



# The Palgrave Handbook of Development Economics

Critical Reflections on  
Globalisation and Development

*Edited by*

Machiko Nissanke · José Antonio Ocampo

palgrave  
macmillan

# The Palgrave Handbook of Development Economics

“The discipline of development economics has undergone dramatic changes over the decades since the first burst of creative writing around the 1950s. From the rise of big data, randomized control trials and emergence of new theoretical methods to the changing landscape of the real world whereby developing countries now have to deal with myriad shocks originating elsewhere and as part of the globalization process, development economics today looks very different from what it did even a few decades ago. Moreover, the subject is now an important part of mainstream economics. This book is a fascinating stocktaking of this evolution, with contributions from some of the finest development economists in the world, including several who helped shaped the discipline. Given the book’s ambitious scope and careful but critical analysis of the discipline it can serve as a first-rate collection of readings for today’s students of development economics.”

—Professor Kaushik Basu, Professor of Economics and Carl Marks Professor, *Cornell University*, the President of the International Economics Association and former Chief Economist of the World Bank

“This volume offers expert expositions on key methodological, conceptual and empirical issues in economic development while tracing the evolution of the field of modern development economics through the lenses of the evolution of major schools of thought over time. The careful analysis presented in this volume helps to refocus our understanding of economic development as a set of processes involving structural changes aimed at achieving sustainable development in its economic, social, environmental, political and institutional dimensions. The analysis in the volume calls for a critical, innovative, forward-looking and pluralistic approach to development economics and cautions against naive reliance on narrow quantitative approaches that distract the researcher and policy maker from fundamental big-picture economic, institutional and political phenomena. The volume is a gold mine for researchers, development policy makers, and teachers of advanced and graduate development economics.”

—Professor Léonce Ndikumana, Professor and Chair, *Department of Economics, University of Massachusetts Amherst*

“Machiko Nissanke and José Antonio Ocampo have coordinated and edited a handbook on development economics that is a most impressive contribution in its breadth, depth, and freshness. The covered territory encompasses the history of the discipline and its various directions, the central issues of its contemporary agenda, including growth, inequality and institutional development, the role of development finance, labour market institutions, technological innovation and ecological sustainability in the development process, and, last but not least, the past and current problems related

to globalisation of finance, trade, and migration. Highly recognized experts, including a number of towering figures or precursors in particular subfields, have contributed each one of the 24 chapters, making the aggregate outcome a most authoritative and scholarly achievement. Highly recommended for both specialized and non-specialized readers.”

—Professor Jaime Ros, Professor of Economics at the University of Notre Dame and fellow of the Kellogg Institute for International Studies

“This Handbook should be essential reading for anyone studying the economics of developing countries, or indeed of any country. Its critical and pluralistic perspectives, which challenge the mainstream neoclassical approach on multiple fronts, have hugely important implications for theory and policy. While there are a number of individual publications adopting critical perspectives on particular issues, the comprehensive coverage of this Handbook is of unparalleled value.”

—Professor Frances Stewart, Professor Emeritus of Development Economics, *University of Oxford*

“Globalisation has gained centre-stage over the past decades, generating challenges for developing countries. The leaders recognise the fact that globalisation has introduced new opportunities, as well as new risks. What this new *Handbook of Development Economics* does is to provide a solid set of explanations for why the theories underlying development have not always been useful in predicting the way forward. It acknowledges the fact that globalisation makes the various obstacles that national economies have to contend with even more complicated, and provides ways for better understanding these. It is comprehensive in its coverage of issues, looking at the evolution that has taken place in development economics, especially in the last four decades. The essays are all well written by very experienced and knowledgeable development economists. This new volume should make a very big difference to our understanding of the interface between globalisation and development.”

—Professor Ernest Aryeetey, Secretary General of African Research Universities Alliance, Former Vice-Chancellor of the University of Ghana

Machiko Nissanke • José Antonio Ocampo  
Editors

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# Part I

## Overview



# 1

## Introduction to the Handbook

Machiko Nissanke and José Antonio Ocampo

### 1 Development Economics as Evolved

Great thinkers such as Albert Hirschman, Paul Rosenstein-Rodan, Rognar Nurkse, Arthur Lewis, Gunnar Myrdal and Raúl Prebisch addressed big issues related to development in the classical tradition of Smith, Ricardo, Mill and Marx with a historical perspective at core and established development economics as a branch of economics in the early post-war period. Over time, development economics has grown exponentially in terms of thematic issues addressed and analytical tools applied. As Erik Thorbecke's adept contour to the history of the development doctrine presented in Chap. 3 of this handbook shows, development economics has evolved to serve a diverse set of development objectives and form a basis for deriving development policies and strategies over the past seven decades. This evolution has been guided and facilitated by advancement of development theories, models and techniques as well as an expansion of underlying data.

In terms of theories and methodologies applied, however, one cannot but notice that development economics, which was viewed as a distinct field of

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studies in its own right by many of the founding scholars known for their pluralistic approaches, has been absorbed into mainstream economics. Development economics is by now largely seen as a branch of neoclassical economics, as the latter has revised and extended the original confined version of the general equilibrium models in several directions by incorporating new perspectives such as imperfect competition, economies of scale, externalities, imperfect information, incomplete contracts, strategic game theories and so on. Enhanced with these new analytical perspectives and tools, neoclassical models have been embraced as an appropriate framework to address issues arising from underdevelopment such as missing markets and ‘inappropriate’ institutions.

Given this advancement, theoretical propositions, methodological approaches and analytical tools of the neoclassical economics are increasingly accepted, *to the exclusion of other schools of thoughts*, as a universal lens through which issues related to economic development are addressed.<sup>1</sup> This trend has been intensified since the early 1980s, as the neoclassical school has progressively gained a dominant position in economics as a subject discipline in teaching and research. Thus, New Institutional Economics and New Political Economy—not the evolutionary school of thought or classical political economy—have been adopted as a principal analytical framework to address institutional issues related to political economy of development.

At the backdrop of these trends, development economics has widened its scope with a proliferation of topics and issues covered with the growing body of empirical results arising from fieldwork data and a large number of datasets made available with easy access worldwide. Unsurprisingly, therefore, analytical perspectives taken for these empirical studies have also converged narrowly to those accepting neoclassical economics as the standard toolkit for applied research, often without its theoretical foundation being appraised in light of conditions prevailing on grounds or in a historical political economy context. In this ‘conversion’ process, the big picture and important questions posed by the founders of development economics from a much broader perspective have often been neglected, and their central tenant that economic development should be analysed as historical *processes* has been somewhat sidelined or forgotten altogether at times.

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<sup>1</sup> Krugman (1995) explicitly attributes the ‘fall of high development theories’ of the pioneers of development economics such as Albert Hirschman, Paul Rosenstein-Rodan and Gunnar Myrdal to their methodological choice, that is, the rejection of tightly specified models and mathematical founded analyses in favour of a loose, ‘discursive’ style of expositions of their ideas in the name of pragmatism. Krugman suggests that the ideas embedded in high development theories could get recognition as a respectful branch of economics only after adopting the unique language of discourse of economic analysis found in neoclassical economics.

This tendency has been intensified with the rising popularity of behavioural economics—one of the burgeoning sub-fields of economics to examine markets and agents' behaviour through randomised controlled trials (RCTs)—in development economics too. A vast number of RCTs have been conducted at household, firm and community levels in developing countries for impact evaluations, and RCT-led evaluations and social experiments have become dominant in the fields of development *microeconomics*, where experimental studies of this kind are seen as an ultimate legitimate response to evidence-based rigorous analyses.

Even for those who have made substantial contributions to development economics within the realm of mainstream economics, this recent predisposition in development microeconomics has been the source of concerns. Echoing the critique over the proliferation of the 'randomisation' method in development economics by Basu (2014), Deaton (2010), Deaton and Cartwright (2018) and others, Michael R. Carter and Aleksandr Michuda in Chap. 11 of this handbook refer to this tendency as a shift of development economics away from big picture theorising towards an impact evaluation economics. Further, Erik Thorbecke reminds us in Chap. 3: "All theories (such as the neo-classical framework) and techniques (such as the randomized controlled experiments that have become the gold standard of the present generation of researchers) used in the analysis of development phenomena act as lenses that distort somewhat the outside reality". His critical review of the history of development economics has led him to conclude that while development economics has followed a time path that moved it to become more experimental and more rigorous in approaches and techniques, the almost total emphasis on microeconomic phenomena, in particular RCTs, may have detracted researches from exploring fundamental 'big picture' macroeconomic and political economy phenomena.

Turning to the field of *development macroeconomics*, there is also an explosion of data-driven empirical analyses with use of cross-country regression analyses or analyses of 'big data' and others, not always underpinned by a deeper theoretical inquiry. A large number of empirical studies to examine determinants of economic growth by cross-country regressions are often such an example. As discussed in Chap. 15 by Machiko Nissanke and in Chap. 21 by Elissa Braunstein, Piergiuseppe Fortunato and Richard Kozul-Wright, there are also serious methodological and technical pitfalls associated with trying to capture processes as complex as growth and their determining factors such as aid or trade openness or globalisation, let alone their interaction, in econometric equations. Empirical results are extremely sensitive to model specifications, time periods and countries covered, or omitted variables.



Further, in terms of issues addressed, until recently, development macroeconomics has been kept preoccupied with the central question of conventional macroeconomics, that is, how to achieve macroeconomic stability by *nation states*. In this framework, macroeconomic stability is usually understood in a narrow sense, as low inflation and sustainability of (public sector and external) debt ratios, over the objectives of smoothing business cycles, that is, ‘real’ stability (Ocampo 2008). It frequently uses closed economy models, which dominate most macroeconomic textbooks, notwithstanding the fact a myriad of shocks originating from globalisation forces tend to be today the major force overwhelming developing economies.

Furthermore, while achieving macroeconomic stability is undoubtedly crucial, the conventional macroeconomic policy discourse, with its exclusive focus on maintaining ‘sound macro fundamentals’ is inadequate in accelerating development entailing transformation of socio-economic structures. First of all, macroeconomic policies derived from the Keynes’ General Theory were very much focused on the mission of maintaining aggregate demand through business cycles. Macroeconomic models subsequently developed in the Keynesian tradition were, hence, built around the promise that there exist an inherent tension and *trade-off* between the two objectives—*stabilisation* and *growth*—in the short run, while the two objectives can be complementary in the long run. Macroeconomic management is then understood as treading carefully this short-run trade-off.

When this is applied to developing countries, however, it should be explicitly recognised that their aspiration lies not merely in stabilising prices and debt ratios, or even output over business cycles and sustaining growth over time, but in realising their broad developmental missions. Therefore, their macroeconomic policy performance should also be evaluated in relation to development goals, that is, how stabilisation measures affect developmental objectives. In this sense, macroeconomic management should set both *stabilisation* and *development* as the main objectives. Here, development should be understood as *processes* involving changes in multiple dimensions of a socio-economic system, including its production matrix, social structure, institutional setting and its relationship with the natural environment. As Ricardo Ffrench-Davis and Stephany Griffith-Jones in Chap. 20 state, “the challenge of macroeconomics for development is to design a set of counter-cyclical policies—fiscal, monetary, exchange rate, domestic financial market and capital account regulations—that takes into account the relationship between the short and long term, reconciles real economic stability with more dynamic long-term growth and promotes social inclusion”.

In the past, this critical question regarding how to address the short-run trade-off between the *development* objective on the one hand and the *stabilisation* objective on the other has got much less attention than it deserves. Clearly, macroeconomic management of developing economies cannot simply be based on the theories and policymaking rules advanced for developed economies. A fresh approach to resolving the trade-off between the stabilisation and development objectives, and the management of the shocks generated by globalisation, is called for.<sup>2</sup> Since macroeconomic conditions should be supportive of other policies deployed to pursue economic development and structural transformation in a more integrated global economy, the neglect of these questions is not justifiable for development economics as a subject discipline.

Over the recent decades, the importance of addressing these questions and associated policy issues has acquired an urgency all the more with developing economies increasingly exposed to large and frequent external shocks—not only *real* such as terms of trade shocks but *financial* shocks propagating through financial systems—as the recent phase of globalisation has accelerated its pace since the 1980s. As Ricardo Ffrench-Davis and Stephany Griffith-Jones examine in Chap. 20, with finance taking the lead in economic globalisation, macroeconomic stability is incessantly threatened from the inherent procyclicality of unfettered capital flows, producing large negative effects on growth, jobs and income distribution with increased frequency.

Yet, up to recently, despite some vocal concerns raised after a series of financial crises in emerging economies,<sup>3</sup> mainstream macroeconomics literature went along with promoting financial globalisation either on account of the large benefits that financial openness is promised to produce or because free capital mobility is claimed to be inevitable due to changes in global technology, market structures or politics. Despite the huge developmental costs incurred by emerging economies in Latin America and Asia that have embraced capital account liberalisation with International Monetary Fund's (IMF's) strong endorsement, the proposition of the 'imperative of financial globalisation' was first time properly questioned at its core in the IMF's official policy documents only in the aftermath of the North Atlantic Financial Crisis of 2007–2009, which is more widely known as the Global Financial Crisis (GFC).<sup>4</sup>

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<sup>2</sup> See Nissanke (2019) for a detailed discussion on exploring macroeconomic frameworks of resolving the trade-offs between the stabilisation and development objectives for structural transformation.

<sup>3</sup> See Stiglitz (2008) and Bhagwati (1998) among others.

<sup>4</sup> See Ostry et al. (2012, 2016) and Ghosh et al. (2017). For a review of this debate, see also Ocampo (2017), ch. 4.

In fact, several key aspects of mainstream approaches to development macroeconomics have been placed under critical reappraisal over recent years, as theories that guided macroeconomic policymaking in advanced countries have also been under scrutiny since 2008.<sup>5</sup> Valpy Fitzgerald in Chap. 5 notes, for example, that the onset of the GFC initiated discussions on renewed state intervention, public macro-financial management through macro-prudential regulations, capital account management and universal social protection, which are the central theme of public economics literature. The new analytical approach emerging from these academic and policy debates has begun to displace the conventional orthodoxy of public choice theory, deregulation and fiscal minimalism and restore public economics to its historical role at the core of development economics.

Similarly, in Chap. 4, Amitava Krishna Dutt notes the re-emergence of several versions of the structuralist approach, which was dominant in development economics from the 1940s to the 1960s, but whose influence waned with the rise of the neoclassical approach since the late 1970s. An example of this can be found in Chap. 9, wherein Xinshen Diao, Margaret McMillan and Dani Rodrik state that their empirical studies are built on the complementarity between structuralist models of growth and the neoclassical model of growth first introduced by Solow (1956). Structuralism is interpreted therein as the position acknowledging that the developing countries differ qualitatively from developed countries due to the presence of structural dualism—or structural heterogeneity, the term preferred by Latin American structuralists—between the traditional and modern sectors of the economy. Hence, they argue that policies should recognise these crucial differences.

Indeed, how development economics has been shaped and evolved as a branch of economics since the 1980s has had profound policy implications for the course of economic development of many developing countries. As a practical policy-centred field of economics, the opinions and positions taken by development economists have far-reaching influences on the formation of development strategies and economic policies in the developing world. Economic policy advices given by development ‘experts’ are purportedly derived from their rigorous analyses in light of empirical evidence. However, policy conclusions and advices are inevitably conditional upon which paradigms are adopted as a basis of their analysis. Hence, development policy advices should be always critically scrutinised and openly debated. Yet, in the past, the policy debates of the field have often been driven by some extreme ideological positions taken by the dominant school of the day. As a result, the

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<sup>5</sup> Stiglitz (2008), Blanchard and Summers (2017), and the papers included in Blanchard et al. (2012).

debates tended to be bifurcated or polarised. Voices of more nuanced and balanced positions have been ignored or suppressed in these debates.

In particular, since ‘*policy conditionality*’ has been actively utilised in one form or another in aid disbursements and debt restructuring processes by the ‘donor community’, aid-dependent countries have been often deprived of opportunities to challenge the position taken by the ‘donor community’, as discussed by Machiko Nissanke in Chap. 15. Critical voices are often not given an open platform or marginalised at best in such unhealthy intellectual environments. Developing countries have had little option but to adopt development policies deemed appropriate and correct in the eyes of the ‘development experts’ who are more aligned with the views and interests of the donor community and the International Financial Institutions (IFIs) in particular.

This condition, which prevailed since the early 1980s to the first decade of the twenty-first century, has not only influenced the course of economic development of many developing countries but also stifled the healthy advancement of development economics as a field of social science. Open, honest and contested debates are necessary for any discipline of sciences, including social sciences, in fulfilling the useful societal function expected of it. Encouraging pluralistic approaches would allow development economics to contribute more positively to enriching our knowledge on development as *processes* and providing a rich menu of policy scenarios and options for consideration. This is particularly important and relevant today since developing countries, as well as the global community, face formidable challenges in navigating development missions in an increasingly globalising and uncertain/volatile world. These challenges are qualitatively different than those envisaged by the founders of development economics in the early post-World War II years.

## 2 Scope and Overview of the Handbook

### 2.1 Themes and Scope of the Handbook

Today, we witness an ever-shifting world order with significant changes not only in political-economic power relationships but also in the global demographic transition in favour of developing nations. Thus, development economics is concerned with welfare of the growing majority of the world population, who would aspire to have a better future with secure jobs and

productive employments in stable environments. This places enormous responsibility and expectation in the hands of those specialising in this sub-discipline of economics. At the same time, almost all national economies have become truly integrated into the global economy in the hope of benefiting from constantly evolving technological advancements and an infusion of dynamism.

Indeed, deeper economic integration can be a major engine for growth in aggregates and has the potential for accelerating development through the spread and transfer of technology and the transmission of knowledge and information worldwide. However, as shown in detail in Chap. 2 by Machiko Nissanke and José Antonio Ocampo, *hyper-globalisation* as practised to date—corporation-led and finance-centred and purely market-driven integration—has exposed itself to the reality that the process is unsustainable socially, economically and politically as well as ecologically, with discontents growing all around. It is associated with an increasing inequality in many countries—and in some of them of astounding scale. It has failed to accommodate mechanisms and procedures for preventing severe economic and financial crises of global nature from occurring periodically. Yet, it is often the vulnerable and the poor who are forced to bear the heavy cost associated with the resolution of these economic crises. The unchecked process of globalisation has also contributed to an escalation of green-house effects that has engendered an ecological disaster. The deteriorating eco-system resulting from climate changes poses the greatest threat to food security and the livelihood of those most vulnerable in the world. Many developing countries have remained extremely vulnerable to external forces of all kinds. As noted by Raphael Kaplinsky in Chap. 17, “the global economy is experiencing interlocked crises of economic, environmental and social sustainability”.

The need for addressing these issues requires the global community to face up to these shared challenges with a view of laying down a foundation for sustainable development in all the key aspects, that is, searching for a social, economic, financial and environmental sustainable path for the global economy. It is critical for those specialising in development economics to engage with the pivotal question of how to change the nature and course of globalisation so as to make globalisation work for inclusive and sustainable development. In this context, fresh and innovative perspectives should be constantly searched in the field of development economics so that the discipline can make a substantial contribution to the academic and policy debates with a view to setting new approaches and agenda in dealing with the pressing issues of addressing multifaceted sustainability at all levels: community, national, regional and global in a constantly evolving globalised world.

Taking on these challenges while remaining relevant to real-world issues requires critical appraisal of a variety of methodological approaches and analytical tools applied in light of rich empirical evidence accumulated from a broader and balanced perspective. In fact, empirical evidence shows that economic development cannot be treated as taking a monolithic path. Instead, it follows different paths depending on institutional configurations in place or other conditions such as different resource endowments, rates of knowledge diffusion, locational externalities and so on. Such a critical, careful appraisal would allow us to advance the frontier of development economics as well as generating more refined and balanced policy perspectives in our quest for sustainable development paths in all key aspects in the interest of stakeholders of nation-states, regional blocks and the global community.

This handbook is conceived with these overall needs in mind. It aims at providing students in postgraduate courses and scholars with specialisation in development economics as well as policymakers with reference materials to inspire critical thoughts and approaches on a wide range of issues. Such thoughts and approaches could lead to a formulation of fresh policy perspectives on how to make globalisation work for advancing sustainable development in the twenty-first century. Hence, we have collectively attempted to examine economics of development paths, in particular how globalisation has affected development paths, in relation to the ideas and concepts of ‘sustainable development’ in the triple dimensions—economic, social and environmental—as well as in the institutional and political economy dimensions. There are deep and strategically crucial, conceptual and policy links between the development paths and the multidimensional questions of sustainability. Yet, these links are not well examined analytically and documented in a systematic way in the current literature of development economics so far. Each contributor to this handbook is therefore asked specifically to explore these conceptual and policy links by setting appropriate questions and critically reviewing relevant literature in his/her chapter.

Thus, the hallmark of this handbook is a *critical* and *pluralistic* approach to the main issues of development economics and an *innovation* of linking explicitly and systematically issues of economic development to multidimensional questions of sustainability in the context of globalised environments. It is critically *reflective* in examining effects of globalisation on development paths to date, and in terms of methodological and analytical approaches, as well as *forward-looking* in policy perspectives for addressing challenges facing the development community in the ever inter-connected, dynamically evolving globalised environments of the twenty-first century.

The handbook explicitly adopts a broad approach to wide-ranging conceptual and analytical issues as well as various policy questions by accommodating heterogeneity of views and approaches. It reflects our attempts to address *grand* issues in development economics at a deep conceptual level as the pioneers of this sub-discipline of economics, with a focus on “the processes of development by discussing the concept of development, its historical antecedents, and alternative approaches to the study of development, broadly construed”—the approach adopted by Hollis Chenery and T.N. Srinivasan as the editors of the *Handbook of Development Economics* published three decades ago (Chenery and Srinivasan 1988).<sup>6</sup> In our view, it is timely, appropriate and important to revisit these fundamental questions in development economics in light of rich empirical evidence accumulated to date since the early/mid-1980s. It presents an opportunity to review, pose fundamental methodological questions and apply fresh analytical tools to historical development experiences in different regions. At the same time, these questions should be addressed in relation to new challenges faced by the global community.

We hope that our *critical* and *pluralistic* approaches to issues in development economics would timely meet the growing demand from students of economics worldwide for broadening curricula of economics courses, currently dominated by mainstream neoclassical economics. This handbook can hopefully respond to these needs and aspirations of the current and future generations of professional development economists by providing critical reference material, so that they can be exposed to ideas and positions contained in alternative analytical perspectives *alongside* or *in relation to* mainstream propositions.

## 2.2 Overview of the Handbook

With these overarching themes and scope in mind, the handbook, which contains 24 chapters, including this introductory chapter, is divided into *five* parts by thematic topics. In addition to this Introduction, *Part I* has another overview chapter (Chap. 2) where, as co-editors of this handbook, *Machiko Nissanke* and *José Antonio Ocampo* present our collective critical reflections on

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<sup>6</sup>In editing the first three volumes of Handbook of Development Economics, Hollis Chenery and T.N. Srinivasan, were conscious in selecting authors known to have different views regarding the nature of development economics. The first volume is, for example, organised by the editors around the implications of different sets of assumptions and their associated research programmes. Since then, North Holland has added two volumes as new policy agenda and analytical tools have emerged over time. These subsequent volumes are useful for research students and scholars in one of these very specialised topics. However, the chapters appearing in the subsequent volumes tend to engage with narrowly specialised topics and issues. The *grand* issues in development economics addressed at a deep conceptual level in the first three volumes have not been revisited in a comprehensive manner.



how globalisation has affected the course of economic development over the last four decades. We argue that despite the potential of globalisation in accelerating economic growth and development through the spread and transfer of technology and the transmission of knowledge and information, *hyper-globalisation* as practised to date—corporation-led and finance-centred and purely market-driven integration—has exposed itself to the reality that the process is unsustainable socially, economically and politically as well as ecologically, with discontents growing all around. There is urgency for us all to engage with the pivotal question how to make globalisation work for inclusive and sustainable development, and to arrest the tide of the political fallouts with grave consequences for the global community. Against this background, drawing on many insightful analyses provided by the chapter contributors to the handbook, our collective narrative on the effects of globalisation on development is organised under two themes: (i) the diverse development experiences of countries in the South under globalisation; and (ii) the growing inequality and its implications. We then proceed to discuss challenges facing us for finding a way to change the course and nature of globalisation and indicate several pathways for making globalisation work for sustainable and inclusive development.

*Part II* consists of six chapters, all of which address methodological and conceptual issues in development economics.

In Chap. 3, *Erik Thorbecke* examines the history and evolution of *development doctrine*. He suggests that the selection and adoption of a development strategy depend upon three building blocks: (i) the prevailing development objectives which, in turn, are derived from the prevailing view of the development process; (ii) the conceptual state of the art of development theories, hypotheses, models, techniques and empirical applications; and (iii) the underlying data system available to diagnose the existing situation, measure performance and test hypotheses. He then defines development doctrine as the body of principles and knowledge resulting from the interrelated complex of these four elements that is generally accepted by the development community at that time. This analytical framework is applied to describe the state of the art that prevailed in *each* of the five decades (from the 1950s to the 1990s) and in the most recent period 2000–2017 to highlight in a systematic fashion the changing conception of the development process. Over the last 67 years, the definition of development and strategies to achieve it progressed and broadened from the maximisation of GDP in the 1950s to employment creation and the satisfaction of basic needs in the 1970s, to structural adjustment and stabilisation in the 1980s and early 1990s, to poverty reduction, and culminated with the present broad-based concept of inclusive and sustainable



growth. He concludes that while development economics has followed a time path towards more experimental, multidisciplinary, and more rigorous, the present emphasis on microeconomic phenomena and randomised and controlled trials may have detracted researches from exploring fundamental 'big picture' macroeconomic phenomena.

Chapter 4 by *Amitava Krishna Dutt* provides an overview of the structuralist approaches to economic development. It discusses the contributions of the early structuralists, distinguishing between the European-US strand and the Latin American strand as well as newer structuralist approaches, including formal structuralist macroeconomics, CEPAL<sup>7</sup> neo-structuralism, new structuralism based on technology studies, new developmentalism, new structural economics and development traps. The main theoretical ideas of structuralists are (i) their focus on structures of systems rather than individual units; (ii) viewing the world in terms of the structure of the global economy, their emphasis on structural differences between developed and developing countries, and different structures among developing economies; and (iii) their engagement with not only issues related to growth but distributional questions. In terms of policies, structuralists recommend active flexible state that promotes the synergy between the state, markets and society and addresses macroeconomic and sectoral issues. The chapter also evaluates structuralists' policies in a number of areas including trade and industrial policies with focus on developing technological capability and upgrading; macroeconomic policies that promote economic growth and external competitiveness, dampen cycles, and avoid instability; and policies aimed at reducing poverty and inequality. It discusses both the approaches' strengths and possible problems and how the latter can be overcome.

Chapter 5 by *Valpy Fitzgerald* addresses the theoretical and practical relationships between public economics and development economics from a critical perspective. With better appreciation that the state has been the leading collective actor in the process of structural transformation, a new approach has challenged, over the past two decades, the conventional orthodoxy of public choice theory, deregulation and fiscal minimalism. This rethinking process on both ideas and policy has been accelerated by the impact of the global financial crisis. The emerging analytical approach is based on the integration of modern theories of market failure, income inequality and endogenous growth on the one hand, with the recent practice of emerging market economies in managing structural change, welfare provision and integration

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<sup>7</sup>CEPAL is the Spanish acronym for the United Nations Economic Commission for Latin America and the Caribbean (ECLAC according to the English acronym).

to the world economy on the other. The chapter discusses the recent shift towards proactive management of structural change, reduced inequality and resilience to external shocks. It further discusses the issues related to (i) public sector resource mobilisation to undertake these vital tasks expected of the state; and (ii) the fiscal transformation caused by economic globalisation, the opening of capital markets and the determination of corporate tax rates by international competition. It concludes with discussions on the implications of the analysis for the design and implementation of public economic policy in developing countries.

Chapter 6 by *Robert Boyer* presents the views of the French *Régulation* school, which offers a framework for gaining deeper understanding about economic development as processes. He argues that (i) development derives from the art of creating virtuous circles in which social values, organisations, institutions and technological systems co-evolve; (ii) development modes are built upon the discovery of institutional arrangements that fulfil two conditions: the viability of the accumulation process and a political legitimacy around an implicit or explicit institutionalised compromise. Derived from these propositions, the chapter discusses a variety of development modes, that is, *spatial diversity*, and also points to the *temporality* of these modes. It then examines three challenges facing the future of development: (i) how to overcome the opposition between the State and markets; (ii) organisational forms and institutional arrangements for global public goods provision and management of the global commons; and (iii) the merits of an anthropogenetic model based on education, health and culture.

Chapter 7 by Richard Nelson shows how economic development is viewed from the perspective of modern evolutionary economics. It lays out the basic conceptual view of economic activity and economic change provided by evolutionary economic theory, the central role played by technologies and their evolution in economic dynamics, and the key role of evolving institutions in forging the evolutionary processes at work. He argues that (i) the key driving forces involved in development are the co-evolution of technologies and institutions; (ii) an adequate economic framework for analysing long-run economic change must recognise the rich set of institutions involved—not just firms, households and markets but also a wide range of private not-for-profit and public organisations and structures; and (iii) the varied roles of government cannot be understood simply as responses to ‘market failures’.

Chapter 8 by Maria S. Floro provides critical reflections from a gender lens on the economic development theories and policy debates. It demonstrates that the pre-eminent theories of economic development are overwhelmingly

androcentric or male-centred in terms of the values they assert and the underlying premises upon which the theories are built. Since these models serve as a framework for policymaking and analyses, their predictions and policy prescriptions reflect male-centred predilections and biases. The chapter then introduces the gender dimensions of economic development processes, highlighting the contributions of gender scholars and feminist economists to the analysis of economic development and to contemporary policy debates around globalisation and market liberalisation. It presents a forward-looking agenda towards the development of a feminist theory of sustainable development. It not only incorporates non-market activities and women's experiences in its description of economic processes but also captures the underlying power relations including unequal gender relations that underlie production, consumption and distributive processes. It also depicts the interdependence between human systems and ecological systems and the importance of accounting the different impacts and outcomes for women and men as well as for current and future generations.

*Part III* consists of five chapters, which discusses various themes clustered under socio-economic development processes, covering topics of structural change, inequality, poverty, institutions and capabilities.

In Chap. 9, *Xinshen Diao*, *Margaret McMillan* and *Dani Rodrik* examine the patterns of structural change of developing economies across regions, focusing on their respective *growth acceleration episodes* with updated data from 2010 to 2014. By decomposing overall labour productivity growth into 'within-sector' productivity growth component and inter-sectoral labour reallocation effects, their analyses show consistently divergences among the regions. In Asian economies, both pioneering Newly Industrialised Countries (NICs) and contemporary Low Income Countries (LICs) in the region, both within-sector productivity growth and inter-sectoral structural change have made a strong and positive contribution to overall productivity growth. This is not the case in other regions. In Latin American countries, while within-sector labour productivity growth in non-agricultural sector was observed, there was not much growth-increasing structural change through inter-sectoral labour reallocation. Labour moved from high-productivity activities to low-productivity ones in non-agricultural sector and this resulted in premature de-industrialisation. In Africa, growth-increasing structural change took place, but labour productivity within modern, non-agricultural sectors declined. Thus, during their high-growth spells, other regions could not replicate East Asia's experiences of fast export-led industrialisation. Rather, none of the recent growth accelerations in Latin America, Africa and South Asia was driven by industrialisation.

In Chap. 10, *Rolph van der Hoeven* provides a historical overview on how income inequality has been addressed in developing countries. The chapter offers a critical literature review on how distribution issues and interrelationships between inequality and growth have been debated in development economics. It also presents a rich set of empirical evidence pertaining to increasing income and wealth inequality, declining labour income shares and increasing top incomes under globalisation, among other trends. With this background, it proceeds to discuss contemporary issues of income inequality in the context of growing globalisation. It shows that (i) trade globalisation, investment liberalisation, financialisation and skills-based technical change have been important exogenous drivers of inequality; (ii) the effects of these globalisation drivers on within-country income inequality depend also on national macroeconomic and labour market policies, which can either counteract or intensify the disequalising market-driven trends; (iii) the adverse effects of financial and trade globalisation on income inequality have been exacerbated by national policies that had a negative impact on income distribution; and (iv) these exogenous drivers have often strengthened existing patterns of inequality through a very high wealth inequality and intergenerational transfers of inequality due to skewed access to higher level education. It concludes that (i) national policies, which include a strengthening of institutions to deal with inequality, can play an important role in reducing income inequality; in particular, fiscal policies should be used to mitigate a high primary income inequality down to lower levels of secondary and tertiary inequality; (ii) the right mix of macroeconomic, fiscal, labour market and social policies executed coherently can reverse the rising trend in income inequality.

Chapter 11 by *Michael R. Carter* and *Aleksandr Michuda* presents an interpretive intellectual history of contemporary economic thinking on rural poverty and development, centred around the agrarian questions of whether, when and how the initial distribution of productive assets shapes the dynamics of poverty and rural development. In the 1960s and 1970s, academic and policy debates on agrarian issues spun around the distribution of land, with some arguing that neither rural development nor poverty reduction was possible without asset redistribution. Over time, however, the argument for large-scale redistribution gave way to microfinance for ‘enhanced capital access’ and other less radical interventions intended to allow low-wealth households to do more with their existing, modest asset endowments. This ‘lend, don’t redistribute wealth’ perspective coincided with a shift of development economics away from big picture theorising towards an impact evaluation economics focused on reliable identification of microfinance and other singular interventions. However, despite the promise of microfinance to substitute for asset

redistribution, impact evaluation of microfinance found that it has at best modest effects on the class positions and living standards of poor households. In contrast, a new generation of programmes with modest transfer of tangible assets has shown more promise in terms of changing households' economic strategies and placing them on trajectories of sustained economic advance. These fresh approaches reflect new learning on both the psychology of poverty and the economics of asset accumulation by poor households, indicating the important synergies between efforts to build up both the physical and psychological assets of poor rural households.

In Chap. 12, noting that institutions were at the foundation of development economics in its inception as a separate branch of economics, *Ha-Joon Chang* and *Antonio Andreoni* provide a review of the theory of institutions from old institutionalism to new institutional economics and critically assess today's mainstream view on institutions and economic development. The chapter engages specifically with analytical issues related to the definition of institutions, the conceptualisation of the role of institutions, the theory of the relationship between institutions and economic development, and the theory of economic development. It highlights the importance of focusing on the *variety of types, forms and functions* that institutions have taken historically, and on their *collective* nature. In this respect, it introduces Abramovitz's concept of *social capability*, understood as 'tenacious societal characteristics' embedded in productive organisations, as well as a variety of political, commercial, industrial and financial institutions. They discuss the idea of social capability by analysing historical examples of six types of institutions and their role—forms and functions—in the industrialisation process. These institutions are those of production, productive capability development, corporate governance, industrial financing, industrial change and restructuring, and macroeconomic management for industrialisation. The chapter underscores the importance of developing productive capabilities at the sectoral and social level, so that industrialisation could make a real contribution to social-economic changes and advancing development agenda.

Chapter 13 by *Sakiko Fukuda-Parr* and *Ismael Cid-Martinez* provides an overview of the capability approach and human development paradigm and situates them within development economics—thought and practice—highlighting its contrasts with conventional thinking, and complementarities with human rights and feminist economics. It suggests that (i) human development as a development paradigm, built on Amartya Sen's capability approach to development, puts people at the centre of development—as its principle end and means; and (ii) it provides a normative framework for assessment of individual wellbeing, social outcomes and public policies. They argue that the

human development paradigm challenges standard prescriptions in a broad range of areas including social, macroeconomic, political, environmental and cultural arenas. Therefore, as it is built on its rich and complex concept of human development, the human development paradigm cannot be reduced just to an agenda for meeting basic needs, or social welfare programmes and social investments, nor to its reductionist measurement tool, the ‘Human Development Index’ that only includes education, income and a decent standard of living.

*Part IV* presents five chapters, which address issues related to different productive assets, that is, finance, labour, technology and ecology, and their contribution to economic development.

Chapter 14 by *Fernando Cardim de Carvalho, Jan Kregel, Lavinia Barros de Castro* and *Rogério Studart* presents a history of theoretical debates and an evolution of practice regarding the provision of *development finance*, that is, how best to allocate efficiently resources towards economic and social transformation. It critically analyses theories associated with the two opposing policies towards financial sector development—policy of ‘financial repression’ and that of financial liberalisation—and how these policies have been implemented in practice and their respective performances in provision of development finance in a comparative perspective of Latin America and Asia. It discusses why and how the pendulum turned completely against ‘financial repression’ in the late 1970s on both academic and policy fronts. The predominant view became that government activism was to be blamed for the very problems that it had been set to overcome. It claimed that financial repression not only resulted in inefficient allocation of existing resources but had long-term consequences of deterring financial development and leading to poor economic and social performance. This perspective prevailed over three decades since then, but its validity has been increasingly questioned after the GFC and a new nuanced position has been emerging. While a reversal of financial liberalisation could be only partial in the light of the radical changes to financial systems in the intervening period, we require new financial architectures for provision of development finance to face up to challenges on multiple fronts.

Chapter 15 by *Machiko Nissanke* traces the evolution of the academic and policy debates on the ‘aid-debt-growth’ nexus and evaluates the extent to which these debates in macroeconomic terms reveal dynamic interactions in the aid-debt-growth triad and their effects on development. The chapter brings ‘aid’ and ‘debt’ literature together to highlight the importance of an integrated treatment of developmental effects of aid and debt in developing countries with access to concessional windows as part of aid packages. It shows

that (i) despite abundant micro-level evidence that aid's contribution to development is context specific, an answer to the question on whether 'aid works' has been sought through an investigation of macroeconomic relationships, often with cross-country regression analyses; and (ii) how research outputs have been selectively used to rationalise donors' positions prevailed at times with profound implications for development outcomes of 'recipient' countries. It argues that *policy* conditionality attached to aid and debt relief as practised through Washington and post-Washington consensus has created an unproductive environment for nurturing mutual trusts necessary for building institutional foundations and technical capacity for making governments accountable to domestic stakeholders in policy making and governance. It calls for an overhaul of 'conditionality' so that it is based on adherence to universally accepted codes of conducts and norms to basic human rights, and governments' efforts to achieve collectively agreed targets such as the United Nations' Sustainable Development Goals (SDGs). It argues that successful development depends on long-term processes of institutional development, to which all parties could contribute as an equal partner through development cooperation. The chapter presents the ways forward to make debt sustainable and aid work for development by designing efficient aid and debt contracts, and moving away from the *austerity-dominated* management of debt crisis to the *investment-centred* management for preventing debt crises from emerging.

Chapter 16 by *Servaas Storm* and *Jeronim Capaldo* examines the impact of labour institutions on economic development. Labour market institutions consist of a set of labour interventions and regulations such as providing for minimum wages, unemployment insurance, employment protection, improving working conditions or facilitating collective wage bargaining. Their effects on economic growth, employment and inequality have been controversial in both developed and developing countries alike. Mainstream economic analysis traditionally portrays these legal interventions as 'luxuries' for developing countries, as these regulations are regarded as harmful to economic efficiency in the long run by raising labour costs and hence reducing countries' competitiveness, even though these institutions may be useful for social stability or for short-term support to aggregate demand. On this basis, deregulation of labour market institutions has been justified and promoted worldwide under globalisation. Given this background debate, after a critical review of theoretical propositions and empirical evidence, they challenge the mainstream claim that policy efforts to protect workers are futile as they push workers into precarious informal employment. They demonstrate with use of a macroeconomic model of a balance-of-payments constrained small open economy that these labour market institutions could well lead to a dynamic economic



efficiency. They also examine the effect of labour market institutions from a political economy perspective and conclude that these institutions would promote economic development through improving income distribution and positive effects on aggregate demand, labour productivity and technology.

Chapter 17 by *Raphael Kaplinsky* presents the evolution of analysis and policy with regard to technology and innovation in the post-war period. It starts with a review of analytical issues, arguing that (i) technology is created and requires resources and focused and dedicated effort; (ii) the driving force for technological innovation and for productivity growth has been the quest by capitalists for producer rents; and (iii) technology is malleable and the direction of technological progress is induced by a series of the social, political, economic and environmental factors as well as by the unfolding imperatives of the technology itself. The chapter goes on to examine the evolution of innovation and technology policy and its associated analytical discussion during the phase of import substituting industrialisation, which lasted for three decades to the end of the 1970s. This was a period when developing countries were heavily dependent on imported technologies, many of which were inappropriate in their environments. Import substitution was complemented and then succeeded outward-oriented growth strategies. This transition was associated with the growth of human and technological capabilities in many developing economies. From the mid-1980s, a rapidly growing proportion of global trade occurred within global value chains (GVCs), which now dominate global trade, and this helped to shape the direction of technological progress. However, since the millennium, growth trajectories have faltered globally. Productivity growth has declined in advanced economies and is static in many developing economies. At the same time, the dominant growth trajectories have run into a crisis of sustainability. Not only is economic growth uneven and unstable, but also its environmental and social character threaten its sustainability, as well as the survival of life on earth. This has posed new challenges for the organisation and path of innovation, giving rise to growing attempts to foster more inclusive patterns of innovation.

In Chap. 18, noting the increasing link between ecological scarcity and poverty in developing countries *and* the growing calls to respect sustainable economic development, *Edward B. Barbier* explores the implications for sustainable development of these two trends. He adopts the *capital approach* to sustainable development as an analytical framework, in which *ecological capital* is treated as a unique form of economic wealth. As ecosystems are subject to irreversible conversion and prone to collapse, sustainability encompasses limits on the exploitation or irrevocable loss of this ecological capital in light of ‘planetary boundaries’ to the expansion of economic activity and



populations. In these efforts, however, it is important to consider uneven distributional consequences of ecological decline. It is the rural poor who are disproportionately affected by the increasing scarcity of ecosystems. In this light, the chapter explores the policy challenges posed by these two interrelated problems—ecological scarcity and poverty, and ecological sustainability and planetary boundaries—arguing that overcoming these challenges is important not only for economic development and poverty alleviation but also for intergenerational resource transfer for global sustainability. It concludes with discussions on policy options for dealing with the global market failure through (i) compensating developing countries for conserving ecosystems and biodiversity; (ii) international payments for ecosystems services; and (iii) new international environmental agreements.

*Part V* contains six chapters, all of which address international policy agenda in the context of the globalisation and development nexus.

Chapter 19 by *Deepak Nayyar* presents a critical essay on the implications and consequences of globalisation for development situated in its long-term historical perspective. While there have been many waves of globalisation during the second millennium, its focus is on the two recent eras of globalisation: (i) from 1870 to 1914 and (ii) the present era which started circa 1980. His comparative analysis reveals striking parallels, similarities and differences between the two waves of globalisation. Comparing characteristics in international trade, investment flows and migration flows, he emphasises the critical differences in international migration flows between the two eras, arguing that the severe restrictions placed on cross-border migration of unskilled labour in combination with free capital mobility in the current globalisation era have significantly worsened income distribution globally as well as within individual countries. The chapter examines outcomes in development during the second epoch to explore the underlying factors and highlight the emerging problems, suggesting that globalisation has historically always been a fragile and reversible process. He argues that (i) the underlying reasons have been embedded in the consequences of the process of globalisation, ranging from the spread of disease or pandemics to economic strains or political conflict between winners and losers, whether countries or people; (ii) the backlash has taken different forms at different times; (iii) the problems and challenges that have now surfaced are largely attributable to its economic and political consequences of contemporary globalisation; and (iv) globalisation has never been the end of either history or geography.

In Chap. 20, *Ricardo Ffrench-Davis* and *Stephany Griffith-Jones* provide a critical literature review and empirical evidence that show that (i) financial markets have increasingly taken the centre of development objectives, which

has led to the fast rise of financial activity, with finance taking the lead in economic globalisation; and (ii) capital account liberalisation and unfettered capital flows, especially procyclical, short-term and reversible ones, have had negative effects on macroeconomic stability, growth, jobs and income distribution. Hence, they call for policies geared to manage the capital account, which would reap the positive effects of capital flows whilst mitigating or eliminating the depressive and regressive effects of unmanaged flows. They note that while the IMF revised its long-held position of promoting capital account liberalisation after the GFC of 2008–2009 and now favours counter-cyclical capital account regulations, World Trade Organisation (WTO) and bilateral trade deals still include provisions to limit individual countries' ability to regulate capital flows. The chapter calls for an aggiornamento of WTO and bilateral trade provisions on this account.

In Chap. 21, *Elissa Braunstein, Piergiuseppe Fortunato and Richard Kozul-Wright* show how the pattern of international trade and investment flows has been changing over time. The developing countries' share of world trade has been rising sharply since the early 1990s. A growing portion of world trade is taking place in the South-South trade. After presenting a succinct review of extensive literature in the trade-foreign direct investment (FDI)-development nexus and strong empirical evidence of the export-investment-profit nexus, the chapter examines the shifting terrain of globalisation through a trade and development lens, and how the nature and governance of international trade and investments flows have changed from the era of managed globalisation established at the end of World War II to the era of hyper-globalisation. In the earlier regime, governments had a space to manage their economic integration in line with a broad set of national policy goals. In contrast, as globalisation gathered pace since the early 1990s, capital flows have been increasingly liberalised and the governance of international trade has been left to large multinational firms. Hence, the chapter further analyses the pros and cons of FDI and participation in GVCs, with particular attention to the obstacles to diversification and upgrading in these chains and the unequal economic relations that they generate. In this context, it stresses the ongoing importance for developing countries of manufacturing activities, including for export, even in an era of rising services, and calls for a pragmatic policy approach and for an active developmental state able to set priorities, manage unavoidable trade-offs and deal with distributional challenges and conflicts of interest that could hinder a desirable pattern of integration.

Chapter 22 by *Hania Zlotnik* examines how migration and the development process interact, including the role of international migration in increasing human welfare and enhancing development outcomes. It focuses on the

two major effects: (i) the selectivity of migration and its impact on wages and (ii) the potential of remittances to improve livelihoods and promote productive activities. Although international migration continues to be highly regulated, international migration flows continue to increase and diversify. In examining the most comprehensive estimates of net migration flows by origin and destination between 1960 and 2010, she shows that (i) middle-income and certain high-income countries, rather than low-income countries, are more likely to be important sources of international migrants; (ii) 'south-to-north' migration has been growing; and (iii) migration among developed countries has been on the rise. Her review of empirical studies further shows that the impact of recent immigration on wages is small and beneficial in receiving developed countries, which have been increasingly selecting migrants on the basis of skills. However, migration of skilled persons is detrimental to developing countries of origin where skill shortages are constraints on economic development. At the same time, she notes the boom in global remittances has been contributing to improve the livelihoods of millions of people. Remittances not only ensure a satisfactory level of consumption for their recipients and families but also improve agricultural productivity or invest in small or micro-enterprises. Remittances are shown to increase the school enrolment of children in households with migrants abroad, as well as bringing other benefits, and known to boost household incomes and reduce poverty more generally.

*José Antonio Ocampo* in Chap. 23 presents analyses of the international monetary system, the weakness of which has been exposed repeatedly by the major international financial crises of the past decades. After examining the defects of the current international monetary system, particularly from the perspective of emerging and developing countries, the chapter sets the major objectives of a reform agenda in seven areas: (i) a better international reserve system than the current fiduciary dollar standard, and particularly one that makes counter-cyclical allocations of IMF's Special Drawing Rights (SDRs) that increase international liquidity during crises and help fund counter-cyclical IMF lending; (ii) better instruments to guarantee the consistency of national economic policies of major countries; (iii) a system of managed exchange rate flexibility that promotes stability and avoids negative spillovers on other countries; (iv) the regulation of cross-border finance to mitigate the procyclical behaviour of capital flows; (v) appropriate balance of payments financing during crises, particularly through financing facilities that are automatic or have simpler prequalification processes and simpler or no conditionality, to overcome the stigma associated with borrowing from the IMF; (vi) adequate international sovereign debt workout mechanisms; and (vii)

reforming the governance of the system through a more representative apex organisation than the current G-20, stronger voice of developing countries in the IMF and a ‘dense’ architecture, in which the IMF is complemented with regional and interregional institutions.

In Chap. 24, *Inge Kaul* addresses the critical issue of ‘under-provision’ of global public goods (GPGs) such as climate change mitigation, financial stability, global health and cyber security, which threatens development globally, both in the North and in the South, and sustainability in all three dimensions—economic, social and environmental. The chapter examines how GPG provision functions today and what are the impediments for adequate provision, showing that the existing range of corrective actions by state and non-state actors are far off from what is required to resolve global challenges in the absence of a systematic theory and practice of global public policy. It suggests that new analytical lenses are required through which we can examine current policymaking realities, understand the impediments and facilitators of GPG provision, and spark willingness among policymakers to choose new policy paths for enhanced interdependence management, development and global sustainability. With this in mind, it suggests an agenda for future research and debate for constructing the building blocks of a new branch of public policy, which can offer well-founded advice on how to combine individual state and non-state actor interests, including national sovereignty concerns, and meet the adequate provision requirements of global public goods.

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# 2

## Critical Reflections on Globalisation and Development and Challenges Ahead

Machiko Nissanke and José Antonio Ocampo

### 1 Background

Today, we live in an ever-shifting multipolar world—the one that has emerged from the contemporary phase of globalisation that has spanned nearly four decades to date. As Deepak Nayyar establishes firmly in Chap. 19, globalisation is not new, seen in a long-term historical retrospective, and there are many striking parallels and similarities as well as crucial differences between the current wave of globalisation and the one that began around 1870 and gathered momentum until 1914. The latter was ‘globalisation in the age of empire’ and proceeded with a mix of rapid technological advancement with a laissez-faire policy regime in the United Kingdom and protectionism in several continental European countries and the United States.

Indeed, as discussed in Nissanke and Thorbecke (2006a, b, 2010), the current wave of globalisation is, in common with all the previous waves, not a process proceeding neutrally in a policy vacuum—that is, purely driven by technological innovations and progress or ‘neutral’ market forces—but it is a policy-induced condition. Globalisation as experienced to date is a process

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promoted through the global consolidation and diffusion of a particular economic policy paradigm, which emphasises benefits and positive features of the liberalised policy regime.

As throughout modern history, contemporary globalisation has produced a sharp configuration of winners and losers *between* and *within* countries at multiple levels.<sup>1</sup> In terms of countries, Deepak Nayyar in Chap. 19 observes the discernible shift in the balance of economic power away from industrialised countries towards developing countries through the catching-up process of selective countries of the South. The significant change of the relative economic position of countries most vividly evident in the dramatic rise of China, India and some other emerging essentially Asian economies over the recent decades has had enormous geopolitical implications for international relations. This is clearly reflected in the declining trend of one measure of ‘between-countries’ inequality, that is, the ‘between-countries’ differences of mean income weighted by population size.

However, in contrast to the number of countries in Asia that have been able to benefit from *virtuous* cycles of globalisation-induced growth, others in sub-Saharan Africa (henceforth just Africa) and Latin America were left behind in stagnation or even experienced *vicious* cycles of globalisation, except for short periods. As a result, the scale of income disparity between countries in the world is still astounding. Decomposing global inequality into ‘class’ component (due to differences in incomes within nations) and ‘location’ component (differences between mean incomes of all the countries in the world), Milanovic (2012) shows that about more than two-thirds of global inequality has been consistently due to the ‘location’ component. This indicates the continued dominance of ‘between-countries’ or ‘inter-country’ income inequalities in global inequality. In place of the income convergence under the open trade and investment regimes predicted by the pro-globalisation protagonists of the earlier years, we observe a considerable divergence in the growth experienced by different developing regions.

Furthermore, over the last four decades, as the pace of globalisation has accelerated, *within* countries inequality has increased at an unprecedented pace. According to United Nations Development Programme (UNDP) (2013), in a sample of 116 countries, household income inequality, as measured by the Gini Index, increased by 9 percentage points to 45.3 for high-income countries, and by 11 percentage points to 41.5 for low- and middle-income countries from early 1990s to the late 2000s.<sup>2</sup> Growing

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<sup>1</sup> See also Williamson (2002), among others, for winners and losers from globalisation in modern history.

<sup>2</sup> Reported in Fig. 3.1 in UNDP (2013).



inequality in income and asset distribution has been accompanied by gathering extreme polarisation worldwide (see Milanovic 2012, 2016; Piketty 2014; Atkinson 2015; Bourguignon 2015; Stiglitz 2012, among others). The staggering degree of global inequality in income and asset distribution, and the steadily rising inequality within individual countries, developed and developing countries alike, is visibly present throughout the world, with social cohesion threatened and political tension rising further.<sup>3</sup>

The growing inequality is one of the clear manifestations of the problems with the current wave of globalisation, which has proceeded on the unproven premises of the supremacy of neo-liberal economic policy regimes. This has led to considerably debilitated institutional and regulatory environments at both national and global levels for preventing crises as well as alleviating negative distributional consequences. The capacity and will of nation states to govern markets and mitigate the rising ‘within-country’ inequality has been enfeebled, while the existing international system of governance is weak and ineffective for prevention and management of economic crises of global scale and steering the course of globalisation through international cooperation and coordination. Deep economic integration has been promoted without institutional underpinnings and a robust system of global governance in place.

The resultant *hyper-globalisation* as practised to date—corporation-led and finance-centred and purely market-driven integration—has exposed itself to the reality that the process is unsustainable socially, economically and politically as well as ecologically, with discontents growing all around. It is associated with an ever-increasing within-country inequality of astounding scale. It has failed to accommodate mechanisms and procedures for preventing severe economic and financial crises of global nature from occurring periodically. The unchecked process of globalisation has also contributed to an escalation of green-house effects and dramatic extinction of animal and plant species that has engendered an impending ecological disaster. The deteriorating ecosystem resulting from climate changes and reduced biodiversity poses the greatest threat to food security and the livelihood of those most vulnerable in the world. Many developing countries remain extremely vulnerable to external shocks of all kinds.

Against this background, this overview chapter presents our collective critical reflections on globalisation and development, along with the narratives organised under two themes: the diverse development experiences of coun-

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<sup>3</sup> Given this, the survey carried out for the World Economic Forum 2014 ranked widening income disparities as one of the greatest risks the global community faces today (World Economic Forum, 2013). The growing within-country inequality has been a main thematic topic selected to address in many reports by multilateral institutions over recent years (UNCTAD 2012; UNDP 2013; OECD 2011, 2014; IMF 2017 and others).



tries in the South under globalisation (Sect. 2) and the growing inequality and its implications (Sect. 3). In the final section (Sect. 4), drawing on many insightful analyses provided by the chapter contributors to the Handbook, we discuss challenges facing us for finding a way to change the course and nature of globalisation and indicate several pathways for making globalisation work for sustainable and inclusive development.

## 2 Diverse Development Experiences in the South Under Globalisation

The dynamics of the inter-country inequality under the contemporary globalisation has been shaped differently from the nineteenth-century globalisation. As noted by Deepak Nayyar in Chap. 19, the previous globalisation wave was accompanied by the sharp income divergence between the colonial powers of the North and the colonised of the South. The latter group countries, in particular in Asia and Africa, which were forced to embrace free trade and investment regimes under the colonisation, were condemned to economic decline and underdevelopment. Latin America, which was mainly made of independent nations since the early nineteenth century, fared better and some countries in the region were able to partially catch up with the developed world.

The recent wave has produced even more diverse development experiences among countries in the South, where almost all national economies have become actively engaged with globalisation in the hope of benefitting from constantly evolving technological advancements and an infusion of dynamism. Yet, the mere adoption of the open trade and investment regimes has not guaranteed, or promoted, developing countries' entry into the 'income convergence club' as claimed by Sachs and Warner (1995) and others like in their simplistic thesis of the openness-induced income *convergence*.

In this light, we should also question the conclusion drawn by Baldwin and Martin (1999) from their historical comparative study of the globalisation experiences. Referring to one of the fundamental differences between the two waves of globalisation, they argue that in contrast to the experiences under the late nineteenth-century globalisation wave, when an enormous North-South income divergence was produced as result of industrialisation of the North at the expense of deindustrialisation of the South, the current wave of globalisation has industrialised the South whilst the North has experienced deindustrialisation. In reality, the recent globalisation experiences are very heterogeneous among countries in the South as sharp divergences have emerged in the development paths followed by different regions of the South,

including premature deindustrialisation in several regions and countries as noted in Nissanke and Thorbecke (2010) and Nissanke (2015) and several contributions to this Handbook (see the following sections).<sup>4</sup>

Not only did the growth rates diverge significantly among the developing regions over time as documented in many reports and studies,<sup>5</sup> but also the difference is striking in terms of the pattern and quality of economic growth under the current phase of globalisation. A clear evidence for this is found, for example, in their capability of advancing structural transformation. McMillan and Rodrik (2011) examine the relationship between structural transformation and productivity growth, and define structural transformation as the growth-enhancing structural change resulting from reallocation of resources from low-productivity activities to high-productivity ones across, and within, sectors. Their comparative empirical analysis covering the period of 1990–2005 shows whilst Asian countries are found to have experienced *productivity-enhancing* structural changes, *productivity-reducing* structural changes have been a norm in Africa and Latin America. Extending an analysis to a longer period between 1960 and 2000, de Vries et al. (2015) further reveal that Africa's relative productivity in relation to the global technological frontier has steadily declined across sectors since the 1980s, and its structural change since the 1990s has been characterised by 'static gains' but accompanied by 'dynamic losses' as labour migrated from both agriculture and manufacturing to fragile informal activities in services with lower marginal productivity.

Clearly, integration into the global economy per se does not guarantee growth dynamics or productivity-enhancing structural change. In this connection, in comparative analyses of the globalisation impacts on poverty reduction across the three developing regions of Asia, Africa and Latin America, Nissanke and Thorbecke (2010) argue that (1) the effects of globalisation on growth and poverty reduction are diverse and context specific; (2) the difference in the nature of structural transformation to sustain growth as well as the differential speed of the progress in poverty reduction among the developing regions can be explained by the distinct domestic patterns of economic growth and the forms of integration followed; and (3) where the effects were positive, globalisation has worked best for the poor through the '*growth*' channel when globalisation-induced growth can generate more stable employment opportunities at a steady pace for growing population and labour force.

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<sup>4</sup>Naturally, countries within each of the developing regions are heterogeneous in their globalisation experiences. While acknowledging country-specific experiences, the discussions herein reflect our attempt to discern overall patterns of the different regions' experiences.

<sup>5</sup>See, for example, Chap. 14 for the detailed comparative analysis of effects of alternative financial policy regimes on economic growth between the Asian and Latin American regions.

Asia is thus the region widely regarded as having benefited most from the dynamic *growth* effect of the recent wave of globalisation. There is very little disagreement over the powerful growth-enhancing effects of openness through trade and foreign direct investment (FDI) in the case of most Asian countries. In particular, most East Asian economies had not only managed the process of integration into the world economy through exporting of manufactured goods much earlier than other developing countries but also improved their form of linkages to the global economy in the years of their rapid economic growth.

In this context, it can be argued that integration/globalisation has assisted the process structural transformation of rapidly growing economies of East Asia, as popularly depicted in the 'Flying-Geese' thesis.<sup>6</sup> The thesis suggests that East Asia has experienced a sequence of staggered catch-up growth episodes region-wide since the end of World War II (WWII), and particularly since the 1960s. Furthermore, in tandem with growth, poverty alleviation had also taken place in Flying-Geese style. According to estimates made by the Asian Development Bank (Ali and Zhang 2007; Asian Development Bank 2004, 2007), the incidence of extreme poverty is estimated to have declined from 33 per cent in 1990 to 7 per cent in 2005 in East Asia including China, from 24 per cent to 7 per cent in South East Asia and from 42 per cent to 32 per cent in South Asia, respectively. According to the recent estimates, which use the thresholds of US \$1.90 per day, the headcount ratio of extreme poverty has dropped from 60 per cent in 1990 to 3.5 per cent in 2013 in East Asia and Pacific (World Bank 2016).

This substantial 'growth-induced' reduction of abject poverty in Asia had taken place at the backdrop of the region-wide *comparative advantage recycling*. The initial taking-off phase was assisted with a spur in demand for unskilled and semi-skilled labour by exporting labour-intensive goods and attracting pro-trade FDI in search for a location with abundant cheap labour. However, the formation of the 'Flying Geese' and shifts of positioning within the formation have been assisted by the fact that the lead countries have constantly engaged with a strategic question of how to transform their production and trade structures by continuously upgrading their human skill endowments and technology/knowledge base. These concerted efforts in upgrading endowments and accumulation of knowledge assets through active technology acquisition and 'learning-by-doing' have allowed a shift in comparative advantages of each country in a flying-geese pattern to form a dense production network of the 'Factory Asia' within the Asia-Pacific region.<sup>7</sup>

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<sup>6</sup> See Kojima (2000) for detailed presentation of this thesis. Lin (2011) also provides a description of the Flying-Geese pattern of economic development in the Asia-Pacific Region.

<sup>7</sup> Baldwin (2012) attributes Asia's success story under the 'globalisation's second unbundling' to Asia's ability to participate actively in international supply chains that have emerged from the huge reduction

By relying on their fast-evolving dynamic comparative advantages, the economies in the region have been able to maximise the benefits from dynamic spatial externalities collectively in the context of a growing regional market. Their increasing specialisation in sectors with large spillovers and dynamic externalities has been conducive to engendering a process of *regionalisation* of supply chains and production networks, driven by vertically integrated operations of manufacturing firms based on growing regional and global markets for their products. Over time, their increasing specialisation in sectors with large spillovers and dynamic externalities was conducive to further accelerating structural transformation region-wide.

In contrast, such dynamic processes of structural transformation accompanied by steady progress in poverty reduction could not be achieved in most economies in the Africa and Latin American regions under the recent globalisation.<sup>8</sup> Most of the economies of these two regions are historically characterised with their revealed comparative advantages in natural resources and primary commodity exports. As they were unsuccessful in embarking structural transformation associated with overall labour productivity growth and a move into sectors with dynamic externalities and spillovers, they have failed to get the process of productivity-enhancing structural change underway while increasingly integrating into the world economy as globalisation has gathered pace since the early 1990s. Their revealed comparative advantage has remained largely intact and still lies in resource-based sectors.

Clearly, the thesis of the inverted U-shaped trend in global income inequality postulated in Krugman and Venables (1995) is not applicable to regions that fail to embark upon a decisive shift towards activities characterised by dynamic externalities. Their thesis predicts global income would be spatially equalising in the long run through centripetal forces and centrifugal forces in a spatial economy associated with spreads of manufacturing activities to the South.

On the whole, the employment-creating effect of growth is pronounced in the region of Asia, where globalisation has brought about a substantial poverty reduction due to vigorous growth *despite* the fast-increasing inequality discussed later.<sup>9</sup> The accelerating 'rural to urban' migration in response to the

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in the transport cost and transmission/communication cost in the late 1980s and the early 1990s. The 'Factory Asia' thus emerged along with the 'Factory Europe' and the 'Factory of North America'.

<sup>8</sup> Latin America had experienced a successful industrialisation and structural diversification process, which had started during the 1930s and was very dynamic in the first decades of the post-WWII post-war period. It peaked in the second half of the 1970s and was followed by deindustrialisation and stronger dependence on primary exports, with some exceptions (Mexico being the most important case, as it became an important manufacturing exporter). See Bértola and Ocampo (2012), chapters 4 and 5.

<sup>9</sup> See Nissanke and Thorbecke (2008, 2010) for a summary of the findings of case studies of the impact of globalisation on the poor in Asia.

rapid expansion of job opportunities has contributed both to economic growth in urban areas and to the alleviation of poverty in rural areas (1) by reducing surplus labour in agriculture, and (2) through the remittances from migrant workers that account for a significant share of rural household income in many Asian countries, including China. The process of poverty reduction has closely followed the waves of employment creations for unskilled labour and the poor in tandem with the evolution and shifts of comparative advantages within the region in the ever-accelerating integration process, as described earlier.

In contrast, such a poverty-reduction process through globalisation could not be achieved in Africa and Latin America, where liberalisation of trade and investment regimes failed to produce any meaningful employment-creating growth. Instead it has resulted in 'jobless' growth, casualisation of employment and informalisation of their economies, as Latin American case studies most vividly illustrated.<sup>10</sup> This comparison led us to argue that the employment creation effect achieved through globalisation-induced growth is a most direct channel through which globalisation can make some noticeable dent on poverty.

While the prospect of substantial poverty reduction can be increased, wherever globalisation brings about job generating economic growth, this potential is realised only when economic growth is characterised by a relatively high 'employment elasticity'. Such growth outcome cannot be guaranteed whenever globalisation/integration is embraced, on its own, as a development strategy. Instead, the dynamic integration experiences in Asia point to the need for policies of *strategic integration*, not policy of *passive integration* into the global economy—or *de-linking* from it.

Such a strategic position should, first of all, aim at facilitating the transformation of production and trade structures from the narrowly based commodity dependence that is bound to expose economies to external shocks and generate Dutch-disease effects. In terms of sustained economic growth, as Ocampo and Parra (2006) note, developing countries that have successfully diversified their exports structures into manufactured goods, in particular increasingly into medium- and high-technology sectors, have systematically outperformed those dependent on primary commodities and natural resource-based processing goods.<sup>11</sup> Thus, whether globalisation can establish a virtuous

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<sup>10</sup> See Thorbecke and Nissanke (2009) for more discussions on the effects on globalisation on poverty reduction in the Latin American region. The better record in poverty reduction in the 2000s in Latin America can be at least partially attributable to institutional innovations for social protection such as the rapid expansion in education coverage and some universal health and pension systems mixed with conditional cash transfer programs (CCTs).

<sup>11</sup> Ocampo and Parra (2006: tables 2 and 3, and figure 9).

circle or vicious circle of growth depends not only on the initial conditions at the time of exposure but also importantly on the effective design and implementation of national policies to manage the integration process.

Further, it is important to note that the historically observed ‘pro-poorness’ of growth in East Asia should not be interpreted purely as a manifestation of market-driven growth effects. The pro-poor pattern of public expenditure in favour of the rural poor in the early decades of the post-war years had in no small measure contributed to sustaining the ‘shared’ growth process in the region in those years<sup>12</sup> and laid a foundation for subsequent development. There were concerted efforts on the part of governments to facilitate building primary assets of the poor through such measures as an equitable distribution of land; extensive public provision of free and universal primary education; promotion of small-scale enterprises and development of rural infrastructure—roads, schools, agricultural support outposts, health stations and irrigation systems.

Undoubtedly, sizable public investment in capabilities and skills, as a specific pro-poor measure, is the key for ensuring positive benefits from globalisation for the poor. Further, in conjunction with building primary assets of the poor in their human capital base, there is also a need to enhance their secondary assets by investing in rural physical and social infrastructures, so that the poor can be connected and networked beyond isolated communities and villages. In terms of inter-sectoral flows, a continuing *gross* flow of resources should be provided to agriculture—irrigation, inputs, research and credit—to increase this sector’s productivity and potential capacity of contributing an even larger flow to the rest of the economy and hence a *net* surplus to finance the subsequent development of the rest of the economy. Coupled with these pro-poor measures, strategic integration requires policies of upgrading their comparative advantages towards high value-added activities by developing social and technological capabilities, which would allow climbing the technology ladder step by step through learning and adaptation. As Stiglitz and Greenwald (2014) argue, development should be understood as a process of creating a ‘learning society’.

The diverse development experiences of the different developing regions under globalisation and the factors behind these heterogeneous outcomes, discussed earlier, are further collaborated and elaborated in a number of chapters included in this Handbook.

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<sup>12</sup>A number of earlier studies (World Bank 1993; Ahuja et al. 1997; Campos and Root 1996) described the growth pattern of East Asian countries in the 1960s and 1970s as highly inclusive and viewed as a model of ‘shared growth’. As discussed later, however, such a condition has been steadily and considerably eroded as hyper-globalisation proceeded.

In Chap. 9, Xinshen Diao, Margaret McMillan and Dani Rodrik revisit their early results by examining the patterns of structural change of developing economies across regions focusing on their respective *growth acceleration episodes*, with updated data to 2010–2014. Their results confirm that in Asian economies, both pioneering Newly Industrialised Countries (NICs) and contemporary Low Income Countries (LICs) alike, high-performing non-agricultural sectors have contributed to economy-wide productivity growth by drawing labour from low-productivity sectors as well as by achieving high ‘within-sector’ productivity growth, as depicted in classical structuralist models. This is not the case in other regions. In Latin American countries, there was not much growth-increasing structural change through inter-sectoral labour reallocation. Rather, labour moved from high-productivity activities to low-productivity ones in non-agricultural sectors and premature deindustrialisation was a common result. In Africa, labour productivity within modern, non-agricultural sectors declined. Thus, during their high-growth spells, other regions could not replicate East Asia’s experiences of fast export-led industrialisation, and none of the recent growth accelerations in Latin America, Africa and South Asia was driven by industrialisation.

Clearly, growth per se is not sufficient for advancing productivity-enhancing structural changes. On this question, building on the concept of *social capability* proposed by Moses Abramovitz (Abramovitz 1986), Ha-Joon Chang and Antonio Andreoni emphasise, in Chap. 12, the need for developing *social capability*—productivity capabilities not just at the individual and firm levels but at the sectoral and social levels. The social capability requires an appropriate institutional configuration. In this context, they analyse historical examples of six specific types of institutions and their role—forms and functions—in the industrialisation process.

In Chap. 17, Raphael Kaplinsky notes that technology and innovation are an outcome of social and political constellations, and as such play central roles in determining both the pace and pattern of economic growth and the consequent development outcomes. He shows that in the transition from the inward-oriented industrialisation to the outward-oriented growth strategy in developing countries under the rolling out of the neo-liberal Washington Consensus, an increasing proportion of global trade has taken place within global value chains (GVCs) through intra-firm trade. Participating in GVCs has provided a new opportunity for technology learning and ‘functional’ and ‘chain’ *upgrading* to countries that invested heavily in human resource and social capabilities during the inward-oriented industrialisation phase and beyond. These investments were deeper in parts of Asia than in Africa and Latin America. Developing countries, where upgrading through active learn-



ing processes has been possible based on heavy investments in skills and capabilities, as in several Asian countries, have managed to avoid becoming just attractive low-cost production platforms for transnational corporations (TNCs) or stacked in low-rent links in GVCs. Thus, he argues that the deeper the insertion into the global economy, the greater the requirement for innovative capabilities if sustainable income growth is to be achieved.

Elissa Braunstein, Piergiuseppe Fortunato and Richard Kozul-Wright in Chap. 21 discuss how manufacturing can generate productivity growth both within and across industries and sectors through economies of scale and scope, which are dynamic and can create capabilities and processes that elevate productivity in a cumulative way. They also note that under the current era of *hyper-globalisation*, international trade is increasingly conducted in the domain of GVCs, where corporate interests for extracting rents dominate and determine governance and market structures within value chains. They suggest that an insertion into the bottom of value chains with weak productive capability may even delay structural transformation. The strong association between GVC participation and industrialisation observed in much of Asian region is not replicated in other regions. They call for an active development state to work out strategic and selective integration tailored to local conditions and capabilities.

Further, Chap. 11 by Michael R. Carter and Aleksandr Michuda emphasises the centrality of the question of distribution of productive assets for advancing rural development and poverty reduction. While academic and policy debates on agrarian issues in the 1960s and 1970s were conducted around the question of land reforms and asset redistribution in favour of the poor, this has given a way to less radical, market-based interventions such as microfinance, leaving the poor with their existing, modest asset endowments. They recall that the egalitarian land distributions of East Asian economies made a pivotal contribution to their relatively rapid rates of economic growth and rural poverty reduction, compared to other regions. They suggest that at least a minimum asset base is required to allow households to escape poverty, though the transfer of tangible assets alone or improved access to capital by itself is inadequate to reduce rural poverty.

Their analysis renders support to our discussions earlier on the significance of the land reforms and other pro-poor rural public investments aiming at building both primary and secondary productive assets of the poor in laying a foundation for subsequent development paths in East Asia. Such measures have not been consistently followed through in other regions, resulting in the failure of providing the poor with one of critical means to overcome the poverty trap in a sustainable manner. In the absence of decisive measures of asset redistribution, economies can get stuck in a 'developmental trap'.



### 3 Growing Inequality and Its Implications

While there has been a marked divergence in a country's ability to maintain momentum of economic growth with substantial poverty reduction as well as in advancing structural transformation agenda among the three development regions, the rapid rise in inequality is a commonly observed condition cut across the developing world as well as globally. Asia is no exception, where within-country inequality has been sharply rising as part and parcel of the integration process. In fact, Asia is leading in the rising inequality trend. China, known as the biggest winner of all from the current globalisation, has emerged as one of the most unequal countries in the world from the one previously characterised with egalitarian income distribution. As of 2013, the Gini coefficient of income inequality in China is over 50, similar to that of several Latin American countries but still far from South Africa's Gini index of close to 60. The Gini coefficient of *wealth* inequality in China is estimated to have risen by 10 percentage points over just 7 years between 1995 and 2002, when the fastest increase was recorded, and stabilised at that high level since then (World Bank 2016). China is in the second place only after the United States with respect to the number of millionaires and that of ultra-high net worth individuals in 2018. Asia has become the region to house the largest number of millionaires and billionaires in the world (Credit Suisse: Global Wealth Report 2018).

The scale of global inequality is striking. Based on household surveys worldwide, Milanovic (2012) calculates that the top 1 per cent received almost 29 per cent of global income in 2008 compared to 11.5 per cent in 1990, while the top 8 per cent received 50 per cent of global income. Milanovic (2016) presents his updated estimates of the Gini coefficient of global income inequality among world citizens, which effectively combine between-country and within-country inequality.<sup>13</sup> This index was consistently above 70 up to 2008 before declining to 63 in 2013. He notes that the recent gradual decrease in global inequality after the turn of the twenty-first century was largely due to the decline in population-weighted 'between-countries' inequality. It reflects the rapid rise of average income and 'middle classes' in populous emerging economies such as China and India.<sup>14</sup> In fact, within-country

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<sup>13</sup>This is based on the survey results of income/consumption expenditures per household, expressed in 2011 Purchasing Power Parity (PPP) exchange rates.

<sup>14</sup>On the other hand, referring to this decline, Bourguignon (2015) presents a longer historical series of global inequality and notes that from 1820 to the 1990s global inequality steadily rose, but it started declining gradually in the first decade of the twenty-first century, which is also to the narrowing 'between-country' inequality, reflecting the rise of average income of emerging economies.

inequality for the average person in the world was much wider in 2013 than 25 years ago (World Bank 2016).

The scale of *wealth* inequality is much higher. Recent statistics released on world *wealth* distribution tells us most vividly how much global inequality has grown over the recent decades: of the total world wealth estimated at about US \$317 trillion in mid-2018, the wealth of 1 per cent richest people is equal to US \$149 trillion. That is, about 47 per cent of world wealth belongs to the top 1 per cent richest people, while the top 10 per cent owns 85 per cent of world wealth. Similarly, the scale of world wealth inequality can be gauged by the revelation that the bottom half of world's population collectively owns the same as the richest 85 people in the world. There are 42 million millionaires worldwide.<sup>15</sup> These numbers can be placed in the context that as of 2013 there are 767 million extreme poor whose income or consumption expenditure per day is below the international poverty line of US \$1.90.

In the presence of the astounding degree of inequality, social cohesion has been threatened in many parts of the world. Social and political tension has been further rising throughout the North Atlantic financial crisis of 2007–2009 and the subsequent fragile recovery. In the ever-increasingly disequalising world, it is often the poor and the vulnerable who are to bear the heaviest cost for the outcome of relentless global market forces and unregulated markets.

The rising inequality and the fear that the poor are hurt most under globalisation have long generated passionate debates worldwide as well as powerful anti-globalisation movements since the 1990s. These debates have been typically polarised between the proponents and supporters of globalisation, who identify globalisation under neo-liberal policy regimes as a 'win-win process' in the long run on the one hand, and those who identify corporate-led and finance-centred globalisation as a 'winner takes all' process on the other (Kozul-Wright and Rayment 2007).

More recently, however, the marked changes in relative economic positions among countries resulting from the rapid rise of emerging economies in the South have generated new kinds of political fallouts and popular movements. In particular, these changes have given rise to high anxiety and job insecurity among the vulnerable and the working poor in the 'North' as globalisation has intensified. They are the ones who have been hit hardest by the North Atlantic financial crisis of 2007–2009 and the subsequent feeble recovery. At the back of their increasing discontents over the past decade, the rise of populism and nationalism has decisively taken a hold on an anti-globalisation stance, basing its rhetoric on the grievance of the losers consisting of lower income working class within the developed countries. Their anti-globalisation sentiments are

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<sup>15</sup>Credit Suisse, Global Wealth Report 2018 and World Inequality Lab (2018).

often expressed through anti-immigration, anti-establishment and protectionist platforms with a simplistic message: 'jobs are stolen from us'. The rise of populism has been on the rise in the 'South' too to become a global phenomenon.

Although any observed trend in inequality cannot be exclusively attributed to the 'globalisation' effect as such, numerous empirical evidences pointing to the increasing inequality under contemporary globalisation cannot dismiss the concerns raised that the globalisation process, as it has proceeded so far, has had adverse effects on income distribution. In this context, Nissanke and Thorbecke (2006a, b, 2010) examined various transmission mechanisms in the globalisation-growth-poverty nexus and suggested that (1) globalisation affects poverty through two different paths: first, through its contributions to the *growth channel* and, secondly, through its impact on *distribution channel*; and (2) these two main channels interact dynamically over time to produce a growth-inequality-poverty triangular relationship; (3) while globalisation-induced growth can benefit the poor as shown in the Asian experiences, the ultimate poverty-reduction effects will depend also on how the growth pattern under globalisation affects income distribution, since inequality is the *filter* between growth and poverty reduction; and (4) several specific features associated with the current phase of globalisation have contributed to producing amplified adverse effects on the poor and income and asset distribution through the combined effects of the growth and distribution channels.

In these contributions, Nissanke and Thorbecke highlighted five features of the current wave of globalisation, which have affected globally the functional income distribution between labour and capital decisively against the former. They are as follows. (1) The nature of technical changes biased in favour of capital and against labour, the asymmetrical access to new technology and knowledge and the uneven process of technology diffusion.<sup>16</sup> (2) The differential treatment of international migration flows between skilled and unskilled workers, which produces a greater migration of skilled labour from developing countries to developed countries, while unskilled labour migration tends to be strictly controlled. This has prevented wage equalisation from taking place through labour migration, as was the case in the previous globalisation era. (3) The perverse movement of capital flows often flowing from developing or emerging market economies to developed countries. Private cross-

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<sup>16</sup>Although the technological changes and the globalisation effects are often entered as a separate factor in accounting for the falling labour income shares in a number of empirical studies (e.g., IMF 2017), these two are closely bundled together from a perspective of developing countries, where skill-biased technological changes are embodied in goods and services imported from the rest of the world. Hence, technical changes can be seen as one element of globalisation effects.

border flows bear characteristics more of *diversification* finance conducted through asset swapping for risk hedging and shedding than *development* finance. As such, these capital flows are highly volatile and pro-cyclical, reflecting swift portfolio rebalancing acts on the part of global investors and financial institutions in the face of the global liquidity cycle. (4) Uneven, skewed FDI flows, which have not necessarily guaranteed host developing countries access to potential benefits in management know-how and knowledge transfer. (5) As intra-firm trade has taken a growing share of international trade, trade and investment flows have become closely interwoven in the formation of GVCs. Governance in GVCs are structured towards meeting TNCs' interests and requirements. The poor and unskilled working in the lower end of GVCs as well as smallholders engaged in global commodity chains are most adversely affected by asymmetries in market power and access to information, technology and marketing in relation to TNCs.

In particular, the differentiated degree of cross-border factor mobility (skilled labour and capital vs. unskilled labour and land) has considerably weakened workers' bargaining positions globally, in developed and developing countries alike. Workers are losing out, as de facto labour mobility takes place through the increasingly free cross-border capital mobility and TNCs' ability to re-locate production sites in response to changes in relative labour costs. In response to the associated foot-looseness of production sites and in fear of driving away TNCs, governments of developing countries are less likely to enact regulations to protect and enhance labour rights or protect local environment.<sup>17</sup> The unwillingness or inability to tax international mobile capital in the face of tax competition and fear of capital flight and asset migration has, among other conditions, contributed greatly to the erosion of the capacity of governments to raise revenues for redistribution purposes.

This has led many to regard globalisation as driven by the interests of big TNCs or large financial institutions. Under *corporate-led* and *finance-centred* globalisation as known by many, globalisation has resulted in the weakening capacity of national governments to protect their domestic stakeholders' rights and interests and created a 'race to the bottom' regulatory environment. Concerns are particularly strong about the increased vulnerability of the poor to globalisation forces that generate greater fluctuations in income and expenditure caused by global shocks, such as the various financial crises of many emerging economies in Latin America and Asia in the 1990s and the North Atlantic financial crisis of 2007–2009 or food and other crises affecting the world economy, all of which did hurt disproportionately the poor everywhere, including those in 'vulnerable employment' and the 'working poor'.

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<sup>17</sup> See Basu (2003).

Several chapters of this Handbook highlight particular features of contemporary globalisation with important distributional consequences and shed light on how to attenuate the negative effects on inequality. In Chap. 19, Deepak Nayyar compares international trade, investment flows and migration flows under the current wave of globalisation with the 'globalisation in the age of empire'. Though there are substantial differences in the nature of integration through all these flows, he emphasises that the most striking difference between the two eras of globalisation lies in the sphere of cross-border labour flows with stern implications for world income distribution. Under the previous wave of globalisation, there was a mass emigration of more than 50 million white settlers from the land-scarce Europe to the land-abundant New World and Africa. With no restrictions on cross-border movement of people, international migration played a critical part in shaping the world economy at that time.<sup>18</sup> While international migration is still substantial today, the nature of migration has undergone significant changes because of restrictive immigration laws and consular practice on unskilled labour movements. It resulted in an increased proportion of temporary guest workers, illegal migrants and refugees in migration flows. Yet, professionals with significant skill premiums are treated differently and remain 'free' as capital in cross-border mobility. He notes that the differential mobility of capital and immobility of labour have changed the nature of the employment relationship and reduced the bargaining power of trade unions.

At the same time, as noted in Chap. 22 by Hania Zlotnik, though international migration has become highly regulated, international migration flows have been increasing and diversifying in its origin and destination between 1960 and 2010. She also draws our attention to the contribution of remittance made to economic development by raising household incomes and welfare, and productivity in agricultures and microenterprises, all of which has contributed to poverty reduction. Remittance flows has become the second largest source of external finance after FDI, surpassing the official development assistance for many developing countries. Importantly, remittance flows are more stable than other financial flows to be counted throughout economic cycles.

In Chap. 10, Rolph van der Hoeven shows how trade globalisation, investment liberalisation and financialisation along with skill-based technical change have acted as powerful 'exogenous drivers' of inequality under globali-

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<sup>18</sup> During the previous globalisation, there were, however, constraints on the movement of Asian, particularly Chinese and Indian labour, to territories that were considered to be destined for the white population, with notable cases being Australian and US restrictions in this regard. So, Asian migrants largely moved around the tropics.

sation. He argues that as globalisation has intensified since the 1990s, the adverse effects of exogenous drivers have been exacerbated by the range of national policies pursued, which include monetary policies that emphasised price stability over growth, labour market policies that weakened bargaining position of labour vis-à-vis employers and fiscal policies that prioritised fiscal consolidation at the expense of benefits and progressive taxation. Hence, he calls for reorientation of these national policy packages and institutional frameworks so as to counteract distributional consequences of globalisation by reversing the increasing inequality trends and reducing inequality in income, wealth and human capital endowments. He shows this possibility in several examples of Latin American countries in late 2000s, where high *primary* income inequality has been mitigated by fiscal policy instruments and other measures, resulting in much lower *secondary* and *tertiary* income inequality.<sup>19</sup>

Servaas Storm and Jeronim Capaldo in Chap. 16 follow up on this theme, focusing their analyses on labour market regulatory regimes. They challenge the foundations of mainstream analyses used for justifying sweeping deregulation of labour market institutions observed worldwide under globalisation. The dominant position by mainstream literature is that labour market regulations and institutions such as providing for minimum wages, unemployment insurance, employment protection, improving working conditions or facilitating collective wage bargaining would reduce economic efficiency by raising labour costs and hence harming countries' competitiveness. These regulations are also claimed to harm investment and growth, and cut secure jobs and push workers into precarious informal employment. However, as they argue, these claims are founded on weak and partial theoretical grounds and static analyses, and the empirical evidence in support for them is not robust. Instead, labour regulations could generate benefits in raising dynamic efficiency through a number of channels, including improvements in labour productivity, inducing innovation through employer-worker cooperation, improving income distribution by raising labour share of income and thus increasing aggregate demand and the size of markets. They argue that labour market regulations, which are desirable in its own right, must be treated as a strategic development policy tool complementary to, and in support of, industrial policy.

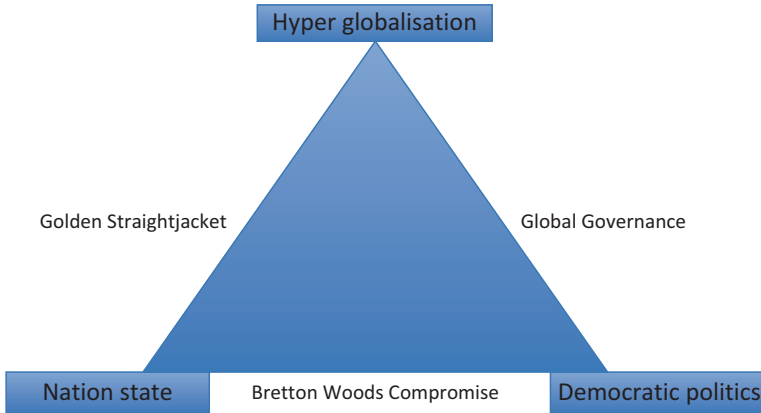
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<sup>19</sup>Primary income distribution is the distribution of household incomes consisting of different factor incomes before tax and subsidies, whilst secondary income distribution is the distribution of household incomes after deduction of taxes and inclusion of transfer payments. Tertiary income distribution is the distribution of household incomes when imputed benefits from public expenditures are further taken into account.

Maria S. Floro in Chap. 8 emphasises that the processes of economic and social transformations are *gendered*, with differential impacts on women and men. From this perspective of feminist economics and gender studies, she notes two opposing effects of globalisation on women. On one hand, the majority women's increased access to paid employment can enhance their autonomy and bargaining power, and this can challenge old patriarchal forms and gender norms and may reduce gender inequality. On the other hand, they remain at the bottom of the labour hierarchy and social ladder, often burdened with both domestic and labour market responsibilities. While noting these two offsetting trends, she highlights the importance of analysing effects of globalisation on women in relation to the general changes taking place in labour market conditions under globalisation worldwide. First, globalisation has led to 'increasing flexibilisation' of work processes, the decline in workers' voice and labour union memberships. Given these trends, TNCs as well as local businesses find it easier to use contingent labour and resort to casual or subcontracted work arrangements to minimise their costs. Many jobs are informalised and wages are pushed lower for women, who tend to be concentrated at the lower levels of the value chains and low-productive informal sector activities. Second, 'feminisation of the labour force' is observed. In Africa, women have often taken on farming and off-farm employment as male household members migrate to the urban areas. Export-led growth in Asia and Latin America has resulted in the growth of female employment, especially in labour-intensive manufacturing and service sectors, where women have provided a cheap and flexible labour force.

All in all, there is no doubt that purely market-driven economic growth and globalisation have historically had a tendency to increase inequality, as 'global markets and globalisation are inherently disequalizing' (Birdsall 2006: 18). Therefore, establishing robust institutions to 'govern markets' at national and global levels is always necessary and critical so as to counteract market forces and stem the tide of increasing inequality by adopting adequate redistribution measures and effective regulatory regimes. The problem with the current wave of globalisation lies in the fact that it has proceeded on the unproven premises of the supremacy of neo-liberal economic policy regimes. This has led to considerably debilitated institutional and regulatory environments at both national and global levels for preventing crises as well as alleviating negative distributional consequences. The capacity and will of nation states to mitigate the rising 'within-country' inequality has been enfeebled. At the same time, the existing international system of governance is weak and ineffective for prevention and management of economic crises of global scale





**Fig. 2.1** Political Trilemma of the world economy

Sources: Adapted from Fig. 9.1 in Rodrik 2011

and steering the course of globalisation through international cooperation and coordination.

Clearly, the policy space of nation states has been eroded considerably in the name of globalisation. Rodrik (2011) offers a thesis of the *Political Trilemma* to examine why this condition prevails as economic integration has deepened over the past four decades. He postulates that the nation state (sovereignty), hyper-globalisation and democratic politics are mutually incompatible and we cannot have all three objectives at once. According to this thesis as shown in Fig. 2.1, under ‘hyper-globalisation’ with a pursuit of deep economic integration, one has to opt for *either* the system of the ‘Golden Straitjacket’ such as the policies pursued under the gold standards before WWI with little democratic politics *or* the system of ‘global governance’ at the cost of national sovereignty. In short, his thesis highlights that there is fundamental tension between hyper-globalisation and democratic politics at the nation-state level, that is, national democracy.<sup>20</sup>

With reference to this thesis, Rodrik explains how hyper-globalisation can impinge on democratic decisions of a sovereign nation in policy choices over a host of areas such as labour standards, corporate tax, health and safety standards, regulatory takings and industrial policies in developing countries. If the imperative of hyper-globalisation is taken for granted and the world economic system opts over for the ‘Golden Straitjacket’ regime, governments would be enticed to pursue policies primarily to earn market confidence and attract

<sup>20</sup> It is also interesting to detect, in this thesis, a potential discord between economic liberalism in its *neo-liberal* genre and liberal democracies as political institutions, although these two are often presented together to the rest of the world signifying the virtue of the Western institutions over the others.



trade and capital inflows with tight money, small government, low taxes, flexible labour markets, deregulation, privatisation and openness all around. He continues to suggest that whilst we may be far from the classical gold standard, the demands of hyper-globalisation require a similar crowding out of domestic politics accompanied by changes in institutional arrangements towards the ones characterised by the insulation of economic policymaking bodies (central banks, fiscal authorities, regulators); the disappearance (or privatisation) of social insurance and the push for low corporate taxes; the erosion of the social compact between business and labour; and the replacement of domestic developmental goals with the need to maintain market confidence.<sup>21</sup>

It is not difficult to notice that the policies listed here by Rodrik are the hallmarks of the packages contained in *policy* conditionality embedded in the Washington and Post-Washington Consensus. As discussed in Chap. 15 by Machiko Nissanke, for several decades, experiments with policy conditionality attached to aid and debt relief have undermined the sovereignty in domestic economic policymaking as well as the fragile nascent democracy of many 'recipient' countries amidst sovereign debt distresses and crises. As suggested earlier, it is also these policies and institutional set-ups wrapped up under a neo-liberal regime that have been actively promoted as indispensable for benefitting from globalisation. Yet, they are also the ones identified in our discussions as key factors that have contributed to growing inequality—an inevitable distributional outcome of hyper-globalisation as practised.

For Rodrik, the second option available in pursuing hyper-globalisation, that is, deeper economic integration under the 'global governance' model is impractical anytime soon as well as undesirable, as national sovereignty and democracy are sacrificed. He reckons that while there is nothing inherently contradictory between having a global rule-based regime and national democracy, democratic global governance in a model of global federalism held in check of new mechanisms of accountability is probably a century away. He suggests that presently the global governance model based on the concept of global citizens lacks legitimacy, as democracy is practised mostly at the level of nation states.<sup>22</sup>

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<sup>21</sup> See Rodrik (2011: 201–202), where lists of these policy packages associated with, and institutional requirements for, hyper-globalisation are presented.

<sup>22</sup> European Union (EU) is a notable exception to this, as it tries to organise a democratic legitimacy at the regional level, while preserving nation states' sovereignty. However, the recent crises within the EU plentifully demonstrate that it is not easy to guarantee the success and the sustainability of their political project.

## 4 Challenges Ahead

Despite the potential of globalisation in accelerating economic growth and development through the spread and transfer of technology and the transmission of knowledge and information, *hyper-globalisation* as practised to date—corporation-led and finance-centred and purely market-driven integration—has exposed itself to the reality that the process is unsustainable socially, economically and politically as well as ecologically, with discontents growing all around. There is urgency for us all to engage with the pivotal question how to make globalisation work for inclusive and sustainable development, and to arrest the tide of the political fallouts with grave consequences for the global community. Rodrik succinctly summarises our task ahead by remarking ‘our challenge is to render the existing openness sustainable and consistent with broader social goals’ (Rodrik 2011: 253).

Rodrik’s own version of ‘managed’ globalisation—more restrained forms of globalisation presented as ‘smart globalisation’ or ‘sane globalisation’—is built on the Bretton Woods compromise, in which the nation states remain the principal locus of democratic politics. It embraces the principles that (1) markets must be deeply embedded in the system of governance and social institutions of nation states; and (2) globalisation should be proceeded on the basis of firm recognition of *institutional diversity* in social arrangements and regulations so that nation states are accorded *policy space*, and their democracy and sovereignty are not impinged. By placing globalisation on a sound footing of the centrality of nation states, he discusses how to reform the existing international systems of governing cross-border flows of trade, finance and migration.

While respecting the principle of national sovereignty is undoubtedly critical for designing and implementing wide-ranging social and developmental policies,<sup>23</sup> there are also many cross-border economic policies requiring effective coordination and cooperation among nation states. Whichever form globalisation would take, it is undeniable that all economies are much more inextricably intertwined and interdependent than the earlier years of the Bretton Woods compromise. In many areas, individual nations cannot take actions in isolation without generating spillovers beyond their borders as well as being affected by others’ policy decisions. For example, without cooperation on regulatory regimes, free cross-border flows allow regulatory arbitrage to take place, leading to a ‘race to the bottom’. Further, there are issues that can be addressed only at a global level, such as provision of global public

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<sup>23</sup>This is discussed by one of us in Chap. 15 of this Handbook in the context of ensuring aid effectiveness and debt sustainability.

goods (GPGs), including the provision of pure GPGs with non-rival and non-excludable characteristics; dealing with goods with significant cross-border externalities; managing of the global commons; and shared infrastructure and networks (Ocampo 2016). For example, the provision of GPGs covers addressing global negative externalities such as reduction of greenhouse effects, preserving ecosystems and biodiversity, eradication of global poverty, prevention of global financial crises, combatting international tax competition and evasion/avoidance, as well as the preservation of global security, nuclear disarmament, prohibition of biological weapons, the fight against human pandemics and the defence of human rights and those of migrants, among other global challenges. These issues require a robust and effective international system of governance as well as cross-border regulations and enforcement mechanisms.

In this regard, Ocampo (2016) explains why full sovereignty advocated by Rodrik cannot prevail in addressing issues such as the domain of GPG provision because of the latter's 'interdependence' attribute. Hence, he argues for conducting cooperation and coordination in these areas on the basis of the principle of 'responsible sovereignty' with 'common but differentiated responsibilities'.<sup>24</sup> He also calls for gradually building up democratic spaces of an international character, perhaps as a part of a transition to a partial transnational federal order in the long run. For now, however, we are still a long way from such a transnational order. In fact, under hyper-globalisation, economic globalisation has outpaced political globalisation by a wide margin, as Stiglitz (2006) remarks. Deep economic integration has been promoted without institutional underpinnings and a robust system of global governance in place. As a result, the existing international systems of governing markets are imperfect and weak and not fit for the purpose for steering the course of globalisation to a sustainable path. Presently, we are not equipped to deal with the global issues of enormous proportions through coordination and cooperation in a satisfactory and timely manner. Furthermore, the current system of global governance suffers from democratic deficit.<sup>25</sup> Without addressing these weaknesses, the 'policy space' accorded to nation states may prove of limited value in many critical economic policy arenas where nation states and their economies are so interdependent. This leaves plentiful room for reforms in multiple areas and dimensions.<sup>26</sup>

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<sup>24</sup> See Ocampo (2016) for more detailed analyses on these issues. He underscores how the 'sovereignty paradox' applied in the GPG provision presented in Kaul (2013) is related to Rodrik's 'globalisation paradox' discussed earlier.

<sup>25</sup> See Nayyar (2002), Stiglitz (2006) and Ocampo (2017).

<sup>26</sup> Ocampo (2016, 2017) contains detailed discussions on how to build a better global governance structure.

In any case, a world in which global economic—and, we could add, social and cultural—integration has significantly advanced but ‘global governance’ is being attacked by some powerful nations, what must be found is an *adequate mix between global governance and adequate ‘policy space’ for national rules* in relevant economic, social and, of course, political areas. Otherwise, we may end up in a world totally dominated by the interest of powerful nations and in which power struggle among them becomes the form of ‘global governance’. That world system is certainly worse than that build around the (no-doubt imperfect) global governance regime that has characterised the post-WWII period. This is clearly shown in the very adverse features of the imperialist expansion of the late nineteenth and early twentieth centuries during the globalisation that took place at the time, and even of global political and military dimensions of global governance during the ‘cold war’ of the post-WWII period.

Various chapter authors of this Handbook examine the question of ‘sustainability’ through a lens of their respective thematic topic and indicate several pathways for making globalisation work for sustainable and inclusive development.

In Chap. 21, Elissa Braunstein, Piergiuseppe Fortunato and Richard Kozul-Wright express their doubts over sustainability of export-led industrialisation models, if they are pursued on the basis of low unit labour costs and taxes. They argue that such strategies must sooner or later reach their limits when many countries adopt simultaneously, as competition results in a fallacy of composition and a race to the bottom. Robert Boyer in Chap. 6 also argues that the export-led growth model adopted by a weak state should be sharply distinguished from the innovation-led export-led growth model pursued by a developmental state of East Asia discussed in Sect. 2. While the latter is driven by the state’s strong motivation for fast technological catching up and upgrading to production and exports of high value-added goods, the former export-led model is based on flexible and suppressed wage labour and an insertion into a lower end of global value chains by producing standardised intermediate or final consumption goods. Economic growth in such a model is overly dependent on external demand and remains precarious and vulnerable, as found in Mexico’s experiences with the North American Free Trade Agreement (NAFTA).

A similar assessment is made by Servaas Storm and Jeronim Capaldo in Chap. 16, who argue that the declining labour shares over the last 30 years have resulted in a vicious circle of deteriorating income distribution, declining domestic demand, a growing dependence on external demand and higher financial fragility. In contrast, a higher labour share can provide the founda-

tion for realising a self-reinforcing ('cumulative') demand-driven industrialisation process in which faster growth creates more and better paid jobs, increasing demand, spurring investment and thereby enhancing (embodied) technical progress, allowing manufacturing to expand further. They note that industrialisation that gives rise to sustained growth and development is the one that relies strongly on dynamic domestic demand (Storm 2015; UNIDO 2017), which in turn is sustained by well-paying and stable employment and fair income distribution (Ocampo et al. 2009). Not only does labour market regulation have positive impacts on productivity growth, employment, equality and competitiveness through the Keynesian-Kaldorian channel by raising the labour income share, but it also protects economic and social rights (including the right to strike and free, safe and fair working conditions) and fundamental human rights (e.g., the freedom of association and the prohibition of slavery, exploitation and forced and compulsory labour).

Noting that the global economy is experiencing interlocked crises of economic, environmental and social sustainability, Kaplinsky in Chap. 17 argues that the current trajectory of innovation has posed significant problems with regard to both social and environmental sustainability. The Schumpeterian motor—a driver behind capitalist accumulation—is in itself incapable of addressing external diseconomies such as environmental degradation or social discontents stemming from the growth trajectory associated with the current wave of globalisation. Hence, the growing recognition of the societal challenges posed by the triple bottom line sustainability has also reinvigorated the drive for more appropriate technology and inclusive innovation.

With respect to dealing with frequent occurrences of financial crises and ensuring financial and economic sustainability, in Chap. 14, Fernando Cardim de Carvalho, Jan Kregel, Lavinia Barros de Castro and Rogério Studart note that upon the North Atlantic financial crisis of 2007–2008, the policies of financial liberalisation, both domestic and external, have been finally put under an intense scrutiny in relation to provision of development finance. The needs for prudential regulations and controls are no longer in dispute. The potential roles of national development banks are more widely accepted again, and regional and global infrastructural banks have been established for providing development finance. However, they conclude that while the legacy of the financial liberalisation may be more ambiguous than their radical supporters and opponents may think, we will require new financial architectures to address the consequences of environmental degradation and climate change, and the challenges of poverty and inequality and transformation of our social and economic infrastructures.

In Chap. 20, referring specifically to consequences of financial globalisation, Ricardo Ffrench-Davis and Stephany Griffith-Jones argue that (1) ‘financierism’ has prevailed over ‘productivism’, because international financial markets are dominated by pro-cyclical behaviour of short-term operators, and capital flows are mostly disconnected from capital formation; (2) increasing integration with more volatile international financial markets has led to greater instability; (3) effective and efficient capital account regulation is required to allow counter-cyclical monetary and exchange-rate policies to be implemented; and (4) a reformed financial system is crucial to reduce high structural heterogeneity of developing economies and facilitate structural transformation and innovation, to achieve a dynamic, sustainable and inclusive development model, and provide counter-cyclical finance.

In Chap. 23, José Antonio Ocampo takes up the question of how to reform the dysfunctional international monetary and financial architecture, which has been evolved in an ad hoc way after the collapse of original Bretton Woods arrangements in the early 1970s. The reform is particularly important for emerging and developing countries, which are subject to strong boom-bust cycles in external financing and hence are forced to ‘self-insure’ to manage the associated risks through the accumulation of large foreign exchange reserves, severely face the inadequacies of the crisis management facilities currently available, and have inadequate voice and participation in the governance of the system. Referring to it as the ‘non-system’ that has evolved, he exposes the major problems of the currently prevailing condition in a number of areas, including the following: (1) the global reserve system, in which the fiduciary dollar is the main global currency with the special drawing rights (SDRs) playing a secondary role and other major currencies floating against each other; (2) while the International Monetary Fund (IMF) lost in 1997 the call to include ‘capital account convertibility’ in its Articles of Agreement, market pressures and mainstream economic thinking largely imposed this principle in practice; (3) despite IMF’s failed attempt in the early 2000s, a formal debt restructuring system is absent and debt restructuring is limited to market-based mechanisms; and (4) global monetary policy cooperation has to rely on ad hoc bodies (G’s) together with stronger bilateral and multilateral surveillance by the IMF of macroeconomic policies of major economies and their linkages. He proposes a comprehensive yet evolutionary reform in seven areas, with the objectives of making a more *equitable* system consistent with a reasonable level of *global* macroeconomic stability (see a more detailed analysis in Ocampo 2017).

In Chap. 18, Edward B. Barbier highlights the importance of considering the increasing link between ecological scarcity and poverty in developing

countries for examining the sustainability of the ecosystems consistent with economic development. He emphasises the need to address issues of *intergenerational equity*, which requires balancing the needs of the present and those of future generations, as well as *intragenerational equity*, which entails reducing the current income and wealth inequality gap between and within nations. Given the impending danger of the collapse of the remaining ecosystems, discussions on ecological sustainability understandably focus on the former aspect, that is, protection of ecosystem for the sake of future generations, and placing limits on the exploitation or irrevocable loss of ecological capital *and* expansion of economic activities and populations in relation to 'planetary boundaries'. In doing so, however, the chapter reminds us that there are uneven distributional consequences of ecological decline and the cost of adjustments, as the rural poor of developing countries and their economies are disproportionately affected by both the increasing scarcity of ecosystem and required adjustments. In this context, along with other proposals such as involving private corporations in preserving ecosystems, the chapter explores options for dealing with the global market failure through compensating developing countries for conserving ecosystems, through international payments for ecosystems services and new international environmental agreements.

In Chap. 24, Inge Kaul shows that while the global community adopted, back in 2015, the 2030 Agenda for Sustainable Development to promote growth and development on a global scale that is economically, socially and environmentally sustainable, we face global challenges due to the underprovision of GPGs. The latter cover wide-ranging issues such as climate change mitigation, ocean health, communicable disease control, financial stability, conflict prevention and peace, and the universalisation of such norms as basic human rights as well as tackling cyber-security and the risk of misuse of artificial intelligence and other new technologies. Given that development and GPGs provision are interlinked, she emphasises the urgency of reforms of the current system of governance, which acts as a major impediment. She locates the root cause of the problem in the absence of a systematic theory of *global* public policy and GPGs provision. Currently, GPGs are primarily being addressed through the *market-centred* public policy approaches and treated as if they were national public goods or development-cooperation concerns. On this ground, she argues that a major responsibility for fostering governance for global sustainability rests with social-science scholars.

Indeed, there is widespread dissatisfaction with the increasingly narrower scope of the approaches taken by mainstream development economics. Its theoretical framework is seen as inhibiting us from addressing adequately



multi-dimensional sustainability challenges. With this in mind, the Handbook includes several chapters that provide us with pluralistic approaches to development in their methodological and conceptual frameworks. These alternative schools view development distinctively as *processes of social and economic transformation* in contrast to the more static equilibrium view of the world in the neoclassical paradigm.

For example, in Chap. 13, Sakiko Fukuda-Parr and Ismael Cid Martinez suggest that much of development economics, whether in the mainstream or heterodox tradition, suffers from confusion over means and ends in development discourses. They underscore the importance of adopting, instead, human development as a development paradigm. It is based on Amartya Sen's capability approach to development, which advocates for 'people-centred' development with focus on improving human wellbeing. They highlight that it has increasingly become accepted discourse of global debates, as reflected in the 2030 Agenda for Sustainable Development. Hence, they suggest that the capability approach embedded in the human development paradigm is central to our critical evaluation of globalisation effects on development and it is complementary to human rights-based approaches and feminist economics.

It is therefore not surprising to find similar positions taken up by Maria S. Floro in Chap. 8. In her view, the human development framework with an emphasis on entitlements, capabilities and development introduces an alternative framework in which the goal of gender equality can be embedded. It shifts the focus away from increase in material consumption as the goal of development to enhancing the overall wellbeing of women and men. Building on this framework, feminist economics provides direction for further exploration by redefining economic development as a process of economic and social transformations for ensuring *social provisioning* and the betterment of human wellbeing, involving a shift in value away from material accumulation of capital, wealth and increases in material consumption. Further, she shows that social provisioning and wellbeing are fundamentally ecological concepts. An emphasis on these goals lends itself to concern with future generations and with sustainable production, consumption and allocative processes, implying the necessity for reliance on and interdependence with nature rather than exploitation of nature.

In Chap. 4, Amitava Krishna Dutt notes the resurgence of interests in the structuralist approach, which emphasises the importance of 'structures' in affecting the economic development of developing countries, differences in structural characteristics of different countries and the need for structural change. He reminds us that it amounts to the denial of the 'monoeconomics' claim of the mainstream neoclassical approach, as referred to by Hirschman



(1981)—a claim that all economies can be examined using the same approach since they are similar. Amitava Dutt highlights the differences in the view of the world and policy perspectives between the two approaches: (1) while the neoclassical approach is generally organised in terms of the optimising individual, the structuralist approach focuses on the system as a whole and its structure, either of individual countries or of the global economy as a whole; (2) while the former views different economies as being similar with markets allocating resources efficiently, the latter, with an emphasis on widely different structures across countries, would see market allocation can result in a variety of different outcomes; and (3) while the former offers the ‘one-size-fits-all’ recipe, and its neo-liberal version advocates minimalist governments with focus on macro stability, the latter gives a major role to the government in promoting economic development through structural change. Hence, the structuralist approach sees state intervention in a positive light, if done in a flexible and context-specific manner.

In Chap. 5, Valpy Fitzgerald notes that the macroeconomic dimension of public economics has got due attention back in academic and policy debates in development economics over the past two decades. He reminds us that public economics is central to development theory, as the former provides an analytical framework for addressing issues such as externalities and market failure. The framework is critical for understanding the scope and the efficacy of state intervention necessary for addressing structural change and unequal distribution or external shocks, all of which are classical questions facing developing economics. The chapter shows how important it is to restore the conceptual place of public economics in development economics for designing appropriate public economic policies for achieving fiscal sustainability and ensuring social equity. It underscores the renewed need for an active ‘developmental’ state to control sufficient fiscal resources to ensure economic sustainability and social cohesion while mitigating the uncertainty caused by the global economy. At the same time, as all economies are integrated and inter-linked through financial markets, international tax cooperation is essential for effective fiscal management by nation states.

Chapter 6 by Robert Boyer introduces the Régulation Theory, which offers a dynamic theory for understanding economic development as a long-run historical process from a comparative perspective, explicitly recognising a multiplicity of national trajectories. It discusses a variety of development modes: (1) inward-oriented state-led industrialisation; (2) export-led model with a weak state; (3) an innovation-based export model led by a development state; and (4) an investment- and export-led model by an omnipresent party-

state, such as observed in China. He suggests that development does not take place when institutional forms do not cohere, as observed in rentier economies with natural resource curse, resulting in a clientelist state, or economies characterised by the mirage of an external finance-led development. At the same time, the regulation theory implies the temporality of a development mode, as its very success can lead to its structural crisis through erosion of the hegemonic block, structural change in the international relations and excessive confidence in the long-run viability of the development mode. Thus, he argues that the resilience of development modes is limited in space and time. In relation to future development, he presents several ways forward, suggesting, among others: (1) development is not the search for an optimal static equilibrium but the art of *creating virtuous circles* in which social values, organisations, institutions and technological systems co-evolve; (2) development modes are built upon the discovery of possible institutional arrangements which fulfil conditions of dynamically reproducing the social relations, including political legitimacy, and of sustaining the process of accumulation; and (3) there is no canonical development model that could be implemented everywhere and all the time.

Finally, in Chap. 7 Richard R. Nelson presents modern evolutionary theory as an effective framework for understanding the economic development process and dynamics, as an alternative to the neoclassical theory. He discusses the critical differences between the evolutionary approach and the neoclassical one: (1) the former sees modern market economies as dynamic systems, in a Schumpeterian sense, with constant changes induced and driven by unknown technological and institutional innovation, while the neoclassical analyses focus on Walrasian equilibrium states and configurations; (2) in the neoclassical world, economic actors are assumed rational and make optimal decisions, while in evolutionary theory their rationality is bounded and actors do take decisions in innovative ways in response to constant changes taking place in a world characterised by uncertainty. Furthermore, after fully taking the institutional complexity into account, the new evolutionary growth theory sees economic growth as the result of the co-evolution of technologies and institutional configurations, covering firm and industry structures, and supporting and governing institutions, including a variety of non-market institutions and regulatory systems. Applying this perspective as an '*appreciative*' theory enriches our understanding of the catching-up process involving not only accumulation, but also importantly assimilation and learning in a variety of ways.

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# **Part II**

## **Methodological and Conceptual Issues in Development Economics**



# 3

## The History and Evolution of the Development Doctrine, 1950–2017

Erik Thorbecke

### 1 Introduction

The economic and social development of the Third World, as such, was clearly not a policy objective of the colonial rulers before the Second World War.<sup>1</sup> Such an objective would have been inconsistent with the underlying division of labour and trading patterns within and among colonial blocks. It was not until the end of the colonial system in the late 1940s and 1950s, and the subsequent creation of independent states, that the revolution of rising expectations could start. Thus, the end of the Second World War marked the beginning of a new regime for the less developed countries involving the evolution from symbiotic to inward-looking growth and from a dependent to a somewhat more independent relation vis-à-vis the ex-colonial powers. It also marked the beginning of serious interest among scholars and policymakers in studying and understanding better the development process as a basis for designing appropriate development policies and strategies. In a broad sense a

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<sup>1</sup> This chapter is a thoroughly revised and greatly expanded version of an earlier paper on ‘The Evolution of the Development, Doctrine, 1950–2005’ in Mavrotas and Shorrocks (2007) *Advancing Development Core Themes in Global Economics*, published by Palgrave Macmillan. With due acknowledgement of UNU-WIDER in Helsinki which commissioned the earlier study and holds copyright thereon. I am grateful for the valuable comments I received from Kaushik Basu, Alain de Janvry, Ravi Kanbur, Machiko Nissanke and Finn Tarp. I should add the usual disclaimer that the views expressed here are entirely my own.

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conceptual development doctrine had to be built which policymakers in the newly independent countries could use as a guideline to the formulation of economic policies.

A compelling case can be made that development economics, more so than any other branch of economics, should be both positive *and* normative. It should be positive to investigate micro and macro phenomena as objectively as possible. This means that the concepts, theories and techniques used to examine the behaviour of actors under different settings and initial conditions should be as value-free as possible. However, just as in quantum physics the Bohr-Heisenberg principle may hold in economics, as well, in the sense that there is no reality independent of the observer and the instruments used in capturing that reality. All theories (such as the neo-classical framework) and techniques (such as the randomised controlled experiments that have become the gold standard of the present generation of researchers) used in the analysis of development phenomena act as lenses that distort somewhat the outside reality.

At the same time development economists have a crucial *normative* role to play in trying to express social welfare functions in different settings that are consistent with the highest attainable and sustainable levels of well-being over time given the limited resources available. This is a most difficult and even controversial task. In many respects, development economists by investigating the likely consequences of alternative policy scenarios can help identify those scenarios that provide the highest feasible levels of well-being for the groups under consideration. In this sense development economics can become the conscience of economics.<sup>2</sup>

The selection and adoption of a development strategy—that is, a set of more or less interrelated and consistent policies—depend upon three building blocks: (1) the prevailing development objectives which, in turn, are derived from the prevailing view and definition of the development process; (2) the conceptual state of the art regarding the existing body of development theories, hypotheses, models, techniques and empirical applications; and (3) the underlying data system available to diagnose the existing situation, measure performance and test hypotheses. Figure 3.1 illustrates the interrelationships and interdependence which exist among (1) development theories and models, (2) objectives, (3) data systems and the measurement of performance and (4) development policies, institutions and strategies, respectively. These four

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<sup>2</sup>When Robert Solow chaired the American Economic Association's luncheon in honour of Amartya Sen's Nobel prize, he mentioned in his introduction that "he did not think that economics had a conscience but that, if it did, Amartya Sen would be its conscience" (my paraphrase).



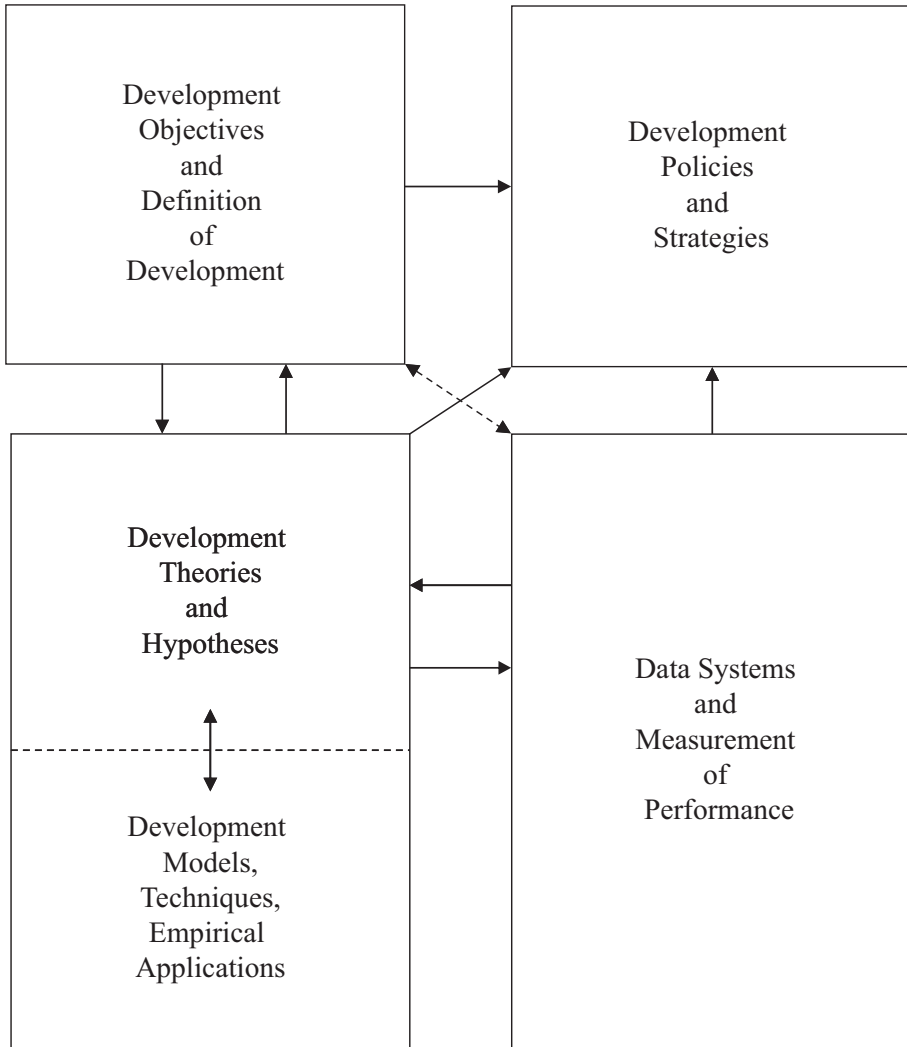


Fig. 3.1 Development doctrine: key interrelationships

different elements are identified in four corresponding boxes in Fig. 3.1. At any point in time or for any given period, these four sets of elements (or boxes) are interrelated. We define *development doctrine* as the body of principles and knowledge resulting from the interrelated complex of these four elements that is generally accepted by the development community at that time.

Thus, it can be seen from Fig. 3.1 that the current state of the art, which is represented in the southwest box embracing developments theories, hypotheses and models, affects and is, in turn, affected by the prevailing development

objectives—hence the two arrows in opposite directions linking these two boxes. Likewise, data systems emanate from the existing body of theories and models and are used to test prevailing development hypotheses and to derive new ones. Finally, the choice of development policies and strategies is jointly determined and influenced by the other three elements—objectives, theories and data, as the three corresponding arrows indicate.<sup>3</sup>

The analytical framework presented earlier and outlined in Fig. 3.1 is applied to describe the state of the art that prevailed in *each* of the five decades (from the 1950s to the 1990s) and in the most recent period 2000–2017 to highlight in a systematic fashion the changing conception of the development process. The choice of the decade and that of the longer most recent period (2000–2017), as relevant time periods, is of course arbitrary. So is, to some extent, the determination of the most important contributions in each of the categories (boxes) shown in Fig. 3.1 for each of the six periods under consideration.<sup>4</sup> While I fully recognise that the choice of these contributions ultimately reflects my own subjective evaluation, I tried hard to reflect the consensus views of the professional development community as it evolved over time.<sup>5</sup>

Figures 3.2, 3.3, 3.4, 3.5, 3.6 and 3.7 attempt to identify for each period the major elements which properly belong in the four interrelated boxes. In a certain sense it can be argued that the interrelationships among objectives, theories and models, data systems and hypotheses and strategies constitute the prevailing development doctrine for a given period. A brief sequential discussion of the prevailing doctrine in each of the six consecutive periods provides a useful way of capturing the evolution that development theories and strategies have undergone. A final section sums up and concludes.

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<sup>3</sup>There are two additional reciprocal relationships denoted by arrows in Fig. 3.1. The first one is the interaction between development theories and hypotheses and development models. Models are typically based on theoretical hypotheses, which often are of a partial nature. By integrating various hypotheses into a consistent framework, which the model provides, some new insights may be derived which could lead to a modification of the initial hypotheses. The second bi-directional arrow is the one linking development objectives and data systems. Clearly, the choice of development goals both predetermines the kind of data systems that is required and is affected by it. Many concrete examples of these interrelationships are described and analysed next in the application of the conceptual framework in Fig. 3.1 to the six periods between 1950 and 2017.

<sup>4</sup>In particular, certain conceptual and theoretical contributions may have been formulated before they became part of the conventional wisdom. An example of this is the seminal article of W. A. Lewis (1954), which triggered the economic dualism concept which became a major element of the development paradigm of the 1960s rather than of the 1950s.

<sup>5</sup>Also, my career as an active development economist spanned the 67 years covered in this evaluation.

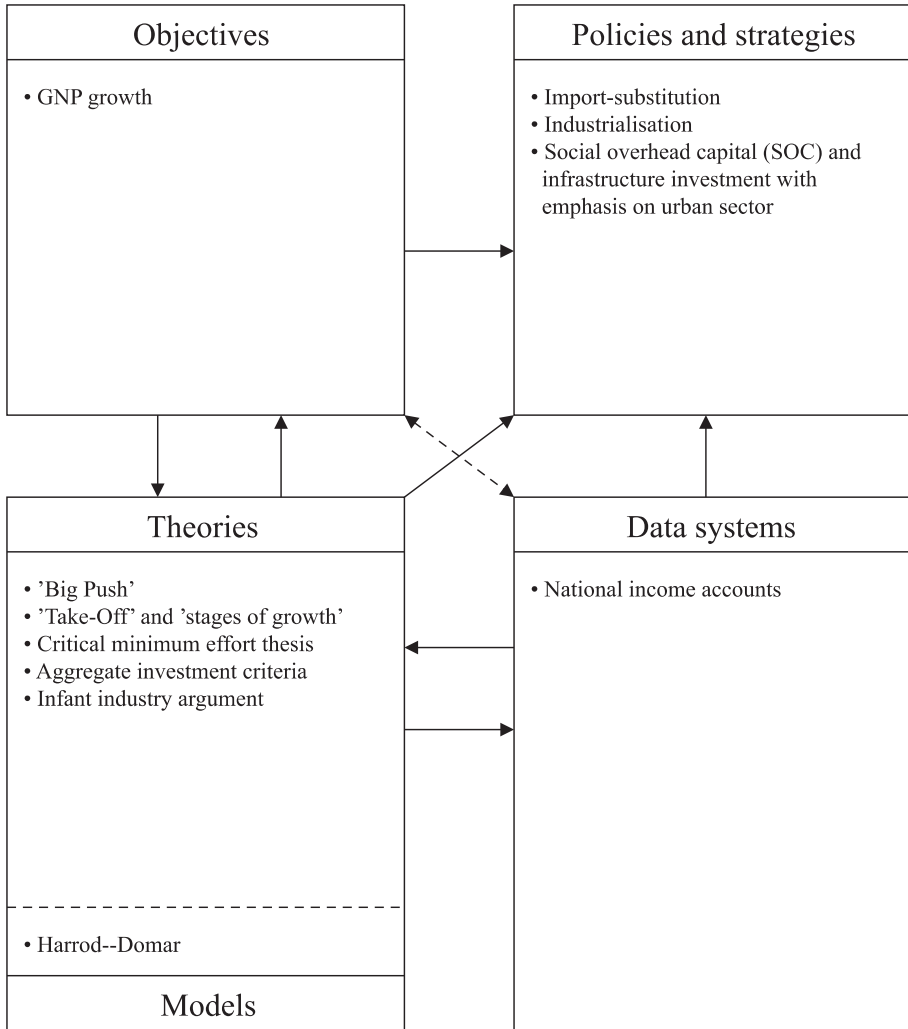
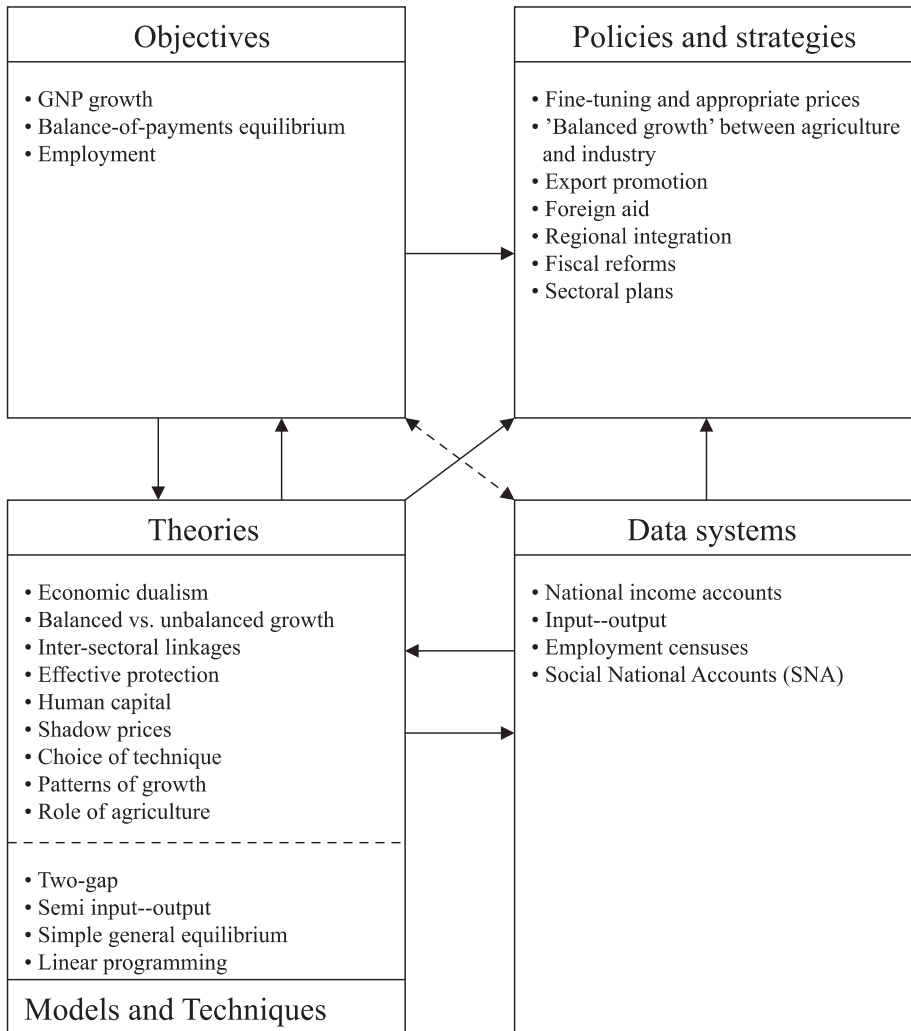


Fig. 3.2 Development doctrine during the 1950s

## 2 The Development Doctrine During the 1950s

Economic growth became the main policy objective in the newly independent less developed countries. It was widely believed that through economic growth and modernisation per se, dualism and associated income and social inequalities which reflected it, would be eliminated. Other economic and social objectives were thought to be complementary to—if not resulting from—gross national product (GNP) growth. Clearly, the adoption of GNP



**Fig. 3.3** Development doctrine during the 1960s

growth as both the objective and yardstick of development was directly related to the conceptual state of the art in the 1950s. The major theoretical contributions which guided the development community during that decade were conceived within a one-sector, aggregate framework and emphasised the role of investment in modern activities. The development economists' tool kit in the 1950s contained such theories and concepts as the 'big push' (Rosenstein-Rodan 1943), 'balanced growth' (Nurkse 1953), 'take-off into sustained

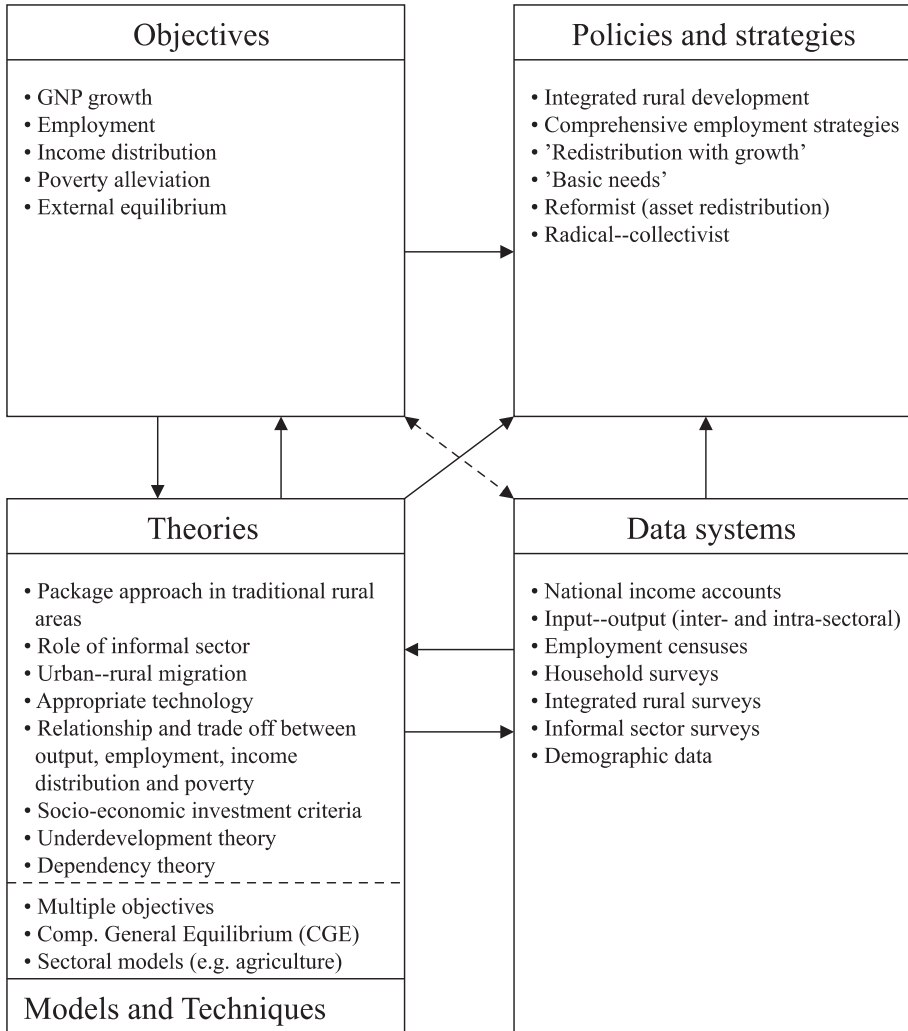
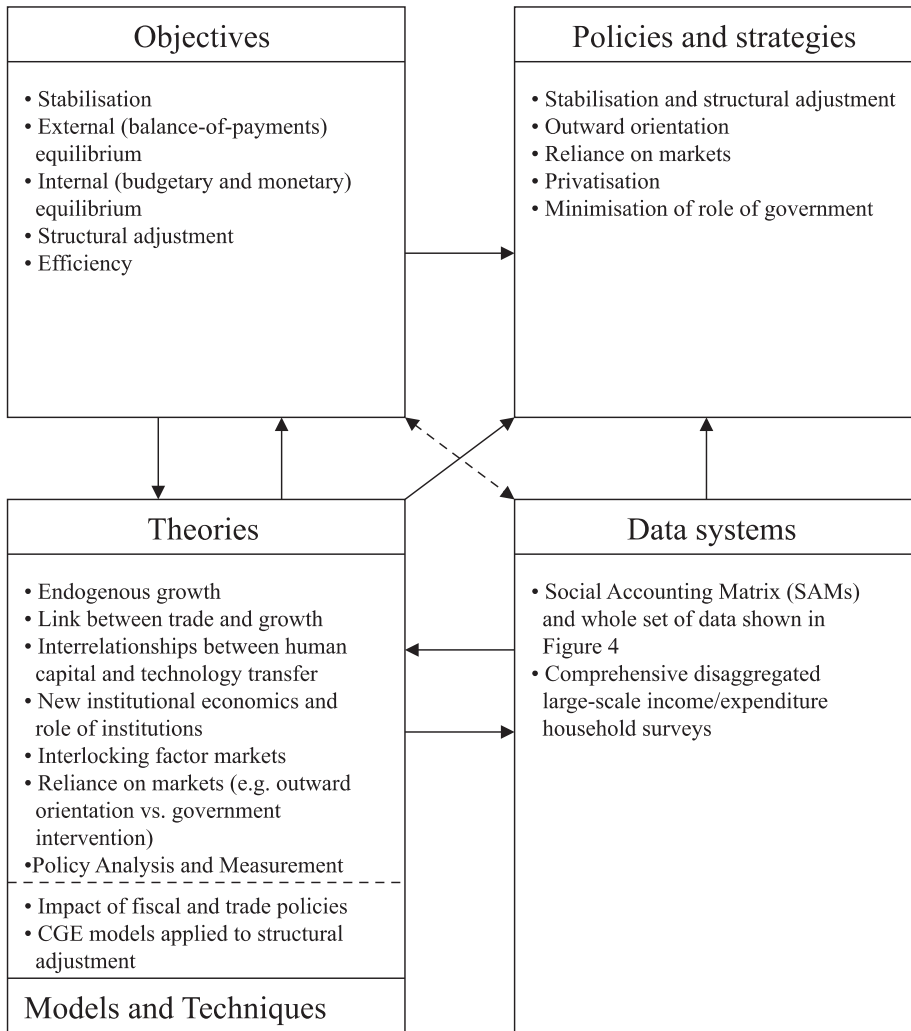


Fig. 3.4 Development doctrine during the 1970s

growth' (Rostow 1956) and 'critical minimum effort thesis' (Leibenstein 1957) (see Fig. 3.2).

What all these concepts have in common, in addition to an aggregate framework, is equating growth with development and viewing growth in less developed countries as essentially a discontinuous process requiring a large and discrete injection of investment. The 'big push' theory emphasised the importance of economies of scale in overhead facilities and basic industries. The 'take-off' principle was based on the simple Harrod–Domar identity that



**Fig. 3.5** Development doctrine during the 1980s

for the growth rate of income to be higher than that of the population (so that per capita income growth is positive), a minimum threshold of the investment to GNP ratio is required given the prevailing capital–output ratio. In turn, the ‘critical minimum effort thesis’ called for a large discrete addition to investment to trigger a cumulative process within which the induced income-growth forces dominate induced income-depressing forces. Finally, Nurkse’s ‘balanced growth’ concept stressed the external economies inherent on the demand side in a mutually reinforcing and simultaneous expansion of a full

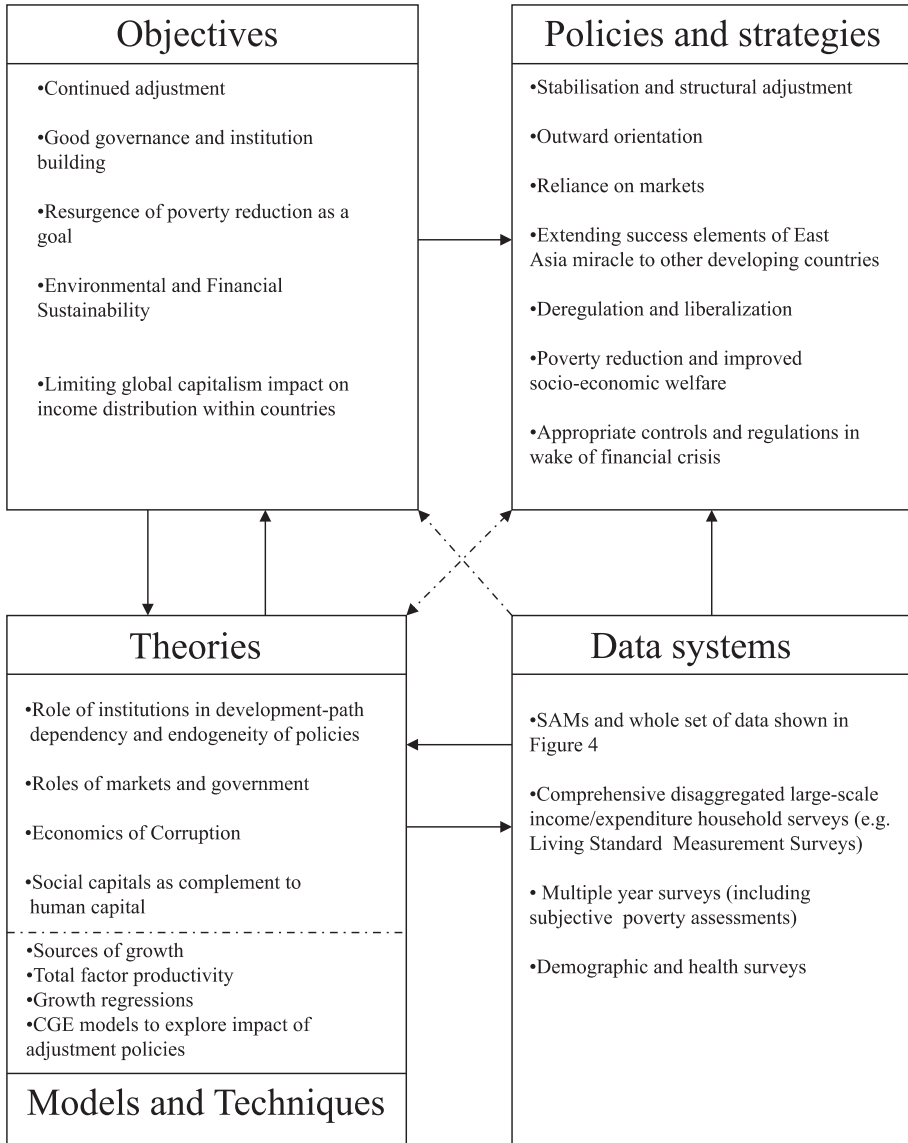
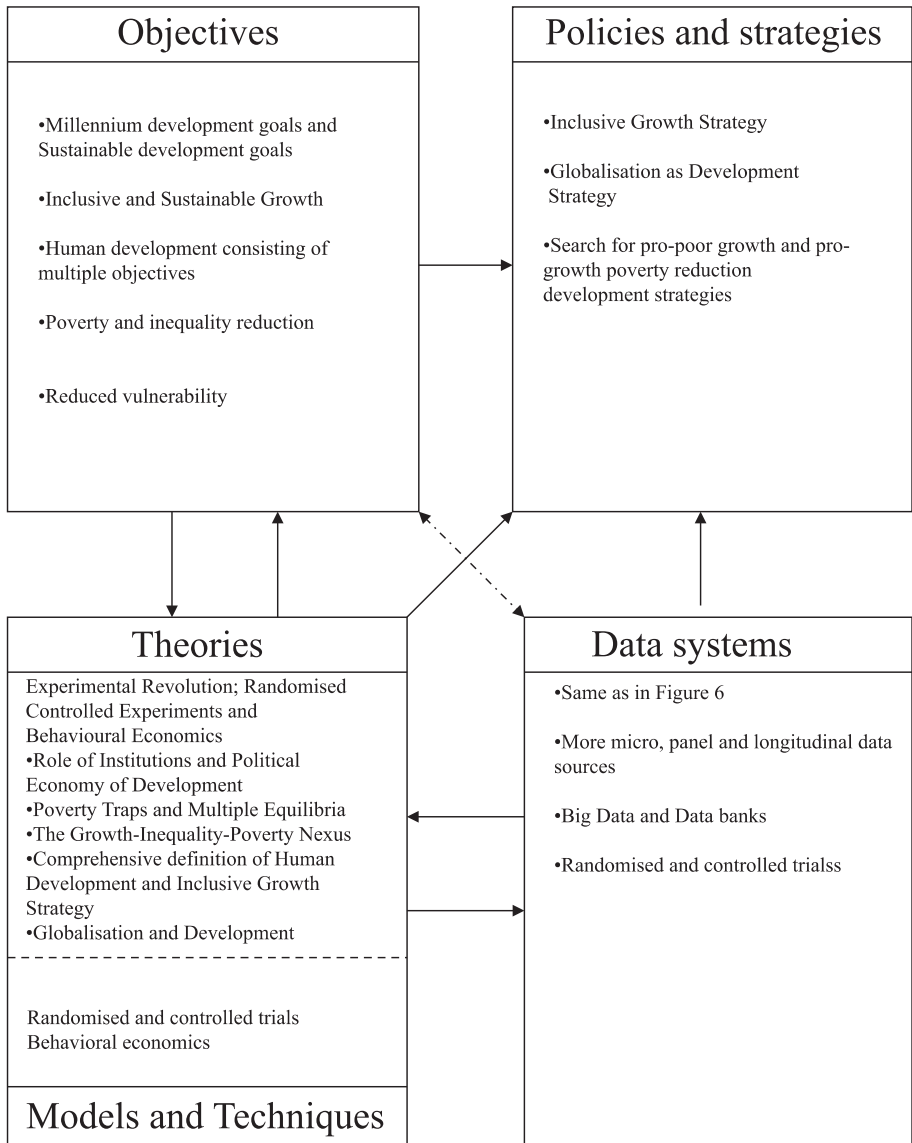


Fig. 3.6 Development doctrine during the 1990s

set of complementary production activities which combine to increase the size of the market. It does appear, in retrospect, that the emphasis on large-scale investment in the 1950s was strongly influenced by the relatively successful development model and performance of the Soviet Union between 1928 and 1940.





**Fig. 3.7** Development doctrine during present period (2000–2017)

The same emphasis on the crucial role of investment as a prime mover of growth is found in the literature on investment criteria in the 1950s. The key contributions were (1) the ‘social marginal production’ criterion (Kahn 1951 and Chenery 1953), (2) the ‘marginal per capita investment quotient’ criterion

(Galenson and Leibenstein 1955) and (3) the ‘marginal growth contribution’ criterion (Eckstein 1957).

It became fashionable to use as an analytical framework one-sector models of the Harrod–Domar type which, because of their completely aggregated and simple production functions, with only investment as an element, emphasised at least implicitly investment in infrastructure and industry. The reliance on aggregate models was not only predetermined by the previously discussed conceptual state of the art but also by the available data system which, in the 1950s, consisted almost exclusively of national income accounts. Disaggregated information in the form of input–output tables appeared in the developing countries only in the 1960s.

The prevailing development strategy in the 1950s follows directly and logically from the previously discussed theoretical concepts. Industrialisation was conceived as the engine of growth which would pull the rest of the economy along behind it. The industrial sector was assigned the dynamic role in contrast to the agricultural sector which was, typically, looked at as a passive sector to be ‘squeezed’ and discriminated against. More specifically, it was felt that industry, as a leading sector, would offer alternative employment opportunities to the agricultural population, would provide a growing demand for foodstuffs and raw materials and would begin to supply industrial inputs to agriculture.

Under this ‘industrialisation-first strategy’, the discrimination in favour of industry and against agriculture took several forms. First, in many countries, the internal terms of trade were turned against agriculture through a variety of price policies which maintained food prices at an artificially low level in comparison with industrial prices. Another purpose of these price policies—in addition to extracting resources from agriculture—was to provide cheap food to the urban workers and thereby tilt the income distribution in their favour.

A major means of fostering industrialisation, at the outset of the development process, was through import substitution—particularly of consumer goods and consumer durables. With very few exceptions the whole gamut of import-substitution policies, ranging from restrictive licencing systems, high protective tariffs and multiple exchange rates to various fiscal devices, sprang up and spread rapidly in developing countries. This inward-looking approach to industrial growth led to the fostering of many highly inefficient industries.

The infant–industry argument provided the rationale for the emphasis on investing in the urban modern sector in import-substituting production activities and physical infrastructure. While there is some validity to this thesis, in most instances, the import-substitution process followed by most developing countries relied on too much protection over too long a period.

### 3 The Development Doctrine During the 1960s

Figure 3.3 captures the major elements of the development doctrine prevailing in the 1960s. On the conceptual front the decade of the 1960s was dominated by an analytical framework based on economic dualism. Whereas the development doctrine of the 1950s implicitly recognised the existence of the backward part of the economy complementing the modern sector, it lacked the dualistic framework to explain the reciprocal roles of the two sectors in the development process. The naive two-sector models *à la* Lewis (1954) continued to assign to subsistence agriculture an essentially passive role as a potential source of ‘unlimited labour’ and ‘agricultural surplus’ for the modern sector. It was assumed that the marginal productivity of labour in traditional agriculture was zero and, hence, that farmers could be released from subsistence agriculture in large numbers without a consequent reduction in agricultural output while simultaneously carrying their own bundles of food (i.e. capital) on their backs or at least having access to it.

As the dual-economy models became more sophisticated, the interdependence between the functions that the modern industrial and backward agricultural sectors must perform during the growth process was increasingly recognised (Fei and Ranis 1964). The backward sector had to release resources for the industrial sector, which in turn had to be capable of absorbing them. However, neither the release of resources nor the absorption of resources, by and of themselves, was sufficient for economic development to take place. Recognition of this active interdependence was a large step forward from the naive industrialisation-first prescription because the conceptual framework mentioned earlier no longer identified either sector as leading or lagging.

A gradual shift of emphasis took place regarding the role of agriculture in development. Rather than considering subsistence agriculture as a passive sector whose resources had to be squeezed to fuel the growth of industry and to some extent modern agriculture, it started to become apparent in the second half of the 1960s that agriculture could best perform its role as a supplier of resources by being an active and co-equal partner with modern industry. This meant in concrete terms that a gross flow of resources from industry to agriculture could be crucial at an early stage of development to generate an increase in agricultural output and productivity which would facilitate the extraction of a new transfer out of agriculture and into the modern sector. The trouble with the alternative approach which appears to have characterised the 1950s of squeezing agriculture too hard or too early in the development process was described in the following graphic terms: “The backwards agricultural

goose would be starved before it could lay the golden egg” (Thorbecke 1969, p. 3).

The ‘balanced’ versus ‘unbalanced’ growth issue was much debated during the 1960s. In essence, the balanced growth thesis (Nurkse 1953) emphasised the need for the sectoral growth of output to be consistent with the differential growth of demand for different goods as income rises. Unbalanced growth, on the other hand, identified the lack of decision-making ability in the private and public sectors as the main bottleneck to development (Hirschman 1958). The prescription for breaking through this bottleneck was to create a sequence of temporary excess capacity of social overhead facilities which, by creating a vacuum and an attractive physical environment, would encourage the build-up of directly productive activities. Alternatively, the process could start by a build-up of directly productive activities ahead of demand, which, in turn, would generate a need for complementary social overhead projects.

The similarities between the balanced and unbalanced growth theses are more important than their apparently different prescriptions. Both approaches emphasised the role of inter-sectoral linkages in the development process. In a certain sense they extended the dual-economy framework to a multi-sectoral one without, however, capturing the essential differences in technology and form of organisation between modern and traditional activities. This was at least partially due to the type of sectoral disaggregation available in the existing input–output tables of developing countries during the 1960s. Except for the various branches of industry, the level of sectoral aggregation tended to be very high, with agricultural and service activities seldom broken down in more than two or three sectors.

Another contribution of the late 1960s which was imbedded in inter-sectoral (input–output) analysis is the theory of effective protection, which clarified and permitted the measurements of the static efficiency cost of import substitution when both inputs and outputs are valued at world prices.

Still another important set of contributions that appeared in the 1960s relates to the inter-sectoral structure and pattern of economic growth. Two different approaches provided important insights into the changing inter-sectoral structure of production and demand throughout the process of economic development. The first approach, based largely on the work of Kuznets (1966), relied on a careful and painstaking historical analysis of a large number of countries. The second approach was pioneered by Hollis Chenery and based on international cross-sectional analysis which was subjected to regression analysis to derive what appeared to be structural patterns in the process of growth (Chenery 1960 and Chenery and Taylor 1968).

The conception of economic development in the 1960s was still largely centred on GNP growth as the key objective. In particular, the relationship between growth and the balance of payments was made clearer. Towards the end of this decade the increasing seriousness of the un- and underemployment problem in the developing world led to a consideration of employment as an objective in its own right next to GNP growth. The most noteworthy change in the conception of development was the concern for understanding better the inter-sectoral structure and physiology of the development process—as the preceding review of the conceptual state of the art revealed.

It is important to observe, in retrospect, that a deep-rooted pessimism prevailed about the development prospects of Asia, somewhat in contrast with the rosier prospects of the Latin America region, among some of the leading analysts. Gunnar Myrdal's *Asian Drama* (1968) painted an almost desperate picture of the Asian socio-economic future, ironically, just as the East Asian Miracle was starting in Taiwan and South Korea.

The development policies and strategies that prevailed in the 1960s flowed directly from the conceptual contributions, development objectives and the data system. These policies fall into a few categories, which are reviewed briefly later. The first set embraces the neo-classical prescription and can be expressed under the heading of 'fine-tuning' and 'appropriate prices'. In a nutshell the 'fine-tuning' instruments embrace the use of an appropriate price system (including commodity, tax and subsidy rates), the removal of market imperfections and appropriate exchange rate and commercial policies.

A second set of policies can be classified as essentially structural, emphasising the importance of inter-sectoral linkages. They include the allocation of investment and current public expenditures among sectors, so as to achieve a process of inter-sectoral balanced (or, in some instances, unbalanced) growth. More specifically, by the late 1960s agriculture was assigned a much more active role in the development process. The provision of a greater level of public resources to that sector—combined with less discriminatory price policies—was expected to result in a growth of output and productivity which would facilitate a net transfer back to the rest of the economy. The success of South Korea and Taiwan in nurturing their agricultural sector and using the agricultural surplus to achieve a successful industrial take-off was starting to resonate.

## 4 The Development Doctrine in the 1970s

Figure 3.4 summarises the major development objectives, theories, data sources and policies prevailing in the 1970s. By the 1970s the failure of a GNP-oriented development strategy to cope successfully with increasingly serious development problems in much of the Third World led to a thorough re-examination of the process of economic and social development. The major development problems that became acute and could no longer be ignored during this decade can be summarised as: (1) the increasing level and awareness of un- and underemployment in a large number of developing countries; (2) the tendency for income distribution within countries to have become more unequal or, at least, to have remained as unequal as in the immediate post-Second World War period; (3) the maintenance of a very large and rising share and absolute number of individuals in a state of poverty, that is, below some normative minimum income level or standard of living; (4) the continuing and accelerating rural–urban migration and consequent urban congestion and finally (5) the worsening external position of much of the developing world reflected by increasing balance-of-payments pressures and rapidly mounting foreign indebtedness and debt servicing burdens. Largely because of these closely interrelated problems, a less unequal income distribution, particularly in terms of a reduction in absolute poverty, was given a much greater weight in the preference function of most developing countries compared to the objective of aggregate growth per se. Furthermore, this reduction in absolute poverty was to be achieved mainly through increased productive employment (or reduced underemployment) in the traditional sectors.

By the mid-1970s, GNP as a dominant all-encompassing objective had been widely, but by no means universally, dethroned. The presumption that aggregate growth was synonymous with economic and social development or, alternatively, that it would ensure the attainment of all other development objectives, came under critical scrutiny and was rejected in many circles. The launching of the World Employment Programme by the International Labour Organisation (ILO) in 1969 signalled that the primary objective should be to raise the standard of living of the poor through increased employment opportunities. The generation of new or greater productive opportunities was considered a means towards the improvement of the welfare of the poor.

The changing meaning of development as a process that should have as simultaneous objectives growth and poverty alleviation both influenced and was influenced by several conceptual and empirical contributions. The first set

of contributions comes under the rubric of integrated rural and agricultural development. A whole series of empirical studies at the micro and macro levels combined to provide an explanation of the physiology and dynamics of the transformation process of traditional agriculture. This body of knowledge provided a rationale for a unimodal strategy in the rural areas, which is discussed subsequently under the strategy box.

A second type of conceptual breakthroughs which appeared in the 1970s was that on the role of the informal sector and that of employment in furthering the development process. Even though the informal sector concept had been around a long time and taken a variety of forms such as Gandhi's emphasis on traditional cottage industries, it became revitalised in a more general and formal sense in the Kenya Report of the ILO (ILO 1973). A number of case studies undertaken by ILO focussing specifically on the role of the informal sector concluded that it was relatively efficient, dynamic and often strongly discriminated against because of market imperfections or inappropriate national or municipal regulations. These studies suggested that informal activities represent an important potential source of output and employment growth.

A third contribution which surfaced in the 1970s includes the interdependence between economic and demographic variables and the determinants of the rural–urban migration. Many empirical studies, mainly at the micro level, attempted to throw some light on the relationship between such sets of variables as (1) education, nutrition and health and (2) fertility, infant mortality and, ultimately, the birth rate. The hypotheses that were generated by these studies highlighted the complex nature of the causal relationship between population growth and economic development and suggested that the Malthusian tragedy could be overcome by appropriate educational and birth control policies.

Regarding the determinants of migration, the initial Harris–Todaro (1970) formulation triggered a series of empirical studies and simple models of the migration process. In general, migration was explained as a function of urban–rural wage differentials weighted by the probability of finding urban employment.

A somewhat parallel set of contributions at the micro level consisted of the attempt at incorporating socio-economic objectives—such as employment and income distribution—among investment (benefit-cost) criteria and in the appraisal and selection of projects (Little and Mirrlees 1974).

A review of contributions to the state of the art in development economics during this decade would not be complete without at least a reference to the neo-Marxist literature on underdevelopment and dependency theories. The



essence of these theories is that underdevelopment is intrinsic in a world trading and power system in which the developing countries make up the backward, raw-material-producing periphery and the developed countries the modern-industrialised centres (Hunt 1989). A neo-colonial system of exploitation by indigenous classes associated with foreign capital (e.g. multinational corporations) was considered to have replaced the previous colonial system. The Prebisch-Singer thesis, arguing that the terms of trade of primary products relative to manufactured goods would decline over time, provided a rationale to implement protectionist policies and was particularly popular in Latin America.

The coverage and quality of the data available improved substantially in the 1970s. By the mid-1970s survey-type information on variables such as employment, income, consumption and saving patterns was becoming available. A variety of surveys covering such diverse groups as urban, informal and rural households started to provide valuable information on the consumption and savings behaviour of different socio-economic groups. In some developing countries it became possible, for the first time, to estimate approximately the income distribution by major socio-economic groups.

In this context, the pioneering work of Irma Adelman and her collaborators of visualising the process of development as the product of multiple economic and non-economic variables interacting over time to determine the structure of growth and income distribution within a general equilibrium framework was a major breakthrough in unveiling the multi-dimensional and dynamic nature of this process (Adelman and Robinson 1978; Adelman and Morris 1967).

After having reviewed the changing development objectives, conceptual contributions and data sources which marked the 1970s, the next logical step is to describe and analyse briefly the new development strategies that emerged. From a belief that growth was a necessary and sufficient condition for the achievement of economic and social development, it became increasingly recognised that even though necessary, growth might not be sufficient. The first step in the broadening process of moving from a single to multiple development objectives was a concern with, and incorporation of, employment in development plans and in the allocation of foreign aid to projects and technical assistance.

One possible attraction of using employment as a target was that it appeared, on the surface, to be relatively easily measurable—in somewhat the same sense as the growth rate of GNP had provided previously a simple scalar measure of development. Yet, as was soon realised, the measurement of informal labour and part-time labour proved to be fraught with difficulties. The



real and fundamental goal was an improvement in the standards of living of all groups in society and, especially, that of the poorest and most destitute groups.

Two partially overlapping variants of a distribution-oriented strategy surfaced during this decade. These were ‘redistribution with growth’ and ‘basic needs’. The first one was essentially incremental in nature, relying on the existing distribution of assets and factors and requiring increasing investment transfers in projects (mostly public but perhaps even private) benefiting the poor (Chenery et al. 1974). The first step in this strategy was the shift in the preference (welfare) function away from aggregate growth per se towards poverty reduction.

The second alternative strategy inaugurated during the 1970s was the basic needs strategy, which was particularly advocated by the ILO.<sup>6</sup> It entailed structural changes and some redistribution of the initial ownership of assets—particularly land reform—in addition to a set of policy instruments, such as public investment. Basic needs, as objectives defined by ILO, included two elements: (1) certain minimal requirements of a family for private consumption, such as adequate food, shelter and clothing and (2) essential services provided by and for the community at large, such as safe drinking water, sanitation, health and educational facilities.

A complementary policy within the agricultural sector was that of integrated rural development. In a nutshell, the novel approach centred on lending and technical activities benefiting directly the traditional sector. This strategy conformed to a broader so-called unimodal agricultural development strategy (Johnston and Kilby 1975). The latter relied on the widespread application of labour-intensive technology to the whole of agriculture. In this sense, it was based on the progressive modernisation of agriculture ‘from the bottom up’ to start and facilitate the dynamic *structural transformation* so fundamental to the growth process. Structural transformation involves four key features: a falling share of agriculture in economic output and employment; a rising share of urban economic activity in industry and modern services; migration of rural workers to urban settings; and a demographic transition (Timmer 2015).

A third type of development strategy follows from the neo-Marxist underdevelopment and dependency theories, which have been previously touched upon. This approach was radical, if not revolutionary, in nature. It called for

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<sup>6</sup> Far from originating with ILO, the concept of basic needs and planning for poverty alleviation had already been expressed and formulated very clearly by the Indian planner Pitambar Pant as early as 1962 (see Pant 1974).

a massive redistribution of assets to the state and the elimination of most forms of private property. It appeared to favour a collectivistic model—some-what along the lines of the Chinese regime in power at that time—based on self-reliance and the adoption of indigenous technology and forms of organisation.

## 5 The Development Doctrine in the 1980s

A combination of events including an extremely heavy foreign debt burden—reflecting the cumulative effects of decades of borrowing and manifested by large and increasing balance-of-payments and budget deficits in most of the developing world—combined with higher interest rates and a recession in creditor countries changed radically the development and aid environment at the beginning of the 1980s. The Mexican financial crisis of 1982 soon spread to other parts of the Third World. The magnitude of the debt crisis was such that, at least for a while, it brought into question the survival of the international financial system.

Suddenly, the achievement of external (balance-of-payments) equilibrium and internal (budget) equilibrium became the overarching objectives and necessary conditions to the restoration of economic growth and poverty alleviation. The debt crisis converted the 1980s into the ‘lost development decade’. Before the development and poverty alleviation path could be resumed, the Third World had to put its house in order and implement painful stabilisation and structural adjustment policies.

Notwithstanding the fact that the development process was temporarily blocked and most of the attention of the development community was focussed on adjustment and stabilisation issues, some important contributions to development theory were made during this decade (see Fig. 3.5).

The first one greatly enriched our understanding of the role of human capital as a prime mover of development. The so-called endogenous growth school (Lucas 1988 and Romer 1990) identifies low human capital endowment as the primary obstacle to the achievement of the potential scale economies that might come about through industrialisation. In a societal production function, raw (unskilled) labour and capital were magnified by a term representing human capital and knowledge, leading to increasing returns. This new conception of human capital helped convert technical progress from an essentially exogenously determined factor to a partially endogenously determined factor. Progress was postulated to stem from two sources: (1) deliberate innovations, fostered by the allocation of resources (including human capital) to

research and development (R&D) activities and (2) diffusion, through positive externalities and spill-overs from one firm or industry to know-how in other firms or industries (Ray 1998: Ch. 4). If investment in human capital and know-how by individuals and firms is indeed subject to increasing returns and externalities, it means that the latter do not receive the full benefits of their investment resulting, consequently, in under-investment in human capital (the marginal social productivity of investment in human capital being larger than that of the marginal private productivity).

A second contribution based on quantitative and qualitative empirical studies—relying on international cross-sectional and country-specific analyses of performance over time—was the robust case made for the link between trade and growth. Outward orientation was significantly and strongly correlated with economic growth. Countries that liberalised and encouraged trade grew faster than those that followed a more inward-looking strategy. The presumed mechanism linking export orientation to growth is based on the transfer of state of the art technology normally required to compete successfully in the world market for manufactures. In turn, the adoption of frontier technology by firms adds to the human capital of those workers and engineers through a process of ‘learning-by-doing’ and ‘learning-by-looking’ before spilling over to other firms in the same industry and ultimately across industries.

A third set of contributions to development theories that surfaced in the 1980s can be broadly catalogued under the heading of the ‘new institutional economics’ and collective action (North 1990, Williamson 1991 and Nabli and Nugent 1989). As de Janvry et al. (1993, p. 565) noted, “The main advance was to focus on strategic behavior by individuals and organised groups in the context of incomplete markets. The theories of imperfect and asymmetrical information and, more broadly, transaction costs gave logic to the role of institutions as instruments to reduce transactions costs.” The neo-institutional framework, in addition to reminding the development community that appropriate institutions and rules of the game are essential to provide pro-development and anti-corruption incentives, also suggested broad guidelines in building institutions that reduced the scope for opportunistic behaviour.

Another contribution of this approach was to provide a clear rationale for the existence of efficient non-market exchange configurations, particularly in the rural areas. Proto-typical examples of such institutions include intra-farm household transactions; two-party contracts (e.g. sharecropping and inter-linked transactions), farmers’ co-operatives and group organisations, mutual insurance networks and informal credit institutions (Thorbecke 1993). Those exchange non-market configurations—called agrarian institutions by Bardhan

(1989)—owe their existence to lower transaction costs than those that would prevail in an alternative market configuration providing an equivalent good, factor or service. In most instances market imperfections or, at the limit, market failure (in which case there is no alternative market configuration and transaction costs become infinite) are at the origin of non-market configurations.

The decade of the 1980s witnessed some seminal contributions to a better understanding of the concept of poverty and its measurement. A comprehensive and operationally useful approach to poverty analysis was developed by Amartya Sen (1985) in his ‘capabilities and functioning’ theoretical framework. According to this framework what ultimately matters is the freedom of a person to choose her functionings. In order to function, an individual requires a minimum level of well-being brought about by a set of attributes. In turn, the Foster-Greer-Thorbecke (1984) class of decomposable poverty measures allowed poverty to be measured while satisfying most important welfare axioms.

A final contribution worth noting—which can be subsumed under the ‘new institutional economies’ heading—is that of interlinked transactions (Bardhan 1989). An interlinked contract is one in which two or more interdependent exchanges are simultaneously agreed upon (e.g. when a landlord enters into a fixed-rent agreement with a tenant and also agrees to provide credit at a given interest rate). In a more general sense, this type of contract leads to interlocking factor markets for labour, credit and land. In retrospect it is somewhat ironical that during a decade dominated by a faith in the workings of markets—as is discussed subsequently—important theoretical contributions were made that highlighted market imperfections and failures.

On the modelling front, some important contributions to general equilibrium modelling appeared during the 1980s (Dervis et al. 1982). These models—calibrated on a base year social accounting matrix (SAM) reflecting the initial (base year) socio-economic structure of the economy—proved particularly useful in tracing through and simulating the impact of a variety of exogenous shocks and policies (such as a devaluation, trade liberalisation and fiscal reforms) on the income distribution by socio-economic household groups.

The 1980s witnessed a proliferation of statistical information on a variety of dimensions of development and the welfare of households. Besides more elaborate and disaggregated employment, manufacturing, agricultural and demographic surveys<sup>7</sup> and censuses, large-scale household income and

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<sup>7</sup>The Demographic and Health Surveys (DHS) initiated in 1984, undertaken in a large number of developing countries and covering multiple years, have been extensively used by researchers.

expenditure surveys produced by statistical offices of most developing countries—and often designed and funded by the World Bank (e.g. the Living Standard Measurement Surveys)—became available to analysts and policy-makers. Perhaps for the first time, reasonably reliable and robust observations could be derived relating to the magnitude of poverty, the characteristics of the poor and the inter-household income distribution. In turn, the various data sources could be combined to build SAMs of a large number of countries.

The development strategy of the 1970s—centred on redistribution with growth and fulfilment of basic needs—was replaced by an adjustment strategy. The magnitude of the debt crisis and the massive internal and external disequilibrium faced by most countries in Africa and Latin America and some in Asia meant that adjustment became a necessary (although not sufficient) condition to a resumption of development.

The main policy objective of Third World governments became macroeconomic stability, consisting of a set of policies to reduce their balance-of-payments deficits (e.g. devaluation) and their budget deficits (through retrenchment). Whereas stabilisation per se was meant to eliminate or reduce the imbalance between aggregate demand and aggregate supply, both externally and internally, structural adjustment was required to reduce distortions in relative prices and other structural rigidities that tend to keep supply below its potential. A typical adjustment package consisted of measures such as a devaluation, removal of artificial price distortions, trade liberalisation and institutional changes at the sector level.

Under the influence of ideological changes in the Western world (e.g. the Reagan and Thatcher administrations), developing countries were strongly encouraged—if not forced—to rely on the operation of market forces and in the process to minimise government activities in most spheres—not just productive activities.

Inherent contradictions and conflicts arose among the elements of the broad adjustment strategy of the 1980s. The successful implementation of adjustment policies called for a strong government. Likewise, the rationale for a larger role of government in the education sphere to generate the social spillover effects and counteract the under-investment in education by private agents, who do not capture the positive externalities of their investment, ran counter to the objective of a minimalist state.

In this decade, characterised by pro-market and anti-government rhetoric, there was strong sentiment to do away with aid altogether and have private capital flows substitute for it. Thus, in the early 1980s, the Reagan administration created a fertile environment for conservative critics of foreign aid who felt that “economic assistance distorts the free operation of the market and

impedes private-sector development” (Ruttan 1996, p. 143). Clearly, the debt overhang put a damper on going too far in eliminating aid. Both public and private creditors in the industrialised world had too much at stake.

## 6 The Development Doctrine in the 1990s

In the first half of the 1990s, stabilisation and adjustment were still the dominant objectives (see Fig. 3.6). While most of the Latin American countries (and the few Asian countries affected by the debt crisis) had gone through a painful adjustment process and were back on a growth path, the overall situation was still one of stagnation in much of the developing world—largely caused by poor governance in sub-Saharan Africa and most transition economies in Eastern Europe. It was becoming increasingly clear to the development community that fundamental and deep-rooted institutional changes to facilitate a successful transition from socialism and command economies to market economies and reduce corruption were a precondition to successful adjustment and a resumption of development in Eastern Europe and sub-Saharan Africa. Potentially the institutions and policies at the root of the East Asian ‘miracle’ could provide the model to follow.

In the second half of the 1990s, the Asian financial crisis hit East and Southeast Asia with a vengeance, resulting in a sharp reversal of the long-term poverty reduction trend. Simultaneously socio-economic conditions deteriorated so drastically in the former Soviet Republics that poverty alleviation in its broadest sense—including improvements in health, nutrition, education, access to information and to public goods and a participation in decision-making—resurfaced as the major, if not overarching, objective of development.

Another consequence of the financial crisis was to bring into question the Washington Consensus of unbridled capital and trade liberalisation and complete deregulation of the financial system. Several East and Southeast Asian countries were still suffering from the extreme deregulation of the banking sector and capital flows that weakened the supervisory and monitoring functions of central banks and other institutions. To protect their balance of payments, a number of affected countries were restoring controls on an ad hoc basis. The international monetary and financial system that still relied on the outdated Bretton Woods rules of the game needed major revamping and a new set of rules befitting the contemporaneous environment. These crises triggered a re-examination of the role of government in protecting the economy from major shocks originating abroad. In particular, it pointed towards strengthening financial institutions and the provision of the minimum set of

rules and regulations (e.g. improved monitoring and supervision of the banking sector, and higher own capital reserves for individual banks) to reduce corruption and speculative borrowing from abroad; and the establishment of institutional safety nets that could act as build-in-stabilisers following a crisis.

The pernicious effects of a series of financial crises worldwide including the Japanese credit bubble, the US junk bonds and savings and loans' crises and the Mexican tequila crisis in addition to the Asian financial crisis, perhaps for the first time forced the world economy to face the issue of building a *sustainable* global financial system. It was also in this decade that the aid community formally recognised and accepted the concept of *sustainable* development at the United Conference on Environment and Development held in Rio de Janeiro in 1992.<sup>8</sup> Sustainability in many of its dimensions became an integral part and objective of development.

The conceptual contribution to development theory in the 1990s, in general, extended and further elaborated on earlier concepts. Perhaps the most fundamental issue that was debated during the 1990s is the appropriate roles of the state and the market, respectively, in development. An inherently related issue was to identify the set of institutions most conducive to the acceleration of the process of economic growth and socio-economic development. Prior to the onset of the Asian financial crisis, it was felt that the mix of institutions and policies adopted by the East Asian countries that gave rise to the East Asian miracle (World Bank 1993) provided a broad model, with parts of it potentially transferable to other developing countries. The financial crisis led to a more sceptical appraisal—even, among some circles, whether the miracle, after all, was not a 'myth'.

In any case, the reliance on government actions in the previous decades to promote industrial growth on the part of East Asian countries (particularly, South Korea) appeared suspect and came under heavy criticism. Some critics argued that the already impressive growth performance would have been even better with less government intervention—and that even if those industrial policies had contributed to growth, they required a strong state, an element sorely missing in other parts of the Third World.

The role of institutions as a precondition to following a successful development path became even more critical if one subscribed to a new approach to political economy that takes institutions as largely given exogenously and argues that policies tend to be determined *endogenously* within a specific institutional context (Persson and Tabellini 1990). Thus, for example, if the central

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<sup>8</sup> Sustainable development was the solution to the problems of environmental degradation discussed by the Brundtland Commission in the 1987 report *Our Common Future*.



bank and the ministry of finance are not independent or are operating under loose discretionary rules, the monetary and fiscal policies that result will depend on political and social factors (or according to the political power of the different lobbies in society and the public choice formulation).

Two additional contributions worth highlighting in this decade are the concept of social capital and a better understanding of sources of growth (total factor productivity) and the need to explain the residual. Social capital was devised as a concept to complement human capital. If individuals are socially excluded, or marginalised, or systematically discriminated against, they cannot rely on the support of networks from which they are sealed off. Alternatively, membership in group organisations brings about benefits that can take a variety of forms (e.g. the provision of informal credit and help in the search for employment). The acquisition of social capital by poor households appeared particularly important as a means to help them escape from some poverty traps.

The spectacular growth of East Asian countries prior to 1997 renewed the interest in identifying, explaining and measuring the sources of growth. Several studies tended to demystify the East Asian miracle by suggesting that the rapid growth of these economies depended on resource accumulation with little improvement in efficiency and claimed that such growth was not likely to be sustainable (Krugman 1994, Kim and Lau 1994 and Young 1995). This conclusion was based on estimates of total factor productivity (TFP) growth and depended crucially on the form of the production function used and on an accurate measurement of the capital and labour inputs. Whatever residual was left over was ascribed to technological progress. Some critics argued that typical TFP calculations significantly underestimated organisational improvements within firms or what Leibenstein called x-efficiency.

The 1990s witnessed a renewed interest in computable general equilibrium (CGE) models used to simulate the impact of exogenous shocks and changes in policies on the socio-economic system and particularly income distribution. A key issue explored in those models was that of the impact of adjustment policies on income distribution and poverty. General equilibrium models provide the only technique to compare the impact of alternative (counterfactual) policy scenarios, such as a comparison of the effects of an adjustment programme versus a counterfactual non-adjustment programme (e.g. Thorbecke 1991 for Indonesia and Sahn et al. 1996 for Africa).

This decade was marked by a proliferation of statistical information relating particularly to the socio-economic characteristics and welfare of households—in addition to the more conventional data sources previously collected (see data box in Fig. 3.6). A large number of quantitative poverty assessments



based on household expenditure surveys were completed, as well as more qualitative participatory poverty assessments. Furthermore, the availability of demographic and health surveys for many developing countries provided micro-level information on health and nutritional status, assets and access to public goods and services to supplement information on household consumption. Also, perhaps for the first time, the availability of multiple-year surveys and panel data for many countries allowed reliable standard of living and welfare comparisons to be made over time.

In many respects, the development strategy of the 1990s was built upon the foundations of the preceding decade and retained most of the latter's strategic elements—at least in the first half of the decade. However, as the decade evolved, the adjustment-based strategy of the 1980s came under critical scrutiny that led to major changes—particularly in the wake of the Asian financial crisis.

In sub-Saharan Africa, the great majority of the countries were still facing serious adjustment problems. A widely debated issue was whether adjustment policies *per se* without complementary reforms—within the context of Africa—could provide the necessary initial conditions for a take-off into sustained growth and poverty alleviation. Two conflicting approaches to adjustment and diagnoses of its impact on performance were put forward. The 'orthodox' view, best articulated by the World Bank (at the beginning of the decade but subsequently modified), argued that an appropriate stabilisation and adjustment package pays off. Countries that went further in implementing that package experienced a turnaround in their growth rate and other performance indicators.

In contrast, the 'heterodox' approach—best articulated by the concept of 'adjustment with a human face', embraced by the United Nations International Children's Emergency Fund (UNICEF) (see Cornia et al. 1987)—while supporting the need for adjustment, argued that the orthodox reforms focus extensively on short-term stabilisation and did not address effectively the deep-rooted structural weaknesses of African economies that were the main causes of macro instability and economic stagnation. Accordingly, major structural and institutional changes were needed to complement adjustment policies to induce the structural transformation (such as industrialisation, diversification of the export base, the build-up of human capital and even land reform) without which sustainable long-term growth in Africa (and by extension in other developing countries facing similar initial conditions) was not deemed possible.

The UNICEF and heterodox critical evaluation of the impact of adjustment policies on long-term growth and poverty alleviation—even when it

could not be appropriately verified on empirical grounds—sensitised multi-lateral and bilateral donors to the need to focus significantly more on the social dimensions of adjustment. It made a strong case for the implementation of a whole series of complementary and reinforcing reforms, ranging from greater emphasis on and investment in human capital and physical infrastructure to major institutional changes—particularly in agriculture and industry—benefiting small producers. In turn, the orthodox approach has made a convincing case that appropriately implemented adjustment policies not only are a necessary condition to the restoration of macroeconomic equilibrium but could also contribute marginally to economic growth and poverty alleviation, in the short run. Yet many observers feel, in retrospect, that the form of conditionality could have been significantly improved.

In 1993, the World Bank published a very influential report on the East Asian miracle (World Bank 1993). The report analysed the success elements of the high-performing Asian economies and argued that many of them were potentially transferable to other developing countries. In brief, these success elements consisted of (1) sound macroeconomic foundations and stable institutions aiming at a balanced budget and competitive exchange rates, (2) technocratic regimes and political stability that provided policy credibility and reduced uncertainty—an important factor for foreign investors, (3) an outward (export) orientation, (4) reliance on markets, (5) a more controversial set of industrial policies with selective government interventions often using ‘contests’ among firms as proxy to competition, (6) high rates of investment in building human capital, (7) high physical investment rates, (8) a process of technology acquisition consistent with dynamic comparative advantage and (9) a smooth demographic transition. In particular, the outward orientation, encouraging exports was applauded as a means of acquiring state of the art technology which in turn would trigger a ‘learning-by-doing’ and ‘learning-by-looking’ (e.g. reverse engineering) process that would lead to spill-over effects on human capital and positive externalities among firms within an industry and among industries.

The East Asian miracle also provided a convincing example of the essential importance of sound institutions (such as the balanced budget presidential decree in effect in Indonesia between 1967 and 1997) as preconditions to a sustainable process of growth with equity. The absence of institutions appropriate to a smooth transition from command to market economies in much of Eastern Europe and the fragility of existing institutions in much of sub-Saharan Africa provide painful counter-examples of the enormous human costs of a weak institutional framework.

The Asian financial crisis that wrought havoc to much of East and Southeast Asia in 1997 forced a critical re-examination of an international trade and financial system based on excessive trade and capital liberalisation and financial deregulation. The large increase in the incidence of poverty that followed in the wake of the crisis sensitised the development community to again focus on poverty reduction and improvements in the socio-economic welfare of vulnerable households as the overarching objective of development. Thus, at the end of the decade, the World Bank made it clear that poverty reduction—in its broadest sense—measured in terms of outcomes (e.g. health, education, employment, access to public goods and services and social capital) rather than inputs was the primary goal to strive for.

The decade of the 1990s was marked by a strong and lingering case of ‘aid fatigue’ evidenced by the absolute decline in net disbursements of official development assistance (ODA) after 1992. This downward trend resulted partially from the end of the Cold War but reflected also the strong faith in the operation of markets and scepticism regarding governments’ (both aid donors and recipients) involvement in productive sectors such as agriculture and industry. Fatigue was also influenced by the rising fear that foreign aid was generating aid dependency relationships in poor countries and, as such, would have the same type of negative incentive effects that welfare payments have on needy households whose recipients might be discouraged from job searching.

A related issue that was critically debated in the 1990s was that of the effectiveness of aid conditionality. First, given fungibility, is it possible to use aid to ‘buy’ good policies or even a sound programme of public (current and capital) expenditures from aid recipients? From the standpoint of the political economy of external aid, structural adjustment can be looked at as a bargaining process between bilateral and multilateral donors, on the one hand, and debtor governments, on the other. Both sides may have a vested interest in following soft rules in their lending and borrowing behaviour, respectively. This tends to foster and continue a dependency relationship that may well be fundamentally inconsistent with a viable long-term development strategy for the recipient countries (particularly in sub-Saharan Africa).

The conditionality debate continues to fuel a series of econometric studies of aid’s effectiveness based on international cross-sectional data. Perhaps the most influential one was that of Burnside and Dollar (2000) which concluded that aid can be a powerful tool for promoting growth and reducing poverty but only if it is granted to countries that are already helping themselves by following growth-enhancing policies. In contrast, Guillaumont and Chavet (2001) found that aid effectiveness depends on exogenous (mostly external)

environmental factors such as the terms-of-trade trend, the extent of export instability and climatic shocks. Their results suggest that the worse the environment, the greater the need for aid and the higher its productivity. Hansen and Tarp (2001) argued that the Burnside–Dollar model did not stand up to standard specifications and that when account is taken of the dynamic nature of the aid–growth relationship, the Burnside–Dollar conclusion fails to emerge. Country-specific characteristics of aid recipient countries—aside from the policy regime followed by those countries—have a major impact on aid’s effectiveness which makes it difficult to generalise. It is noteworthy that these studies were criticised on econometric grounds.

## 7 Development Doctrine in the Most Recent Period (2000–2017)

The present period has witnessed some rich and fundamental contributions to development economics. Figure 3.7 outlines these contributions.

A strong case can be made that the most important contribution to development economics during this period has been the attempt to move it from a largely axiomatic and deductive discipline to a more *experimental* discipline.<sup>9</sup> Two separate but interrelated bodies of knowledge—one based on *randomised controlled trials* (RCTs) and natural experiments and the other based on insights from *behavioural economics*—have added a degree of realism in describing which projects work and how, in fact, actors (and particularly the poor) actually behave under different settings and circumstances. RCTs by relying on field trials captured the underlying settings while behavioural economics helped identify actual as opposed to presumed rational choice behaviour such as maximisation and ‘satisficing’. Behavioural economics, through theoretical, empirical and experimental investigations, made it possible to incorporate non-standard behaviour modes influencing the decision-making process such as procrastination, overweighting low probability outcomes, loss aversion and willingness to sacrifice return for the sake of fairness.

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<sup>9</sup>I would be tempted to use the term ‘experimental science’ instead of ‘experimental discipline’, but I realise that at the present time this would be too much of a stretch.

## 7.1 The Experimental Revolution: Randomised Controlled Trials

The recent two decades have been marked by what could almost be characterised as a paradigm shift in the prevailing methodology employed by development economics' researchers.<sup>10</sup> Field experiments relying mainly on RCTs have become the overwhelming tool favoured by the research community.

RCTs as used in the evaluation of development effectiveness are a technique rather than a theory. As Duflo and Kremer (2003) argue "Any impact evaluation attempts to answer an essentially counterfactual question: how would individuals who participated in the program have fared in the absence of the program?" One of the best early example of impact analysis is the quasi-experimental design used in evaluating the redistributive PROGRESA programme in Mexico that relied on the selection of target villages (receiving benefits) and control villages (not presently receiving benefits but eligible for benefits in future rounds). Programme effects are estimated by comparing treated individuals or communities to control individuals or communities. There is no question that this new methodology has revolutionised the evaluation of social programmes by providing a more scientific base for the recommendations comparable to the design of drug and medical trials. The *Handbook of Field Experiments* (Duflo and Banerjee 2017) provides a large amount of useful evidence derived from field experiments on a variety of development issues such as in health on how to incentivise providers; in education on how to organise the classroom and incentivise teachers; in credit on repayment conditions and ratings of customers; and on index insurance on how to observe yields and overcome time inconsistencies.

The leading institution in conducting RCTs is the Abdul Latif Jameel Poverty Action Lab (J-PAL) at MIT that, by 2017, had over 840 ongoing and completed randomised evaluations in 80 countries. Aid donors, and especially the World Bank, became enthusiastic supporters of RCTs because this technology could determine whether a *specific* project worked and was successful or not.

After an initial period of euphoria, such early claims that RCTs were (1) 'the gold standard'; (2) the only valid methodology in development economics; (3) occupied "a special place in the hierarchy of evidence, namely at the top" (Imbens 2010); and (4) that "the World Bank is finally embracing

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<sup>10</sup> Other disciplines, especially in medicine and public health, had long relied on RCTs in their research so that the paradigm shift in development economics consisted of borrowing an existing methodology from another field.

science” (The Lancet 2004 editorial)<sup>11</sup> were subjected to critical scrutiny. The essence of the critique was directed at the limitation of this approach in that a given RCT only provides a precise and robust answer to a very narrow question, that is, “what is the effect of a specific program on a specific date within a specific context?” By definition, RCTs cannot address a whole host of important dynamic macroeconomic issues, such as structural transformation, and climate change.

Given the extreme influence enjoyed by the randomised field trial approach among the development community and its present impact on the substance of development economics, it is important to review and analyse in a constructive way the criticisms that have been expressed.

The latter can be grouped under four interrelated headings: (1) do RCTs contribute to uncover the underlying mechanisms through which an intervention affects the desired development outcome? (2) can the lessons learned from one or even multiple RCT settings be generalised to other different settings? (3) how serious a shortcoming is it that the RCTs do not address general equilibrium effects? and (4) does the randomised trials’ approach give rise to ethical issues?

The first question goes to the heart of the development methodology and doctrine. In its pure form, the purpose of an RCT is “not to understand the underlying structure of the system of relationships generating the outcomes, only the statistical outcome impact of certain policy treatments” (Mookherjee 2005). Relying on reduced form relations without explicitly identifying and presenting the structural (and behavioural) model yielding the reduced form allows the researchers to by-pass what some would consider a fundamental prior step, namely, the theoretical foundations of the tested hypotheses. Controlled experiments per se do not enlighten us on the underlying mechanisms generating the outcomes. One of the strongest critics of RCTs, Deaton (2010, p. 426), writes that “Project evaluations, whether using randomised controlled trials or nonexperimental methods are unlikely to disclose the secrets of development, unless guided by theory”, and “Learning about theory, or mechanisms, requires that the investigation be targeted toward that theory, toward *why* something works, not *whether* it works” (p. 442).

RCTs appear to have largely replaced structural and behavioural models in the tool kit of development economists. The potential strength of those latter models is that they capture explicitly the underlying structure and behaviour of the agents and rely on the prevailing body of theory. It seems that blending RCTs and structural models might be quite fruitful. Greater use of theory

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<sup>11</sup> As quoted by Deaton (2010).

could help explain and clarify the (causal) mechanisms underlying findings generated by controlled experiments and permit a wider range of policy assessments (Mookherjee 2005). In fact Heckman (2010) makes a convincing case that a *bridge* can and should be built between the two approaches. As he points out: “The two approaches can be reconciled by noting that for many policy questions, it is not necessary to identify fully specified models to answer a range of policy questions. It is often sufficient to identify policy invariant *combinations* of structural parameters” (p. 368).

The second main criticism directed at the RCT approach is that of the generalisability and transferability of the specific findings in a given setting at a given time to other settings. Basu (2013) argues that we cannot assume that a programme that worked in a specific setting (location) and time context will be effective in a different setting or even the same location tomorrow.<sup>12</sup> As the underlying conditions change, so might the effectiveness of a policy intervention. There are technical and statistical issues that limit if not preclude generalisability and external validity. A well-designed RCT can provide credible estimates of the average treatment effect (ATE). The latter, in turn, can be influenced by outliers and it is “precisely the few outliers that make or break a programme. In view of these difficulties, we suspect that a large fraction of RCTs in development and health economics are unreliable” (Deaton and Cartwright 2016). Hence, if the distribution of outcomes of a treatment in the population of a given trial is significantly different from what would have been the distribution of outcomes in another setting, then the transferability of the findings of the original RCT to another setting is questionable.

J-PAL is conscious of this issue and refers to it as the ‘generalisability puzzle’. It also recognises the essential need for causal and structural models as discussed previously and the need for integrating different types of evidence, including results from the rising number of randomised evaluations including apparently running the same treatment in different contexts (Bates and Glennerster 2017).<sup>13</sup> They conclude that “if researchers and policy makers continue to view results of impact evaluations as a black box and fail to focus on mechanisms, the movement toward evidence-based policy making will fall short of its potential for improving people’s lives” (Bates and Glennerster 2017, p. 12).

The third potential shortcoming of RCTs is that, as such, they ignore the indirect effects of a policy intervention. These general equilibrium effects can

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<sup>12</sup>It is noteworthy that Kaushik Basu as senior vice president and chief economist of the World Bank expressed his reservation of the extent to which RCTs could be generalised at a time when the World Bank was the main user of this approach.

<sup>13</sup>The latter are respectively the deputy director and executive director of J-PAL.



in certain cases be significant and even dominate the direct effects. In most instances these indirect effects are likely to be positive and to augment the direct effects in a positive direction, but it is possible to conceive of some scenarios where these general equilibrium effects would have some negative consequences that would reduce or even negate the initial benefits of a given intervention. The solution to this dilemma is for users of the randomised trials approach to attempt to estimate the indirect impact of an intervention with the help of an appropriately linked CGE model.<sup>14</sup>

Finally, following appropriate protocols, being aware of the possible negative impact of some groups excluded from the treatment groups and designing some compensation scheme can resolve most ethical issues inherent to RCTs. One example which also illustrates how behavioural economics can be used in aid is the classic “lentils and a plate for vaccination” by Banerjee et al. (2010) which revealed how a small incentive in rural India could encourage vaccination. By providing the same sweetener to the control group, some of the foregone benefits of vaccination could be partially compensated.

## 7.2 The Role of Institutions and the Political Economy of Development

A major characteristic of the approach to development issues in the present period is the multidisciplinary broadening of what had previously been a narrower economic base. The lens through which development researchers and practitioners explore development issues, now, increasingly incorporates concepts from other disciplines such as psychology, as discussed earlier, sociology and political science. Two good examples of fruitful collaboration between economists and political scientists are on the role of institutions in development and the political economy of development, respectively.

In an extremely influential article, Acemoglu, Johnson and Robinson (2001) made a strong case that development depends on institutional quality. They selected an instrumental variable, colonial settler mortality, that affects institutions exogenously but not income directly and were able to explain inter-country differences in per capita income as a function of predicted quality of institutions. Their hypothesis is that mortality rates among early European settlers in each colony determined whether they would decide to establish resource-extractive or plundering institutions or to settle and build European institutions and, in particular, those protecting property rights.

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<sup>14</sup>By extension, the preceding discussion of the three critical issues related to RCTs applies equally to natural experiments.



However, as Bardhan (2005) has argued, there are other types of institutions that matter for development, such as participatory and accountability institutions, and institutions that facilitate investment coordination.

Subsequently, Acemoglu and Robinson (2012) make a compelling and convincing case, based on a myriad of historical episodes worldwide, that growth (and, more generally, development) can only be sustained in the long run if it is anchored on and supported by inclusive political and economic institutions. Central to their theory “is the link between inclusive and political institutions and prosperity. Inclusive economic institutions that enforce property rights, create a level playing field, and encourage investments in new technologies and skills are more conducive to economic growth than extractive economic institutions that are structured to extract resources from the many by the few and that fail to protect property rights or provide incentives for economic activity” (Acemoglu and Robinson 2012, p. 430).

Institutions and policies might be viewed as tools for moving an economy out of one (bad) equilibrium into another (good) one. In a dynamic sense this process corresponds to a phase transition. If economic development is conceived as one of phase transitions, it carries far-reaching implications for the role of government. Institutions must be established and policies designed and implemented that facilitate the phase transition. One implication is that the emphasis on temporary, one-time interventions is likely to be much greater and if successful will not have to be repeated. If and once the new (good) equilibrium is reached, it is presumably sustainable within the new institutional and policy framework. It would be like jump-starting a car whose battery had run down.

The political economy of development was greatly influenced by the contributions of a group of Harvard economists starting in the 1990s. A key contribution was that of Alesina and Rodrik (1994) who argued that the greater the inequality of wealth and income, the higher the rate of taxation and the lower subsequent growth. The new political economy theories linking greater inequality to reduced growth operate through the following channels: (1) unproductive rent-seeking activities that reduce the security of property; (2) the diffusion of political and social instability leading to greater uncertainty and lower investment; (3) redistributive policies encouraged by income inequality that impose disincentives on the rich to invest and accumulate resources; (4) imperfect credit markets resulting in under-investment by the poor—particularly in human capital; and (5) a relatively small income share accruing to the middle class—implying greater inequality—has a strong positive effect on fertility which, in turn, has a significant and negative impact on

growth (see Thorbecke and Charumilind 2002, for a detailed discussion of how each of these channels affects growth).<sup>15</sup>

### 7.3 Poverty Traps and Multiple Equilibria

While the most innovative contributions to the concept of poverty traps (which at that time were referred to as vicious circles of poverty) originated in the decade of the 1960s and are described in an earlier section, the increasing availability of time series allowed for a better understanding of poverty traps within a *dynamic* context. A poverty trap is a self-reinforcing mechanism which causes poverty to persist (Azariadis and Stachurski 2005). There are many different types and causes of poverty traps such as (1) under-nutrition resulting in low physical activity and productivity; (2) under-investment in education and skill acquisition; (3) geographical remoteness; (4) social exclusion and marginalisation; and (5) lack of assets sealing some household out of the capital market. Access to more diversified and longer panel data on household living standards has made it possible to distinguish better between chronic (structural) poverty and transitory poverty (Carter and Barrett 2006). It has also helped in identifying the root causes of those traps and measures to combat them.

A theoretical construct that is presently in vogue and that appears promising in exploring poverty traps, how to escape them and a variety of other issues in development economics is that of multiple equilibria. If an economy is stuck in a bad equilibrium (a poverty trap), moving it to a good equilibrium would allow it to escape from the trap. In a more general sense Ray (2000) provides a vivid example drawn from the Rosenstein-Rodan (1943) Big Push notion and the Hirschman (1958) backward and forward linkages concept. These pioneers argued that economic development could be thought of as a massive coordination failure, in which several investments do not occur simply because of the absence of other complementary investments and similarly, these latter investments are not forthcoming because the former are missing. In the same vein Sachs (2006) argues that a 'Big Push' in the amount and allocation of foreign aid would end poverty in the developing world.

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<sup>15</sup>There are some excellent studies of the political economy of development at the national and regional levels such as Basu (2015) on India and Ndulu et al. (2008) on sub-Saharan Africa.

## 7.4 The Interrelationship Among Growth, Inequality and Poverty

Recent studies have provided additional empirical and conceptual evidence that high initial income (wealth) inequality and high initial poverty, while undesirable in their own rights, act as brakes to growth. Atkinson (2015), in a masterful treatise, builds a strong case that inequality can be reduced while enhancing efficiency.<sup>16</sup> In a real-world setting where monopolistic competition, imperfect information and missing markets reign the trade-off between equality and efficiency no longer holds.<sup>17</sup> In turn, Ravallion (2012), in a comprehensive study covering growth spells in about a hundred developing countries since the late 1970s, found that high initial poverty rates have sizeable negative impacts on the subsequent growth rates of per capita gross domestic product (GDP).

If the contention that a reduction in inequality and in poverty in settings where both are 'high' can contribute to raise productivity and subsequent growth is valid and can be further confirmed by sound empirical studies, then the resulting strategic implications would be gigantic.

This new approach turns on its head the prevailing view under the classical framework that an unequal income distribution is a prerequisite to growth based on the argument that the rich (the capitalists) save a larger proportion of their income than the poor (the workers). Hence, for a given level of total income, a more unequal income distribution would generate a larger flow of aggregate savings that could be channelled into investment to yield a higher growth rate of GDP. In this sense the desirability of an unequal income distribution could be rationalised on economic grounds while clashing with the ethical concern for more equality, equity and egalitarianism. More poverty today was a precondition to more economic growth and less poverty in the future. As the Cambridge School baldly put it, impoverishment of the masses is necessary for the accumulation of a surplus over present consumption. If indeed less inequality is conducive to growth, then it becomes a means towards economic development and future poverty alleviation and the conflict between

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<sup>16</sup> Another extremely influential body of research documenting the sharply rising income inequality in the last few decades is by Piketty. It is interesting to note that the remedies recommended by Atkinson (labour power and minimum wage legislation) differ from those of Piketty (taxation and redistribution). While these policies might be effective within the setting of a mature economy, other policies might be called for in a poor developing country.

<sup>17</sup> Ever since Okun's so-called law, first expressed in 1974, that there was a trade-off between equality and efficiency, the conventional wisdom among the economics profession has been that a trade-off was inevitable.

the ethical objective (norm) of egalitarianism and the economic conditions required for growth disappears (Thorbecke 2006).

The previous findings that high initial inequality and poverty affect future growth negatively *reverse* the conventional causality in development economics that typically explored how growth affects inequality and poverty. These findings are anchored on a major conceptual contribution originating in the present period, namely, to view and consider the growth-inequality-poverty nexus as an essentially *indivisible* process. Growth is a necessary (but not sufficient) condition for development to occur. If the initial income and wealth distributions are uneven, then growth may not only be lower (as proponents of the new political economy of development would argue) but the impact of a given aggregate (GDP) growth rate on poverty reduction will also be significantly smaller (the elasticity of poverty reduction with respect to growth varies within a wide range, between  $-0.2$  and  $3.0$ , depending on the initial conditions). Inequality can be thought of as the filter between growth and poverty.

In addition to the initial income distribution, the pattern and structure of growth play a fundamental role in their impact on poverty. Given the initial conditions, including the institutional framework in place at the time, the outcomes of the nexus of growth, inequality and poverty are jointly determined. This is essentially the theme of the World Development Report for 2006 (World Bank 2005) which argues convincingly that there need not be any trade-off between growth (efficiency) and poverty reduction (equity). The key issue is to identify institutions and policies that are conducive to a pro-poor growth pattern.

## 7.5 Comprehensive Definition of Human Development and Inclusive Growth Strategy

Since the beginning of the New Millennium the definition of development has become much more comprehensive and multi-dimensional than prevailed previously. Building on the foundations of Sen's functioning and capabilities' concepts, human development, as opposed to the narrower concept of poverty reduction, has taken over centre stage as the ultimate goal of development. Human development consists of a plethora of dimensions and aspects as they relate to health, education, nutrition, shelter, access to information, participation, nature of regime (degree of democracy and liberty), environmental and global sustainability and many others. Conceptually, one can think of a human development profile over  $n$  dimensions. An *individual* profile would consist of the specific values or scores of that individual on each of

the indicators proxying the  $n$  dimensions.<sup>18</sup> Likewise, one could compute average regional and national profiles. Instead of deriving a scalar value by weighing each of the dimensions (as the UNDP [United Nations Development Programme] Human Development Index does), complete profiles would be compared.

In some—probably unusual circumstances—one profile could reveal higher (better) values on each of the indicators of the  $n$  dimensions. In this case the equivalent of first-order stochastic dominance would obtain and it could be stated unambiguously that the level of human welfare was higher in the dominant profile. When one profile scores higher on some dimensions but lower on others, no unambiguous ranking can be established without linking each dimension of human welfare to some utility function. It is very difficult if not impossible to imagine that this mapping from dimension to utility can be done totally objectively in a non-arbitrary fashion. In this case, as two profiles intersect, one can check whether second or higher order (stochastic) dominance obtains. Until now the theoretical and empirical work on multi-dimensional welfare has been focussed on and limited to the measurement of multi-dimensional poverty as opposed to the even broader concept of human development (Bourguignon and Chakravarty 2003; Tsui 2002; Duclos et al. 2006 and Alkire and Foster 2011). In many respects, this approach goes back to, and represents a much more sophisticated version of, the Basic Needs doctrine of the 1970s. A complementary approach also meant to broaden the concept and measurement of poverty is the attempt at blending objective and *quantitative* (essentially money-metric) indicators and more subjective and *qualitative* indicators (à la Sussex School) based on focus groups and interviews (Kanbur 2004; Kanbur and Schaeffer 2007).

As discussed earlier, improvement in human development is increasingly seen as the ultimate goal to strive for. Since a case has been made that less inequality in the income and wealth distributions can be conducive to growth and future development, greater equality has taken its place along poverty reduction as joint objectives to be reached through a pattern of growth sensitive to the needs of the poor. The eight Millennium Development Goals, initially established by the United Nations in 2000, were further extended into 17 Sustainable Development Goals in 2015. The latter provide a general framework to monitor the progress of the Third World in its search for improving its level of human welfare. While progress in meeting these goals has been uneven, their existence provides useful targets to strive for. There is one more objective that has surfaced recently, namely, reduced vulnerability.

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<sup>18</sup> Some observers would call this the dashboard approach.

Since the poor in an era of globalisation tend to be more vulnerable to external (essentially macroeconomic) shocks as the Asian Financial Crisis of 1997 demonstrated, it is important to design and implement a set of safety nets and structural measures that would reduce their vulnerability.

*Inclusive growth*, as a development strategy, is the new paradigm embraced by the development community. It follows directly from and is based on the broad, highly multi-dimensional and contemporary definition of human development discussed earlier. It recognises that the pattern and structure (arguably even more so than the pace) of growth are crucial determinants of inclusive growth. All segments of society must be involved in, and benefit from, this process—the poor, the middle class and the rich. On the production side, involvement is through productive employment. On the public policy side, involvement is through voice and representation in local and national policymaking decisions. Arguably the most comprehensive and concise definition of inclusive growth is that of the Indian Planning Commission, that is, “growth that reduces poverty and creates employment opportunities, access to essential services in health and education, especially for the poor, equality of opportunity, empowerment through education and skill development, environmental sustainability, recognition of women’s agency and good governance”.

A case can be made that there are two reinforcing variants of an inclusive growth strategy. The first one is the conventional *pro-poor growth* strategy where the causal link is from the structure of growth to poverty (and inequality) reduction, while the second variant is the *pro-growth poverty reduction* strategy which is based on the reverse causal link from poverty (and inequality) reduction to growth.

## 7.6 Globalisation and Development

Until very recently most economists took it for granted that the globalisation process was like gravity—an irresistible force. Strong protectionist reactions worldwide are beginning to cast some doubt on the immutability of globalisation. The formulation of development strategy has to be scrutinised within the context of a world economy that had been globalising at a very fast rate—a trend that could well decelerate in the future. A key issue is whether the present form of globalisation is conducive to a process of growth-cum-structural transformation, which is capable of engendering and sustaining an inclusive growth pattern. It is possible, contrary to the income convergence thesis, that globalisation could generate, both at the national and global levels,

adverse distributional consequences that could slow down the present poverty alleviation trend (Nissanke and Thorbecke 2006). Yet an acceleration of the nascent nationalistic and protectionist trends could lead to an even worse outcome for the deprived.

Hence, policymakers need to design and implement a pro-active development strategy not only to benefit from but also to help counteract some of the negative effects of the forces of globalisation. Globalisation should not be viewed as a reliable (passive) substitute for a domestic development strategy. It is not enough for governments to assume an active role in liberalising trade and capital movements and de-regulating their economies, while passively waiting for the fruits of the old 'Washington Consensus' and the market forces of globalisation to pull them on a fast development track. The alternative anti-free trade approach could yield even worse results. Instead, governments need to pursue both active liberalisation and active domestic development policies.

Globalisation offers large potential benefits for those countries that decide to engage strategically and actively in the globalisation process. Benefits are neither automatic nor guaranteed. Passive liberalisation may lead to marginalisation. At the same time those countries that are still in a relatively early stage of development (as in most of sub-Saharan Africa) need to focus *inwardly* to strengthen institutions and nurture their agriculture in order to speed up the structural transformation process of their economies, and *outwardly* to find their appropriate niches in the global value chain and thereby benefit from the wave of globalisation.

Finally, it would not be unfair to claim that the great bulk of the major conceptual progress in development economics in the last two decades has been at the *microeconomics*' level. The claim that the development community has run out of 'big ideas' at the beginning of this New Millennium (Lindauer and Pritchett 2002) has not withstood the test of time but could well apply to the *macroeconomic* sphere. The richness and boldness of the early macroeconomic contributions in the 1950s and 1960s contrasts with the present relative paucity of new 'big ideas' in the macroeconomics of development.

## 8 Conclusions

The retrospective appraisal revealed the close interdependence and evolution among development objectives, the conceptual framework and models, data and information systems and development strategies throughout the last six periods. In each period the nature and scope of the prevailing development strategy were influenced and sometimes predetermined by the conceptual



state of the art and the available data systems. The interdependent evolution among the four elements of the development doctrine can perhaps best be brought to light by the gradual progression which these elements underwent through time.

Over the last 67 years, the definition of development and strategies to achieve it progressed and broadened from the maximisation of GDP in the 1950s, to employment creation and the satisfaction of basic needs in the 1970s, to structural adjustment and stabilisation in the 1980s and early 1990s, to poverty reduction, followed by sustainable and shared growth that dominated the scene until recently. The evolution in the conception of development culminated with the present broad-based concept of inclusive and sustainable growth. An important contribution of inclusive growth is that it recognises that human development is a highly multi-dimensional concept. Thus, development evolved from an essentially scalar concept to a multi-dimensional one entailing the simultaneous achievement of multiple objectives.

A parallel progression occurred in development theory. During the 1950s the analytical framework was completely aggregative and relied on one-sector models. In the 1960s the prevailing framework became dualistic—distinguishing between an urban, modern-industrial sector and a rural, traditional-agricultural sector. Gradually as distributional issues became paramount, major breakthroughs in the analysis and measurement of poverty occurred. A concern for structural issues early on gave way to a concern with the role of institutions and the market in the development process. The somewhat idealised and misplaced faith in planning which characterised the early decades was replaced by an arguably controversial over-reliance on the effectiveness of markets as an engine of development and as a corollary the minimisation of the role of governments. Endogenous growth requires governments capable of intervening in areas such as education and health to yield the spill-over effects of investment in human capital on overall development. In the present era of globalisation, the appropriate roles of governments and markets are one of the most debated issues. Since the New Millennium, economics and more particularly development economics has taken a giant step to become more experimental drawing on the contributions of behavioural economics and randomised controlled trials.

The advance in the coverage and quality of the data and data systems needed for development analysis and policy over the last seven decades has been remarkable. Until the 1970s the statistical information available to researchers and government offices consisted almost exclusively of national income accounts, population, agricultural and manufacturing censuses and,



in a few instances, simple input–output tables. Survey-type information on variables such as employment, income, consumption and savings patterns tended to be scarce and not very representative. Thus, in general, the existing data systems were not conducive to empirical studies, which could illuminate such fundamental issues as the state of income distribution and the incidence of poverty.

From the 1980s on, the coverage of household survey data expanded enormously and allowed a plethora of microeconomic studies to be conducted on a large variety of issues related to human welfare such as health and education.

In turn, the evolution in the quality and comprehensiveness of SAMs, worldwide, provided a necessary bridge between the macro- and the micro-economic settings. Computable general equilibrium models and macro-micro simulation models made it possible, within limits, to estimate the impact of macroeconomic policies and shocks on the earnings and incomes of different socio-economic household groups and even, in some instances, on individual households. The parallel progress in theoretical concepts and in data systems opened up the domain of distributional issues to more rigorous investigation. In the last two decades randomised trials, focus group interviews and the increasing availability of longitudinal household data have resulted in a much better understanding of (1) how well development projects met their targets; (2) the actual behaviour of actors in various settings; and (3) the dynamics of poverty and growth.

A conclusion of the present retrospective history of the evolution of development doctrine is that instead of a succession of fads, as some critics have claimed, development economics has followed a time path that moved it to become more experimental, more multidisciplinary, more rigorous and more scientific. An interesting and challenging question is what are the forces that influenced this evolutionary path? Some of these forces are exogenous and some are endogenous. Researchers and the development community, in general, respond to socio-economic changes and to conceptual breakthroughs.

Thus, for example, development economics owes its birth to the widespread independence and anti-colonialist movement. Newly independent countries needed a conceptual framework to grow. An early faith on, and experimentation with, industrialisation as the engine of growth based on central planning failed and gave an impetus to focus on agricultural development and the structural transformation at an early stage and greater reliance on market forces. The enormous success of the East Asian Miracle provided a blueprint that could not easily be copied and transferred to the settings of many other developing regions such as Africa that lacked the required institutions. This,

in turn, generated a strong interest in investigating the role of institutions in development.

The protectionism ‘beggar my neighbour’ policies of the 1930s and the tragedy of the Second World War set the stage for a vision of greater integration worldwide and free multilateral trade. This vision strengthened by technological forces led to a wave of globalisation fuelled by multinational corporations. Policies friendly to these corporations and rewarding capital relatively more than labour, created the present setting of a large inequality in the income distribution within many countries and the revolt of the lesser educated clamouring for more protection in the name of fair trade. The increasing focus on poverty and inequality reduction stems from the relative failure of the earlier structure of growth to have been sufficiently inclusive in many parts of the world. It is also important to note that a pattern of inclusive growth is easier to achieve when the initial conditions are more favourable—as was the case for much of East Asia.

The gradual demise and fatigue of relying on foreign public aid with many strings attached led policymakers and researchers to looking more inwardly for endogenous sources of growth. It also encouraged private foundations and philanthropic aid to replace public foreign assistance. The debate about the effectiveness of foreign aid is still very much alive and as yet unsettled. In recent years the United Nations University World Institute for Development Economics Research has devoted much of its resources to reviewing past studies of aid’s impact and undertaking new ones. It concluded that the most recent empirical studies provide support for the view that aid has had a positive effect on growth when allowing for its effects to be felt over an extended period.<sup>19</sup> Yet it is clear that a major research effort is needed to identify the best form of aid and the best balance between public and private aid in assisting the structural transformation—particularly of the poorer countries.

It is relevant to note that the relative importance of the four elements in influencing the contemporaneous development doctrine changed over time. Thus, in the 1950s ‘Big Ideas’ and strategic considerations derived from the Soviet experiment with central planning and industrialisation dominated the scene. The scarcity of data and the highly aggregative nature of the theoretical foundations left investigators and policymakers with little choice other than copying what appeared at the time to be a successful growth experiment and spell. In the 1980s, characterised as ‘the lost development decade’, the objective of stabilisation to restore a modicum of internal (budget) equilibrium and external (balance-of-payments) equilibrium for most developing countries

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<sup>19</sup> See Addison et al. (2017) for an overview of aid effectiveness.

became overarching. The process of growth and development would come to a halt and be 'short-circuited' without first stabilising the economy. The most recent period offers a final example of the dominance of an element, namely, RCTs as a technique that has had an enormous impact on the evolution of the development doctrine since the beginning of the New Millennium.

In a certain sense, the evolution of the development doctrine has followed a partially endogenous path influenced by external factors. Researchers and the development community have responded to failures, crises and successes in their choices of topics to investigate. While the concept of a more or less endogenous path guiding the evolution of development economics is still very premature and vague at this stage, it deserves to be reflected upon and further investigated.

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# 4

## Structuralists, Structures, and Economic Development

Amitava Krishna Dutt

### 1 Introduction

Since the emergence of the new subfield of economics after World War II (see Hirschman 1981; Little 1982; Meier 2005), a number of different approaches to development economics have coexisted. Among them, the structuralist approach has had a prominent place (see Chenery 1975; Bardhan 1988). The approach was dominant from the 1940s to the 1960s, but from the late 1970s and 1980s its influence waned with the rise of the neoclassical approach, the dominant mainstream approach in economics as a whole. More recently, however, several versions of the structuralist approach have reemerged.

As its name suggests, this approach emphasizes the importance of “structures” in affecting the economic development of developing countries, differences in structural characteristics of different countries, especially developed and developing countries,<sup>1</sup> and the need for structural change. As such, it provides an approach to development economics which is an alternative to

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<sup>1</sup> This is related to what Hirschman (1981) referred to as the denial of the mono-economics claim, a claim according to which all economies can be examined using the same approach since they are similar.

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the mainstream neoclassical approach, or at least a complement to some versions of the latter. While the neoclassical approach is generally organized in terms of the optimizing individual, the structuralist approach focuses on the system as a whole and its structure, either of individual countries or of the global economy as a whole. While the former arguably views different economies as being similar, with markets generally allocating resources efficiently, apart from some distortions which can differ between countries, the latter emphasizes different structures, which can differ widely across countries and result in a variety of different outcomes. While the former advocates government policies that often (in its neoliberal version) champion free markets, and sometimes involve micro interventions while maintaining macro stability, the latter gives a major role to the government in promoting economic development through structural change.

This chapter provides an overview of the structuralist approach to economic development. In Sect. 2 it examines the contributions of the early structuralists, distinguishing between the European-US and Latin American strands, by reviewing the ideas of the main contributors. Then, in Sect. 3, it describes newer structuralist and closely related approaches that emerged after the revival of the approach. In Sect. 4 it examines the main theoretical ideas of the structuralists, taking into account differences between different structuralist approaches and comparing them to those of rival approaches. Section 5 examines the main policy prescriptions that are relevant in the contemporary world. The chapter concludes with some brief comments on the strengths and possible problems of the approaches.

## 2 Early Structuralist Approaches

The structuralists in development economics do not comprise a homogeneous group, and it is more accurate to refer to them as following different structuralist approaches. At least two strands in the early days have been distinguished: one developed mainly in European and US universities and the other flourishing in Latin America,<sup>2</sup> especially at CEPAL.<sup>3</sup>

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<sup>2</sup> Sanchez-Ancochea (2007) refers to them as Anglo-Saxon versus Latin American structuralism in development economics. Some discussions focus on the Latin American version (Palma 1987; Blankenburg et al. 2008) while others focused on the European-US version (Arndt 1985).

<sup>3</sup> This is the Spanish acronym for Economic Commission of Latin America (ECLA) which later incorporated the Caribbean countries and became ECLAC.

## 2.1 European and US Strand

The main contributors to the first strand were Rosenstein-Rodan (1943), Nurkse (1953), Singer (1950), Lewis (1954), Myrdal (1957), Hirschman (1958) and, somewhat later, Chenery (1979), and Seers (1962). This strand has been interpreted as focusing on distortions, rigidities, and lags in developing countries. Chenery (1975, 310) states that it “attempts to identify specific rigidities, lags, and other characteristics of the structure of developing economies”, and Little (1982, 20–21), a critic of the approach, states that it “sees the world as inflexible. Change is inhibited by obstacles, bottlenecks and constraints.... This alleged inflexibility was married to the evident fact that the production structure of developing countries was very different from that of developed countries. To achieve development, it had to be changed rapidly ... [This] view of the world provides a reason for distrusting the price mechanism and for trying to bring about change ... by administrative action.” Arndt (1985, 152) distinguishes between what he calls the signaling, response, and mobility components of this view, where the first involves prices giving wrong signals because they are “distorted by monopoly and other influences”, the second, inadequate or perverse responses of labor and other factors of production to price signals, and the third, slow or even zero mobility of factors of production. Arndt (1985, 151–3) argues that structuralism in this sense emerged from a number of sources, such as the analysis of externalities, deviations from pure competition, wage-price rigidities, fixed coefficient technologies, attacks on the idea of *homo economicus*, and wartime controls.

Rosenstein-Rodan (1943) argued, using the example of the shoe factory (the workers of which do not spend all their income on shoes), that successful industrialization needs the simultaneous and coordinated expansion of several sectors, which generates incomes and markets for each other, and therefore makes each kind of investment profitable. Thus, balanced sectoral growth and a big push are required. While he focused mainly on investment, Nurkse (1953) emphasized both investment incentives (i.e., low incomes implying small markets and low investment incentives) and saving capacity (due to low incomes), using the notion of the vicious circle. While the former problem can be tackled with balanced growth and a significant amount of capital, the latter is difficult especially for sparsely populated countries, which do not have surplus labor like densely populated countries that can transfer labor from agriculture to industry without causing a reduction in food production and have to face the difficult task of increasing agricultural productivity. Although international capital inflows can address the savings problem, other

international factors like demonstration effects that keep savings low and imports of luxury consumer goods high (thereby leaving less foreign exchange for importing capital goods), and international trade specialization in primary products led to terms-of-trade deterioration because of limited demand. While Rosenstein-Rodan and Nurkse advocated balanced growth, Hirschman (1958), who stressed capital shortages and managerial and entrepreneurial bottlenecks, favored an unbalanced growth strategy that made use of externalities and market linkage effects in key industries—especially backward linkage effects from input-using industries—to induce pressures that stimulate other industries.

Lewis's (1954) celebrated model of development focused on densely populated regions and the dualistic nature of developing countries, with a non-capitalist subsistence sector with disguised unemployment or surplus labor which uses little or no capital, and a modern sector using capital and producing under capitalist conditions with hired labor. Profit-maximizing, price-taking, producers in the modern sector employ workers up to the point at which the marginal product of labor equals the real (product) wage, given the stock of capital. The low wage, because of the existence of surplus labor and consequent low income in the subsistence sector, keeps profits high. Saving comes from profits, as in classical political economy, which is automatically invested, resulting in capital accumulation, which increases production and employment in the modern sector. The process slows down when surplus labor is exhausted, with increases in subsistence income putting an upward pressure on the modern sector wage, a tendency that is exacerbated by a fall in food production (if the subsistence sector is the agricultural sector) and a rise in the price of food which increases the cost of living. But, by then, the economy becomes non-dualistic and no longer has low income. Lewis also developed models examining interactions between developed and developing countries to show that if the latter specialize in primary products, foreign capital inflows and technical change in them causes their terms of trade to deteriorate and, if they produce both subsistence and modern goods, free trade makes them over-produce the former and reduces their total income.

Singer and Myrdal focused on international issues and global inequality. Singer (1950) pointed to increasing inequality between the industrialized high-income countries and primary product-oriented developing countries (he later claimed that the problem remained even when the latter produced simpler manufactured products) caused by the decline in terms of trade of the latter due mainly to the low income elasticity of primary products and specialization in the production of primary goods (or simpler manufactured goods), often in enclaves with few positive links with the rest of the economy, which

deprives developing countries the benefits of economic development through technological learning. Myrdal (1956, 1957) criticized mainstream economics for using equilibrium methods and ignoring social and political factors, examined the global economy using the concept of circular and cumulative causation, and incorporated “non-economic” factors. Distinguishing between spread effects of developed-region expansion (e.g., because it increases the demand for developing region products) and backwash effects (e.g., by dislocating industrial activity in developing regions through competition or by causing capital outflows out from them in search of more secure returns), he argued that the former are likely to be relatively weaker because of language and cultural barriers and the existence of enclaves in developing countries. He advocated government intervention in the form of import tariffs for industry and planning in developing countries and the promotion of trade between them.

Somewhat later, Hollis Chenery who, as chief economist at the World Bank, had a direct influence on development policy emphasized using statistical data on the sectoral composition of income and input-output relations. With his colleagues, he used this data for constructing development planning models and for analyzing changing patterns of sectoral composition of output, which he viewed as a central aspect of structural change. In addition, stressing the importance of distortions and rigidities, he and his colleagues developed empirical two-gap models to analyze saving and foreign exchange constraints on growth due to the inelasticity of capital goods import requirements. He also advocated government intervention, for example, to take advantage of the complementarity of sectoral investments and develop dynamic—rather than following static—comparative (see Chenery 1979).

## 2.2 The Latin American Strand

The main contributors to the second strand were the Argentinian, Raul Prebisch, the acknowledged leader of this group, and the Brazilian, Celso Furtado.

Prebisch (1950) criticized the false sense of universality of general (neoclassical) economic theory and advocated new approaches to study the growth process in Latin American and other developing countries in view of their peripheral structures. His preferred approach was to focus on “the economic surplus ... [and] the structure and dynamics of power which explain how the surplus is appropriated and shared” (Prebisch 1984, 153). Prebisch (1950, 1959) emphasized the division of the global economy between the high-income,

industrialized, center and the developing, mainly primary-producing, periphery. In the center, large firms often operate in imperfectly competitive markets, labor is largely unionized, and labor markets tight, while the periphery has heterogeneous production structures exhibiting limited industrialization, a large informal sector, underemployment, and competitive producers lacking market power. Consequently, technological change (which originates in the center and spreads slowly to the periphery's export sector) has asymmetric effects on the two regions, increasing wages and profits in the center and lowering the price for peripheral exports, resulting in secular terms-of-trade decline for periphery (in addition to fluctuations in the terms of trade due to business cycles in the center). The low income elasticity of the demand for primary products due to Engel's law exacerbates this terms-of-trade decline. Income and its growth in the periphery are low due to the shortage of capital and low levels of saving and investible surplus. Moreover, foreign exchange shortages in the periphery due to the high level of imports of consumer goods and the low propensity to import of countries like the US, exacerbated by the terms-of-trade problem, reduce the ability to import investment goods.

He argued that although industrialization was not the end, it was necessary in order to create jobs and raise living standards. Thus, he advocated planned industrialization, with the state directing investment to the industrial sector, and protecting nascent industries using import tariffs. Especially in later writings, he became critical of excessive and haphazard protectionism that actually occurred in Latin America motivated by foreign exchange shortages rather than the desire to promote industry. He also emphasized the need for the efficient promotion of exports of both primary and industrial products and advocated a change in the pattern of international division of labor, rather than autarky.

Celso Furtado analyzed the economic system in terms of its structural configuration to understand and explain the level and pattern of economic growth and its distributional consequences and advocated "reforms of the structural rigidities that have hindered authentic development" (Furtado 1987, 225). Using an historical-structuralist approach, he examined the process by which capitalism spread from Europe and penetrated peripheral regions and, especially in his later writings, emphasized how political, social, and cultural factors changed structures.

Furtado (1961, 1965) analyzed the process of development and accumulation in terms of the generation and use of the economic surplus. Although underemployment and high inequality imply high profits, the investible surplus is reduced by profits of transnational corporations leaking abroad and high luxury spending by local elites because of their cultural dependence on

rich countries. High inequality also implied low consumer demand and low investment incentives, which reduced accumulation, in contrast to Lewis's view. Moreover, technological dependence on rich countries meant high capital intensity and low employment growth, and consumer imports and the import intensity of capital goods resulted in an external disequilibrium, which is similar to the foreign exchange gap of two-gap models. Although he was less enamored with the policy of import-substituting industrialization than Prebisch because of its high import propensity and low employment generation, he saw the state as having a major role in promoting development by creating conditions for entrepreneurial investment, through public investment, land reform, and other policies for altering the structure of the economy.

Several others made major contributions to Latin American structuralism. Juan Noyola Vazquez (1956) and Osvaldo Sunkel (1960) developed the structuralist theory of inflation which explains inflation as a result of real imbalances in the economy rather than excess money supply growth as emphasized by the monetarists. This imbalance is due to a rigid foreign exchange shortage that causes currency depreciation, rising food prices due to the rigidity of agricultural production due to the land tenure system, the bargaining power of workers and the monopoly power of capitalist firms, fiscal mechanisms (such as a regressive tax system), and accommodating credit expansion. Anibal Pinto (1970) stressed the heterogeneity of peripheral countries (a phenomenon more complex than dualism), as reflected by large differences in productivity and a relation of exploitation of different elements of the large "internal periphery" by the modern sector. Finally, Sunkel (1969) focused on how the growth of transnational capitalism implies that foreign corporations controlled much of the modern sector, leading to national disintegration, with only a minority of people benefiting.

### 3 Later Structuralist Approaches

Although structuralist approaches were dominant in the early days of development economics, they coexisted with other approaches. Of these, the neo-classical one emphasized the importance of market forces, individual incentives, and the corrupting effect of state intervention. The Marxian one focused on class struggle in the economic and political spheres (with the state possibly acting in the interests of the domestic and international capitalists) and surplus transfer from developing to developed countries through transnational corporations and other neocolonial mechanisms. The institutionalist one stressed the role of legal, political, and socio-cultural institutions in the

presence of asymmetric power relations. From the late 1970s and early 1980s, however, structuralism went into decline in the wake of criticisms of it from various sources (Love 2005).

The major assault came from the neoclassicals, with the argument that while trade restrictions and other kinds of state intervention stifled growth and development in many developing countries, those countries that embraced relatively free market policies performed well (Little 1982). Lal's (1985) neo-classical critique took aim at the idea of surplus labor, pessimism about the growth of traditional exports from developing countries, the focus on capital accumulation rather than on efficiency and resource allocation, and the alleged benefits of state-led industrialization. Lal explained that he did not favor laissez-faire policies and the complete withdrawal of the state, and acknowledged the role of the state to correct for market failures arising from specific (and presumably minor) distortions in developing countries.

Other critiques came from the basic needs approach which emphasized basic needs fulfillment over economic growth (see Streeten 1982) and the dependency school (see Palma 2008), which underscored the problems of underdevelopment in a global economy in which international trade, foreign aid, the technological leadership of rich countries, and the activities of transnational corporations made developing countries dependent on advanced capitalist countries. Although the latter school shared some major ideas with the Latin American structuralist approaches (indeed, some contributed to both), some members of the school were less sanguine about the success of state-led import substitution policies within a capitalist market system and advocated revolutionary changes toward socialism and the overhauling of the global capitalist system.

Though structuralism went into decline, it did not disappear, and there have been some recent attempts to revive it.

### 3.1 Newer Structuralist Approaches

Contributions of five prominent ones, in particular, may be summarized as follows.

First, Lance Taylor (1983, 1991, 2004) and his colleagues have developed a formal approach to structuralist macroeconomics initially for developing countries but later for more general application. Taylor (1983, 3) states that “[a]n economy has structure if its institutions and the behavior of its members make some patterns of resource allocation and evolution substantially more likely than others. Economic analysis is structuralist when it takes these fac-



tors as the foundation stones for its theories.” He explains that the approach examines what variables adjust to bring about overall macro balance (equalizing saving and investment plans), that is, production, prices, or some other variable (such as imports, government spending), and shows how different structural characteristics of the economy affect the answer to this question. Taylor (2004, 1) points out that foundations of the approach lie with Keynesian, Kaleckian, Ricardian, and Marxian schools, according to which “an economy’s institutions and distributional relationships across its productive sectors and social groups play essential roles in determining its macro behavior” and that it “puts a great deal of emphasis on accounting relationships as built into national income and product account and flows of funds”. In this approach, a basic model examines the determination of output stressing the role of aggregate demand along Kalecki-Keynes lines, introducing different classes along Marxian lines and examines the interaction between output, growth, and distribution. The model is extended to incorporate various additional features, as discussed later.

Second, from the late 1980s, CEPAL (see ECLAC 1992) has produced a new version of structuralism, called neo-structuralism, which has replaced the neoliberal one as the preferred approach to policy in several Latin American countries. It has three main pillars: a focus on technological upgrading; an emphasis on reducing inequality through productive employment creation, investment in human resources, social welfare, and transfer policies; and making the state more responsive to peoples’ needs through social inclusion and by restructuring the state through measures such as decentralization and promoting public-private and public-civil society partnerships. The proponents of the approach see themselves as a preferred alternative to the market fundamentalism and neglect of inequality of neoliberalism, by recognizing the importance of the state intervention for development, but in a focused and selective way, taking into account its synergy with markets and society. They see themselves as continuing in the tradition of the early Latin American structuralists (see Ffrench-Davis 1988; Fajnzylber 1990; Ocampo 2001), emphasizing center-periphery relations, especially the dominance of the center in terms technology and suppliers of global currencies, the problems caused by primary product dependence, and the structural heterogeneity of the periphery. But they also take into account some of its problems (especially in the context of recent changes in the global economy), such as its neglect of inequality, overemphasis on import substitution rather than technological upgrading, neglect of the social dimension, and not taking into account short-term macroeconomic and financial issues and their connection with long-term development. However, the approach has also been criticized for



abandoning some of the central tenets of structuralism, such as the focus on the appropriation and use of the economic surplus (as done by both Prebisch and Furtado), and not emphasizing power relations within peripheral countries and between the center and periphery, for instance, due to the influence of transnational corporations and financial markets (see Leiva 2008).

A third approach focuses on technological upgrading and the process by which such upgrading occurs by opening up new sectors that require and develop greater skills (see, e.g., Justman and Teubal 1991). This approach draws on technological case studies of successful developing countries using a Schumpeterian and evolutionary approach and also traces its lineage back to structuralists such as Rosenstein-Rodan, Nurkse, Hirschman, and Chenery. It interprets structural change to mean moving into new sectors of production, which does not result automatically due to the accumulation of capital but requires policies to foster technological capabilities; develop specific infrastructure, human capital, physical infrastructure, specialized financial institutions, generic technologies, and export marketing infrastructure; produce adequate supply of entrepreneurs with good technical understanding; and promote sophisticated local markets. Key sectors need to be identified, choices need to be made between different discrete paths, and a critical mass is required to take advantage of scale economies. A typical path of structural change is from primary sectors and light industry, to large-scale processing like steel, cement, and petrochemicals, to capital goods sectors, to high-technology industries using electronics and robotics, and so on. This approach explicitly contrasts itself from the neoclassical one which focuses on marginal decisions, free markets, and international specialization according to comparative advantage, by emphasizing discrete changes and choices, the role of strategic government policy, and the dynamics of learning by doing and infant industry development.

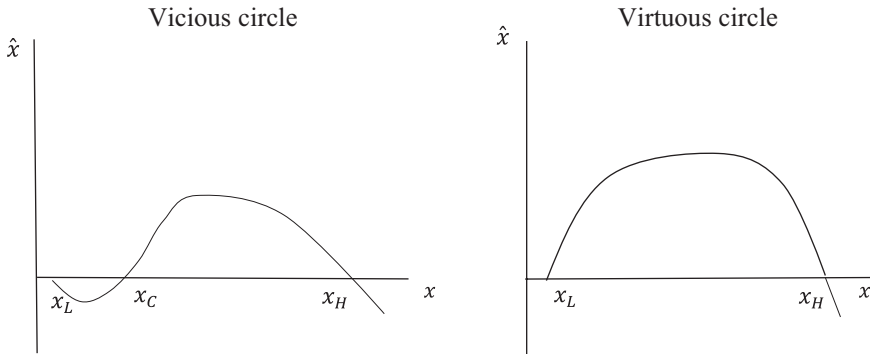
The Brazilian economist Carlos Bresser-Pereira (2012) and his colleagues have sought to revive structuralist macroeconomics in terms of “new developmentalism”, drawing on some of the early structuralists, especially Furtado. He emphasizes the importance of aggregate demand and argues that high levels of inequality (with wages lagging behind productivity growth) reduce consumption demand, and the Dutch disease (especially for oil exporters) and faulty exchange rate policy that result in currency overvaluation, reduce exports and causes foreign payments crises. He advocates a national development strategy with the state playing an active role, but not through expansionary fiscal policy (that increases the government and foreign debts and ultimately weakens the state because of high interest payments), or through import tariffs, but by pursuing a competitive exchange rate policy, having some indus-

trial policies to encourage exports without making them the centerpiece of the strategy, reducing inequality with minimum income policies, and rejecting the liberalization of the capital account and financial globalization.

Finally, Justin Lin (2012), while serving as chief economist at the World Bank, advocated a “new structural economics” as an approach to development policy which he calls the “neoclassical approach to structure and change”. His analysis starts with the economy’s factor endowments (as in the Heckscher-Ohlin approach) and examines how the surplus produced in the economy is saved and invested (echoes of some older structuralist ideas) and how this leads to capital accumulation and structural change that involves the production of more technologically sophisticated goods. Although he sees the market as the main engine of growth and structural change, he also emphasizes risk, public goods such as infrastructure, externalities, and coordination failures, which require the state to pursue policies that help the private sector to climb the technological ladder. These policies include the provision of hard and soft infrastructure (the latter rather vaguely interpreted as including institutions that reduce transactions costs), building human capital, and encouraging private foreign investment. Although he opposes doctrinaire neoliberal free market policies, he warns against protectionist policies that attempt to deviate too much from comparative advantage (though interpreting its determinants to include soft infrastructure which require state action to develop) because they encourage the creation of unsustainable industries for which the country does not have the required skills and infrastructure in addition to encouraging corruption and rent seeking. While his focus on both the requirements for, and effects of, climbing the technology ladder is well taken and very similar to the technology upgrading approach discussed earlier, it is not clear in what sense his approach is really neoclassical (apart from its organizing principle; see the following sections), since much of it is similar to the former approach, which explicitly distances itself from the neoclassical one.

### 3.2 Development Traps

Another approach, which emphasizes the importance of traps in the development process, has some relation to structuralist approaches. Early references to low-income traps can be found in the discussion of vicious circles, for instance, in the contributions of Nurkse mentioned earlier. Circles, however, may be vicious—which make it difficult to break out of them—or virtuous—in which case an increase in per capita income, for instance, increases saving or investment incentives, generating a cumulative expansion.



**Fig. 4.1** Vicious and virtuous circles

A useful way of distinguishing between these two kinds of circles is in terms of Fig. 4.1 which shows the dynamics of some income-increasing factor,  $x$  (such as the capital-labor ratio or the level of education or even the level of per capita income itself), that is, how the growth rate of  $x$ , denoted by  $\hat{x}$ , depends on the level of  $x$ . The relationship is shown by the curve which is the horizontal axis for levels of  $x$  below  $x_L$ ; other factors affecting the dynamics are assumed to be constant. In case (a) there are three equilibria for  $x$ , of which  $x_L$  (the low-level equilibrium or trap) and  $x_H$  (the high-level equilibrium) are stable, and  $x_C$  (the critical minimum level) is unstable. If the economy is initially at  $x_L$ , an (exogenous) increase in  $x$  brings the economy back to it if the increase takes it to less than the critical minimum level, but if there is a sufficiently big push, the economy will move on to the high-level equilibrium.<sup>4</sup> This case, therefore, corresponds to a vicious circle, since small efforts will not allow the economy to break out of the low-level trap. Case (b), however, has only two equilibria and there is no low-level trap: an increase in  $x$ , however small, will take the economy to the high-level equilibrium. Proponents of the vicious circle and critical minimum effort ideas argue that the situation is as shown in Fig. 4.1a.

An early example by Nelson (1956) explains the vicious circle in terms of the interplay between saving (which is zero at low per capita incomes but then increases as income rises beyond a point) and population growth (which rises with per capita income but then stabilizes). Solow (1956), in addition to population growth, invokes increasing returns. Leibenstein (1957) emphasizes the role of socio-economic factors that affect the relative importance of differ-

<sup>4</sup>There need not be a high-level equilibrium, since the curve need not cross the horizontal axis after  $x_C$ , so that  $x$  increases indefinitely.

ent kinds of agents, such as entrepreneurs engaged in innovation, and those engaged in speculation and predation.

Recent contributions, which often use the name poverty traps, revisit some of these earlier themes involving elements such as saving behavior, externalities, and endogenous population growth. They usually provide explicit neoclassical microfoundations involving utility-maximizing agents and the full employment of labor and other resources, and introduce additional issues such as public health, education, nutrition, financial intermediation, inequality, discrete technologies, regional and neighborhood effects, and institutional and organization factors, such as corruption, incomplete property rights, and kinship ties (see Azariadis and Stachurski 2005; Azariadis 2006). The similarity of some of this—for instance, those introducing firms with market power, increasing returns, and different technologies—to some earlier structuralist contributions, such as Rosenstein-Rodan's analysis of the big push, has not escaped attention (see Easterly 2006).

However, some models depart from neoclassical lines and are closer to earlier structuralist contributions. These include Ros (2000), who shows how the interaction of surplus labor, as in the Lewis (1954) model, and increasing returns can produce multiple equilibria and a low-level equilibrium trap, and Rada (2007) and Ocampo et al. (2009), in which a traditional sector having surplus labor interacts with a capitalist sector in which aggregate demand determines output and capital accumulation and growth results in productivity growth through the Kaldor-Verdoorn effects, to result in a low-growth trap that sustains dualism.

Another recent literature argues that even if countries escape the low-income trap, they may get caught in a middle-income trap (see Gill and Kharas 2015). Although the evidence on whether, and in what sense, a generalized middle-income trap exists is not conclusive, several explanations of the phenomenon have been offered. A popular one relates to the disappearance of surplus labor and the consequent increase in the real wage which reduces the investible surplus and erodes external competitiveness, resulting in export stagnation and balance of payments problems, unless labor productivity grows sufficiently. Whether the problem is caused by government policy mistakes as some have argued, or by the inherent difficulty of the transition process, the approach is similar to the newer structuralist approaches that emphasize the need for technological upgrading.

## 4 Structuralist Approaches to Development Theory

This section examines the main theoretical characteristics of structuralist approaches, discussing in turn the general approach or organizing principle of analysis (what can be called its epistemology), the ways in which the approach views the main features of the real world (what can be called its ontology), and how it defines economic development (or the normative dimension).

### 4.1 Organizing Principles

The organizing principle refers to the general framework used by the approach (which may even combine multiple principles) without committing to particular views of the world, and is used as the basis for adding these views to provide a complete analysis. Organizing principles are not right or wrong in how they depict and explain the real world since they do not attempt to do these things, but as they provide the general basis of how analysis proceeds, they may be more or less useful for addressing particular issues.

The structuralist organizing principle consists of viewing the system as a whole in terms of the important structural relationships between parts of the system and how some of these structures change over time. This feature is related to the ideas of structuralism in other disciplines, such as linguistics, social anthropology, and psychology (see Jameson 1986; Blankenburg et al. 2008). The approach often focuses on the structure of the global economy as a whole and usually adopts a holistic perspective that goes beyond narrow economics to incorporate social, political, and historical factors. In contrast, the neoclassical organizing principle (of methodological individualism and “rationality”) can be seen as involving the optimizing individual agent, in terms of which behavior and outcomes are analyzed, without commitment to specific objectives and beliefs of individuals, the constraints they face, and how they interact with each other. The approach is used in other disciplines using the so-called rational choice approach.

The early Latin American structuralists were the most explicit in clarifying the structuralist organizing principle. Furtado emphasized the role of structural configurations and rigidities to explain patterns of growth and distribution in peripheral regions and adopted a historical perspective in explaining these structures taking into account the role of the periphery in the global

economy.<sup>5</sup> As noted earlier, Prebisch emphasized the structure of the global economy as a whole and stressed the fact that the center and periphery had different structural characteristics, and later CEPAL neo-structuralists adopted this approach. New structuralists, such as Taylor, who use mathematical formulations provide a formal representation of this systemic approach by starting with some algebraic accounting relations (e.g., the product and income accounts, to which the flow of funds, balance of payments, and balance sheets with assets and liabilities can be added). These accounting relations provide a systemic framework but do not determine the values of all variables of interest. But they can be used as the basis of models of the system as discussed below.

The European and US strand of early structuralism (apart from Myrdal and Singer) did not explicitly use the systemic approach but focused mainly on distortions and rigidities. They can thus be interpreted as following the neo-classical epistemological approach based on optimizing agents operating in markets and adding distortions and rigidities to their system to explain low-level equilibrium traps, as they have been subsequently interpreted (see Krugman 1992). Nevertheless, they can also be interpreted in systemic terms in which these distortions and rigidities may be interpreted as being based on structural relations, often involving social and political factors (especially as in the cases of Nurkse, Myrdal and Lewis).

Other approaches to development, such as institutional, Marxism, and dependency ones, also use the systemic approach, because they adopt a holistic approach that goes beyond the boundaries of narrow economics and emphasize how the system affects the behavior of classes and other groups and organizations, rather than focusing on individual units.<sup>6</sup>

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<sup>5</sup>Furtado actually distances his approach which “stressed the importance of noneconomic parameters in macroeconomic models ... [such as] ... the landownership system, the control of firms, the composition of the labor force, so on” and how they evolved historically (see Boianovsky 2015), from that of “the French structuralist school, which was based on static social analysis and resulted in the formulation of a ‘syntax’ of disparities in social organizations” (Furtado 1987, 209–10). However, he glosses over the fact that some of his own analysis follows this holistic/structural approach and overemphasizes Levi-Strauss’s synchronic approach to structuralism in social anthropology in which structures are arguably more stable, than on the combination of synchronic and diachronic approaches (which takes into account how structures change over time) as in Saussure’s linguistics and Lacan’s psychology.

<sup>6</sup>However, they emphasize other organizing principles, such as, for institutionalists, the idea that institutions “matter”, presumably interpreting some structural characteristic as institutions, and, for Marxists, that class struggle determines the distribution of income between classes, which then affects economic growth.

## 4.2 Views of the World

Organizing principles have to be supplemented by specific views about important features of a system in order to examine how it actually functions. For structuralist approaches, it is necessary to specify the structural characteristics of particular systems.

Many structuralists view the global economy in terms of the distinction between the high-income industrialized center and the developing periphery. For instance, they emphasize: (1) the nature of trade specialization, with the center or North producing technologically sophisticated manufactured, including capital, goods, and the periphery or South producing mainly primary products and technologically less sophisticated manufactures, which is a legacy of colonialism; (2) the acceptability of some central country currencies as international currencies; (3) the greater technological dynamism of the center; and (4) the cultural domination of the periphery by the center.

Moreover, they stress that the structures of the center and periphery are very different, as noted earlier especially in the discussion on Prebisch. The early structuralists also argue that the structure of developing countries reflects many more rigidities than do developed countries', for instance, in agricultural production because of institutional factors governing land tenure, in imports because they cannot produce many technologically sophisticated goods that are needed for production, and in wages that are held at low levels by surplus labor in low-productivity subsistence sectors.

The structure of the global economy and different structures of the center and periphery mean that there are constraints to economic development in the periphery, for instance, due to low saving, low investment, low levels of technical change, and foreign exchange shortages.

Different structuralists, however, do not necessarily agree about the structural characteristics of peripheral countries. For instance, while some, such as Lewis, argued that high levels of income inequality and low wages provided an impetus to saving and investment, others such as Furtado, took the view that high levels of inequality implied small markets, low levels of profits and hence, low incentives for investment. Moreover, not all peripheral countries need have the same structural characteristics, which may differ depending on population density, whether they are semi-industrialized or heavily natural resource dependent, and their size. The structuralists also have different views about the structures of different economies compared to the proponents of other approaches to development, even those who do not explicitly use the term structure.

Structures can be formalized by adding additional relations between variables—including choices about what elements are held constant—to the accounting framework, mentioned earlier in the discussion of organizing principles, to “close” the model (Dutt 1990). These additional features are derived from assumptions about the real world representing the main characteristics of particular economies.

One closure assumes that growth occurs with full employment at an exogenously given rate of growth of labor supply and with perfect competition. This represents the neoclassical approach to growth and development and can be extended to introduce distortions that can result in some market failures, for instance, due to the market power of firms, externalities, and asymmetric information.

A classical-Marxian closure takes the real wage in the capitalist sector to be given by the state of class struggle or by the income in the subsistence sector, assumes that capitalists save but workers do not, and that all saving is automatically invested. This is similar to the structure of the Lewis (1954) model, which—as noted earlier—has been extended, introducing increasing returns in Ros’s (2000) model with multiple equilibria.

Yet another closure introduces aggregate demand issues by distinguishing between saving and investment behavior and using an independent investment function for the capitalist industrial sector. Saving depends, among other things, on income and the distribution of income (with a higher level of inequality or a high profit share associated with higher saving). Investment depends positively on variables such as the rate of profit, the rate of capacity utilization, and on financial factors. The goods market clears to bring saving and investment to equality. This can occur through variations in output and capacity utilization, with industrial firms setting the price as a markup on labor costs with the presence of excess capacity as in Kalecki’s (1971) approach, or through changes in the price and distribution, as in Kaldor’s (1955–56) approach (when aggregate demand is high enough to take the economy to full capacity). These approaches, especially the approach with excess capacity, are found in new structuralist models such as those of Taylor (1983) and, combined with a subsistence sector and technological change due to learning by doing, lead to trap models such as that of Rada (2007) and Ocampo et al. (2009).

Although some early contributors to development economics, including Kalecki, took the view that the Keynesian emphasis on aggregate demand is relevant only for mature capitalist countries, it has been increasingly recognized that due to the fragmented nature of goods and asset markets, the existence of underemployment, the growth of industries that have made



developing countries semi-industrialized, and the high levels of uncertainty partly due to the lack of stable institutions arguably make aggregate demand important for developing countries as well (see Dutt 2013). What seem like supply bottlenecks may be influenced by demand-side factors as in Keynesian and post-Keynesian approaches: for instance, low levels of aggregate demand may imply low levels of outcome, income, and tax revenues, and hence government spending on infrastructure, resulting in supply constraints.

The models implied by these “closures” can be, and indeed have been, extended in ways to address additional aspects of economies (see Taylor 1983, 1991; Dutt 2017). These include additional sectors beyond the capitalist and subsistence sectors (to take into account agriculture, manufactures and services, and their interaction); inflation (due to social conflicts and sectoral supply constraints, as discussed by earlier Latin American structuralists); interest rates, financial and other assets, banking and the possibility of financial instability and crises; international trade, capital movements, and foreign exchange constraints; technical change due to learning by doing and technology transfers; and fiscal policy and government debt. Many of these “closures” and their modifications involve taking some things as given, such as techniques of production, the real wage, the markup, capital inflows, and agricultural production and its growth. These features can be interpreted as “rigidities” and “distortions”, as done by some early European and US structuralist development economists, because they are not (sufficiently) responsive to price changes but are more appropriately thought of as representing important structural characteristics of actual economies that depend mainly on social norms and other institutional factors.

Some of these views of the world, for instance, taking into account social factors and institutional characteristics, and the nature of international influences that can negatively influence development prospects are also shared by Marxists, institutionalists, and the dependency school. This is not surprising, since some early structuralists drew on, and contributed to, other approaches, such as Myrdal to institutionalism, and Furtado and Sunkel to the dependency approach. However, especially the later structuralists, while borrowing from these and other ideas, adopted a more eclectic view, taking into account the specific structural characteristic approach of particular context and sometimes disagreeing about what characteristics are relevant for a particular context. Their view of world, however, diverges from the neoclassical view, according to which: (1) markets work reasonably smoothly to generate efficient outcomes unless government interventions create distortions (although some accept that there are some distortions due to externalities, rigidities, and information problems, and some, such as Lin, even call themselves

structuralists); (2) international interactions through international trade and capital movements generally bring about economic development; and (3) non-economic factors can be ignored (although later new institutionalist neo-classical economists emphasize their role in reducing transactions costs and protecting private property rights to make markets work better).

Some important implications of these views of the world depicted in the structural approaches may be briefly mentioned. First, most of these views portray developing countries as having dual or heterogeneous production sectors with surplus labor, usually with informal sectors with low productivity and low incomes. Long-run growth is therefore not determined by effective labor supply growth, and growth does not necessarily increase with rate of labor productivity growth as in the neoclassical approach. Different views of the economy reflect different reasons why there is surplus labor and low growth. In the early days of the structuralist approach, the constraint most emphasized was the saving constraint, as formalized in classical-Marxian models. Later, as noted earlier, aggregate demand factors have also been emphasized, where growth is influenced by the expectations of business firms through their effect on investment spending, fiscal policy, and the growth of export demand, not only in the short run, by also in the longer run. Low rates of growth of specific sectors, such as the agricultural sector, which has sometimes been seen as constrained by institutional factors such as patterns of land ownership and land tenure, have also been seen as causes of low overall growth. This occurs, for instance, by limiting domestic aggregate demand for non-agricultural goods and by increasing agricultural price that require increased wages in non-agricultural sectors and therefore squeeze profits, as in the Lewis approach. Foreign exchange constraints due to difficulties in expanding exports of manufactures, the slow growth of world demand for primary products, and the need to import technology-intensive capital and intermediate goods which are not easily produced domestically have been seen as constraining growth, especially during periods of falling primary goods prices and low levels of foreign capital inflows and rising foreign interest rates due to international financial conditions and rising risk premia caused by foreign debt problems. Limits on government spending, resulting especially from high levels of external borrowing and low tax revenues, can also have adverse growth and distributional effects due to low infrastructural and “social” spending. These different constraints, moreover, can “bind” at different times and even interact with each other, as shown in the early structuralist two-gap models, which have been extended to address more gaps such as demand and fiscal gaps (see Taylor 1991).

Second, the structural characteristics affect income distribution and its relation with growth. Income distribution between the rich and the poor is seen as being influenced, sometimes according to different views of the economy, by factors such as (1) income in informal and subsistence sectors, (2) the power on labor organizations which can be affected by labor market conditions, (3) the degree of industrial concentration which raises industrial prices and reduces the real wage, (4) inflation caused by high levels of aggregate demand and its effect on the real wage, and (5) government policies that depend on political economy factors.

In one view of the world, as shown by the classical-Marxian approach, an increase in income inequality is seen to increase the rate of economic growth by concentrating income among the rich, who save a higher proportion of their income, which increases investment and capital accumulation. According to views in which aggregate demand is important, a reduction in income inequality, by increasing the share of income received by lower-income groups who consume a higher proportion of their income, results in an increase in consumption demand and hence, capacity utilization and profits, which increases investment, capital accumulation, and growth (see Taylor 1983; Dutt 1990). Aggregate demand perspectives, however, do not necessarily imply a positive relation between income equality and growth, since a rise in the wage share, by reducing the profit share, can reduce profitability and investment (see Bhaduri and Marglin 1990). Moreover, an increase in the real wage may reduce external competitiveness and thereby reduce net exports and aggregate demand, although this can reduce luxury consumption good imports and improve the trade balance and have the opposite effect.

Third, the incorporation of financial markets into structuralist models has important implications for the analysis of expectations and the possibility of financial instability. An increase in the liquidity positions of banks (e.g., due to international capital inflows) leads to increases in borrowing, which can be used for buying a variety of assets, including stocks and real estate. This increases asset prices. Although this may lead to increases in real investment, sharp asset price appreciation is more likely to lead to speculative purchases of these assets as asset holders expect the price increases to continue and borrow (and lenders lend) more as a result of the rise in the value of their assets. Increasing indebtedness invariably results in the bursting of bubbles and the sharp decline of asset prices (as examined in Minsky's financial instability hypothesis). The resultant losses for asset holders and lenders lead to a cessation of lending, capital outflows, and exchange rate collapses, which further increase capital outflows. The result is economic crisis and contraction with possibly negative long-run growth and development consequences.

Finally, structuralist North-South models have formalized the contradictory effects of international trade, international capital flows, technology transfers, and other interactions between developed and developing countries by taking into account the structure of the global economy and different structures of the North and South (see, e.g., Dutt 1990). These models show how the North can serve as a locomotive for Southern growth, with the expansion of the North increasing the demand for Southern goods, and how international capital flows can lead to technical improvements and changes in production structure in the South. However, they also point to the possibility of terms-of-trade deterioration and uneven development over time due to differences in the income elasticities of demand for Northern and Southern goods, differential rates of technical change due to the pattern of trade specialization, and international capital flows that worsen Southern terms of trade. These models illustrate the difficulties that Southern countries face in the global economy as discussed by the early Latin American structuralists and dependency theorists but are quite compatible with the possible growth and structural change in some Southern economies.

### 4.3 The Normative Dimension

On the third, normative dimension, early structuralists were mainly focused on industrialization and economic growth, although some—such as Prebisch—noted explicitly that the real goal was to increase employment in order to improve living standards, while others—such as Myrdal and Furtado—were deeply concerned with inequality. However, early development economists in general, and structuralists in particular, were later criticized for focusing excessively on economic growth and industrialization, and the basic needs and human development approaches (see Streeten 1982; Sen 1999) can be seen as reactions to this, since the emphasis on growth sometimes neglected considerations of human development, basic needs, and functionings and capabilities. However, as we have seen, newer structuralists are more explicit in emphasizing socio-economic inequality, focusing on both growth and distribution, not only because of intrinsic importance on inequality but also because of its interaction with economic growth. The structuralist normative approach can be contrasted with the neoclassical approach that emphasizes the goal of efficiency (in the sense of Pareto optimality, based on individual preferences) and economic growth since higher levels of income and production are viewed as promoting efficiency, though some within the

approach are also concerned with poverty and inequality (especially if they adversely affect efficiency).

## 5 Structuralist Approaches to Development Policy

This concluding section briefly discusses what, according to structuralist approaches, needs to be done in terms of appropriate policies. Although a thorough analysis of this is beyond the scope of this chapter, some general considerations and some more specific policies are briefly discussed.

On general considerations, four comments are in order. First, our earlier discussion makes it clear that policy-making has to take into account the specific structural characteristics of particular countries and what that implies about their growth constraints, their level of per capita income, their level of inequality of income and assets, their main social classes, the relationship between growth and distribution, their main sectors of production, and their level of technical and managerial skills, among other issues. Thus, the one-size-fits-all recipe of much of mainstream thinking and policy prescriptions is misguided. Second, in particular, market fundamentalism with the prescriptions of liberalization, privatization, globalization, and of maintaining macroeconomic stability by controlling (sometimes severely) government expenditure and focusing single-mindedly on low inflation are poor policy choices. State intervention in the economy is important for promoting economic development, if done in a flexible and context-dependent manner, although overregulation, haphazard and excessive protectionism and state overreach, and delinking from the outside world can certainly be problematic. The state has to play an important role in the development process in synergy with markets and society, although the extent of this role depends on the context. Third, macroeconomic and sectoral policies interpreted broadly, not just in terms of managing monetary, fiscal, and exchange rate policy, are important. Purely microeconomic policies which have arguably been overemphasized in the mainstream development policy literature, such as piecemeal efforts to reduce poverty through transfers, and improvements in schools and health services, although useful, should be seen as part of a broader strategy. Fourth, the fact that the choice of policies and their successful implementation and desirable results depend on broader social and political factors that some—though not all—structuralists have recognized, but are often forgotten in technocratic approaches to policy-making, needs to be kept in mind.

Regarding more specific policies, our discussion takes into account the current characteristics of the global economy, which include: (1) low levels of tariff protection in a liberalized trading system restrict the ability of developing countries to use tariffs and technology transfers as tools for industrial policy in the way they could earlier; (2) relatively developed financial markets in many developing countries and high levels of international capital flows, especially short-term financial movements; (3) large industrial sectors in many developing countries, though by no means in all, and in some cases some degree of deindustrialization in terms of the share of output and employment in manufacturing; and (4) increases in international trade in intermediate goods involving production networks.

### 5.1 Trade and Industrial Policy

While a central pillar of the early structuralists was the idea of promoting industrialization through import substitution, they did not espouse autarkic development but a change in the way developing countries engage in global trade. This view, however, was criticized by many Marxists and dependency writers (such as the Marxist Paul Baran 1957 early on), given the class character of the capitalist state, and the collaboration of local elites with transnational capitalists from the center, and some of them argued that a socialist revolution was necessary for development. Such pessimistic views have been belied by the experience of countries, such as South Korea and Taiwan, which have experienced rapid growth, poverty reduction, human development according to many indicators, and declining inequality, without socialist revolutions, and the possibility that left-wing governments may promote the interests of non-elites. More influentially, the neoclassical critique also attacked dirigisme, emphasizing the inefficiencies of government intervention and promoted the neoliberal slogans of liberalization, privatization and globalization based largely on their reading of the East Asian experience. Although some efforts at import substitution indeed resulted in inefficiencies and corruption, careful research on the East Asian Newly Industrialized Countries (NICs) and elsewhere show clearly the importance of import substitution and government credit allocation to specific sectors for their success (Amsden 2001; Wade 1990; Chang 1994), provided that performance standard on firms is imposed by the state through what Amsden (2001) has called “reciprocal control mechanisms”.

World trading arrangements under the auspices of the World Trade Organization (WTO) and pressure from other international organizations and developed countries have severely limited the scope of the pursuit of

many kinds of trade and industrial policies including subsidies that can be shown to injure trade partners (except for countries with very low incomes, which have been allowed some extra time for liberalization). Technology transfers have also been hampered by the international protection of intellectual property rights through the Trade-Related Aspects of Intellectual Property Rights (TRIPS) agreement in the WTO. Countries that used such policies earlier are “kicking away the ladder”, to use Friedrich List’s phrase (see Chang 2002). However, there remain some possibilities for subsidies for research and development and regional development, and some temporary protection in industries affected by a surge in imports (see Amsden 2003, 87). The state can also affect the sectoral distribution of investment by allocating credit to particular sectors using its investment banks. In guiding investment through these means, the focus needs to be on developing sectors which use activities that develop technological capabilities that have spill-over effects on other sectors and activities, rather than just causing productivity growth. Also, the emphasis should be on activities, rather sectors, since involvement in so-called high-tech sectors may involve mostly assembly activities within production networks and since some sectors, including some simpler manufactures and services such as types of information processing, may involve activities that develop technological capabilities.

It has become widely recognized, especially by later structuralists who rely on technology studies, CEPAL neo-structuralists, Lin, and some of the middle-income trap literature, that technological upgrading requires moving into new production sectors that involve increasingly high levels of technological sophistication. This can be done by (1) establishing engineering and management training institutes, network laboratories, research institutes, science and technology parks; (2) expanding technical and managerial education (which requires basic education as a prerequisite); (3) building appropriate infrastructure of various kinds; and (4) stimulating markets and technical cooperation through regional trade agreements and other types of South-South interactions, and by entering international production networks. These changes are not easy to effect, since they require pragmatic and flexible policies, cooperation between state bureaucrats, private entrepreneurs and workers and their organizations, patience and the acceptance of some failures, and some amount of luck.



## 5.2 Macroeconomic Policies

While the mainstream approach often recommends free market policies for avoiding distortions in the realm of trade and industrial policy, in terms of macroeconomic policies it advocates financial liberalization and policies that maintain macroeconomic stability by maintaining monetary and fiscal “discipline”, for instance, keeping fiscal deficits low, allowing market forces to determine exchange rates, and practicing austerity when there are foreign payment problems. Structuralists, instead, advocate growth-generating policies although taking precautions to avoid financial instability, large government deficits that can create unsustainable situations especially with foreign borrowing, and strong inflationary pressures which can increase uncertainty and reduce real incomes, including wages and informal sector earnings. Robust growth is recommended for expanding employment and thereby reducing reliance on informal activities that have a low quality of employment, increasing wages, and reducing inequality. It is also argued to improve profits and the balance sheets of firms, encourage investment due to buoyant markets, and allow technological diffusion and learning by doing through what are called Kaldor-Verdoorn effects.

Finance is extremely important for increasing capital accumulation and generating growth in output and employment, especially in developing countries with fragmented financial markets, and government policy has to be geared toward increasing finance for production and investment without financial instability. Domestic corporate bond and equities markets may be useful in some contexts, but given that they—especially the latter—are subject to instability due to speculation, sound banking sectors need to be established. Banks need to be regulated to prevent excessive leveraging and risk taking and maturity and currency mismatches, and anti-cyclical financing through, say, variable capital requirements that reduce excessive lending during expansions and sharp reductions of credit during downturns need to be promoted. For long-term investment financing, however, the use of government-owned development banks is an option that has been used by several successful middle-income countries.

Counter-cyclical macroeconomic policies are also very important (see Ocampo et al. 2009; Ocampo 2011). Developing countries are subject to many external shocks, including those in the external terms of trade which are affected by global conditions and international capital flows, which depend on both global and domestic factors. Some shocks can be cushioned through capital controls, especially on the inflow and outflow of short-term capital



flows, for instance, having restrictions on what kinds of assets can be moved and by which foreign investors, but others cannot. Governments often follow pro-cyclical policies as a default option, since—for instance—foreign capital inflows (outflows) increase when conditions are good (bad). Thus, governments increase spending in good times, finding it difficult to resist political pressures, and tighten their belts in bad times, when foreign loans are difficult to obtain, and central banks raise interest rates attempting to prevent capital outflows and currency depreciation. By exacerbating the volatility caused by the external shocks, pro-cyclical policies increase the chances of financial and economic crises, increase uncertainty, and reduce investment incentives and long-term capital inflows by increasing country risks, resulting in fluctuations in government infrastructural investment with further effects on investment, growth, and technical change, with adverse effects on the long-run trade balance. Deep cuts in government “social” spending on poverty alleviation programs and health and education spending also have large human costs, especially on the poor, and also bring about political turmoil especially for countries that have little or no safety nets in place. Counter-cyclical policies, of course, require government debt/gross domestic product (GDP) ratios to be not too high and also maintaining adequate foreign exchange reserves.

Maintaining adequate levels of foreign exchange requires an appropriate exchange rate policy. The exchange rates need to be kept at a competitive level through central bank intervention in the foreign exchange market, which should also prevent large and quick fluctuations in it. In addition to helping to maintain adequate reserves to allow the pursuit of counter-cyclical macroeconomic policies, and possibly stabilizing foreign capital flows to some extent, by reducing currency speculation, it can maintain export competitiveness, especially for traded manufactured goods, as stressed by Bresser-Pereira. However, the exports of manufactured goods not only depend on price competitiveness but also require technological upgrading and related efforts to improve export quality and its perception, so that competitive exchange rates need to be accompanied by policies that directly affect technological capability along the lines discussed earlier.

### 5.3 Poverty and Inequality

Technological upgrading in a relatively small part of the economy (especially for countries where these sectors comprise a small island in an unorganized ocean) is unlikely to increase employment, especially when labor productivity in these sectors is high and growing, or reduce inequality, and focusing only

on growth and stability does not necessarily improve income distribution. Thus, attention has to be given to the basic needs of the poor through policies such as food distribution programs at subsidized prices; cash transfers; employment guarantee schemes (especially in rural areas) funded by the government; credit, marketing, and technical assistance to small-scale and unorganized producers; improvements in basic health and education; progressive tax systems for funding government programs for low-income groups; and land reforms that provide better tenancy conditions and transfer land to the poor. While some of these may directly contribute to income and employment growth (e.g., land reforms and improvements in education that allow some surplus labor to move into low-technology and assembly sectors if these sectors can expand but are constrained by the lack of semi-skilled workers), many of them may make only a small dent on poverty and inequality.

However, the simultaneous promotion of labor-intensive sectors producing mainly for local markets and low-income foreign markets, and technological upgrading to develop new high-technology sectors, together with government assistance for trade union formation and increases in minimum wages (including those in informal sectors) can increase the labor share in income.

It is sometimes feared that some countries may be profit led, that is, a rise in the labor share may reduce aggregate demand and growth by reducing the profitability of investment and export competitiveness. However, when labor income increases in sectors catering to domestic markets (rather than in exporting sectors), exports are encouraged by technological upgrading and suitable exchange rate policies that do not depress the real wages of lower-income groups (who in any case tend to consume mostly goods that are produced domestically or have high domestic value added, rather than luxury imports), and investment is encouraged with other aggregate demand policies, distributional improvements need not adversely affect growth.

While mainstream approaches advocate poverty alleviation through means such as conditional cash transfers and micro-credit to promote private entrepreneurship, structuralist approaches, though not rejecting these policies, tend to see them within the broader context of policies for growth and reducing inequality and place more emphasis on changing power relations, building institutions, and reducing inequality.

## 6 Conclusion

Structuralist approaches to economic development have a long history. Although their influence declined after their early popularity, they have revived in recent years. This is to be welcomed for a number of reasons. First, they stress the importance of overall global, macroeconomic, and sectoral structures, which provides a much-needed antidote to the recent emphasis on microlevel analysis, empirics, and policy-making (resulting, e.g., from the applications of behavioral economics and asymmetric information, randomized experiments, and microlevel policies). Second, instead of treating all economies as more or less the same (apart from having a few more distortions or different parametric values) as in much of the mainstream approach, which often has the result of recommending policy prescriptions that are argued to fit all sizes, they provide systematic ways of differentiating between different structural characteristics that can deepen the understanding of different contexts, provide a more informed judgment about what aspects of development should be focused on, and guide better context-related policy formulation.

Some versions of structuralism, however, can be seen as overly doctrinaire and rigid, with vague appeals to holism and “systems”, while neglecting the microlevel and structural changes; by focusing too much on the language of “distortions” and “rigidities” that create departures from perfect markets or by finding the same “structure” in all places; and by becoming too “economistic” and ignoring the role of “political” and “social” factors and their co-constitution and interaction with “economic” factors. But structuralism does not inevitably result in these problems and, when adequately supplemented, can provide a basis for overcoming some of them. Regarding microeconomic issues and structural change, the analysis of structures and how they change needs to be supplemented by complementary studies. First, with the careful study of firms, individuals, social groups, and organizations within particular social and political contexts, rather than trying to explore uniform behavior patterns or, worse still, on some notion of the ubiquitous optimizing agent. Second, with the examination of broad structural changes in history and contemporary situations, taking into account the possibility of both path dependence and sudden catastrophic changes. On rigidly structuralist approaches: focusing only on some market failures due to rigidities and distortions like some early and some newer structuralists is problematic because it ignores important systemic structural differences between economies, and asking the state

to supplement markets (although it is difficult to find structuralists who advocate this, some policy approaches arguably ended up doing this) ignores problems of state failure. On the importance of taking into account economic, political, and social factors, this is important in the understanding of given structures and structural change as discussed earlier and also in developing suitable policies and fostering institutional change. For instance, land reforms require popular support for passing laws and for actually implementing them for obtaining suitable results, so that landowning elites cannot use their local power to thwart redistribution through courts and violence, and redistributed land is not bought up by “developers” and speculators. Successful industrial policy for building technological capability requires a reciprocal relationship between the state and private firms. This is facilitated by what Evans (1995) calls the embedded autonomy of the state. This means that the state bureaucracy is embedded in the private sector so that it understands the latter’s needs and provides appropriate help (rather than be a hindrance), yet is autonomous rather than being captured by private interests so that it can demand performance rather than provide unconditional support. It is also helpful if the state can foster appropriate organizations in which different groups in business and society can cooperate to induce technological change and develop technological capability.

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# 5

## Development Economics and Public Economics: Emerging Analytical Interface and Practical Policy Implications

Valpy FitzGerald

### 1 Introduction: The Conceptual Issues

This chapter addresses the theoretical and conceptual relationships between public economics and development economics from a critical perspective. This perspective reflects the emerging analytical approach based on the integration of modern theories of market failure, income inequality and endogenous growth, on the one hand, with the recent practice of emerging market economies in managing structural change, welfare provision and integration to the world economy, on the other. Over the past two decades, this new approach has begun to gradually displace the conventional orthodoxy of public choice theory, deregulation and fiscal minimalism, thereby restoring public economics to its historic role at the core of development economics.

I stress the macroeconomic and macrofinancial dimensions of public economics in developing countries for two reasons. On the one hand, this dimension has come to the fore during the present century after financial markets were liberalized both nationally and internationally, becoming a major constraining factor on state intervention and limiting the space for autonomous policy initiatives. On the other hand, companion chapters in this volume

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address key aspects of welfare provision and public intervention at the micro-economic level.<sup>1</sup>

The state has always been central to economic thought and theory as the leading collective actor in the process of structural transformation (Deane 1989). Nonetheless, university textbooks still tell us that public economics is the study of government policy through the lens of economic efficiency and equity. However, even on this restricted view, public economics provides a framework for thinking about how government should participate in the economy—principally through taxation and expenditure, and also through the way in which any deficits are financed.

Public economics is also central to development economics, the subject of which is itself characterized by structural change, unequal distribution and exogenous shocks—in sharp contrast to the textbook view of a ‘developed’ economy assumed to enjoy smoothly functioning markets, an acceptable income distribution and stable external linkages. Externalities and market failures are also significant in developing countries, as are gross poverty and dependence on international capital markets. It follows therefore that the need for public intervention is likely to be even greater than in developed countries, even though their administrative capacity may be correspondingly more limited.

It is therefore not surprising that state intervention and its limits—and thus public economics—are central to development theory. The three main phases in the evolution of modern development economics all have the role of the state at their core. First, what I will term the ‘classical’ period (1947–1980) opened with a model of state-led industrialization and agrarian transformation derived from the experience of late-industrializing developed countries and gained a focus on employment and universal basic needs provision—led by public investment and welfare provision, respectively—as the basis of poverty reduction and greater equality. Second, the ‘neoclassical’ period 1981–2006 involved a shift towards more market-based solutions to private investment, exports and growth; and towards public intervention reduced to selective and targeted welfare provision in order to reduce poverty; while capital market opening would raise productivity; all leading to lower direct taxation and public expenditure. Third, the present ‘revisionist’ period (since 2007), which is the focus of this chapter, sees a return to greater state intervention but not to the previous classical model, but rather to one of macro-prudential regulation, of universal benefits to reduce inequality, of structural

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<sup>1</sup> Such as Chap. 10 on inequality, Chap. 9 on structural change, Chap. 18 on the environment and Chap. 17 on technological innovation.

transformation to increase both international competitiveness and resilience to external shocks. This new phase appears to be based as much on practical policy experience as on economic theory.

All such periodizations are essentially arbitrary in their boundaries. I have chosen the three turning points for their institutional and ideational significance: (i) the Marshall Plan and the first UN *World Economic Survey: Salient Features of the World Economic Situation* in 1947 which initiated the period of national development planning for structural change; (ii) the Reagan administration and the World Bank *World Development Report 'National and International Adjustment'* in 1981 which initiated a period of structural adjustment and reduced state intervention; and (iii) the onset of the Great Financial Crisis and the International Monetary Fund (IMF) *Global Financial Stability Report 'Financial Turbulence: Causes, Consequences and Policies'* in 2007, which initiated the present period of renewed state intervention and public macro-financial management.

Academic debates about these changing roles of the state have flowed in two streams throughout these three phases: on the one hand, critiques of public intervention on grounds of inefficiency and corruption from the 'public choice' school and, on the other, 'developmental' demands for greater intervention in order to resolve problems of inequality, environment or industrialization. However, a new critical approach has in fact been gaining momentum among developing country policymakers over the past two decades and has begun to displace the conventional orthodoxy of public choice theory, deregulation and fiscal minimalism in developing countries, thereby restoring public economics to its historic role at the core of development economics. The underlying theme is the continued need for an active 'developmental' state to ensure economic sustainability and social cohesion while mitigating the uncertainty caused by the global economy.

The scale of public sector activity has changed less in practice than might be imagined from these conceptual debates, as discussed in Section 2. However, the nature of the activities did change significantly from the original planning approach of the post-war decades through a long period of privatization, structural adjustment and stabilization programmes. More recently, new roles have emerged for the public sector including universal social protection, prudential macroeconomic regulation and capital account management.

Critical theories of market failure and endogenous growth also help overcome the sterile dualism of 'state versus market' and suggest a revived role for the state in (i) the support for (endogenous) economic growth; (ii) structural change in response to technological progress; (iii) income redistribution; and (iv) building resilience to (exogenous) shocks. This should allow an integration

of a new public economics approach with other strategic objectives such as social cohesion and environmental sustainability; the construction of enhanced multilateral and regional mechanisms for fiscal cooperation; and a redefinition of the social contract in order to clarify the roles of state, market and civil society in developing countries.

However, as the ecological economists point out with some justification, the concept of externalities is strictly a misnomer. Market agents make their incomes and profits by systematically shifting the social and ecological costs of their activities onto other agents, including future generations. Hence, externalities are a *modus operandi* of the market, not a failure as such: the market cannot exist without constantly ‘failing’. Indeed, much the same can be said of financial markets where market failure in the form of investor herding and information asymmetry is endemic. By extension, the analysis of public economics must be framed within a realistic model of how markets work in practice, rather than an ideal neoclassical world.

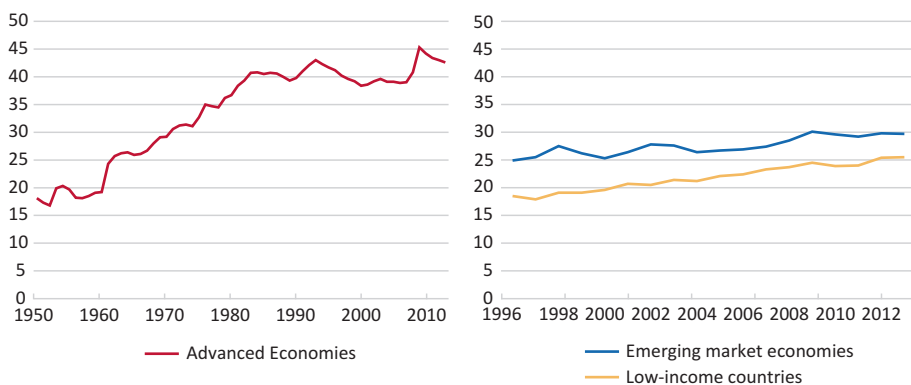
This chapter has the following structure. Section 2 explores the role of the state in economic development in more depth, reflecting the recent shift away from a minimalist stance towards one of proactive management of structural change, reduced inequality and resilience to external shocks. Section 3 addresses the way in which the public sector mobilizes the resources necessary to undertake these tasks, and the implications for sustainable development. Section 4 turns to one of the major fiscal transformations caused by economic globalization, the management of public debt when capital markets are opened to foreign investment and debt is traded internationally. Section 5 addresses another such transformation—the determination of corporate tax rates by international competition. Finally, Section 6 concludes by sketching the implications of the analysis in this chapter for the design and implementation of public economic policy in developing countries.

## 2 The State and Economic Development

The theoretical underpinning of public economics in developed countries reflects an uneasy combination of welfare economics and public choice theory but assumes a closed and efficient industrial economy and a functioning social contract. In contrast, recent debates on economic development are concerned with the absence of these conditions: vulnerability to external shocks, the need for economic growth and structural change, and the problems of social conflict and dysfunctional institutions. Moreover, traditional views of active and strategic state intervention to overcome these obstacles (‘development

planning') were largely superseded until comparatively recently by a more limited view of the state as a facilitator of private initiative and provider of last resort for the poor, despite the experience of newly industrialized countries which seemed to point once more to a more active role for the public sector. The debate on the 'new role of the state' towards the second of the ideational periods identified above reflects an awareness of the shortcomings of the then orthodox approach at both the theoretical and policy levels (Stiglitz 1998; Stern 2002).

It would be incorrect to suggest that the size or role of the public sector in developing countries has been drastically reduced in recent decades, despite repeated attempts by aid donors, international financial institutions and conservative finance ministers to achieve this and the evident social cost of repeated programmes of monetary stabilization and structural adjustment. Indeed, as shown in Fig. 5.1, while public expenditure as a share of GDP in advanced countries has largely stagnated (albeit with wide fluctuations) since the 1980s, this share has continued to rise steadily over the past two decades in both middle- and low-income countries. While general government expenditure accounts for 40 per cent of gross domestic product (GDP) in advanced economies (having risen from 20 per cent in the 1950s), it is about 30 per cent in emerging market economies and some 25 per cent in low-income countries. The difference is largely accounted for by social support transfers<sup>2</sup>



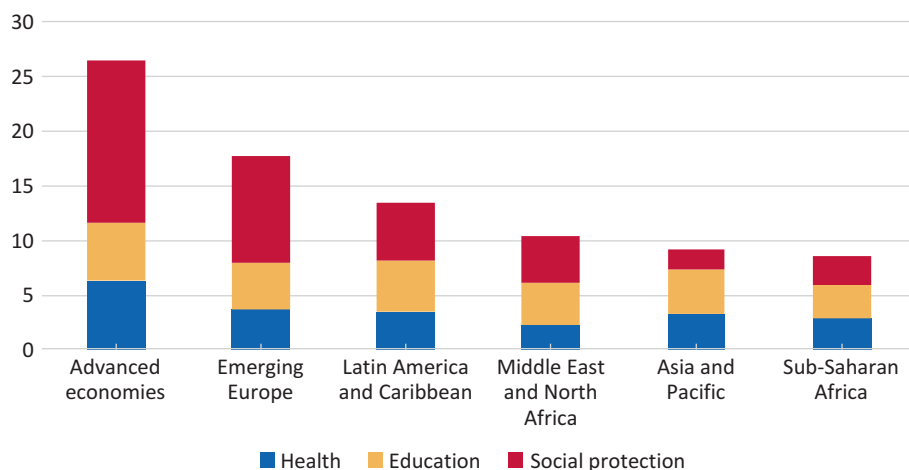
**Fig. 5.1** General government expenditure in developed and developing countries (per cent of GDP)

Source: Data from IMF 2014a

<sup>2</sup>These transfers have major consequences in terms of the redistribution of income and account (along with progressive income taxation) for most of the observed difference between the Gini coefficients for disposable household income in developed and developing countries respectively.

because expenditures on health and education as a share of GDP are remarkably similar in all three groups as shown in Fig. 5.2.

In consequence, public employment remains significant in both developed and developing countries as shown in Table 5.1. As is well known, in developing countries the public employment constitutes a larger part of *formal* employment because of the extent of the ‘informal’ sector. Interestingly, if for the developed countries data we define ‘formal’ as excluding small firms and



**Fig. 5.2** The composition of public social spending by region (per cent of GDP)  
Source: Data from IMF 2015

**Table 5.1** Public employment in developing and developed countries (per cent)

	Public/total employment	Informal/total employment	Public/formal employment
Argentina	19	25	25
Brazil	18	37	29
Egypt	20	51	41
Indonesia	16	60	40
Mexico	12	54	26
Nigeria	11	65	31
South Africa	17	18	21
Vietnam	10	68	31
UK	24	17	29
Sweden	27	26	36
OECD	22	27	30

Source: Author's calculations from ILO and OECD databases

Note: Latest year, ranging 2013–2016; for developing countries, ‘informal’ according to ILO definition; for OECD countries ‘informal’ is self-employment plus employment in firms of ten employees or less

self-employment, then the extent of public employment in both developed and developing countries is surprisingly similar averaging roughly a third of the *formal* workforce. That this should be so is not surprising, due to the similar importance of health and education—sectors which are both labour intensive and account for most of public employment—in developed and developing countries (Fig. 5.2), a point taken up again below.

The modern literature on economic growth rightly focuses on human capital, broadly defined as consisting of the abilities, skills and knowledge of individual workers. Human capital, very much like conventional economic goods, requires a variety of inputs to be produced. However, the impact of public capital on human capital accumulation and more generally education outcomes—particularly of the poor—has only recently begun to receive much attention. A key premise of the literature is that good health and education enhance worker productivity and promote growth. As in the case of education, the provision of health services, while complementary to other services at the microeconomic level, requires the use of public resources—again, particularly in the case of the poor.

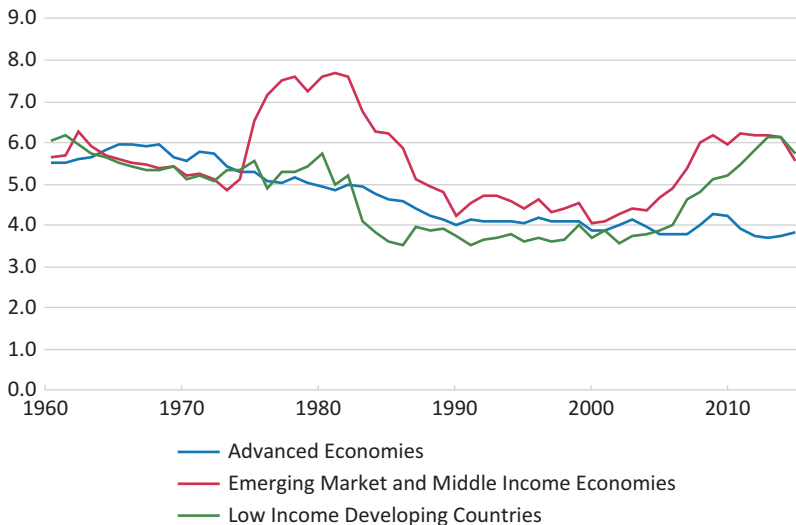
In this context, it is interesting to note that the proportion of GDP allocated to public health and education is now broadly similar among developing regions, as shown in Fig. 5.2, and not much less than in advanced countries. However, the extent of social transfers—pensions, unemployment, sickness and so on—designed to reduce poverty is relatively much larger in advanced economies and indeed accounts for most of the difference in social spending as a proportion of GDP. Furthermore, it is the combination of these direct transfers with higher levels of progressive income tax which accounts for much of the difference in the distribution of disposable income between advanced and developing countries—more indeed than differences in skills and employment (OECD 2017).

The emerging approach to public economics thus requires that public investment be seen as a central driver of economic development strategy, precisely because it is not determined primarily by market forces and can thus effect both structural change and long-term strategy. Increased globalization, through the adoption and adaptation of pre-existing technologies imported from more advanced countries, has led to a substantial acceleration in the pace of technological progress in developing countries. Imports of capital and intermediate goods—whose embodied technological knowledge allows domestic firms to employ more efficient production processes and to adopt more advanced products—and the easing of restrictions on foreign direct investment have also proved to be a powerful channel for technology diffusion. This process of managed insertion into global markets clearly requires

active state intervention—and indeed has become to all intents and purposes, ‘industrial strategy’ in developing countries.

Despite this strategic need, developing countries as a whole during the 1980s and 1990s followed a similar downward trend in public investment as a share of GDP as that experienced by advanced economies—driven by the same forces for the privatization of utilities such as telecoms and power on the one hand and fiscal consolidation on the other. However, not only did the more dynamic emerging markets maintain much higher levels and indeed a ‘boom’ in their early industrializing phase, but there has been a general upswing in public investment in developing countries as a whole in the present century as shown in Fig. 5.3. This is due in part to underinvestment in previous decades, and also to a belated understanding that private investment cannot undertake all the infrastructure requirements of integration to the world economy.

The analysis of optimal level of public sector investment within an endogenous growth model which reflects the relative productivities of public and private capital can help clarify this issue. We start with a basic ‘textbook’ endogenous growth model based on Aghion and Howitt (1998). Consider an economy where public goods enhance private capital productivity and thus growth. We first derive the optimal balance between public and private investment without considering the implications of how public investment is to be financed. In Sections 3 and 4 we will relax this condition in order to take into account



**Fig. 5.3** Public investment in developed and developing countries (per cent of GDP)  
Source: Data from IMF 2018a



‘crowding out’ of private by public investment through profit taxation and interest rates in an open developing economy.

There are three production factors: labour ( $L$ ), private capital ( $K$ ) and public infrastructure ( $J$ ) which produce output ( $Y$ ) along familiar lines, where the constant ( $A$ ) represents social overhead capital:

$$Y = AL^\alpha K^\beta J^\gamma \quad (5.1)$$

Note that the marginal productivity of private capital ( $\Delta Y/\Delta K$ ) is a positive function of the stock of public infrastructure ( $J$ )

$$\frac{\partial Y}{\partial K} = \beta AL^\alpha K^{\beta-1} J^\gamma \quad (5.2)$$

However, the issue here is the composition ( $\theta$ ) of the capital stock

$$\theta = \frac{J}{K} \quad (5.3)$$

In order to maximize output ( $Y$ ), the optimal composition of the capital stock is found simply by differentiating (5.1) with respect to output, setting the differential to zero and rearranging to yield:

$$\tilde{\theta} = \frac{\gamma}{\beta} \quad (5.4)$$

The point here is the somewhat obvious one that the optimal balance between public and private capital is determined by their relative marginal productivities ( $\gamma, \beta$ ).

The issue is thus double: whether developing countries have different relative productivities of public and private capital from developed ones; and whether their public investment rate is below (or indeed above) the optimum. The critique of public investment that characterized the second ‘neoclassical’ phase of development economics simply assumed that for one or other reason the level of public investment had been too high.

This bias was based on two further propositions: one valid, the other not. The invalid reason is the claim that markets in general and private firms in particular can be relied upon to undertake whatever capital accumulation is required. Modern appreciation of the extent of market failure, the persistence of economic uncertainty and the importance of externalities all mean that public investment should reacquire a central strategic role. However, the

extent and nature of such public investment must also logically reflect these same three factors.

First, market failure alone cannot justify public as a substitute for private investment. On the one hand, the nature of the market failure must be clearly identified and alternative means of addressing that failure be assessed—regulation or taxation (or indeed subsidy) may be preferable and indeed cheaper. On the other hand, where private firms are unable to undertake the strategic investments required, the public sector should aim to build up this capacity over the longer term.

Second, in the face of economic uncertainty, public investment should be designed to underpin the capacity of domestic firms to adjust to changing circumstances (such as unpredictable commodity prices), rather than attempting to predict the unpredictable ('picking winners'). In other words, the provision of infrastructure, technology, skills and non-traded service inputs that traded-sector firms require and that can be used by all such firms exposed to international markets, and thus competitive forces.

Third, the scale of externalities expected from public investment projects must be systematically quantified not only *ex ante* ('project appraisal') but also *ex post* using the technical cost-benefit analysis methods which have so unaccountably fallen out of fashion (FitzGerald 1978). These analyses should become an integral part of the budgetary process (rather than being merely supporting documents for funding decisions) and be published in the same way that government accounts are.

The valid reason—although it can be exaggerated—is that public investment is susceptible to inefficiency at best and corruption at worst. However, this is not a reason for abandoning collective action, but rather one for addressing these problems directly. Inefficiency is best tackled by professional training of administrators,<sup>3</sup> independent auditing, international productivity benchmarking and above all transparency that allows taxpayers to monitor their delegated investment (OECD 2017).

### 3 Public Economics as Resource Mobilization

On average, as we have seen, the state mobilizes about a quarter of GDP in low-income developing countries and a third in emerging market economies (Fig. 5.1), shifting these resources away from individual expenditure decisions by households

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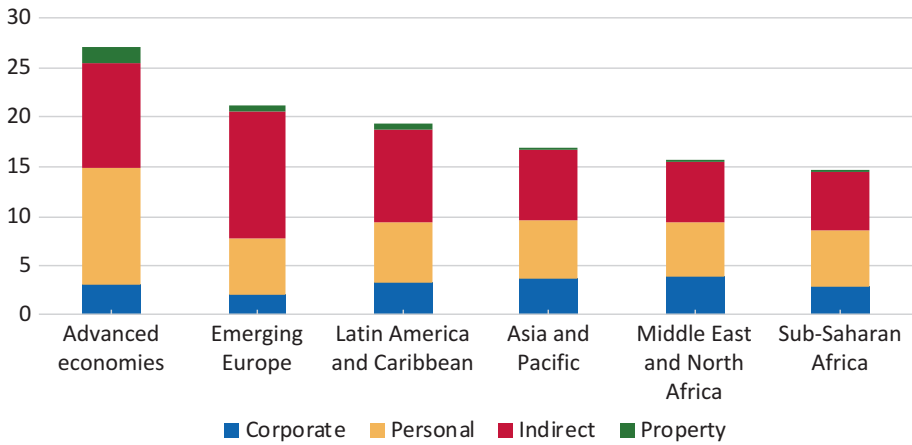
<sup>3</sup> Hopefully in reliable and tested techniques of 'public administration' rather than the now fashionable 'governance'.

and firms towards broader collective objectives. The way in which public expenditure is financed thus has three distinct—yet logically interrelated—effects on economic development: first, the extent of resource mobilization for social expenditures on security, welfare and infrastructure; second, the impact of taxation and spending on income distribution and poverty; and, third, the implications for macroeconomic stability and growth. The contemporary context is the reaction against the experience during the previous quarter-century of rising tax pressure (based on indirect taxes); and budgetary balancing driven by anti-inflationary monetary policy, which had in turn led to the decline of public investment and the exposure of public debt to international capital markets.

Traditionally, in developed economies, the objective of fiscal policy has been full employment and low inflation, which implies a Keynesian counter-cyclical demand management policy through the recourse to expansionary (or contractionary) fiscal deficits (or surpluses). In the field of public investment, in a similarly Keynesian approach, developed countries aim to support investment in private enterprises and divert resources to more desirable investment channels such as lagging regions or emerging technologies. Finally, fiscal policy is used to intervene at the household level so as to stimulate savings on the one hand, and reduce poverty on the other; although the major redistributive mechanism is full employment and rising productivity through investment, which then generates higher wages.

For a developing economy, the main purpose of fiscal policy has traditionally been to accelerate the rate of capital formation and investment. The government invests in those productive channels which incur benefit to low-income groups and are helpful in raising their productivity and technology. Therefore, redistributive expenditure should help economic development and economic development should help redistribution. In the very long run, this is the means of approaching full employment and ‘advanced economy’ status.

Meanwhile, fiscal policy is of course related to inflation in developing countries but no longer as in the 1980s and 1990s with inflation targeting and minimal fiscal deficits (which led to undesirable fluctuations in the exchange rate and procyclical expenditure) and still less nominal exchange rate anchors (which led to unmanageable capital inflows and distorting fluctuations in the real exchange rate), but rather to management of the real exchange rate so as to stabilize the external account and thus mitigate external shocks. Rather than full employment, although this is still a long-term goal, developing countries are now more concerned with the provision of universal benefits to all citizens and productive capabilities to those in the ‘informal



**Fig. 5.4** Composition of tax revenues in developed and developing countries (per cent of GDP)

Source: Data from IMF 2015

sector', so that these public expenditures effectively take the place of the full employment fiscal criterion in the Keynesian tradition.

As shown in Fig. 5.4, not only do developing countries rely less on direct taxation than developed ones, but there is also a greater reliance on personal income taxation (PIT) in developed countries and corporate income tax (CIT) in developing ones.

Revenue from personal income tax in developing countries is necessarily limited by the large part of the private sector that is effectively 'informal', while larger wealth holders tend to keep their assets overseas or have other means of tax evasion (FitzGerald 2002). They thus rely more than advanced economies on taxing corporate profits largely because it is easier to collect tax from registered and regulated companies than profits in the hands of individual shareholders, many of whom reside abroad (or pretend to, holding their assets offshore). Thus, the CIT is in effect a 'withholding tax' on dividends otherwise payable to shareholders by reducing dividend pay-outs or the capital value of the firms' retained earnings. As a result, the CIT is a tax on the rich.

Some conservative public economists argue that CIT has a negative effect on savings and/or investment and that the tax rate should therefore be zero. The argument is that in a large or closed economy, CIT would drain away corporate funds for investment and shareholders receiving reduced dividends might save less, so that banks would have fewer funds for investment. In a small or open economy, the argument runs, higher rates of CIT could induce domestic investors to seek higher returns abroad or deter inflows of capital, thus reducing investment and growth (Mirrlees 1976; Bovenberg 1994).

In fact, modern firm theory holds that corporate investment decisions are such that external finance (e.g. through banks) is always an alternative to retaining profits, so that tax levels will influence funding structures (the use of debt in particular) rather than the level of investment as such (Stiglitz 1976). Moreover, modern endogenous growth theory suggests that the usual design of CIT incentives to stimulate firms' investment in worker training or research and development will result in higher productivity growth (Aghion and Howitt 1998). The resources mobilized by CIT also have a positive effect on private investment when applied by government to productive infrastructure such as transport, human capital formation and technology research.

The negative view of CIT is not supported by empirical evidence either which indicates ambiguity as to the size and even the direction of the effect of increased CIT on growth (Klemm 2009); and there is evidence that although lower CIT rates can stimulate capital inflows into developing countries, these inflows do not in fact contribute to either real investment or economic growth (IMF 2015; Klemm and van Parys 2015).

To formalize this argument, consider the case where the revenue from profit tax ( $t$ ) on profits ( $P$ ) is spent on infrastructure provision ( $J$ ), profits themselves being a fixed proportion ( $\pi$ ) of national income ( $Y$ )

$$\Delta J = tP = t\pi Y \quad (5.5)$$

And, for simplicity, suppose that the remainder of profits are spent on private investment

$$\Delta K = (1-t)P = (1-t)\pi Y \quad (5.6)$$

In other words, there is complete crowding out ( $\Delta K = -\Delta J$ ).

The optimal tax rate ( $\tilde{t}$ ) can quickly be found because we have already derived the optimal composition of the capital stock in (5.4). From (5.5) and (5.6) we have

$$\frac{\Delta J}{\Delta K} = \frac{t}{1-t} \quad (5.7)$$

And in the steady state where the optimal capital stock balance already obtains,

$$\frac{\Delta J}{\Delta K} = \frac{J}{K} = \tilde{\theta} \quad (5.8)$$

which gives us the optimal tax rate as a function of the optimal capital structure and thus of the relative productivities of public and private capital

$$\tilde{\tau} = \frac{\tilde{\theta}}{1 + \tilde{\theta}} = \frac{\gamma}{\gamma + \beta} \quad (5.9)$$

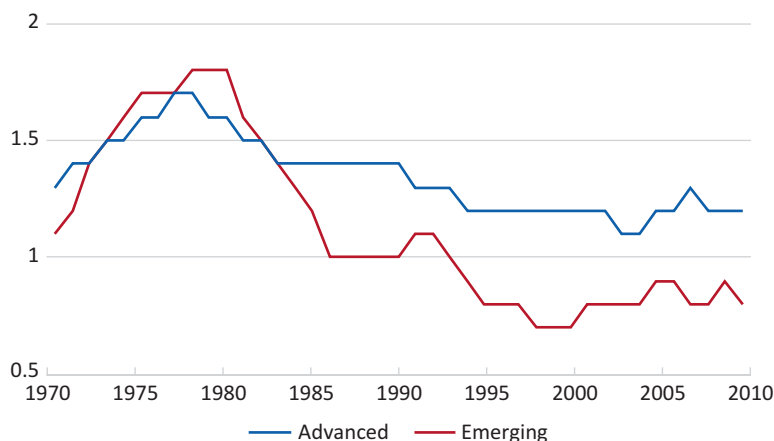
It follows that if crowding out is incomplete (e.g. as in a Keynesian formulation where increased investment demand will raise output and thus saving), then the result would be to increase the optimal share of infrastructure in the capital stock and by extension, the optimal profit tax rate. Similarly, from an endogenous growth perspective, as Agénor (2012) shows, there is a direct productivity and cost effect on private production inputs and a complementarity effect on private investment, which may well exceed any crowding-out effect—so, again, the optimal tax rate will be higher.

There is a traditional view among conservative public economists<sup>4</sup> that workers (and not the corporate owners) bear the greatest burden of profits tax, arguing that the CIT leads to lower investment and thus a lower capital-labour ratio; so labour productivity falls and as a result, wages decrease. Small, open economies are particularly sensitive to CIT pressure under this view. This notion, however, has little or no empirical basis (Clausing 2012).

The CIT definitely has an important role in reducing inequality. The distribution of household disposable income is not only determined by earnings from the market, by the progressive taxation of capital of the richer declines and cash transfers to the poorer deciles in the form of pensions, unemployment pay and so on designed to reduce poverty. These transfers as well as social expenditure itself (public education, health, etc.) are funded in part by CIT, which also have an indirect macroeconomic effect on inequality by increasing domestic demand and thus output and employment (FitzGerald and Siu 2019). Moreover, there is growing evidence for the positive effect of reduced inequality directly on growth whether through enhanced social stability (and thus reduced investor risk) or through greater family investment in health and education (Ostry and others 2014).

The reliance on indirect taxation such as value-added tax (VAT) has none the less *increased* over time in both developed and developing countries since the early 1980s. VAT is of course generally regressive with the greatest tax burden falling on immobile unskilled labour; while as we have seen, the incidence of direct taxation is progressive (OECD 2010a). As shown in Fig. 5.5, there

<sup>4</sup>The canonical contribution is of course Harberger (1962) whose simplistic yet convenient analysis has been endlessly repeated ever since by supporters of business interests.



**Fig. 5.5** Ratio of direct to indirect tax revenue  
Source: IMF 2013

had been a sharp rise in the ratio of direct to indirect tax revenues (and thus greater tax progressivity) in the 1970s, but thereafter the trend reversed in both advanced and emerging economies, contributing to the deterioration in income distribution. This relatively high level of indirect taxation is principally the result of governments attempting to raise fiscal resources under pressure from international financial institutions, pressure which included a shift from excise and import duties towards value-added tax on the one hand, and a limit on direct taxation in order to promote private enterprise on the other.

Somewhat belatedly, the Fund now calls this picture ‘emblems of lesser progressivity’ (IMF 2013, p. 34). Recently, this regressive trend appears to have slowed down—apparently because VAT pressure has reached its natural limit, while concerns for both fiscal revenue and inequality have led to an expansion of the direct tax *base* through improved administration despite the decline in tax *rates* themselves (FitzGerald and Siu 2019).

Last, but not least, there is both growing empirical evidence (and policy consensus) for the positive effect of reduced inequality directly on growth, whether through enhanced social stability (and thus reduced investor risk) or through greater family investment in health and education (Ostry et al. 2014). Of course, as orthodox economists point out frequently, redistributive goals can in principle be met by an appropriate targeting of welfare expenditure towards the poor. However, although this may reduce poverty, it still implies that in the absence of higher profits taxes, the cost of increased poverty reduction will

be borne by middle-income groups. Specifically, it implies that raising the income of unemployed and retired citizens will be funded by employed workers. In this limited sense, inequality will in principle be reduced in the lower half of the distribution but increased in the upper half. In fact, both empirically and as the result of public choice, middle-income groups tend to enjoy roughly neutral fiscal incidence, so that raising the share of poorer groups in national income can only be achieved democratically by increasing the tax burden on the wealthy.

Further, from the Kaleckian viewpoint, even with a balanced budget rule (or a binding rule for the fiscal deficit or public debt) the effect of raising profits tax and increasing public expenditure on infrastructure or welfare is to increase output and employment in the long run (Kalecki 1937). This in turn will further reduce income inequality, while the increase in overall national income will mean that the absolute level of net profits (and thus investment) will not fall even though the *share* of the rich declines.

So far, we have been discussing the long-run or ‘structural’ fiscal balance which ignores the state of the economic cycle (as measured by the output gap) or one-off fiscal operations such as privatizations. The output gap measures the difference between actual and potential GDP in developed economies, the latter being an estimate of the level of GDP that would prevail if the economy were working at full capacity. For developing countries, such ‘one-off’ factors would also include changes in resource revenues—as a result of oil price changes, for example—and in interest payments (as a result of past debt accumulation or changes in interest rates) as well as deviations from trend in net capital transfers, all of which are neither cyclical nor purely discretionary. Investment in contrast should be included in the structural deficit calculation, unless it is in activities that directly produce revenue, in which case it should be included in the separate accounts for state-owned enterprises with their own balance sheets and financial controls.

In practice, potential GDP is not directly observable and estimates are subject to substantial margins of error (OECD 2017). The problem for developing countries is worse because capacity is more closely related to the balance of payments constraint on the one hand, and full employment is not a relevant concept (with surplus labour) nor is it a source of inflation on the other (FitzGerald 2001). Investment should be included in the overall expenditure targets moreover, unless it is in activities that directly produce revenue, in which case it should be included in the separate accounts for state-owned enterprises with their own balance sheets and financial controls.

Ultimately, fiscal sustainability can only be defined in terms of the overall public sector balance sheet that includes not only the debt and deficit



discussed here but all the public sector assets (including infrastructure, enterprises and reserves) and all the liabilities (including contingent liabilities such as pension obligations). Only recently have the methodology and data become available to do this, and it is clear that the limitations of debt ratios and deficit rules are considerable, particularly when there are large revaluation effects from currency movements on the one hand, and contingent liabilities in the form of social security commitments on the other—even in low-income countries (IMF 2018b).

It is now widely accepted that commodity cycles are best managed by a sovereign wealth fund—essentially no more than the long-run equivalent of foreign exchange reserves—with the benefit of a higher return (Das et al. 2010). At first sight it would seem logical to invest in home country and this might bring higher social returns. However, the object of such a fund is to reduce instability from external shocks; its returns should not be correlated with the domestic economy—rather should be invested abroad—ideally in assets with negative correlation with the principle export prices.

Finally, there are two other forms of resource mobilization which I have not considered. First, the rental income from natural resource exploitation—either in the form of the profits of state enterprise or as royalties on private mining firms—which is in essence a form of CIT, except that it is highly volatile and thus contributes to the problems of fiscal stabilization discussed above. The second form is essentially a ‘windfall’ open to low-income developing country governments (and indeed middle-income countries in key geo-strategic locations) as official development assistance (‘aid’).<sup>5</sup>

## 4 Public Economics in a Global Economy I: Debt Management

Public economics is conventionally considered at the national level only, but this section considers the international dimension because for developing countries (and indeed most developed countries too), the global economy, other states and international organizations all have considerable influence on the public sector. Foreign investors influence the size and cost of government debt. International institutions condition support on determinate fiscal policies and determine dominant doctrine on public economics. Crucially, the state in developing countries must manage external

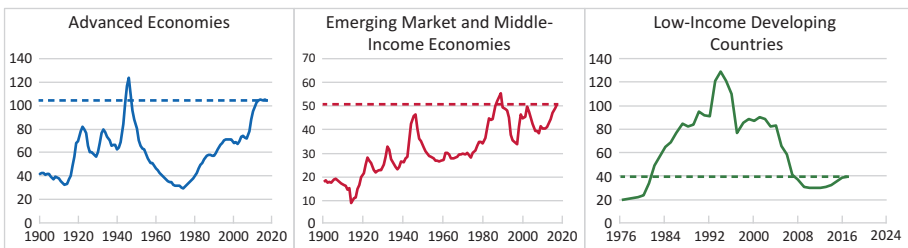
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<sup>5</sup> See, however, Chap. 15 in this volume.

shocks (positive and negative), and this role has become a central characteristic of their public economics.<sup>6</sup>

An alternative to taxing current income and expenditure is public debt, although of course this is effectively a mortgage on future tax revenue rather than a truly alternative source of resource mobilization. It should also be remembered that—as we see below—new sustainable debt flows can never provide more than a couple of points of GDP in new resources each year, a small fraction of the tax revenue base. In other words, while debt can (and should) be a useful mechanism for managing both economic fluctuations and external shocks in the short run, it is no substitute for progressive taxation in mobilizing resources for economic development over the long run.

Nonetheless, debt/GDP ratios in advanced economies have risen steadily over recent decades to reach 100 per cent of GDP on average, as shown in Fig. 5.6. This has been possible only because capital markets have an appetite for government bonds which enables their issuers to hypothecate future tax revenues. In contrast, debt ratios have fluctuated widely in emerging markets and middle-income around a strong upward trend, the peaks and troughs coinciding with repeated debt crises resulting from loss of international investor confidence. The debt trend has now reached 50 per cent of GDP on average. The case of low-income developing countries is rather different because their debt reflects ‘official’ lending by donor agencies (or official guarantees to commercial bank lenders) rather than capital market conditions. Their over-indebtedness in the 1990s and the subsequent write-off against aid funds—bringing their average debt/GDP ratio back down from a peak of 130 per cent



**Fig. 5.6** General government debt (per cent of GDP)

Source: Data from IMF 2018a

<sup>6</sup>There are many important dimensions of this interaction which are not discussed in this chapter because they are addressed elsewhere in this volume, particularly capital account management (Chap. 20), trade and investment (Chap. 21) and the international monetary system (Chap. 23).

to the present 40 per cent—both reflect policies of aid donors rather than a coherent domestic fiscal strategy.

Specifically, the IMF Debt Sustainability model states that debt sustainability is at ‘high risk’ at a debt/GDP ratio of 85 per cent for advanced economies, 70 per cent for emerging markets and 50 per cent for low-income countries (IMF 2018a, p. 8). Unfortunately, this model is not very transparent as to the exact criteria (let alone the underlying theory) but appears to reflect projections of future fiscal balances rather than capital market conditions. Emerging market economies have clearly experienced crises at much lower ratios, as shown in Fig. 5.6. In contrast, advanced countries have clearly breached this limit with impunity. Only in the case of low-income countries has the limit been met, but this is hardly surprising as the debt level is exogenously set by the donor governments.

Exactly what the ‘correct’ debt level is depends upon a number of factors. The optimal debt and public investment levels are logically decreasing in the interest rate and increasing in the productivity of public capital. Consider the case when further public investment can be funded by external debt and thus private investment is unaffected by crowding out. For a given ‘dollar’ borrowing rate ( $i$ ), debt ( $D$ ) should be contracted up to the point where the marginal addition to output equals the addition to interest costs. In other words, we maximize an objective function ( $W$ )

$$W = Y - iD \quad (5.10)$$

with respect to  $J$  where

$$D = J \quad (5.11)$$

which clearly happens where from (5.1)

$$iD = iJ = \frac{\Delta Y}{\Delta J} = \gamma \frac{Y}{J} \quad (5.12)$$

So the optimal debt level is inversely related to the interest rate ( $i$ ) in an exponential (and thus potentially destabilizing) manner,

$$\tilde{D} = \frac{\gamma Y}{i J} = \sqrt{\frac{\gamma Y}{i}} \quad (5.13)$$

For a given target debt ratio ( $d$ ) of this type the familiar ‘golden fiscal rule’ for the short run can be quickly found, because the primary budget deficit as a proportion ( $z$ ) of GDP is constrained by the requirement that

$$d = \frac{\tilde{D}_t}{Y_t} = \frac{\tilde{D}_{t-1}(1+i) + zY_t}{Y_{t-1}(1+y)} \quad (5.14)$$

And thus

$$z = d \left\{ 1 - \frac{1+i}{1+y} \right\} \cong d(y-i) \quad (5.15)$$

In other words, the sustainable fiscal deficit can only be positive if the rate of output growth exceeds the interest rate. There are however two problems with this ‘golden rule’.

First, the rule has a strong procyclical bias because it encourages larger fiscal deficits when GDP is growing strongly, thus overheating the economy, and lower deficits (or indeed surpluses) when growth is low. For natural resource export economies in particular, this is a major destabilizing factor. In the short run, particularly with external shocks, cyclical deficits can be run (after all this is what reserves are for) and debt incurred in order to create ‘fiscal space’:

Fiscal space [is] narrowly defined as the room for undertaking discretionary fiscal policy relative to existing plans without endangering market access and debt sustainability. ... Fiscal space is not determined just by a country’s level of public debt, nor is it a static concept. It can vary with market and economic conditions, sometimes quite quickly and substantially. For instance, when a country undertakes a well-executed fiscal stimulus, the dynamic boost to economic activity could outweigh the initial deterioration in its fiscal position. As a result, its public debt-to-GDP ratio could actually improve over time, creating additional fiscal space. (IMF 2018b, p. 5)

Second, the rule is also an unreliable policy guide because current growth and interest rates may not be maintained and thus new debt contracted on this basis may be unsustainable, even though both borrower and lender have presumably agreed on this outlook for the contract to have taken place. The debt/GDP rate is thus a better guide, although this too can be misleading because as we have seen, the optimal debt level only holds for a given interest rate. The structure of the debt is also crucial, in terms of both its maturity and

who the creditors are: clearly short-term debt held by portfolio investors abroad is the most vulnerable of all.

In sum, the golden rule—whether expressed in terms of debt or deficit—assumes a given external interest rate ( $i$ ) at which the developing country can borrow and sustain whatever debt level it chooses. This is patently not the case and in fact international capital market behaviour constitutes a binding constraint on the public sector in developing countries (particularly the more open and/or small they are) but also that global financial volatility introduces a crucial element of uncertainty into public finance. The reason is that the interest rate charged includes a risk premium to reflect the probability of default on behalf of the borrower.

The risk premium has two components: risk aversion by the market ( $\lambda$ ), and the perceived default risk itself ( $\mu$ ). Perceived risk we express as a simple function of the ratio of interest payments ( $iD$ ) to reserves ( $X$ ), which reflects liquidity in the sense of short-term ability to service existing debt,<sup>7</sup> where the constant ( $\omega$ ) represents the weight given by investors to this ratio

$$\mu = \omega \frac{iD}{X} \quad (5.16)$$

The interest rate ( $i$ ) charged on an emerging market sovereign bond thus becomes in terms of the ‘world’ interest rate ( $i^*$ )

$$i = i^* + \lambda\mu \quad (5.17)$$

So, solving for  $i$  by substituting (5.16) into (5.17) and rearranging

$$i = \frac{i_w}{1 - \lambda\omega \frac{D}{X}} \quad (5.18)$$

In other words, the local ‘dollar’ interest rate is not fixed but dependent on the debt level and effectively exponential in the debt/reserves ratio ( $D/X$ ).

Further, higher lending rates have adverse selection effects on borrowers and thus increase default risk along with higher levels of indebtedness—both due to interest rate burden on reserves and because the incentive to default

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<sup>7</sup>Known to market traders as the ‘Quick Ratio’.

rises with debt and interest rate, so the supply schedule will even be *backward-sloping* beyond a certain point (Folkerts-Landau 1985). This means that credit rationing will occur, where demand for sovereign debt is less than the government is willing to borrow even at market equilibrium (FitzGerald 2007).

Perhaps even more significantly, investor risk appetite ( $\lambda$ ) and the appreciation of risk ( $\omega$ ) both depend on conditions on international capital markets rather than those in the borrowing country. So, perceptions of, and valuation of, risk by foreign investors will have a crucial influence on capital flows and thus the fiscal position of developing countries. These valuations in turn are not free-standing or stable data, but rather an integral part of the process of portfolio management and thus determined by risk and return on other assets.

Consider a home investor (e.g. a fund in an advanced countries) holding emerging market government bonds as part of a larger portfolio. Her objective function is to maximize the value of a portfolio which is increasing in the mean of wealth but decreasing in its variability (Lewis 1999). The standard solution<sup>8</sup> for the share ( $S^f$ ) of the portfolio allocated to a foreign asset ( $f$ ) as opposed to the 'home' asset ( $h$ )

$$S_i^f = \frac{\left[ E_t(r_{t+1}^f) - E_t(r_{t+1}^h) \right] / R}{\sigma_f^2 - \sigma_h^2} + \frac{\sigma_h^2 - \sigma_{fh}}{\sigma_f^2 - \sigma_h^2} \quad (5.19)$$

where  $E(\cdot)$  is an expectations operator conditional on information known in time  $t$ ;  $var(\cdot)$  is the variance-covariance matrix operator;  $R$  is the parameter of relative risk aversion;  $\sigma_h^2$  and  $\sigma_f^2$  are the respective variances of home and foreign returns to home investor, and  $\sigma_{fh}$  the covariance between these two returns. Equation (5.19) is thus in effect the demand function for foreign assets (see FitzGerald 2003, 2007). The first right-hand side term is the demand arising from the higher expected return from the foreign over the home security: this clearly falls with rising risk aversion ( $R$ ) and rises with the returns. The second term is the portfolio share that minimizes the variance of the wealth portfolio. Note that the covariance (actual or believed) *between* emerging markets is in effect 'contagion' and thus a driver of herd behaviour by investors through their risk *perception*.

The key point here is that the demand for emerging market assets will clearly depend in great part upon host 'fundamentals' (i.e.  $r_f$  and  $\sigma_f^2$ ) and

<sup>8</sup> For a full formal exposition, see Babilis and FitzGerald 2005.

also upon variables in the *home* (or other foreign) market such as risk aversion and home volatility ( $R$  and  $r_h$  and  $\sigma_h^2$ , and thus  $\sigma_{hf}$ ). The empirical evidence indicates that the latter is at least as important as the former.

This instability in capital flows and spreads, originating in ‘home’ financial markets, has profound consequences for host economies themselves, exacerbated by contagion effects, particularly since small open emerging markets are increasingly driven by the capital account. This is due as we have already seen to the fact that the local interest rate is effectively set externally and thus that the level of investment and the long-run capital stock is determined in relation to global capital markets. It is also due both to the short-run level of output being affected by the level of import availability (exports plus external capital flows) and to the fact that with uncovered interest rate parity either the exchange rate (and thus both export incentives and the real wage rate) or monetary policy (and thus bank credit) become dependent on capital flows (FitzGerald 2001).

There is thus a strong argument for emerging market authorities to adopt a counter-cyclical monetary stance in response to capital flows. In consequence, it is not surprising that most host governments have had to intervene (in many cases disguised as fiscal or regulatory measures) in the market in order to reduce the volatility of capital flows.<sup>9</sup> This involves real exchange rate targeting, bank credit regulation and an active fiscal stance and can be shown to be effective in supporting growth and investment (FitzGerald 2005). These controls are now usually based on price measures, particularly taxes, while quantitative instruments have become less common. Open-market operations have also proved quite successful in this regard and can be complemented by the active use of reserve requirements and public sector deposits. Domestic regulatory systems for banks and securities markets (including corporate borrowing abroad) are also important supportive instruments.

On a parallel with traditional central bank intervention in advanced economies, the authorities of larger developing countries have begun to conduct open-market operations in these sovereign bonds to stabilize their price, as well as to accumulate reserves in order to be able to conduct counter-cyclical operations without recourse to international borrowing.<sup>10</sup>

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<sup>9</sup> See Chap. 20 in this volume.

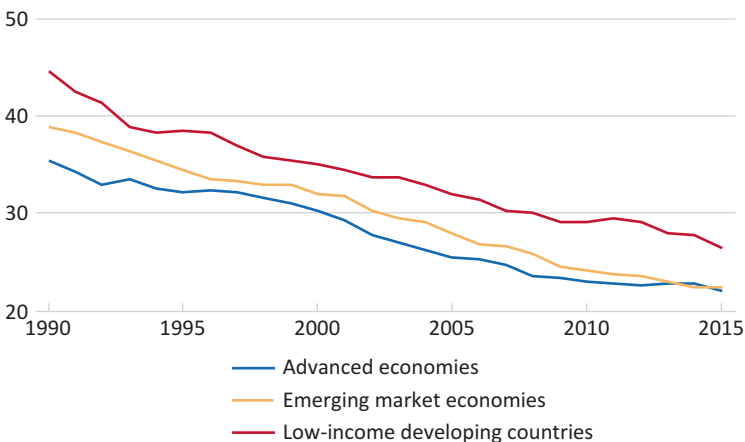
<sup>10</sup> See Chap. 23 in this volume.

## 5 Public Economics in a Global Economy II: International Tax Competition

As discussed above, profit tax—and particularly corporate income tax—is an essential source of resource mobilization to fund the central functions of the development state while reducing income inequality. Nevertheless, there are enormous pressures from foreign investors and international institutions on developing countries to extend CIT concessions in the form of tax holidays, tax-free zones, investment and tax treaties and acceptance of corporate ownership structures designed to facilitate tax avoidance. Moreover, such concessions are often designed to favour foreign over domestic firms, imposing a competitive disadvantage on the latter (ICRICT 2016). In addition to these downward pressures on the corporate tax *base*, most developing countries engage in competition with their neighbours to lower CIT *rates* in order to attract foreign investment in a ‘race to the bottom’ as shown in Fig. 5.7: an unfortunate externality of tax competition with developing countries being significant losers (IMF 2014b).

In marked contrast, textbook economic theory holds that the optimal profits tax in an open developing country integrated to world capital markets should be zero, as an extension of the traditional view (Bovenberg 1994). We can explore this proposition and revise this justification for a race to the bottom using the same endogenous growth model as previously.

As discussed earlier, there are three production factors: immobile labour ( $L$ ), mobile capital ( $K$ ) and immobile infrastructure ( $J$ ). The usual conditions



**Fig. 5.7** Average statutory corporate income tax rate (per cent)

Source: Data from IMF 2015



obtain, and the return ( $r$ ) on private capital ( $K$ ) is found by differentiating (5.1) with respect to  $K$ , yielding the familiar

$$r = \frac{\partial Y}{\partial K} = \beta \frac{Y}{K} \quad (5.20)$$

It should be remembered however that from (5.1) this marginal product of private investment will depend implicitly (in the  $Y$  term) on labour ( $L$ ) and public capital ( $J$ ) productivity as well as social overhead capital ( $A$ ).

Because private capital is mobile, it will move into or out of the developing country until the post-tax rates of return on the local and international markets are equalized. This involves the local corporation tax rate ( $t$ ) and the relevant international rates of return ( $r^*$ ) and tax ( $t^*$ ), such that at equilibrium:

$$r(1-t) = r^*(1-t^*) \quad (5.21)$$

Substituting (5.21) into (5.20) thus yields the result that in capital market equilibrium, the local capital-output ratio is a function of the domestic and international corporation tax rates ( $t, t^*$ ):

$$\frac{K}{Y} = \frac{\beta(1-t)}{r^*(1-t^*)} \quad (5.22)$$

Clearly, increasing domestic tax rates ( $t$ ) will reduce the capital-output ratio—as will falling international tax rates ( $t^*$ ). If we assume for the moment that not only the labour supply ( $L$ ) but also the public infrastructure stock ( $J$ ) are independent of the corporation tax rate, then we can write ( $Y$ ) in terms of ( $t$ ) by substituting (5.22) into (5.1) to yield:

$$Y = \left[ AL^\alpha J^\gamma \left\{ \frac{\beta(1-t)}{r^*(1-t^*)} \right\}^\beta \right]^{\frac{1}{1-\beta}} \quad (5.23)$$

From (5.23), it is evident that any increase in the domestic corporation tax rate ( $t$ ) will reduce national income ( $Y$ ). The optimal rate is clearly zero, which maximizes output.<sup>11</sup>

<sup>11</sup>Or indeed it could in principle be negative—a subsidy to investors.

This standard result however ignores the fact that some if not all the profits tax revenue is used to provide public capital which increases not only output as a whole but also the productivity of private capital. The public stock ( $J$ ) is made up of the previous years' stock plus a share ( $\varepsilon$ ) of corporation tax revenue:

$$J = J_{-1} + \varepsilon t K r \quad (5.24)$$

To simplify the algebra, we only consider the last term—that is equivalent to assuming this is the first year of the exercise, so to speak. In this case, we can substitute (5.20) and the truncated (5.24) into (5.1) to yield:

$$Y = AL^\alpha \{\varepsilon t r\}^\gamma K^{\beta+\gamma} \quad (5.25)$$

Substituting in (5.1) again and rearranging yields the interesting solution

$$Y = \left[ AL^\alpha K^\beta \{r^*(1-t^*)\}^{-\beta} (\varepsilon t)^\beta \right]^{\frac{1}{1-\beta-\gamma}} \quad (5.26)$$

This means that the effect of changes in the corporation tax rate is not as simple as the previous exercise implied, for an increase reduces the private capital stock ( $K$ ) but raises the public stock ( $J$ ). In fact, there is an optimum value of ( $t$ ), which lies between zero and unity—at both of these points  $Y$  is zero. Maximization of ( $Y$ ) by differentiation of (5.26) with respect to ( $t$ ) yields a result for the optimum tax rate ( $t$ )

$$\tilde{t} = \frac{\varepsilon\gamma}{\beta + \gamma} \quad (5.27)$$

which depends in turn on the relative marginal productivity of public (both fixed and human) and private capital stock, and the proportion of corporate tax revenue reinvested in public capital.

The optimal corporation tax rate will therefore be *positive* as long as the marginal productivity of infrastructure is positive. It is important to note that this result is independent of the international tax rate ( $t^*$ ). In other words, developing countries should set their optimal tax rate independently of the international rate.

The resulting maximum national income ( $\tilde{Y}$ ) is thus:

$$\tilde{Y} = \left[ AL^\alpha K^\beta \{r^* (1-t^*)\}^{-\beta} (1-\varepsilon\tilde{t})^\beta (\varepsilon\tilde{t})^\gamma \right]^{\frac{1}{1-\beta-\gamma}} \quad (5.28)$$

However, it is also the case that the resulting level of national income *does* depend on the international tax rate ( $r^*$ ), and when this is lowered by the investors' home countries or by competing host countries then national income will fall—in other words, a significant negative externality for developing countries from advanced countries' fiscal policy.

Finally—and even more significantly—the model shows that even under these circumstances of an international race to the bottom for corporation tax rates ( $t^*$  falling), to chase the corporation tax rate downwards (reduce  $t$ ) will *reduce* national income *even more*.

As the Fund points out, these losses are considerable:

The core question ... (is) ... whether base erosion, profit shifting and international tax competition really matter for developing countries. The empirical analysis ... suggests quite strongly that they do – and moreover that they may well matter at least as much as for advanced countries. Some of the results ... suggest, for instance, that base spillovers from others' tax rates may be noticeably stronger for non-OECD countries than for OECD countries, and statistically more significant. And the signs are that they operate less through effects on real investment decisions than through profit shifting. The revenue losses though avoidance activities associated with tax havens also seem to be more of a concern for non-OECD members; ... in the order of something over one point of GDP in the long run – a large amount, far larger relative to their total tax take than is the case for OECD members, and harder for them to replace from other sources. (Crivelli et al. 2015)

According to the Organisation for Economic Co-operation and Development (OECD) as well, the scale of fiscal resource losses to developing countries from multi-national enterprise (MNE) tax avoidance by relocating income and assets to low-tax jurisdictions is very large: around USD 100 billion annually (OECD 2010b). This is a similar order of magnitude to annual overseas development assistance (ODA) or 'aid' flows.

Ironically, while there are numerous global agreements to avoid double taxation of MNEs' profits, the transfer price rules used by these agreements have been unsuccessful in avoiding the erosion of the tax base and ensuring that profits are taxed where the substantive economic activities of the MNEs actually take place. In a reversal of previous international institutional support

for tax competition, the recent global financial crisis led to the first steps towards cooperation to prevent the undermining of the national tax bases. The Base Erosion and Profit Shifting (BEPS) process led by the G20 and the OECD is intended to address the problem of CIT avoidance by ensuring that corporate profits cannot be shifted through transfer pricing to low-tax jurisdictions (OECD 2015).

The BEPS model attempts to construct prices for the transactions among entities that are part of MNEs as if they were independent, which is inconsistent with the economic reality of a modern-day MNE—a unified firm organized to reap the benefits of integration across jurisdictions. Large MNEs are oligopolies and the bulk of world trade takes place within such firms: so, in practice there are few truly comparable independent local firms that can serve as benchmarks. However, one of its major deficiencies is the inability to address the core problem of the global tax system, the fiction that an MNE consists of separate independent entities transacting with each other at arm's length.

The BEPS process, while helpful, thus does not resolve the basic challenge of ensuring that MNEs pay taxes where real economic activities take place and create value. The process still permits large-scale profit shifting, especially through the exploitation of intangible assets (intellectual property, trademarks, etc.). This is clearly a crucial issue for both developing and advanced countries, but so far tax cooperation proposals have prioritized the perspective of advanced countries and thus tend to focus on taxation in the jurisdictions where profits are received rather than where the underlying activities take place.<sup>12</sup>

In consequence, the Independent Commission on the Reform of International Corporate Taxation (ICRICT 2016) has recently presented practical proposals that would enable countries to collect a fair share of tax revenue from multinational enterprises. Unitary taxation of the worldwide profits of MNEs with formulary apportionment of the tax base between the jurisdictions where economic activity of the firm truly takes place (on the basis of the location of assets, employment and sales) would establish a much clearer, more effective and fairer method of allocating the tax base of MNEs. Formulary apportionment is of course already applied between the constituent states of the USA and Canada, and in process for the EU. The immediate effect of such a system would be to drastically reduce the use of tax havens, offshore financial centres and conduit jurisdictions by MNEs in order to reduce their tax liabilities.

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<sup>12</sup>That is, the residence principle in the 'OECD Model' rather than the source principle in the 'UN Model' (FitzGerald 2002).

Two main criticisms are made of formulary apportionment: first that states could not agree on a formula, and secondly that the enterprises could still play jurisdictions against one another by relocating their factors in the formula. However, states do frequently agree (albeit after tough negotiation) on commercial treaties in general and double taxation treaties in particular. The ability of companies to ‘game’ the system, for instance, by relocating intangible assets such as patents, could also be prevented by an appropriate UN/OECD convention on the definition of the taxable base, and thus limits on investment incentives. However, whilst the sales factor in the formula could not affect the location of activities, firms’ investment decisions could affect the (true) location of employment and assets in response to tax incentives. This may lead negotiations to be biased towards single factor (sales) formulary apportionment. However, sales-based apportionment would clearly limit the tax base of developing countries, where much income is generated by asset- and labour-intensive activities.

## 6 Conclusion: Public Economics and Economic Policy

Supporting the four key activities discussed above —the support for (endogenous) economic growth, structural change in response to technological progress, income redistribution and resilience to (exogenous) shocks—requires sufficient policy space, which in turn is conferred on the public sector by both financial strength and discretionary powers.

Universal welfare provision and transformative public investment renewal do not only require modern methods of planning and implementation; they also require a reorientation of financial regulation and monetary policy in order to support them without causing macroeconomic disequilibrium. To put this another way, the object of macroeconomic policy and financial regulation should not be stability as an end in itself. Although management of external shocks remains perhaps the most important short-run task of such policy in the small open economy, the longer-term objective must be the effective support of sustainable development.

Some of these policy considerations are at last being taken on board by the IMF which now recommends:

Lowering the tax wedge and improving the design of labor taxes and social benefits can strengthen work incentives and induce a positive labor supply response;

reforming capital income taxes to tax rents reduces distortions and encourages private investment; well-targeted tax incentives can stimulate private investment and enhance productivity through research and development (R&D); efficient public investment, especially in infrastructure, can raise the economy's productive capacity; more equitable access to education and health care contributes to human capital accumulation, a key factor for growth. If growth-friendly reforms require fiscal space, revenue measures should focus on broadening the tax base and minimizing distortions; and expenditure measures should aim at rationalizing spending and improving efficiency. (IMF 2015, p. 1)

Even so, the IMF apparently cannot bring itself to enunciate the logical consequence of its argument—higher profit taxation. As Kalecki pointed out more than eighty years ago, capital taxation, “has all the merits of financing state expenditure by borrowing, but is distinguished from borrowing by the advantage of the state not becoming indebted” (Kalecki 1937, p. 450). The orthodox argument against capital taxation (for both corporations and individuals) continues to be enormously influential—no doubt in part because it has suited the interests of both the shareholders in, and the executives of, large corporations.

Moreover, the integrated nature of world capital markets means that these local measures can only have a limited effect. The result is to further constrain the policy space open to developing country governments, as the Fund recognizes:

When a government looks to temporarily increase spending or reduce taxes, it needs to gauge whether it will be able to fund the resulting budget gap without risking an unfavourable reaction from financial markets or undermining the longer-term health of public finances. The more confident it can feel about this, the more fiscal space it has. Conversely, the riskier a country's market and fiscal outlook, the more limited the government's ability to actively use fiscal policy. (Haksar and others 2018)

An alternative approach is to regulate domestic or regional capital markets by prudential bank supervision and active reserve management to sterilize capital flows: in this context Asian central banks are engaged in building a joint system as joint insurance against exogenous shocks. But this does not address the root cause of asset *demand* instability. Only *global* public intervention—by the IMF itself or by a consortium of G3 central banks—could reduce the externality caused by fluctuating G3 demand for emerging market assets.<sup>13</sup>

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<sup>13</sup> See Chap. 23 in this volume.

The other avenue for international cooperation is of course tax. It is essential to ensure that a move to formulary apportionment ameliorate the race to the bottom in corporate tax rates, accompanied by an agreed definition of the tax base and a common minimum tax rate. An agreed international tax convention will need to reflect the different needs of, and be negotiated by, both advanced and developing countries (Faccio and FitzGerald 2018). The obvious parallel is the familiar negotiations over tariffs and market access for international trade under GATT and WTO.

In sum, universal coverage of health, education and social benefits as universally agreed upon at the United Nations in the Sustainable Development Goals necessarily entails increased public expenditure and thus greater direct tax pressure to be fiscally sustainable and socially equitable. Public investment requires new methods of planning and implementation; while enhanced regulation of the financial sector must shift from bank stability and consumer protection towards productive investment as the objective. The degree of global integration of both tax systems and capital markets means that resource mobilization in developing countries in order to fund structural change, universal welfare and resilience against exogenous shocks depends to a great extent on international cooperation. This is the reality of public economics in developing countries today.

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# 6

## The Process of Development: The Contribution of *Régulation* Theory

Robert Boyer

### 1 Introduction

The *Régulation* theory was conceived as an analysis of the long run transformations of contemporary developed capitalist economies, with a special emphasis on the US and France and then many OECD countries (Aglietta 1982; Boyer 1990). Nevertheless, its analytical framework has been mobilized by Third World economists in order to understand the obstacles to development in Chile (Ominami 1986), Mexico (Aboites 1986) and Venezuela (Hausmann 1981). These researches about national trajectories have shown first that the concepts and methods were not specific to mature capitalist economies, and second that the interpretations and analyses were quite different from most other paradigms. The analysis of Asian development has opened another agenda: South Korea and Taiwan have been exploring development strategies that are quite different compared with those of Latin America. Previous surveys have already developed the main teaching from at least three decades of *Régulation* theory applied to development (Quémia 2001; Boyer 2006, 2011a, 2015b; Miotti et al. 2012). This chapter updates these findings in the new context opened up by the world financial and economic crisis of 2008. Four major changes have to be taken into account in any contemporary approach of development theory.

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- First, *mature and emerging economies are trading places* concerning the dilemma between growth and stagnation and this challenges development theory as a special field of economics that originates back to post-WWII rapid return to growth for America, Europe and Japan: what were the obstacles hindering growth and prosperity in Africa or Latin America?.
- A second shift concerns *economic theorizing itself*. In the past, the underdevelopment trap was interpreted as the convergence toward *an inferior macroeconomic equilibrium*. Today, *development is conceived as a long run historical process* that has to be investigated as such.
- A third change relates to the *ideological climate*. From the end of WWII to the collapse of Soviet Union, the debate about development strategies has been focused upon the fight against two opposite visions: either the development was up to *State interventions* as an alternative to inefficient markets (Nurkse 1953) or *markets* were the only driver of modernization of archaic traditions (Schultz 1964). The emergence and the success of *Commons* (Ostrom 2015) seems to open a new avenue for investigations about the process of development, both at the local and global levels.
- A last but important change is now admitted: *there is not a single path to development*. This calls for *a dynamic theory* open to *a multiplicity of national trajectories* and to careful international comparative studies that do not take any economy—as is frequently the case in the US—as the benchmark toward which all governments should aim at converging.

### 1.1 There Is Need for a Historical and Institutional Approach to Development and Underdevelopment.

A priori, the design of Régulation theory concepts allows taking into account the four requisites previously mentioned.

- Whereas traditional theories deal with capitalist *social relations* at the most abstract level, it is crucial to recognize that they can be embedded in quite *different configurations*. For instance, the capital labor relations might be organized by purely decentralized employment relations, or they might be the outcome of collective bargaining and a codification of welfare, whereas informality permeates relations of production in many developing countries. Similarly, the pure and perfect competition is the exception, various forms of imperfect competition being the rule, as observed recurrently in history. Last but not least, monetary creation might be governed by inflows of gold or it might be the consequence of endogenous credit creation by

banks. Therefore, micro and macro adjustments are informed by the precise configuration of the *wage labor nexus*, the *form of competition* and the *nature of monetary creation* (Fig. 6.1). A first merit is to introduce a variability of these institutional architectures, where the ideal of a pure market economy is not anymore the reference: developed, developing and under-developed countries can be analyzed within *the same analytical framework*.

- In societies dominated by capitalist social relations, the economy is moved by the *law of accumulation*: it is the direct consequence of the interaction between firms' competition and the dynamics of capital labor relations. This removes the very possibility of static reproduction of an invariant socio-economic regime: over-accumulation is a recurring feature that means bankruptcy of the weakest firm, the concentration of capital, the search for dominant positions and so on. The ups and downs of accumulation generate a so-called business cycle and its repetition from one period to another *sets into motion a historical trajectory*, specific for each territory and period (Fig. 6.1). When this complex process is successful, development—in the limited sense of cumulative GDP growth—takes place. By contrast, this process might remain marginal and unable to trigger endogenous innovations that propel the long-term trajectory. In other words, development is the outcome of the *coherence* within a set of discovered institutional forms, whereas the absence of development expresses the *contradiction* between them. Long run economic history can be revisited and deliver some hints about the configuration of successful development modes.
- The institutional forms display a *dual nature*. On one hand, they generally are the outcomes of social *collective actions* and their recognition in the political spheres. On the other hand, once created, they shape the distribution of power, they gather and diffuse relevant information for actors and thus they are crucial in the genesis of *economic adjustments*. Consequently, the *régulation* mode is neither the pure expression of political factors nor the outcome of pure economic rationality. As a matter of fact, each institutional form crosses the traditional barriers between polity and economy. The conventional dichotomy between the State and market is abandoned (Wolf 1990). In many cases, the State may correct market failures, whereas markets can be used to overcome public sector inefficiencies. Last but not least, the State is not the only actor able to reconcile efficiency and legitimacy: for instance, the community, or in some circumstance the firm, might internalize externalities. Development is not any more State- or market-led and the theory has thus access to a wider range of *ancient and present societies*.

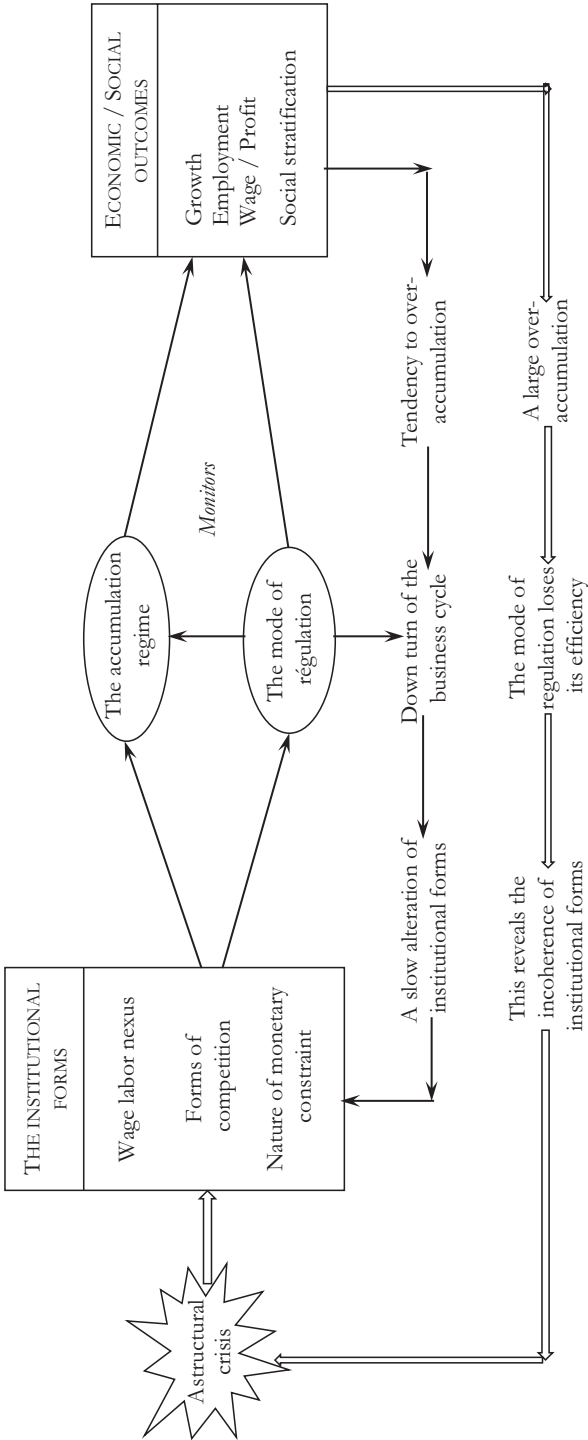


Fig. 6.1 The basic concepts of Régulation theory in a nutshell

- The *diversity of development modes* in history and in the contemporary world is not any more an oddity. Institutional forms are not the outcome of rational ex-ante design but they derive largely from the unintended consequences of political and economic processes interactions. Economics used to deal exclusively with the interaction between preferences and technological capabilities via the mediation of markets. Contemporary political economy, especially its historical and institutional components, brings back the *diversity of coordinating mechanisms* in really existing economies. Since they have a built in inertia—generally institutions might operate for decades—*path dependency* is a typical pattern of development modes. In the present conceptualization, they are defined as the conjunction of an accumulation regime—that sets long run trends—and régulation mode—that defines the short-medium term economic adjustments (Fig. 6.1). This analytical framework might explain why importing successful development models has been nearly impossible without an impressive hybridization process, whereby tentatively imported institutional forms have to change in order to cope with the local environment (Boyer 2015a).

This brief presentation helps understanding the organization of the present chapter.

## 1.2 Régulation Theory Within the History of Development Theories

Long run statistical estimates for GDP show how recent are *contemporary growth patterns* (Maddison 2001, 2003): 1820 and 1945 define two turning points in terms of growth intensity and stability. It is important to note that development theories are emerging in order to investigate why the transformations of Europe and North America have *not been taking place in the rest of the world*. Therefore, there are *as many interpretations of underdevelopment as growth theories* and it is difficult to discriminate among them without precise empirical analyses (I). After WWII, the investigations have pointed out *a large variety of obstacles to development*, each author focusing upon a specific and single mono-causal interpretation; this feature has been nurturing lively debates, but *no consensus* has been reached because each factor only captures a part of the obstacles to development for a given economy and specific period (II). In a sense, development implies a permanent transformation of techniques, organizations, institutions and even social values at odds with a pure reproduction via invariant economic mechanisms. Successful development strategies can be defined as *the art of creating virtuous circles* out of a stationary

society and economy (III). The various researches inspired by Régulation theory have shown that a common property characterizes all viable development modes: the coherence of an institutional architecture, that is, the *compatibility* and even better the *complementarity* among the *institutional forms* (IV).

A second specificity of this institutionalist and historical approach is to disagree with most contemporary theorizing; they often consider the coherence of an institutional setting implies an *unlimited development process*. On the contrary, all regimes have followed a typical pattern: *emergence, consolidation, maturation and finally structural crisis* and this episode opens a new period in the search for other virtuous circles. A third contribution aims at *mitigating the canonical opposition between State and market*, since Régulation theory states that collective political actions and economic incentives are closely linked in the construction of any institutional form. Furthermore, some institutional arrangements imply *community and civil society* and not so much central State interventions. In the management of natural resources and local public goods, *the commons* might define a third source of coordination, distinct both from anonymous market mechanisms and from explicit State intervention (V). *The prospective of development modes* is a quite challenging exercise. Nevertheless, long run historical analyses of the role of education, healthcare and culture suggest that silently, both in the mature and emerging economies, a common model—of course with diverse variants—is probably emerging, based on the production of mankind by mankind. The *anthropogenetic model* would basically replace GDP growth by prosperity and extended well-being for populations as development criteria (VI). A conclusion wraps up the main teachings of this survey and opens to further research.

## 2 Each Paradigm Delivers Its Own Diagnostic

If underdevelopment is broadly defined as the inability to trigger a cumulative growth process, all economic theories have a say in the source of development (Table 6.1).

### 2.1 The Grand Theories and Development

- Ricardian theory delivers a clear message: the inter-relations between land owners, laborers and industrial capitalists are bound to end up in a stationary economy when the agricultural rent has absorbed the profit in reaction to the rise in the price of food and wage in response to the declining fertility of land. A return to growth calls for a permanent improvement

Table 6.1 The conditions for sustained development according to different theories

	Basic mechanism(s)	Source of stagnation	Development policies	Historical/contemporary example
1. Ricardian/classical	Long run steady state due to the of capture by rent of profit	Decreasing fertility of agriculture	Agricultural revolution	Indian Green Revolution; American intensive agriculture
2. Marxist	Reinvestment of surplus into productive capital	No surplus Surplus converted into consumption	Productive modernization Public planning	Early Soviet regime
3. Walrasian	Price flexibility of a complete set of markets	Rigid prices	Deregulation	Eastern Europe after 1989
4. Solow's growth theory	Investment and then technical change	Stagnation of total factor productivity	More spending for science and technology	Post-WWII golden age
5. Schumpeter's development theory	Innovation and entrepreneurship	Erosion of entrepreneurs' dynamism	Public spending in research Tax incentives to innovation	OECD Silicon Valley model
6. Law and economics	Clarity of property rights Stability of public governance	Confusion of polity and economy	An adequate constitutional order	American constitution and growth
7. Endogenous growth theory	Ideas generate new sources of innovation	Blocking of initiatives and experiments	Education, training, proactive innovation policy	Nordic economies



of agricultural techniques. De facto, some development strategies have pointed out the crucial role of land ownership and the need for a technical change adapted to the local conditions of each agriculture. Furthermore, successful developed countries exhibit a clear dynamism in agricultural techniques and organization. Last, but not least, the conversion of booming financial profit into real estate might become a blocking factor in finance-led growth regimes, as observed in the US and UK (Boyer 2015a: 230–33).

- A second classical and Marxist tradition stresses that the extraction of a surplus is the first necessary condition for development, the second one being the reinvestment of this surplus in productive capital. Within this framework underdevelopment is the consequence of a poorly productive system or the diversion of profit in the direction of luxury consumption. By contrast, development strategy aims at modernizing both agriculture and industries, possibly via authoritarian or indicative public planning. The Soviet Union has followed this path until being unable to catch up with the piling up of defense spending, at the detriment of household consumption and productive investment (Sapir 1989, 1996).
- The *neoclassical theory* derived from the concept of Walrasian equilibrium delivers a quite different diagnosis. Underdevelopment is largely the unintended outcome of government interventions on price formation, creating disequilibria between supply and demand and blocking the efficient allocation of natural resources, capital and labor. There is a long tradition that states that the implementation of market mechanisms are the premises for development (Schultz 1964, 1980). One observes a parallel with the unbalanced growth of Soviet type economies: the blocking of the transmission of relevant information by the price system is an obstacle to the dynamism and the legitimacy of this regime (Kornai 1992). In a sense, this diagnosis converges with Hayek's conceptions about the role of prices in diffusing the information about scarcities and overcapacities, without assuming that any market equilibrium is a Pareto optimum, a quite abstract reference indeed (Hayek 1945).

## 2.2 Dynamic Theorizing of Development

- Nevertheless, misallocation of resources does not logically imply stagnation and underdevelopment. *Neoclassical growth theory* addresses more directly the issue at stake: what are the engines of growth? In the medium term the rate of capital accumulation is the key factor whereas demography and

technical change govern the long run trends of any economy (Solow 1956, 1957). Stagnation occurs when the investment and saving rates are balanced and if innovations do not deliver any more the total factor productivity increases. If this is so, the development strategy should aim at fostering more saving—or attracting foreign direct investment in the context of an open economy—and spending more for research, innovation and technical modernization. This was the lesson taught by the post-WWII golden age in OECD countries. But this configuration has been challenged by the quasi exhaustion of total factor productivity: the intensity of debates about a possible secular stagnation (Gordon 2016; Summers 2017) shows that developing and mature economies need an integrated approach whereby growth and development theories tend to overlap.

- Joseph Schumpeter (1934) had proposed a *genuine theory of development*. He explained that an actor was central in counterbalancing the tendency to stagnation: the entrepreneur who dares to imagine new products, techniques and organizations thus launches a new wave of investment and production. He is different from the manager who simply takes charge of the functioning of processes for already existing products. If poor managers and a small number of entrepreneurs prevail, we may as well say farewell to the relevance of any State pushed development (Hagen 1982). But it is difficult for public authorities to promote the emergence of entrepreneurs by designing the education curricula, implementing an adequate tax system favoring risk taking, transforming the society values and so on. Silicon Valley is a good example of the idiosyncratic nature of such a development model, which includes spill overs from large defense research programs converted into new products for private demand. It is quite difficult to replicate such a model in poor and lagging economies.
- *Endogenous growth theories* (Romer 1990) try to overcome the limits of the previous analyses. On one side technical change is not the equivalent of a public good becoming available to any firm and country: innovations are patented and they are the outcome of profit strategies; hence some barriers to their diffusion from developed to developing economies. On the other side, material productive capital is not the only vector in the diffusion of technical change: intangible capital has become a key component in the performance and valuation of modern corporations and the structural competitiveness at the national economy level. The virtuous circle according to which new ideas are emerging out of old ones generate a dividing line between advanced and lagging economies: cumulative growth on one side and growing technological dependency on the other. The market mechanisms are therefore unable to foster and organize the emergence of

major innovations to lagging countries (Stiglitz and Greenwald 2014). De facto at the world level the concentration of innovation capabilities is impressive and it is a clear source for divergent development trajectories.

- Getting the incentives and institutions right is the core recommendation of *law and economics approaches* (Posner 2011). The clarity in the definition and enforcement of property rights is frequently presented as the founding block of any successful economy. More generally, the stability and predictability of governance is helping in mobilizing the commitment of actors in the economy. When governments constantly interfere with private interests and objectives, growth and prosperity are held back. This hypothesis has been mobilized in order to contrast the North American and European trajectories (La Porta et al., 1998). A similar interpretation has been proposed: underdevelopment could well be the consequence of a lack of clarity in the definition and defense of property rights (De Soto Polar 2000, 2006). This assumes implicitly that there is a unique and universal definition of property rights and that “getting property rights right” is a necessary and sufficient condition for development. This neglects all the externalities associated with purely private calculus: the literature on Commons convincingly shows that pragmatic methods for internalizing some externalities can be invented (Ostrom 2015), whereas the sophistication in the decomposition of property rights might well be an explanation of the adaptability and dynamism of the Chinese economy (Chavance 2017).

Is there a road map that would help in sorting out the right theorizing? Each of them is proud of its *coherence*—that is, the derivation of some typical economic patterns from a limited set of axioms or hypothesis—but what about the *relevance* of these alternative foundations for development theories?

### 3 Mono-causal Explanations Are Bound to Fail

Let us now check which analytical framework points out the structural factors that are limiting economic activity and by extension the virtuous cycle of development. It is important to mobilize the researches that have made a diagnosis about the key factor inhibiting cumulative growth (Hausmann et al. 2005). The theories previously presented are thus rearranged according to their diagnosis about the blocking factors of development for a given economy at a given historical period (Table 6.2).

Table 6.2 Success...but misery of mono-causal explanations of underdevelopment

	Empirical observations		Degree of generality
	Theoretical background	Negative	
		Positive	
1. Inefficient agriculture	Ricardian Marxist	Ancient regulation recurring agricultural crises	Modernization by opening to trade but no development (Central Africa)
2. Low productive investment	Marxist, Ricardian, neoclassical, neo-Keynesian	Industrial economies (time and space)	Take into account intangible capital
3. Administered prices	Sub-optimality of fix or oligopolistic prices	A second order explanation	Confusion between static and dynamic assessment
4. Weak innovation system	Schumpeter, Solow, New growth theory	A two-sided causality between growth and innovation	Not relevant, far away from the technological frontier
5. Poor governance	Law and economics Old/new institutionalism	An ex-post correlation	Cause or consequence? Measurement issue
6. Poor integration into the world economy	New international trade theory Learning by trading	Higher productivity growth in export industries	Not a sufficient interpretation
7. Civil society recurring conflicts/inequality	New political economy Olson's theory	An hindrance of economic activity	Contingent to the phase of globalization since the 1990s A complex web of processes

### 3.1 Typically Economic Factors

- An *inefficient agriculture* is the first candidate, recognized as such both by classical and Marxist theories. Ancient regulation modes (Labrousse and Braudel 1970) exhibit a cyclical pattern associated with the recurrence of bad harvests, an explosion of food prices and increasing mortality. Similarly, the surplus value theory of classical and Marxist authors states that the inability to generate an agricultural production sustaining subsistence consumption is the origin of stagnation and the absence of development. The surge of marketization of agriculture provides an incentive to develop production and to overcome food scarcity (Schultz 1964, 1980). But it is not a self-sustained mechanism when subsistence agriculture is transformed into an export sector that specializes the economy and reduces the national autonomy of agricultural products consumption (Devereux 2007). This suggests again that *the factors limiting growth are context dependent, in space and time*.
- A *low productive investment* is typically associated with slow growth in the subsequent phase when industrialization is the driving engine of development. This is the teaching shared by Marxist, Ricardian, neoclassical and post-Keynesian theories. But it is not necessarily the ultimate reason for underdevelopment. A small investment ratio over GDP might be the consequence of low profitability, of insufficient demand at the source of overcapacities, an inefficient banking system or finally the lack of adequate skills. Conversely, the Soviet type economies used to over-accumulate at the detriment of the satisfaction of domestic demand and social needs (Sapir 1989). Nevertheless, the Chinese trajectory since the 1990s shows that an impressive over-accumulation can be transitorily viable by the acceptance of an important trade surplus (Boyer 2017b).
- The *distortion of the price system* by public intervention has frequently attributed a determinant role in the absence of development. It has already been mentioned that this is a confusing discrepancy with respect to an optimal static equilibrium with the absence of cumulative growth. Per se “getting the price right”—and consequently the economic policy—is not a sufficient condition for development. In many Latin-American countries, correcting the past governmental errors and fully liberalizing the domestic economy and the international trade have reached a new and more satisfactory equilibrium but they have frequently blocked the process of cumulative growth (Hausmann et al. 2005; CEPAL 2012, 2015). Last but not least, the world wide diffusion of deregulation of domestic prices and exchange rates has not overcome the issue of underdevelopment: it was a

success in many Asian countries, but it was a source of recurring financial crises in many Latin-American economies (Boyer 2015a). A lesson is being taught by this contrast: the *deviation from a static optimum*—indeed quite difficult to assess—does not tell anything about the *sources of growth* that relate to investment, long-term expectations and so on.

- *A weak innovation system* is another candidate for explaining the persistence of underdevelopment in all the countries unable to foster innovations required for overcoming structural obstacles to growth. This is the common diagnosis proposed by neo-Schumpeterian and new growth theories. This also relates to an updating of the dependency theory: many industrial production facilities have moved to Latin-American economies but the design and innovation centers have migrated to Asian tigers, but not so much to Mexico or Brazil. More fundamentally, this analysis may sustain *some illusions* about the process of development. Firstly, it brings forth an hypothesis of *technological determinism*, which forgets the social capabilities for implementing new technologies (Abramowitz 1979, 1986). Secondly, it assumes that all economies should be at the technological frontier, whereas recurring statistical evidence shows that *catching-up* is still very important factor for all countries, far away from this frontier. Thirdly, there is a *two-sided causality* between growth and innovation: today high level of activity delivers the resources for investing in research and development, and the piling up of past innovation expenditures is finally converted into new products and processes.

### 3.2 Society-Wide Approaches

- “Getting institutions and governance right” is a frequent motto since the end of the 1990s (World Bank 1993, 1996, 1997). It goes along with a significant extension of the domain of development in the direction of institutions favoring individual capabilities (Sen 1997). Simultaneously, the concepts of equity and social justice are mobilized and considered as key ingredients for sustainable development (Revue d’Economie du Développement 2000, 2001). An active field of research points out how corruption is hindering development (Rose-Ackerman 2000). Nevertheless, this approach suffers from significant weaknesses. Implicitly, many empirical studies refer to the American institutional setting as the benchmark. This is falsified by the coexistence of contrasted configurations, far away from the idea of a one best way (Combarrous and Rougier 2017). A second issue relates to difficult measurement problems concerning institutions:

basically they are sophisticated coordinating mechanisms that can be implicit or explicit, informal or formal. Are good institutions the premises for development or do they co-evolve along with the process of development? The cross-national correlations totally neglect this pattern and furthermore they assume that “good institutions” can easily be imported as such. This is not at all the case since failures and hybridizations are the rule, pure copy and imitation are the exception (Streeck and Thelen 2005; Boyer 2015a). This is another example for the *flawed approaches* of development based on a unique factor.

- *A poor integration into the world economy* is a frequently invoked source of underdevelopment. It is especially so after experiencing the structural limits of the previous development mode based upon the defense of the domestic market via import substitution. Traditionally among mature economies, the exporting sector has long been able to enjoy higher productivity increases than other sectors (Bertrand 1978). Since the 1990s the access to the whole world demand allows exporting firms to reap increasing returns to scale and thus gain competitiveness with respect to inward looking firms. This is the central message of new international trade theory (Krugman 1995) and these returns to scale have a definite impact upon the national growth regimes. From an empirical point of view, the quality and sophistication of exports are a good predictor for future growth and this is a novelty of recent decades (Hausmann and Hidalgo 2014). Nevertheless such a development strategy is not accessible to any country. It could be successfully implemented by South Korea and it was the engine of fast growth, high value added exports and rising living standards (Chang 2002), but this was not the case for Mexico where the deepening of trade with the US had generated few high skill, high wage jobs in the context of a quasi-stagnation of average productivity and slow growth (Ros 2015; Rogers and Singh 2017)
- *Conflicting and divided societies do not favor development.* When some groups capture a significant degree of control over the economy, this can be detrimental to performance and growth (Olson 1982). This factor has been pointed out by early cross-national econometric analyses investigating the determinants of growth and specially its link with democracy (Barro 1996). Facing divergent trajectories of development as well as absence of development, the degree of social and economic inclusion appears as a noteworthy discriminating factor (Acemoglu and Robinson 2012). Many case studies confirm that recurring social and political divisions can be obstacles to long-term development. The history of Argentina is a good example since the inability to forge a political consensus implies a recurring succession of booms and bursts (Boyer and Neffa 2004, 2007). Such an obstacle is not



specific to Latin America since it is also observed in Africa: clear economic opportunities can be wasted by the flaws of the political system unable to work out compromises, for instance, as in Madagascar (Razafindrakoto et al., 2007).

This brief survey suggests that all these factors might have some relevance in some contexts but not in other ones. They operate at various levels and have an unequal impact upon development. Let us now explore another avenue: development is a *permanent process of change* that has to progressively define a *viable socio-economic regime*.

## 4 The Art of Creating Virtuous Circles

Development is usually detected by the acceleration of economic activity under the impact of an endogenous or exogenous factor (Hausmann et al. 2005). But this change might be only transitory and faster growth does not necessarily mean development. For instance, the large inflows of gold into Spain after the discovery of Latin-American deposits by Europeans created more inflation than modernity and development (Lebrun 2002).

### 4.1 The Difficult Challenge of Development: Overcoming the Routine of a Self-Equilibrating Equilibrium

Why do many ambitious development programs recurrently fail? Basically, it is because they enter into contradiction with the prevailing mode of régulation that has been warranting the structural stability of the economy. A transitory boom may occur and feed optimist expectations about the transition toward a new socio-economic regime. But macroeconomic adjustments continue to be governed by the ongoing mode of régulation that is embedded into a slowly moving economic specialization, the permanence in the distribution of power in favor of the ruling elite and finally the shared or imposed values that shape economic behaviors of the population.

This homeostasis explains why the absence of development may survive in the long run, in spite of the government's efforts, subsidies and inflow of foreign expertise. Africa has long been in such a situation and these recurring failures have generated a lot of pessimism about the role of international organizations in charge of development (Jerven 2015). Conversely the transformations of the Chinese economy have been domestically generated; they have



avoided any big bang approach and they have preferred a step-by-step, pragmatic experimental approach (Naughton 2007).

This introduces a major difficulty for contemporary macroeconomics theories. The profession imposes that formalizations should exhibit only structurally stable equilibria. Consequently any exogenous perturbation converges back toward the long run equilibrium, generally assumed to be unique (Lucas 1983). The transition from one regime to another can only occur when several potential equilibria coexist but the external shock only sets which of them will prevail. Generally a unique equilibrium is assumed and consequently another development is not possible and the economy falls back into the long-term trajectory (Figs. 6.2 and 6.3). Capturing a trajectory whereby innovation makes possible a new dynamics, supposes a

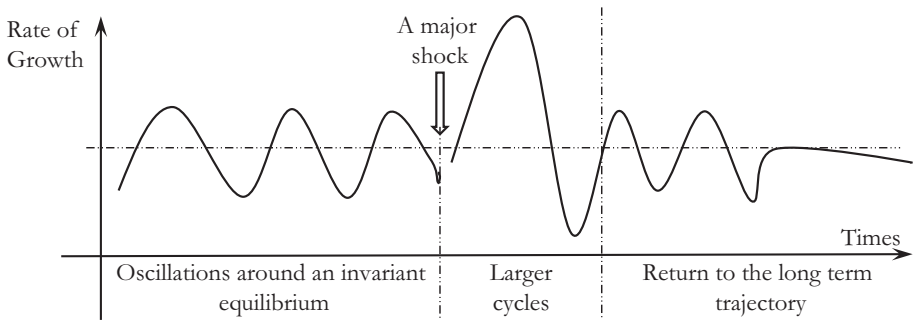


Fig. 6.2 A stable and unique equilibrium: no exogenous innovation can propel development

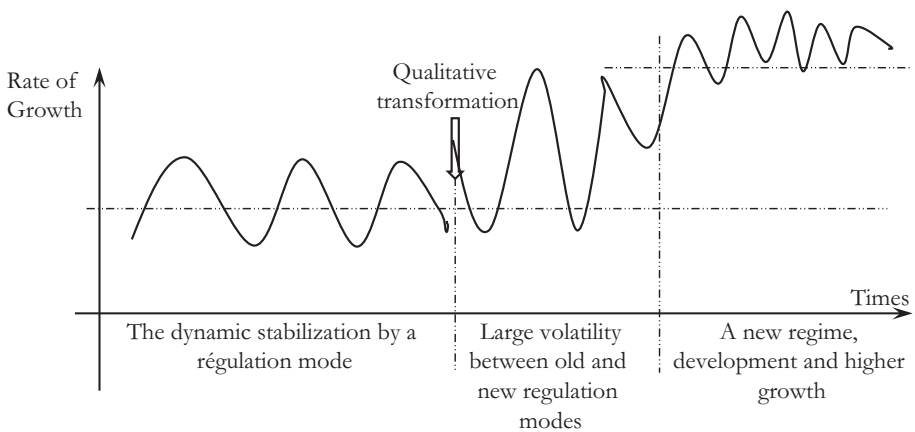


Fig. 6.3 The qualitative changes imply a regime shift that may favor development

modeling accepting the qualitative transformation of the economy. For instance, when population grows the economy might enter a zone of severe decreasing returns, thus the situation induces a migration in order to explore and exploit other territories. This process can be reiterated and at some threshold the different economies may merge and define a new entity (Day 1999).

## 5 Two Conceptions of Macroeconomic Modeling and Development

### 5.1 A Cluster of Innovations That Opens a New Epoch

Once the theoretical framework is presented, a second issue has to deal with the innovations powerful enough to set into motion the process of development. Under this respect, the long run history of presently developed countries has to be revisited along with the successful development cases observed since WWII. Various configurations emerge as follows:

- A. *Technological breakthroughs* are the first candidate for moving traditional economies out of the routine of reproduction. The successive industrial evolutions have been assumed to be the drivers of the transformation of capitalism and the constitution of a series of growth regimes with distinctive features. Nevertheless technological breakthroughs are far from being a sufficient condition: Chinese invented many techniques and products before the Europeans but the nature of social relations controlled by the political power has prevented China from becoming the first industrial nation. This long divergence has launched a lively debate among economic historians (Lin 1995; Pomeranz 2000; Landes 2006). Many alternative explanations still continue to be proposed and they reflect the multifaceted nature of development processes.
- B. *Intellectual and organizational innovations* are recognized to have been crucial in the emergence of modernity. The list of inventions is impressive: the bill of exchange, the commercial bank, accounting systems, the limited liability company, the use of probability theory to design insurance contracts, the public corporation, the creation of stock markets and so on. All these breakthroughs have contributed to make possible capital accumulation on a large scale. These practical ideas have been as important as

the theories elaborated by the founders of political economy and modern economics (Boyer 2018). It is especially so for mathematical finance that made possible the pricing of options and derivatives, thus creating entire markets that have been guiding quoted firms' strategies, Central banks policies and finally the accumulation regime itself. It has been for the best during the boom and for the worst when the American real estate bubble burst. These ideas have not reflected pre-existing reality but they created it (MacKenzie and Millo 2003).

- C. *The opening to world trade* might allow unprecedented dynamic patterns. Clearly the long distance trade has triggered the emergence of a profitable commercial capitalism (Braudel 1979), which allowed the concentration of resources, and then reinvested into manufacturing. The domestically unbalanced accumulation regime of competitive capitalism required an expansion of exports, thus destroying traditional industries of trading partners. This was the source for the coexistence of development in Europe but stagnation in India, for instance (see Fig. 6.1.B. supra). The dependency theory has been analyzing equivalent configurations for Latin America (Cardoso and Faletto 1979). For some historians the world system (Wallerstein 1978) is the necessary level for analyzing any national economy (Fourquet 2018). Some countries may prosper because the internationalization is an opportunity, while for others it is a constraint, detrimental to national economy autonomy and performance (Boyer 2012).
- D. *Innovative socio-political compromises* might be the starting point for the emergence of a development mode. In the US, after WWII, an institutionalization of the wage labor nexus was the outcome of a capital/labor compromise that launched a new era (Juillard 2002). The ideal of stable macroeconomic equilibrium is replaced by a cumulative growth model (Lucas 1988) based upon the increasing returns to scale brought by the reconversion of mass production—from defense to consumer goods (Lucas 1993). An equivalent move takes place in France and in Japan but the precise compromise differs from one country to another. In Brazil, a new presidency opens the exploration of a more inclusive mode of development whereby a moderate redistribution toward the poor population stimulates domestic production (Cardoso 2001). Under this respect one observes significant socio-political differences between most Latin-American and East Asian economies and this calls for new development strategies (Bresser-Pereira 2009, 2010).

These are only the starting point of the transformations that potentially may generate new patterns of development. What are the forces governing this complex process?

## 5.2 In Search for Mechanisms That Allow the Emergence of a Viable Development Mode

Many different and more or less satisfactory hypotheses have been proposed and tested since the early researches on *régulation*. A synthetic overview of the final findings is sketched by Fig. 6.4.

- Invoking *pure hazard and contingency* is a first conception. Individual and collective actors experiment and invent new arrangements in the various domains and sometimes they fit one with another. In some rare cases they may define a new configuration at the macro level. This mechanism is present in the selection of techniques: an initial adoption orients the choice of followers and increasing returns to adoption consolidate a standard or a technique that might appear ex-post as far inferior to neglected alternatives. A minor event has thus consolidated a long-term trajectory (Arthur 1994). Economic geography explains, for instance, the polarization of a given industry in a locality (Krugman 1995). Nevertheless it is difficult to extrapolate this logic to the basic economic institutions such as labor and competition laws and of course the monetary and tax system that are the outcome of collective and reflexive actions in the political domain, even under neoliberalism (Amable et al., 2012; 2017). A last objection: the international distribution of developing and developed economies is far from being stochastic: numerous in East Asia, present in Latin America but nearly absent in Africa and there is a limited number of viable development modes, because they require the coherence of complex architectures (Amable 2003).
- *Co-evolution* of techniques, organizations, institutions and social values is recognized by evolutionary and neo-Schumpeterian research as a relevant process both for developed economies (Nelson and Winter 1982) and developing ones (Nelson 2016). This is an alternative to the excessively static approaches in term of equilibrium, whereas development is a matter of destruction and creation of new structures (Shafaeddin 2016). It also a response to the implicit technological determinism of the approaches just mentioned. Furthermore, effective demand has to be introduced in tandem

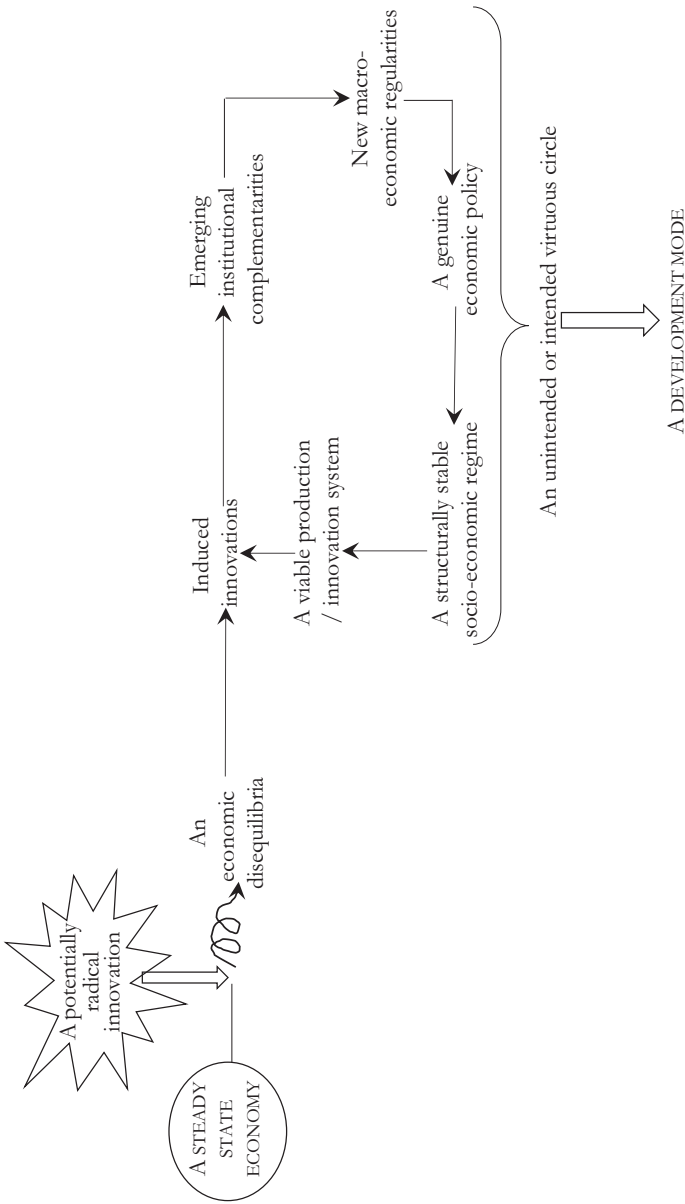


Fig. 6.4 Development is the art of creating virtuous circles

with innovation. It is especially so when balance of payment constrains limit the mobilization of increasing returns to scale, a typical pattern for many Latin-American countries and their recurring crises (Ocampo et al. 2009). Therefore the interplay between a demand regime and a productivity regime is specific both to Asian and Latin-American economies (Boyer 1994). Consequently, co-evolution does not mean that the prevailing configuration will delineate a viable development mode: recurring instabilities and stagnation can be observed for decades (Miotti and Quenan 2004).

- *The hypothesis of complementarity* between institutions, technologies and organizations is a response to this criticism: Two institutions can reinforce each other in promoting and stabilizing development. This builds upon the recent advances of microeconomic theory that rejects the potentially complete substitution between factors of production and managerial tools (Milgrom and Roberts 1990). The economists who studied technological change had already pointed out that its adoption requires adequate social capabilities (Abramowitz 1979) and that any major innovation calls for a synchronization with new organizations and institutions (David 1985). This hypothesis has been applied in order to understand why American and German capitalisms do not converge in spite of the internationalization of competition: each of them displays different complementarities between work organizations, workers skills, product specialization at the firm level and so on (Hall and Soskice 2001). This can be applied to the understanding of the limited number of institutional architectures observed in history and by cross-national analyses (Socio Economic Review 2005). De facto only four social innovation systems can be detected within OECD (Amable et al. 1997) and when the scope is extended to Asian countries seven configurations emerge, each of them based upon a genuine set of complementarities (Harada and Tohyama 2011). Complementarity or at least compatibility is thus at the center of the process and captured by Fig. 6.4 (supra).
- Some *asymmetries in the distribution of power* in polity and economy may help in tentatively synchronizing all the components of a development mode. This can be the visible hand that organizes the coherence of an institutional architecture for the benefit of a hegemonic group formed by the alliance of different socio-economic groups (Amable 2003). The vast literature on the role of Developmental States enters within this category (Thurbon and Weiss 2016). It has emerged as an explanation of the surprising rise—at least for free market economists—of Japan (Johnson 1982) and then of Korea (Amsden 1989) and of various East Asian countries

(Wade 1990). The debate is not necessarily about the respective merits of democratic or authoritarian regimes on development. On one side the Japanese case suggests that it might be a matter of coordination among enterprises, civil servants and political authorities and that the success is not correlated with the proximity to or distance from democracy. On the other side, since the interwar, Latin-American authoritarian regimes have searched for national autonomy via economic development. But in Argentina and Brazil after a phase of easy import substitution, the governments have been unable to work out a dynamic and viable development mode (Miotti and Quenan 2004). The poor capability of a weak state might well express the fragility of social compromises within quite unequal societies (Revue de la Régulation 2012). In this respect China deserves a careful investigation since the concentration of power within the Communist Party has not—until now—delivered a reiteration of the Soviet regime trajectory: the dialectic of a complex multilevel government and a pragmatic path to productive modernization by local experimentation bring a significant adaptability that is not blocked by the domination of a unique party (Boyer 2011a). The very fast transformations observed in East Asia show that their industrialization is not reproducing the slower patterns of the industrial revolution in Europe. This compressed development (Whittaker et al. 2010) calls into question the European-centrism of most development theories.

- *Major crises, social conflicts and wars* destroy past complementarities that previously blocked the exploration of an alternative and more satisfactory social organization. Let us start with one of the simpler arrangements, a convention in the sense of Lewis (2002). A simple formalization exhibits an evolutionary stable equilibrium that blocks the implementation of a superior convention because it is dominated by the benefits of a large number of followers of the present convention (Boyer and Orléan 1992). Nevertheless any event that destroys the past order allows the society to start from scratch and gives it a chance to a more satisfactory arrangement. Such a process actually took place after WWII: the old and Malthusian compromises are blown up, a new generation is able to deliberate and to agree to abandon the ineffective institutions of the past and to design more convenient ones. This is the origin of the fordist mode of development in the US and France (Boyer and Saillard 2001). A long run study in income and wealth inequality confirms that the world wars, probably more than egalitarian ideologies, have opened a new epoch for modern societies (Piketty 2014, 2015). An equivalent process seems to have taken place in

China in the 1970s: the Great Leap Forward has had such disastrous consequences that the government had to repeal their ideological approach. The Chinese authorities adopted a pragmatic development strategy based upon price mechanisms as incentives to foster agricultural production and eradicate famines (Naughton 2007). This general principle—experimenting locally and diffusing the changes when successful—was extended to other sectors (Revue de la Régulation 2017). It was the starting point in the emergence of a genuine accumulation regime. By contrast, the crisis of the Soviet Union had been slowly unfolding (Sapir 1989, 1996) and thus it did not create the feeling of urgency that moved the aggiornamento of the Chinese Communist Party.

- *Reflexivity and development by explicit design* has been observed, after WWII, both in developed and developing economies. The progress of economic analysis, the building of national accounts systems and the rise of public administration competences have allowed an unprecedented approach to the design of a growth strategy: indicative planning in European democracies (Massé 1965), Soviet type planning in Russia and Eastern Europe (Nove 1987) and their transposition by developing economies (Chandrasekar 2016). Planning is not a guarantee that a viable development mode will finally emerge since the outcomes have been quite diverse across countries and periods (Kindleberger 1967). Nevertheless, a possible source of effectiveness originates via the deliberative process through which medium term expectations and behaviors of all agents are coordinated (Boyer 2018). The remarkable trajectory of Nordic countries from distressed agricultural economies to welfare capitalism at the world technological frontier deserves attention even if pure imitation is out of reach (Mjoset 2016). Many institutional changes have taken place in the context of globalization and the leading role of finance. Nevertheless, the ability of collective entities to theorize society-wide evolution continues to be an asset for Nordic countries (Borras and Seebrooke 2015). Since the 1990s most countries—a notable exception is China—have abandoned any planning. It seems that international institutions such as IMF and World Bank have transformed themselves into a collective expert about development. In a sense the Washington Consensus has been diffusing as a synthesis of that knowledge (Williamson 1997). Nevertheless efforts of reflexivity are not an insurance of success since this representation was not at all a self-fulfilling prophecy. On one side the neoliberal construction is far from being theoretically coherent because general equilibrium theory has failed (Ingrao and Israel 1990). On the other side, the neoliberal recipes



for development do not cope with the resilient diversity of institutional architecture of contemporary economies (Boyer 2011a).

The complexity of the development process is the central conclusion of these analyses. Nevertheless, their outcomes delineate a limited set of viable development modes and it is probably one of the key contributions of régulation researches to propose a taxonomy of them.

## 6 Development Modes as Sets of Complementarities

After having shown the limits of mono-causal explanations of underdevelopment, it is noted that each theory diagnoses specific drivers of development and argued that it is a process of technological and institutional change, and that it is time to present the development modes that are observed in history and those in contemporary international analyses.

### 6.1 Against the “One Model for All” Conceptions

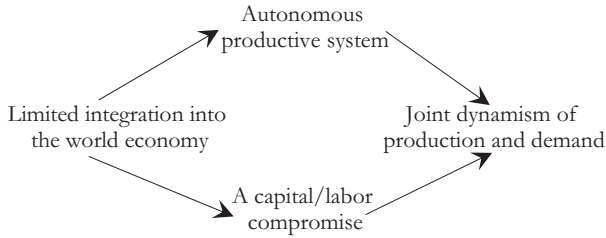
A major result points out that there is no attractor that would imply the convergence toward an optimal and thus unique configuration. This should not be a surprise because the mathematical economists have recognized that they had failed in proving that any market economy will converge toward an equilibrium that is a Pareto optimum: Adam Smith’s invisible hand remains an intuition, not a scientific result and disequilibrium regimes are the rule and not the exception (Benassy 1983). Given the complexity of economies where a series of institutions and organizations interact with markets, many configurations promoting development have been observed.

- *State-led industrialization by import substitution* is probably among the first to launch a specific theorizing with the Latin-American structuralist school (Prebisch 1950, 1971). In a sense it is a modern adaptation of the model that inspired the catching-up of Germany with respect to England (List 1841). It takes place in the context of a retreat from international relations that opens opportunity to replace import of consumer goods by domestic production. State is the key actor in the emergence and building of this development mode (Ocampo and Bertola 2012). This rupture goes along

with the negotiation of a capital/labor compromise which roughly codifies a progression of wage along with productivity increases in line with the modernization of the domestic productive system. The mobilization of increasing returns to scale is the engine that allows standards of living to increase. One should not underestimate the contribution of this strategy to the (partial) catching-up of Argentina, Brazil and Mexico until the 1970s (Fig. 6.5a). *Structural limits* were encountered when import substitution had to proceed from consumption to equipment goods. This failure has tarnished the evaluation of this first development mode, especially when analyzed from the point of view of a triumphing globalization of value chains.

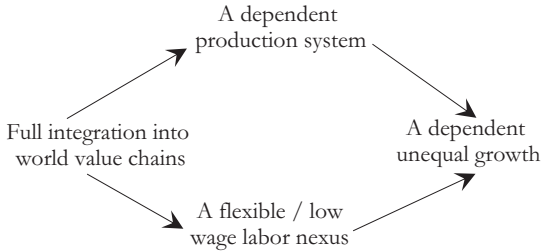
- *Export-led development* has indeed been considered as the logical follower of inward looking industrialization. Within mature economies, it had been detected as a successful option for small open economies that could not rely on a large domestic market: specialization was necessary and it explained the prosperity of Nordic and social democratic economies (Mjoset 2016). State intervention consists in organizing an agora where socio-economic groups negotiate institutional compromises and shape public interventions. Nevertheless a different variant has been implemented for developing economies: weak unions and state power have constrained the model to curb down wages in order to insert some enterprises into world value chains submitted to an acute price competition on rather standardized intermediate or final consumption goods. This is a dependent development, linked to the ups and downs of world trade, low and flexible wages are necessary to maintain competitiveness and the contribution to value added of a growing export sector is limited. Mediocre growth without prosperity is thus affecting Mexico, for instance, since the government decided to join the NAFTA (Fig. 6.5b). *The limits* of this mode of development become evident with the world trade slowdown after the 2008 crisis, the shortening of global value chains and the rise of protectionist policies by mature industrialized countries.
- *An innovation-led export model* is more than a minor variant of an export-led development. It represents an offensive insertion into the world economy with a rapid catching-up or even leapfrogging in the direction of the technological frontier, compared with the passive submission to the subcontracting of low or medium technological components. An efficient general education system delivers the skills required to master evolving products, organizations and processes rapidly. This is an essential component of State intervention. The progressive increase

**State-led industrialization by import substitution**



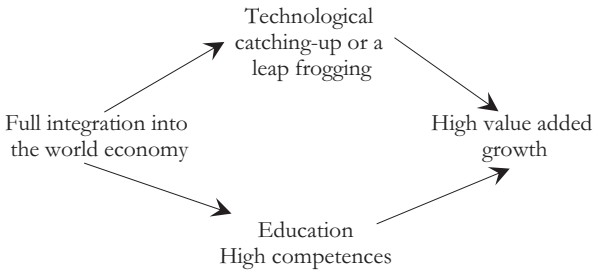
Examples  
 Argentina: 1940-1976  
 Mexico: 1940-1984  
 Brazil 1940-1984

**Price competition export-led model: a weak state**



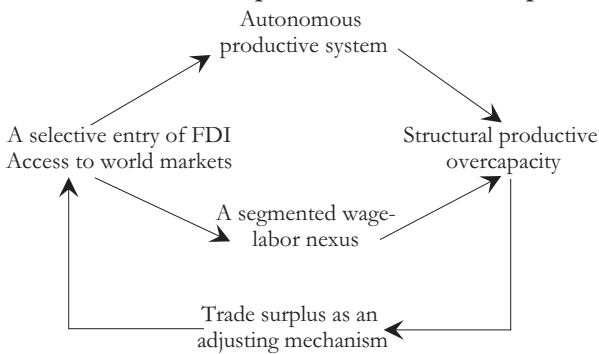
Examples  
 Mexico: since ALENA  
 Less developed economies

**An innovation-led export model: a development State**



Examples  
 Singapore 1990-  
 Hong-Kong 1990-  
 Taiwan 1990-

**An investment- and export-led model: an omnipresent Party-State**



Example  
 China since 2000

**Fig. 6.5** Development modes organize genuine complementarities among institutional forms

of the value created within the global chains allows wages and remunerations to rise steadily. This is a highly dynamic mode that has been inspiring the concept of compressed development since, within a few decades, Taiwan, Singapore and, to some extent, Hong-Kong have reached the standards of life and productive sophistication of advanced economies (Fig. 6.5c). It is observed mainly in East Asia and not at all in Latin America. This reflects the path dependent nature of development strategies. Therefore, it invalidates the precepts that East Asia should be the benchmark for Latin America. The limit of this configuration is so precise that it cannot be easily emulated because specific social capabilities have to be present.

- *An investment- and export-led* development is still another original configuration explored by China. Two engines of growth are operating. The first one inherited from the pre 1978 regime relies on large and increasing investment in basic industrial sectors and infrastructures with the permanent creation of overcapacities that moderate production prices and exert a competitive pressure on other countries via the dynamism of exports. The second process relies on the inflow of Foreign Direct Investment that is assumed to bring and share modern technologies and products. The joint ventures enjoy firstly a reduction of costs via low wages and secondly they aim at capturing a share of a dynamic domestic market launched by the multiplier of investment. Both circuits generate an overcapacity and they require a trade balance surplus in order to stabilize a structurally unbalanced accumulation regime. A Party-State operating at all the administrative levels is the guarantor of this complex strategy. A balkanized wage labor nexus and an open world economy are two conditions for its long run viability (Fig. 6.5d). These are clear intrinsic limits of this development mode. Furthermore it is quite problematic to imagine that it could replace the foregone Washington Consensus (Rodrik 2006): is there another continental economy, poor in natural resources and ruled by a unique party, heir to a multi secular tradition of government?

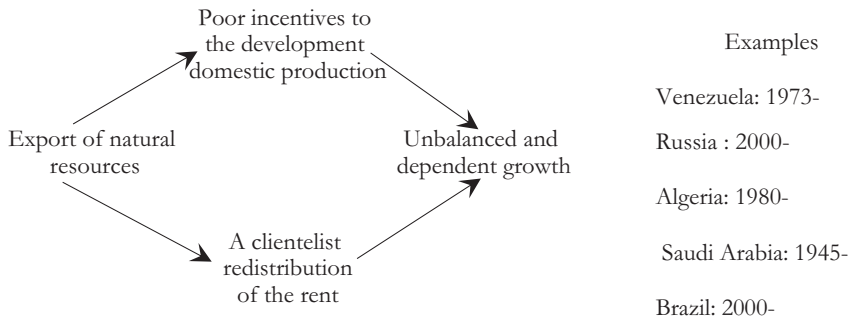
## 6.2 Why Non Development May Persist in the Long Run

The innovations that destabilize the current stationary state are not bound to end up defining a coherent set of complementarities between institutions and organizations or at least their compatibility. *Serendipity* governs the emergence

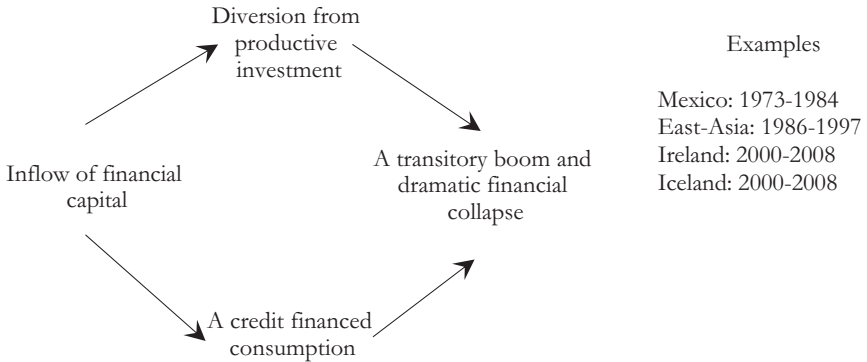
or failure of development strategies. It would be too long to describe all flawed development modes, frequently associated with failed States (Rotberg 2003), because State capabilities are determinant in the construction of economic institutions. Two contemporary examples are illuminating (Fig. 6.6).

- *Natural resources-based rentier economies* are blocked in their search for long-term sustainable development. De facto they are not very imperfect brands of capitalism because they define a sui generis socio-economic regime: the export of natural resources is the source of monetary creation, the main contribution to public budget and the origin of distributive conflicts that sustain a clientelist approach to public policies. All components of State interventions are shaped by the appropriation/allocation of the rent. The exchange rate is moved by the trade surplus/ deficit generated by the exports, in complete disconnection with the competitiveness of the productive sector (Fig. 6.6a). Thus the domestic life style of the beneficiaries of the rent is only

**The curse of natural resources rentier economies: a clientelist state**



**The mirage of a finance-led development: the lender of last resort state**



**Fig. 6.6** The absence of development when institutional forms do not cohere

sustained by the import of consumption goods from advanced economies. When world growth is dynamic, both volume and prices of natural resources are booming and this creates the illusion of catching up with the world standards in terms of standards of living. As soon as the juncture is reversed, governments have to face a harsh reality: their economic model was structurally unbalanced, strictly dependent from the world economy and structurally unequal. Venezuela is an emblematic case of the curse of oil rich countries, followed by Saudi Arabia, Algeria after its independence, Russia after the collapse of the soviet regime and the failure to reconquer the status of industrial power. Last but not least, a significant part of the Brazilian 2015 crisis originates from the dramatic re-primarization of the economy during the 2000s international boom. This is more than a transitory Dutch disease, it means a long lasting obstacle to development, only overcome in Norway by putting aside in a large sovereign fund the income generated by oil exports.

- *An external finance-led development* has recurrently run into major crises (Boyer 2011b). In the epoch of free international capital mobility, many governments have accepted that firms and households go into massive debt, sometimes expressed in a foreign currency. This capital inflow is directed toward real estate or stock market speculation at the detriment of productive capital that would forge the capacities necessary to cope with a booming domestic demand. The surging trade deficit is easily financed during the boom but it becomes a dramatic barrier as soon as optimistic expectations are reversed. The financial crisis is the more dramatic the larger the disequilibrium between the size of the productive sector and that of capital inflows. The State has then to act as a last resort lender via the Central Bank and guarantor via public spending. This type of crisis burst out first in Mexico in 1984 and since then it has affected many other Latin-American countries (Bresser-Pereira 2010), even though it was immediately perceived as a new threat for development (Díaz-Alejandro 1985). The 1997 Asian crisis was also the consequence of the mismatch between brutal capital inflows and poor regulation of the domestic financial system (Krugman 2001). Europe has not been immune from this peril: Baltic States, Ireland and Iceland have reiterated the same dangerous strategy with long lasting impact upon their potential growth. *The fallacy* of development by inflow of foreign saving is amply documented by the history of the last decade.

Thus the development modes detected by regulation research are diverse but in limited number because only few institutional forms display the complementarities or compatibilities required for a viable architecture in the long run. This is an example of an institutionalist approach to development (Boyer 2002).

## 7 No Development Mode Lasts Forever

How long is the long run? After having stressed their *spatial diversity*, it is time to address the issue of *temporality* for development modes.

### 7.1 The Neoclassical Fallacy: An Optimal Strategy out of Historical Time

Conventional economic theories experience major difficulties in dealing with the sequencing of the steps that govern the emergence of a new growth pattern. A general equilibrium approach assumes that a complete set of future contingent markets exists and that agents decide in the first period and the states of nature revealed at each period activate the contingent plans that the agents decided in the first period (Debreu 1959). As soon as only few future markets can be built and if agents are renewed from one period to another, the existence of a dynamic equilibrium is very problematic because many pathologies appear such as the absence of equilibrium or the impossibility to reach an optimum (Hahn 1985).

The literature has developed a far simpler alternative: a representative agent is in charge to optimize intertemporal decisions of consumption and investment under the Rational Expectation Hypothesis; he knows the structural relations governing the economy but they are transitorily moved by stochastic shocks (Lucas 1983). In this imagined and ideal world, the agents respond rationally to programs announced by the State and under a set of quite restrictive, but very convenient hypotheses—total reversibility, extended substitutability, absence of externalities, permanent technical progress—the economy is converging toward a steady state in response to the program announced by the State. Thus an optimal development strategy, once decided, will need no further adjustment and will be efficient forever, at least for a closed economy.

Of course the Washington Consensus was difficult to justify by such an abstract framework but it shared the same implicit basic hypothesis: once enforced, the complete program—decentralization, individualization, privatization, opening to competition, rationalization of State interventions—would require no further public intervention since the economy will then be self-stabilizing. This is contradicted by the positive correlation between the frequency of financial crises and the extent of deregulation that many economists have difficulty to recognize (Reinhart and Rogoff 2009). A second lacuna concerns the hypothesis that markets are the only arrangements able to coordinate

actors and to disseminate the information required to guide resource allocation. This neglects the role of institutions in producing, selecting and diffusing information and socializing expectations and behaviors (Aoki 2001). They are crucial in the various development modes just presented: they have an origin, they mature and finally they may encounter their structural limits. *Bringing back historical time* into the analysis is a necessary step.

## 7.2 Generally the Very Success of a Development Mode Leads to Its Structural Crisis

This theme is already present in the taxonomy of past and present regimes: if the social, political or international context changes, the relevance of the regimes is challenged and this opens a new epoch when socio-economic groups and individuals fight in order to find and impose a follower the development regime in crisis. At least three factors explain these episodes (Fig. 6.7).

- *The overconfidence* in the sustainability of a performing mode of development that undergoes either a progressive sclerosis or the surge of opportunistic actors that overestimate the built in stability of the economy. The first mechanism took place with the ageing of import substitution development when it has become more and more difficult to apply this strategy to the sector of capital goods. The second is typical of finance-led regimes when, for instance, Ponzi finance exacerbates already creeping sources of crises. More generally when actors destroy the pillars of economy in the pursuit of their own interest, the structural crisis is nearby (Rajan and Zingales 2004).
- The widening gap between *the inertia* of a complex institutional configuration and a rapidly evolving international economy is a second factor at the origin of crises. When productive capital internationalizes, it becomes difficult to maintain the complementarity between increasing to scale and a production limited to serving the domestic market that was the founding block of industrialization via import substitution. The full mobility of financial capital puts at risk the innovation-led export model that requires the long-termism of patient capital. When oil price becomes the vector of speculation on derivatives, the stability of rentier is no more possible. When followed by a growing number of economies, the price competition export-led model enters a vicious circle whereby all economies are chasing a world demand limited by the limited purchasing power generated domestically (Boyer 2012a).



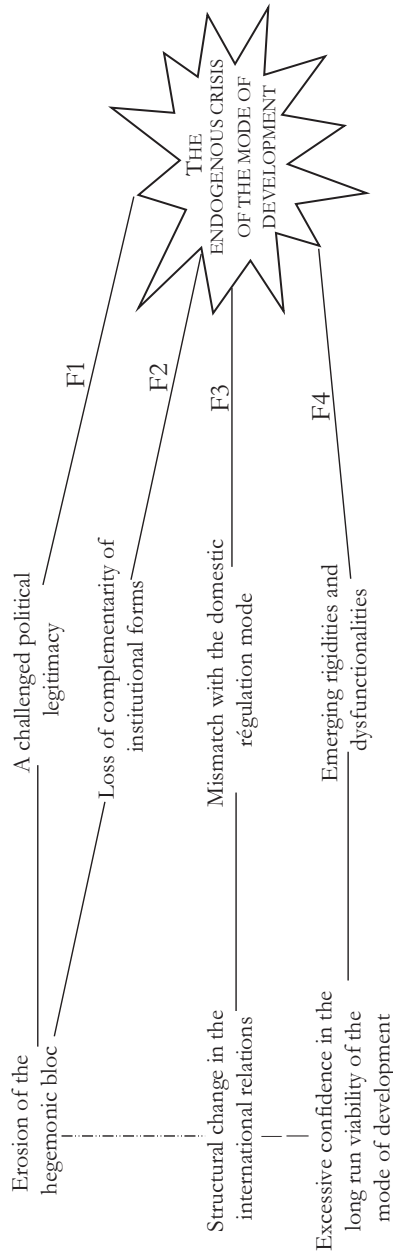


Fig. 6.7 The forces that tend to destabilize any development model

- *The erosion of the hegemonic block* at the origin of the mode of development is a third source of crisis characterized by reemergence of conflicts among its constituent members. For instance, in Argentina the import substitution relied upon an alliance between the State, a fraction of the industrialists and workers movements. It is recurrently challenged by the agricultural sector that prospers via exports (Boyer and Neffa 2004) and this is the origin of a recurring instability with the alternating of two different political coalitions. Facing a crisis of its inward looking mode of development in 1980, the Mexican government undergoes the breaking down of the tripartite alliance that it represented (Gallardo 2008). Similarly, torn between three different models of development—industrialist, rentier and financier, the Brazil experiences in 2016 the breaking down of a political alliance launched by President Cardoso, deepened by President Lula.

With the lenses of Regulation theory, *the resilience of modes of development is limited* in space and time and most of them are prone to structural crises. The task of the analysts should be to try to anticipate or at least detect such episodes in real time.

## 8 The Future of Development

What lessons, if any, may one learn from this analytical framework? First, the economists should challenge the conventional opposition between a State-led development and its total reliance upon pure market mechanisms. Second, there exist *many organizational forms and institutional arrangements* that can overcome the most crucial issues of development such as climate change and environment destruction. Third, factors that used to be considered as consequences of a successful development—such as *education, health and culture*—may now appear as its premise.

### 8.1 Overcoming the Opposition Between State and Markets

Leaving theory aside let us concentrate on the development strategies that governments have been pursuing. It is reassuring to note that a number of convergent lessons can be drawn from the history of the twentieth century. Development plans that bet everything either on a complete organization of

economic life by the State or on a total delegation of collective responsibilities to the market have all failed more or less miserably (Théret 1999). One may synthesize more than half century long history by a simple diagram (Fig. 6.8). One of the two strategies is first adopted and encounters some success but it finally enters a structural crisis and it calls for a reappraisal of the opposite paradigm. It is then the inspiration for a new era and the same pattern is set into motion: emergence, success, maturation and crisis of the development mode..

The limits of one paradigm justify the attractiveness of the other and vice versa: are these long swings unavoidable, a kind of fatality and are the lessons from economic history inaudible?

## 8.2 The Commons: Another Conception of Development

Recent advances in the dialogue of social science suggest that this dilemma can be overcome along two directions:

- Contrary to the debates among economic theoreticians, economic sociology, historical institutionalist theories and modern development analyses stress that *State intermediation and market mechanisms are largely complementary* (World Bank 1993, 1996, 1997). This is also the central message from Régulation theory: all the institutional forms derive from State intervention and recognition and they are also the matrix of the economic incentives and constraint. Like Janus, they have two faces since they belong simultaneously to the political domain and the economic sphere. Markets are among the more sophisticated and fragile economic institutions because they are not self-implementing since they require a third party between the sellers and buyers in charge of monitoring them (Boyer 1997). Without the taxation of the value created by economic activities operating via markets, the State could not play its role of architect of the institutional forms. De facto, the unfolding described earlier (Fig. 6.9, supra) describes the endogenous evolution of the respective role of collective intermediation by the state and the cybernetic processes operating on markets, none of them, alone, being sufficient to guarantee the resilience of a socio-economic regime or development mode (Fig. 6.9).
- *Many other coordinating mechanisms*—the firm, the network, the joint venture and the community—exist and are present in quite all environments. Each of them has distinctive merits and intrinsic limits and they coexist and

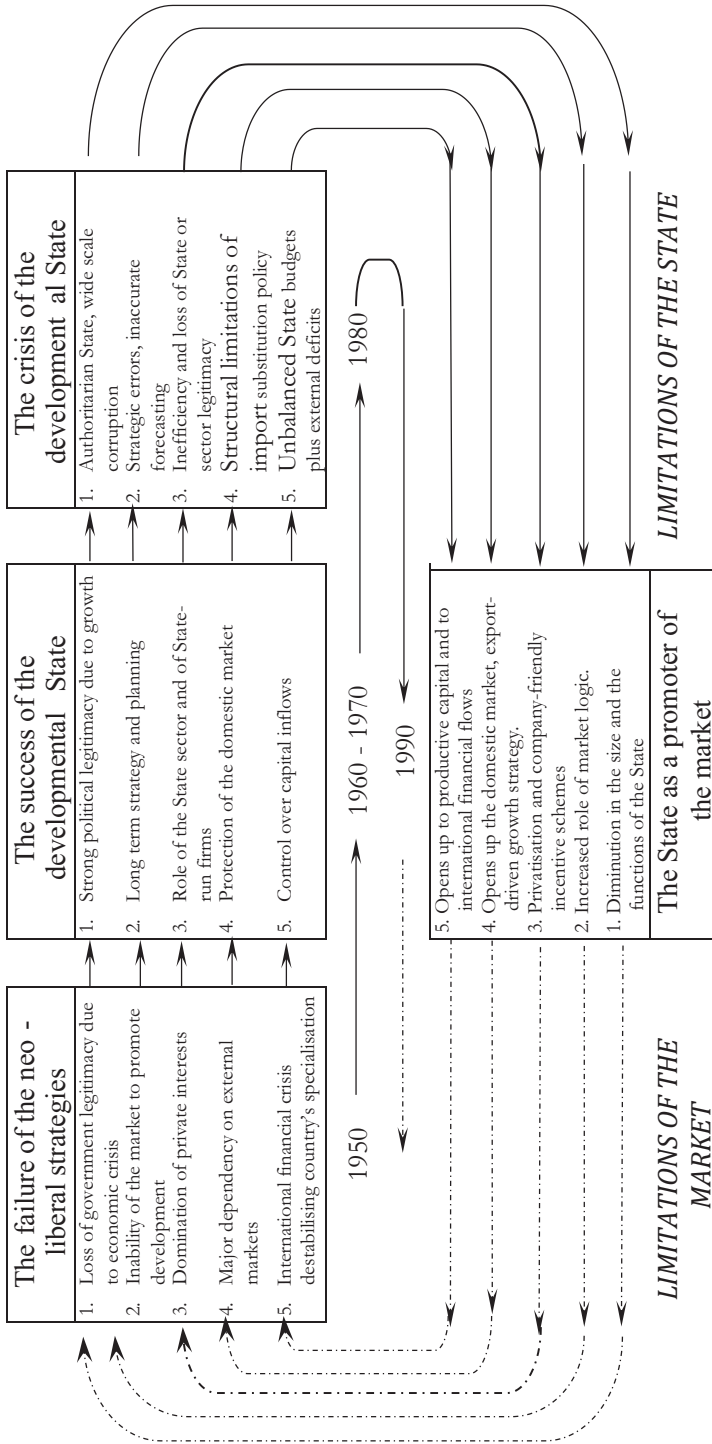
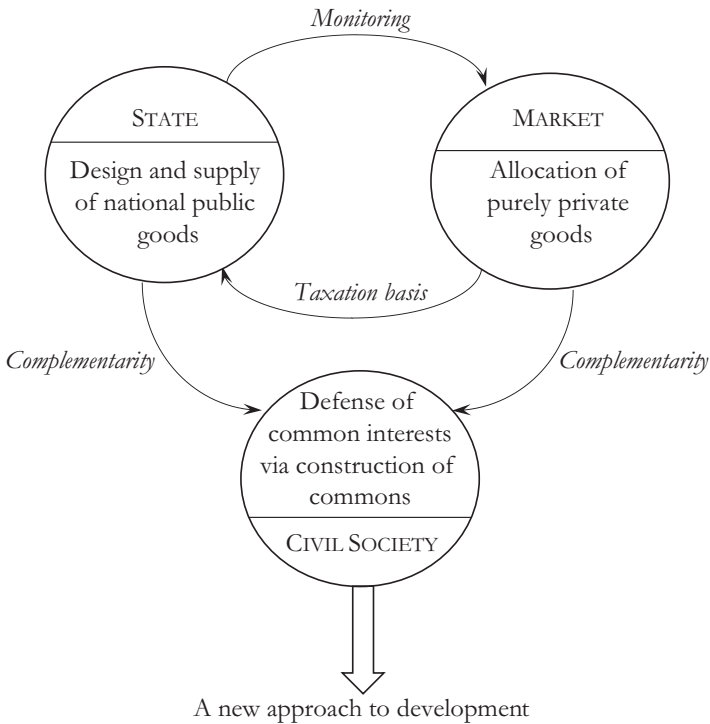


Fig. 6.8 Development strategies history: an endless oscillation between State and markets?



**Fig. 6.9** – State, market and civil society

prosper by their synergy (Hollingsworth and Boyer 1997). As far as development theory is concerned, the last two decades have seen a new vision: *the commons* might well be very efficient and attractive organizational forms, especially in order to manage a pool of natural resources (Ostrom 2015). This emerged as a *bottom up approach* in order to synthesize a series of case studies all over the world. This is an original method, compared to both the dominant approaches: by a pure deductive method inspired by an already existing theory (Table 6.1, supra) and by controlled experiments borrowed from epidemiology (Banerjee and Duflo 2012). The analysis of commons describes how the interactions among participants, at the local level, pilot the process of emergence and their effectiveness originates from this very process. This is a reply to the “tragedy of commons” analyses that recommended, on the contrary, an enforcement of clear private property rights (Hardin 1968). Furthermore, the theory of commons contributes to the analysis of institutional change, far away from a static and normative approach. Any theorizing has to be related to the context and then undergo a process of generalization via systematic comparisons in time and space. The potential relevance of commons can be summarized as follows:

*One of the lessons of our institutional analyses, in Nepal and elsewhere, is that resource users with relative autonomy in designing their own rules to govern and manage common resources frequently achieve higher economic outcomes, but more equitable, than when experts design them in their place. (Ostrom and Basurto 2011)*

This is an elegant solution which overcomes the usual dichotomy between two polar visions of development (Fig. 6.10, supra) and it can be applied to many domains such as the property regimes in agriculture, genomic technologies and free software (Revue de la regulation 2013) or Wikipedia, for instance. By extension, but it is a difficult issue, the new global public goods proposed by standard approaches—such as the preservation of the climate and environment, health, global financial stability—should be analyzed in term of commons. The success requires to describe the social and political processes that should institute them (Dardot and Laval 2014). This is already guiding the strategy of the French Agency in charge of financing development projects (Giraud 2017).

### 8.3 Investing in Humans: Is the Anthropogenetic Model the Future of Development?

In the past, analysts tended to consider that improved quality of life and longer life expectancy were the result of society's enrichment, something that allowed devoting more resources to the healthcare sector. Today, theorists and practitioners also insist on the impact of education and healthcare on the development process. On the one hand, they have improved the skills, including those of women, within families, involved in providing healthcare (Esping Andersen 2008). On the other hand, lower infant mortality and the victory over major epidemics have changed the demographic regime, allowing for economic dividend via, for example, younger population (Fig. 6.10). At the same time, investment in general education and training yield additional benefits, thanks to the extension of the life cycle, which carry over into professional life and increases the return on education policies (Cutler and Lleras-Muney 2006).

Successful development thus results from *a circular process* and, in case of cumulative success, it runs with aid from business investment, which creates productive capital, to educational expenditures, which contributes to social capital. The latter then enters into synergy with government-created infrastructure. Considering this view of things, a proactive strategy in the area of healthcare can in some cases help accelerate growth. This holds even more so

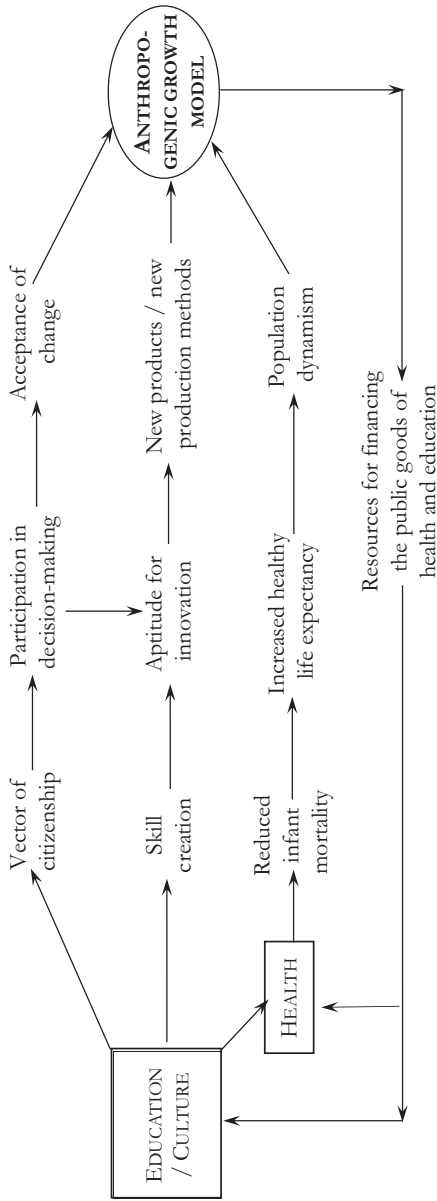


Fig. 6.10 – Education, health and culture at the heart of the anthropogenetic mode of development

for education since it also shapes access to healthcare and generates interest in efforts to promote the well-being of children and the family.

Does this represent a conceptual revolution without historical precedent? It does not. Already in the mid-nineteenth century, Friedrich List had taken the following stance:

*Those who raise pigs and those who manufacture bagpipes or pills are indeed productive but the instructors of youth and of manhood, musicians, virtuosos, physicians, judges and statesmen are productive in a much higher degree. The former produce exchangeable values; the latter, productive power: of the latter, some prepare future generations for production [...] others restore the productive power of the sick or disabled; others acts as legal guardians; others maintain social order. (List 1841)*

What has been new in the past two decades? This conception of development has been joined with more orthodox analyses in terms of human capital and (more fundamentally) capacity development by way of access to basic goods that are education and health care (Sen 1988). The human development indicators that are regularly published by international organizations (UNDP 2014), among them by the World Bank, testify to this modernization. They are no longer merely results of success in accelerating growth; they can be the conditions for a better quality of development. This change of paradigm does not hold only for emergent countries; above all, it applies—perhaps especially—to the most advanced countries, where the search for prosperity might gradually be substituted for that of growth (Cassiers 2011).

## 9 Conclusion

The previous analyses can be summarized by the following provisional results.

1. Given the present uncertainty about the future of growth, respectively in old industrialized countries and in new emerging economies, it is crucial to reunify economic history because it is a method for diagnosing *the sources of successful development modes*. Since its early beginning, this has been a strategic orientation of Régulation theory defined as the analysis of long-term transformations of economies dominated by capitalist social relations.
2. Development is not the search for a good or better static macro-equilibrium but the art of *creating*, if not miracles, at least *virtuous circles* in which social values, organizations, institutions and technological systems co-evolve.



Three periods have to be distinguished. First, a trial and error process governs the *emergence* phase largely governed by unintended consequences of political and economic strategies. Second, the *maturation* and dynamic stabilization of the development mode occurs either under the aegis of an hegemonic bloc organizing, for its own benefit, the institutional forms architecture, or ex-post via the discovery of complementarity or at least compatibility among them. Third, the very success of a development mode builds the condition for its *erosion and structural crisis*, the more so the more rigid the domestic institutions have become, compared with rapidly changing international relations.

3. Development modes are therefore built upon *the discovery of possible institutional arrangements* that fulfill two conditions. On one side, they have to *reproduce dynamically the basic social relations*, compatible with a founding compromise. *Political legitimacy* is a component of this condition. On the other side, they have to *sustain the process of accumulation* that tends to destabilize past institutionalization of these basic social relations. Since *development is a matter of processes*, it is highly problematic to search for an optimal configuration, devoid of meaning as soon as a steady equilibrium is out of reach and is replaced by endogenous business cycles that may differ significantly from one socio-economic regime to another.
4. Consequently, *there is no canonical development model* that could and should be implemented everywhere, whatever the historical period. The comparison of national trajectories, both today and in the past, exhibits several and contrasted models. They differ by the nature of the *integration into the world economy* that might be a blocking constraint for some but an opportunity for others. They are based upon the *production of commodities* with varying degrees of competition or they simply explore *natural resources rents*. In some circumstances, unprecedented institutional forms or arrangements can be invented and they are crucial since they define the nature of economic and political interests, they shape expectations—a decisive factor for any accumulation regime—and they have to legitimize a social order. Each development mode calls for specific State interventions, far away from an optimal configuration that would be valid everywhere at any epoch. The *import substitution* model, *export-led* development, *catching up* with world technological expertise, *foreign direct investment-led* strategy and finally a development based upon *low wage and poor welfare* are such past inventions and they can simultaneously be observed in recent history. But this tentative list of viable development modes is not closed. *Contemporary China* is exploring a genuine development mode: the acute

*competition between a myriad of local corporatisms* is tentatively monitored by a central State. This invention has triggered an impressive *compressed development*.

5. This is an invitation to *revisit dependency theory*, initially proposed by Latin-American economists who observed the chaotic evolution of the interwar period and the inability of most economies to thrive within the existing international regime, itself in crisis. Since then, *other forms of dependent development* have been observed. For instance, the delocalization of production and the rise of global value chains is frequently associated with *a clear asymmetry* between the countries involved: the leading countries impose their strategy in terms of division of labor that has to be accepted by weaker partners. Some East Asian and Eastern European economies do belong to this category. Similarly, when domestic financial intermediation is not possible or efficient, governments have to go into foreign currency debt and thus economies have to rely on foreign entry of capital to sustain a shaky and crisis prone socio-economic regime. This *financial dependency* is clearly an obstacle to autonomous development. This lesson has been learnt by East Asian countries after the 1997 crisis but it was somehow ignored by some Latin-American or European countries.
6. Most of the previous developments were based upon a premise: the domination and centrality of capitalist social relations. This hypothesis is not quite relevant for the countries specialized in the *extraction and export of primary resources*. They are numerous in the contemporary world and they face quite specific challenges concerning development. The central mechanism is the exploitation and the distribution of the rent that generally calls for a clientelist State, a limited role of the wage labor nexus, few incentives to develop domestic production of consumption goods and poor incentives for innovation and technical change. *Venezuela* is emblematic of this underdevelopment trap but the related pathologies are rather common to quite all *rentier economies* from Saudi Arabia to Algeria and even contemporary Russia. Norway is the only counterexample but this society was exploring a social democratic welfare capitalism before becoming an oil-producing country and the management of oil rent is carefully separated from the domestic *régulation* mode.
7. Nowadays, *environment preservation* is widely considered to be the next development mode, in possible rupture with the unlimited growth that used to prevail since the industrial revolution. Possibly, and more silently, another regime might be emerging both in mature and developing countries. In advanced economies, expenditures in healthcare and education

tend to become the most dynamic and resilient sources of growth. In the last two decades applied researches in development have shown how crucial education and access to healthcare are, as preconditions for the well-being of the population and the mobilization of competences in the domain of production of consumption and investment goods. This strengthens a conception of *development in terms of capabilities* that should replace the old vision that the dividends of progress distribution should be converted ex-post into welfare expenditures. The notion of the *anthropogenetic model* captures this intuition but it probably supposes the emergence of *global commons* that could also be applied in terms of the preservation of the planet.

## Appendix

This appendix provides another synthesis of the chapter according to a different logic. At least seven stylized facts or issues cross the contemporary literature on development. Table 6.3 briefly gives the interpretations derived from the researches inspired by Régulation theory.

**Table 6.3** – Some stylized facts that development theories should explain and the responses by Régulation theory

Stylized facts	Interpretations
1. The emergence of development theories after 1945	Growth has become the norm, underdevelopment is oddity
2. Contrasted trajectories: Latin America and Asia	The curse of national resources versus education and land reforms promoting industrialization
3. Why do some countries succeed and others fail?	Depends on the complementarity or mismatch of institutional forms
4. Why development modes do not last forever?	Mismatch among institutional forms when the model is aging, erosion of an hegemonic bloc, changes in the world economy
5. Why do States and markets coexist in the long run?	They are co-evolving by synergy more than by open conflict
6. Will Chinese conceptions for development replace the Washington consensus?	A largely idiosyncratic socio-economic regime based upon competition among a myriad of local corporatism, monitored by a party-state
7. May the same concepts enlighten developed, emerging and under developed countries?	It is the basic requirement of Régulation theory

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# 7

## Development as an Evolutionary Economic Process

Richard R. Nelson

In this chapter I argue that modern evolutionary economic theory provides a much better framework for understanding the economic development process than the neoclassical theory that for many years has dominated main line economic thinking. I begin my argument by laying out the basic differences between the two theoretical points of view. I then propose that an adequate economic theory needs to recognize the rich mix of institutions that are involved in economic activity—not just firms, households, and markets but also a wide range of private not-for-profit and public organizations and structures—and also that the varied roles of government cannot be understood simply as responses to “market failures”. While the early articulations of evolutionary economic theory did not encompass the institutional variety and complexity of modern economies, institutions play a central role in more recent writings. I then will develop the argument that economic development involves the coevolution of the technologies known and in use, and the institutions supporting and regulating these. This is exactly the perspective provided by modern evolutionary economic theory.

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## 1 The Basic Differences<sup>1</sup>

The basic difference between the two perspectives is that evolutionary economics sees modern market oriented economies as dynamic systems with change always going on, much of it driven by innovation. Our perspective is Schumpeterian. We see modern economies as always experiencing the introduction of new products, new modes of production, organizational change, the opening of new markets, and the birth of new industries, with many older ways of doing things declining and some old industries fading away. As a result, economic activity is almost always proceeding in a context that is not completely familiar to the actors, and many actors are engaged in modes of doing things they have not employed before.

In contrast the economic context assumed by neoclassical theory is Walrasian. The focus is on the characteristics of equilibrium configurations of economic activity, and while economic change certainly is recognized, neither the sources of change nor the processes involved in changing are dealt with explicitly. Economic action taking is seen as occurring in an economy at rest, or undergoing well-anticipated change, in any case with the actions appropriate to the context something the actors have learned through relevant experience or can calculate based on what they know securely. The fact that these actions may involve doing things the actor never has done before is not considered in this formulation.

One basic consequence of the difference between the two theories in how the economic context for action is viewed is that they put forth very different views on what is meant by “rational” behavior. Both theories assume that individual and organizational economic actors pursue objectives, usually in a reasonably intelligent way. However, the “rationality” of actors in evolutionary theory is bounded, in the sense of Herbert Simon (1955). There is no way they can understand fully the context in which they are operating, yet they have to cope, somehow. To a considerable extent the coping involves the use of routines that have in the past yielded satisfactory results. But the actors in evolutionary theory also have the capability to do something new, to innovate, if they think they see an opportunity, or when what they have been doing becomes clearly inadequate in a changed context.

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<sup>1</sup>I will not discuss here the differences in the styles of formal modeling in the two theories, save to note that formal modeling in evolutionary theory tends to take the form of dynamic systems that at any moment may be far from an equilibrium, while formal neoclassical models almost always assume that an equilibrium obtains. My focus here is not on formal modeling, but on what Sidney Winter and I (1982) have called “appreciative theory”, that is theory that aims to capture the basics of what actually is going on.

This is a very different view of economic behavior than one that presumes that the actors face given and fully understood choice sets, and make optimal choices given those sets. The latter may make sense if one could assume that the economic context is basically unchanging, that economic actors have had sufficient experience to learn what works and what doesn't in that context, and that there has been sufficient time for selection to winnow out or force transformation of incompetent behavior. But if the economic context tends to be in flux, with change coming both from changes in external conditions and from developments internal to the operation of the system, such a presumption is misleading. It blinds analysis to the fact that economic actors in many cases may operate in ways that have sufficed in the past, but which may be far from the best that can be done given current conditions. It misses the uncertain groping that almost always characterizes individual and organizational action taking in contexts that are poorly understood, and the fact that individual and organizational actors often can and do behave in innovative ways.

A related difference between the two theories is in how they conceive good economic performance. Neoclassical theory proposes that the performance of an economy should be judged in terms of how close it is to a theoretical optimum. In evolutionary theory there is no theoretical optimum, since the range of possibilities for economic action is always changing, generally growing, but in a way that cannot be predicted or specified in detail. Economic performance is seen in terms of the rate and nature of progress.

The focus of modern evolutionary economic theory on economic progress scarcely is a radical new departure. Indeed Adam Smith, in *The Wealth of Nations*, was basically concerned with illuminating the processes of economic development, and the institutions supporting the key processes. Much of his comparative analysis was concerned with identifying the reasons why some countries seemed to have been making significant progress, while others seemed stagnant. This orientation toward economic progress, the factors stimulating progress, and those limiting it, remained central in economic analysis, until the development of neoclassical theory pulled the focus more sharply toward the properties of a hypothetical economic equilibrium.

I also want to note, or rather to highlight, that most of the useful understandings that are contained in modern economics are not tied to modern neoclassical theory, with its focus on conditions of hypothetical equilibrium. Propositions like "demand is responsive to price", "competition tends to keep prices in line with costs", "an economy in which markets play a significant role has a capacity for self-organization and adaptation to changes in basic economic conditions", and "attempts to give detailed direction to an economy from the center tend to be incompetent or worse" are not dependent on

“theorems” derived from modern neoclassical economic theory. You will find all of the above in Adam Smith, over 200 years ago.

I have noted, modern evolutionary theory has been strongly influenced by Schumpeter. It is interesting, and relevant, that in his *Theory of Economic Development*, Schumpeter (1934) used the concept of a circular flow equilibrium, where habitual, customary, behavior sufficed, indeed was hazardous to abandon, as the vehicle to contrast with what is involved in economic development, where innovation was driving change, and the system was out of equilibrium. Schumpeter’s conception of behavior in the circular flow was his interpretation of Walrasian general equilibrium. His characterization of the circular flow is an interesting way of specifying the conditions under which modern neoclassical economics would provide a reasonable analysis of what was going on, at least if maximizing behavior is interpreted, as it was by Milton Friedman (1953), as a way of “predicting” and describing behavior that has been winnowed by learning and competition. I note that modern economic evolutionary theory becomes very similar to neoclassical theory, and generates a continuing equilibrium “circular flow” of economic activity, when innovation is shut down for an extended period of time. But Schumpeter’s basic point was that, if innovation is an important part of what is going on, this characterization of economic activity is inappropriate.

I would like to highlight a particular aspect of Schumpeter’s treatment of innovation in his *Theory of Economic Development*, that he carries over into his later *Capitalism, Socialism, and Democracy* (1950), because it is a central element of evolutionary theory. It is the presence of uncertainty.

I note here that Schumpeter’s concept of uncertainty is close to that of Frank Knight (1921); absence of sufficient relevant experience for the actor to estimate relevant probabilities reliably, or even to list in any detail the states of affairs that might materialize after an action is taken. The essence of trying something new, of innovation, is that what will happen is uncertain in this sense, with success never a sure thing. And where and when a considerable amount of innovation is going on, being done by different economic actors, the current context is particularly uncertain. In such a context, considerable progress may be being made by the economy as a whole, but through a process of “creative destruction” that involves losers as well as winners. The evolutionary economic theory that Sidney Winter and I helped to develop, as an alternative to neoclassical theory, was strongly inspired by Schumpeter.

However, there is an important blind spot in Schumpeter, that I would like to flag here, that also was there to some degree in the early articulations of evolutionary economic theory. It is failure to recognize the institutional complexities of modern market economies. Of course the same problem is there



in neoclassical economic theory. Indeed one explanation for the institutional oversimplification in Schumpeter and in early modern evolutionary theory is that, in focusing their attacks and proposals for reform on the limitations of the equilibrium concept, the writers failed to pay sufficient attention to the spare institutional assumptions of that theory. That theory contains firms, who employ inputs to produce outputs. There are households who supply primary inputs and who purchase final outputs. And there are markets that somehow work, through the adjusting of prices, to equilibrate supply and demand. That's it!

The innovation systems strand of research is designed to enrich this overly spare institutional picture. It does so in two somewhat distinct, but overlapping ways. One is to recognize the complexity of many market relationships, their embedding in broader social and institutional structures, and the elements of cooperation and trust that often are essential if markets are to work well. The other is to highlight the role of non-market institutions, like university and public research systems, scientific and technical societies, government programs, in the innovation process in many sectors. While there has been a tendency in the innovation systems literature to focus on institutions involved in the early stages of the innovation process, particularly R and D, some treatments also include in the innovation system the labor market, the education system, financial institutions, regulatory structures, and other institutions that shape economic dynamics more broadly.

Particularly the latter strand makes the research on innovation systems very much part of the recent broad movement in economics to develop a new institutional economics. While sometimes not recognized for what it is, this is a major step away from the Walrasian model. However, I think it fair to say that there are significant differences between the adherents to a richer institutional view who, in other regards, try to hold on to the basic tenets of neoclassical theory, and those coming from evolutionary economics, who thus far mostly have been associated with the innovation systems writings.

One important difference is that, in the neoclassical writings, the normative justification for structures that regulate markets and for non-market structures more generally is posed in terms of "market failures". The evolutionary theoretic view on this, or at least my view, is that this mode of normative analysis involves a major asymmetry and often obfuscates understanding. Once one recognizes the wide range of institutions involved in economic activity, and acknowledges as well that no particular institution ever works "perfectly" in any real context, the asymmetry involved in justifying non-market modes simply in terms of the inadequacy of markets stands out. It becomes apparent that normative analysis needs to be oriented to comparing

imperfect alternative modes of organization and governance, and possible mixes of them.

Thus public funding of basic research, conducted largely at public labs and universities, is a reasonable policy not so much because of “market failure”, but because well allocated basic research spending yields high expected social returns, and publicly funded research conducted at public institutions would appear to be the best way of getting certain kinds of research done and the results made available for general use. Similarly, it makes much better sense to argue for well designed industrial policies in terms of high expected payoffs (if in fact that can be argued) than to go through a litany of “market failures” that might justify such policies.

Another important difference between a neoclassical and an evolutionary perspective on institutions and institutional change goes back to the basic differences in the theories I discussed above. Neoclassical economists tend to see institutions as created through and operating as they do because of the maximizing behavior of economic agents, and prevailing institutions as an equilibrium configuration. In contrast, evolutionary economists tend to see the institutional structure as always evolving.

## 2 Evolutionary Economic Theory as Growth Theory

The empirical research during the 1950s and 1960s on the sources of macroeconomic growth firmly established that technological advance was the key driving force. These findings led to a surge of research by economists on the processes of technological advance, and to the rediscovery of the features of economic activity where innovation was important that had been argued years before by Schumpeter. It continues to puzzle and sadden me that so many of my colleagues in economics interested in economic growth continue to hold onto a neoclassical growth theory that cannot deal adequately with an economic context in which innovation is important.

The evolutionary growth models that I and my colleagues developed in the 1980s were, I think, a significant step toward the development of a viable theoretical alternative. However, as I mentioned above, those early evolutionary analyses failed to recognize adequately the complex institutional structures that characterize modern economies.

I think that, as a result of the bringing of institutions under the umbrella of evolutionary theory, evolutionary economics now has the capability to provide

a broad, coherent, and useful theory of economic growth as experienced in the advanced industrial economies. A satisfactory growth theory of course has to be able to make sense out of the aggregate time series of output, measured by real GNP, and aggregate inputs like labor and physical and human capital. The early evolutionary growth models showed that a growth theory based on evolutionary economics could do this as well as a growth theory based on neoclassical economics.

But I would argue that a satisfactory growth theory has to do a lot more than just that. A satisfactory growth theory should be able to illuminate the important details of growth, qualitative as well as quantitative, that one sees in the accounts of economic historians. And a satisfactory theory needs to specify correctly the basic processes driving economic growth. Otherwise that theory does not explain what actually is happening.

The new evolutionary growth theory that is emerging sees economic growth as the result of the coevolution of technologies, firm and industry structures, and supporting and governing institutions. I propose that a satisfactory theory of the processes involved in economic growth must consider all three of these aspects, and that the driving dynamics involves their interaction. To illustrate, it is useful to consider several empirical cases.

Let me begin with the rise of mass production, in the United States. As Alfred Chandler (1962, 1977) tells the story, the development toward the middle of the nineteenth century of telegraph and railroad technology opened the possibility for business firms to market their products over a much larger geographical area, and along with the advances that were being made at the same time in the ability to design and build large scale machinery, opened up the possibilities for significant economies of scale and scope. However, to exploit these opportunities, firms had to be much larger than had been the norm, and large size posed significant problems of both organization and management. The organizational problem was solved by the emergence of the modern hierarchically organized company, and later by the multi divisional form of organization. But to manage these huge companies required many more high-level managers than an owner could garner by canvassing family and friends, which had been the usual practice. The notion of professional management came into being, and shortly after Business Schools emerged as the institutional mechanism for training professional managers. The financial needs of the giant companies were beyond what could be met through existing financial institutions, and both modern investment banks and modern stock markets emerged to meet the needs.

All of these developments raised complicated issues of corporate, labor, and financial law. Gradually these were worked out. At the same time the market

power of the new large firms, and their tendency to collude with each other, gave rise to new regulatory law and anti trust.

Another interesting example is the rise of the organic chemical product industry in Germany, as told by Peter Murmann (2003). Here the initiating cause was a breakthrough in the science of organic chemistry. As a result, persons with advanced training in the theory and techniques of chemistry had a special capability for developing synthetic dyestuffs. In order to take advantage of this new capability, business firms had to develop the concept and structure of the industrial research laboratory, as a place where university trained scientists could work with their peers in discovering and developing new products. And the German university system had to gear itself up to train significant numbers of chemists inclined to work for industry. The various German governments provided significant funding to enable this latter development to happen.

My third case is a more contemporary one, the revolution in pharmaceuticals that has occurred over the last forty years, particularly in the United States. The development during the 1960s and 1970s of molecular biology as a strong science, and the creation of the basic processes used in modern biotechnology, clearly was a watershed. These developments opened up a new route to pharmaceuticals discovery and development, one in which, at least at the start, established pharmaceuticals companies had no particular competences, and at the same time, one where certain academic researchers had particular expertise. Several lines of university based research began to appear commercially very promising. A number of new biotech firms were formed, staffed by university researchers and their students, with plans to develop new pharmaceuticals, and either license the successful results, or themselves go further downstream into the pharmaceuticals business.

There were two institutional factors that enabled and encouraged these developments. One was the traditional openness of American universities to entrepreneurial activity on the part of their researchers. The other was an established venture capital industry, which quickly came to see the finance of biotech start-ups as a potentially profitable business.

In 1980 a key legal decision assured skeptics that the products of biotech could be patented. At the same time, Congress passed the Bayh–Dole act, which encouraged universities to take out patents on the results of their government funded research projects, and to try aggressively to commercialize those results. This latter development was accompanied by growing support of the National Institutes of Health for research at universities in the relevant fields, under the expectation that universities would actively engage in patenting of research results and efforts to spur commercialization. These

developments strongly reinforced the developing structure that I have described above.

The pharmaceuticals industry has changed in many ways since the times I have just described. However, there would be widespread agreement that these developments set the stage for an era of high productivity of pharmaceuticals research, albeit with apparent diminishing returns in recent years, and for U. S. dominance in commercial biotech, which holds to the present time.

All three of the above accounts are of a piece of the economy, not the whole, although the developments Chandler described had very widespread impact. I firmly believe that economic growth cannot be understood as an undifferentiated aggregate phenomenon, but rather one needs to understand an economy as consisting of many different sectors each with their own dynamic.

However, I also believe that there is a lot to Schumpeter's theory, presented in his *Business Cycles* (1939), that the history of economic growth tends to divide up into eras, and that within any particular era there is a relatively small set of technologies and industries that are driving economic growth. Schumpeter's theory clearly involves the coevolution of technology, and firm and industry structure. Recently Christopher Freeman and Carlotta Perez (1988) have proposed that the key technologies and industries of different eras generally require different sets of supporting institutions. Their argument is that the nations that tend to be leaders in the different eras are those that had, or managed to build, the appropriate set of institutions.

In the discussion above I have tried to highlight several things. First, once one pays attention to the details, one virtually is forced to take an evolutionary perspective on economic dynamics. A framework that assumes full rational decision-making, and a context of continuing equilibrium, is completely inadequate. Second, the stories presented above involve in an essential way the coevolution of technology, firm and industry structures, and a variety of non-market institutions. An account limited to the Walrasian actors would miss much of the important action. Third, public policies and programs, including the development of law, are an essential part of the dynamic.

### 3 Evolutionary Theory, and Economic Development

I propose that these same features also are there in the rapid economic development of countries, presently significantly behind the technological and economic frontiers, who are striving to catch up. Successful development involves

the coevolution of technologies employed, firm and industry structure, and broader economic institutions. Government policies and programs are an essential part of the picture, for better or for worse, but inevitably.

For countries aiming to catch up, the basic challenge is to learn to master new ways of doing things. This involves breaking from the circular flow of economic activity that Schumpeter used as his base concept for defining what he meant by innovation. In Schumpeter's sense of the term, catch-up requires innovation. The innovation involved in catch-up is not what economists studying technological advance in countries at the frontier tend to mean by the term. The innovation in catching up involves bringing in and learning to master ways of doing things that may have been used for some time in the advanced economies of the world, even though they are new for the country or region catching up. In most cases there are models in advanced countries that can serve as targets for emulation, and in many cases active assistance is available in developing the new capability. In some cases important aspects of the model can be simply imported.

But bringing into operation practices that are new in the context involves an essential break from Schumpeter's circular flow of customary activity. The record is clear that there is considerable learning that needs to be done to enable the new modes of operation to be got under effective control, and a high chance of failure. These are the hallmarks of innovation, at least in evolutionary economic theory.

Neoclassical growth theory misses all of this. In a recent article Howard Pack and I (1999) argued that neoclassical theory sees economic development as largely driven by accumulation—investments in physical and human capital. In contrast, we argue that the key driving force of catch-up is assimilation, learning to do effectively what countries at the frontier have been doing, often for some time. We recognize, of course, that countries behind the frontier that have made successful progress in closing the gap have been marked by high rates of investment in physical and human capital. These were needed to bring in the new ways of doing things, but not sufficient. The premise of neoclassical theory is that, if the investments are made, the acquisition and mastery of new ways of doing things is relatively easy, even automatic. The experience of some of the Communist economies in the period between 1960 and 1990 shows how wrong is this presumption. High rates of investment, without effective assimilation, inevitably result in low returns to those investments, and little in the way of effective development.

In contrast, Pack and I argue that the driving force of successful catch-up is innovation, in the sense described above. Successful innovation requires access to physical and human capital. However, to a considerable extent, innovation

and effective learning tend to draw supplies of physical and human capital by enabling their rates of return to be high. Of course, if a country does not have the institutional structure that enables physical and human capital to be drawn to, or created for, promising innovative efforts, innovation will be scotched. But as we read the successful histories of catch-up in Japan early in the twentieth century, and Korea and Taiwan toward the close of the twentieth century, it was innovation that was driving the process, proceeding in an environment where supplies of physical and human capital were available and forthcoming if the returns were high.

Much of the standard discussion about what is needed for catch-up focuses on the need for access to and achievement of mastery over modern technologies. I would like to propose that that job today is in some ways easier and in some ways more difficult than it was when Korea and Taiwan were successfully taking aboard modern technologies. It is easier because the body of relatively codified knowledge underlying most important technologies has become much stronger than was the case, say, thirty years ago, and much of that knowledge can be garnered through training, sometimes advanced training, in the relevant sciences and engineering disciplines. The need for technological apprenticeship in, or tutelage by, companies in the leading countries, therefore, has diminished. I am not arguing that a freshly MIT trained engineer, or a Ph.D. scientist, can step right in and be effective in the operation of a modern technology. However, that training provides a substantial base for learning by doing and using. From this point of view, technological catch-up is easier today than it was fifty years ago.

But from another point of view, it is harder. There is, first of all, greater need for large scale public and private investments to create a technologically sophisticated cadre of indigenous engineers and applied scientists. While in the early stages of catch-up much of the needed technical sophistication can be gained by sending students to study abroad, as development proceeds, and the sheer quantity of needed engineers and scientists increases, a large share of the education is going to have to be undertaken indigenously. I propose that in the current environment, catch-up will be impossible unless a country builds up its education system, from bottom to top. This poses a major challenge both for financing and for institution building.

In addition, in today's world, countries seeking to catch up technologically will be operating under a much more restrictive regulatory regime defined by international treaties than was the case earlier. TRIPs makes copying, or appearing to copy, much more hazardous in terms of generating lawsuits and diplomatic pressure than used to be the case. And at the same time, treaties enforced through the WTO significantly narrow the range of government



policies of protection and subsidy that can be undertaken in support of infant industry. It is interesting, and I think highly relevant, that these treaties do leave room for support of training, and certain kinds of research and development. But to take advantage of this opening poses a major institutional challenge.

Successful catch-up involves much more than simply gaining mastery over new technologies, and building up a technologically sophisticated work force to work with them. Just as new wine seldom goes in old bottles, the new technologies taken aboard call for new ways of organizing and managing work, and the experience of earlier episodes of successful catch-up indicates that to achieve this involves a painful process of creative destruction. As Japan took aboard more advanced technologies in the early years of the twentieth century, and Korea and Taiwan did in the later years, the economic structures of these countries were transformed. New firms were founded, and whole new industries. Old firms and industries disappeared. One can see the same developments happening in China today.

Achieving the needed reforms in economic structure may well be a more difficult task than gaining the scientific and engineering knowledge needed to operate the new technologies. There are several reasons.

One is the political power of old firms and industries, and the difficulties they may have in transforming themselves. For comfortable, politically well connected, old firms, creative destruction is not a welcome thing. Politically and socially, creative destruction is not easy to handle.

Another reason is that the modes of organization and management in successful companies in advanced countries generally are more difficult to imitate, or to transfer, than the technologies that they are using. Unlike the situation regarding technologies where, I have argued, an increasing share of the relevant knowledge has become codified, successful large organizations remain very difficult to understand, much less to imitate. Various pieces of the modern management literature suggest strongly that managers of successful companies may have hazy, or even wrongheaded, notions as to why their own companies are doing well. And various studies have indicated strongly that effective organizational structures and management styles come into existence at least as much through internal evolutionary processes, as through conscious planning.

It is interesting that while in recent years there have been a number of empirical studies of the processes through which countries, and firms in countries, that have been successful in catch-up and have come to master modern technologies, there has been very little detailed study of the process of transformation of firm and industry structure. Clearly a number of different routes



have been successfully taken. Korea self-consciously opted for an industry structure involving large, diversified firms. The Taiwanese industrial structure that has been successful in modernization has involved medium-size firms, and continuing new firm entry. Some countries like Korea have held off direct foreign investment. Others like Singapore have welcomed it. All of these countries, however, seem to have been effective in creating a firm and industry structure that could successfully organize and manage modern technologies. Other countries have been much less successful at this. It would be extremely interesting to learn more about the differences.

Of course the rate and effectiveness of the needed changes in firm and industry structure, as well as the vigor and effectiveness of efforts to adopt and master new technologies, depends on the institutional structures supporting and molding economic activity, and the extent to which they facilitate productive change. Despite the growing influence of the new institutional economics, much of the analysis of development done from a neoclassical perspective continues to see the needed supporting institutional structures as very simple, basically those that support efficient market organized economic activity as viewed through neoclassical theoretical glasses. Thus there is emphasis on a well drawn and well enforced code of commercial law, strong intellectual property rights, a distancing of government from market economic activity with policies aimed to let the market work, fiscal and monetary policies that support productive investment and avoid inflation, and so on. There may be some talk about the role of government in providing needed infrastructure, particularly in the field of education, but I have seen no coherent discussion of this.

As the examples presented in the preceding section show, the institutional context within which economic growth proceeds in high income countries is much richer, and active, than the standard neoclassical picture. This also seems to be the case in the experiences of successful catch-up.

As I indicated earlier, I am using the term innovation system to encompass the wide range of institutions that are involved in supporting and orienting the dynamics of economic activity where innovation is the key driving force. In my discussion above, I have identified a number of institutions that strike me as absolutely key to the catch-up process. The structure of the financial system obviously is pivotal. Since the catch-up process involves a significant shifting of resources away from old firms and industries, the financial system must enable this transfer. And in the present era, the education system is of vital importance. Over the last century, all the countries that have been successful in catching up have had a system of primary and secondary education that endowed a large fraction of the young population with the basic skills

needed to operate in a modern technology environment, and also provided high-level training for a sufficient cadre of scientists and engineers to enable foreign technologies to be absorbed.

The fact that today so much of technology is science based means, I believe, that a country's system of advanced training in science, technology, and the other bodies of knowledge needed to master modern ways of doing things, is going to be even more important in the twenty-first century than it was in the twentieth. And research at universities and public labs is going to play a more important role (for a discussion, see Mazzoleni and Nelson 2007).

While overlooked in much of the writings on economic development, indigenous public sector research has long been an important element of catchup in certain fields. This is certainly so in agriculture, and here agricultural economists have provided a considerable amount of analysis and evidence. It also would appear to be true regarding medicine, although I have not been able to find much in the way of systematic study here. An important part of the reason in both of these fields is that in these areas developing countries often could not simply copy technology and practice from countries at the frontier, but needed to develop technologies suited to their own conditions. Soil and climate conditions tend to be different. The prevalent diseases were different. There is every reason to believe that the importance of having a capability to do effective research and development in agriculture and medicine will be as important in the future as it has been in the past. In these areas, international institutions have played important roles in the past, and will continue to do so in the future. But I suspect strongly that there are major advantages to a country in building up its own research capabilities in these areas.

In contrast with agriculture and medicine, while in manufacturing the technologies used in advanced countries may not have been optimal, at least they worked in the new setting with often modest modification. And they were generally available. The experience of countries that have successfully caught up in manufacturing over the past half-century testifies to the importance of a nation's university system in providing a supply of trained engineers and applied scientists for manufacturing firms' catching up. However, while there are interesting exceptions (electronics in Taiwan, and aircraft in Brazil, are examples), it is not clear that in the past research per se in universities and national laboratories has played an important role in catch-up in manufacturing, beyond its role in the training function.

I would like to argue that circumstances have changed. There is, first of all, the fact that many important technologies now have a strong science base. As I noted earlier, this at once presents a problem for developing countries, in

that they cannot learn to master these technologies unless they have a highly trained work force, including a cadre of sophisticated scientists and engineers, but also provides an opportunity, in that a larger share of the needed knowledge is open to those who have the capacity to stay with it. In many of the relevant fields, an important part of the activity of staying up with developments in a technology involves an active research program. Universities and public laboratories are an appropriate place for this kind of research, if these institutions also provide training and experience for scientists and engineers who will go out into industry. Earlier I also noted both the new international regimes' stronger protection of intellectual property, and the apparent leeway under WTO rules for certain kinds of public research.

There is no question in my mind that for countries aiming to catch up, developing the capabilities for learning and innovation in firms is the heart of the challenge. However, a strong system of university and public labs research can play a very important supporting role.

## 4 The Case for an Evolutionary Theory of Economic Catchup

I want to conclude this chapter by reflecting briefly on the role of theory in economic analysis, and the case for an evolutionary economic theory. I propose that theory in economics exists at several different levels of abstraction. Sidney Winter and I have highlighted the difference between what we called "appreciative" and "formal" theory, with the former mostly expressed verbally, and much closer to the empirical details of the subject matter than the latter, and the latter articulated more abstractly, often in the form of a mathematical model, and more amenable to logical exploration and manipulation. While current use of the term "theory" in economics has tended to identify with formal theory, we argued that in economics most of the empirical research and interpretation of empirical phenomena was structured by appreciative theory.

Modern economists tend to be pragmatic and flexible when they are doing empirical research, and engaging in serious policy discussion, or at least the best of them are. Does this mean that it really does not matter whether the theory articulated and taught, as formal theory, is neoclassical or evolutionary? I think it does matter. In the first place, while empirically oriented economists partially can escape the grip of neoclassical theory in the research and analysis they do, holding that theory still makes it difficult to appreciate the

nature and role of innovation in economic activity, as various attempts to force innovation into a maximizing framework attest. It makes it difficult to recognize adequately that analyzing the behavior and performance of economic actors in a hypothetical equilibrium is not a good way to understand what is going on in contexts that clearly are out of equilibrium and in flux. In contrast, the perspective of modern evolutionary theory provides a framework that is helpful in the analysis of economic dynamics.

Second, the theory one holds influences the empirical literature with which one is familiar. Scholars who hold strongly to neoclassical theory qua theory tend not to know about the extensive empirical literature on economic dynamics that has been the work of evolutionary economists, and which is published in journals and other outlets that draw in articles by economists who do not adhere to neoclassical theory. I am struck, for example, that my neoclassical colleagues who write about technological advance as the driving force behind economic growth tend not to be aware of *Research Policy* or *Industrial and Corporate Change* or *The Journal of Evolutionary Economics*, where, in my view, much of the most interesting empirical work on firm and industry dynamics is being published. (A good case in point is Rodik 2007.)

It is apparent that a growing number of young economists interested in economic development are finding in evolutionary economics a much more useful way of understanding the economic development process. This is reflected in the growth of professional associations like GLOBELICS that explicitly recognize economic development as an evolutionary process in the broad sense sketched here. My hope is that this chapter will encourage more development economists to join with us.

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# 8

## Feminist Economist's Reflections on Economic Development: Theories and Policy Debates

Maria S. Floro

### 1 Introduction

The emergence of development economics in the aftermath of World War II as a field in the economics discipline is by no means an accident. This body of knowledge was intended to provide the governments of newly independent countries, which were former colonies of Western empires, with policy prescriptions and tools for social and economic transformation. These prescriptions were drawn from the emergent economic development theories and models from the late 1940s onward that were largely created by male, development thinkers.<sup>1</sup>

Theories of economic development are not expected to provide a full description of the real world, but rather they are meant to give an abstract representation of the salient features of that reality. However, the construction of development economics in general and economic development theories in particular does not occur in a vacuum. The manner of constructing knowledge, in this case regarding the process of economic development, reflects the perception of social reality and interpretation of social phenomena by those who created the knowledge (Harding 1995; Ferber and Nelson 1993). As this chapter argues, the pre-eminent theories of economic development

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<sup>1</sup> There are a few notable exceptions such as Irma Adelman and Cynthia Taft Morris.

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overwhelmingly are androcentric or male-centered, in terms of the values they assert and the underlying premises upon which the theories are built. Since these models serve as framework for policymaking and analyses, their predictions and policy prescriptions also reflect the male-centered predilections and biases.

As with the economics discipline, men have dominated the group of influential development thinkers, using the vantage point of their social position and drawing from their experience to unravel the complexities associated with the process of economic development. These economists provided guidance on how to transform the nascent economic systems of former colonies and make economic development happen. In constructing their theories of economic development, they determine which economic processes to include in their analysis and which particular development problems to evaluate and address.

The study of economic development also involves certain value judgments regarding the goals to which the process of economic, social and political transformation aims to achieve. If economic development is about raising the quality of life of an entire society, what constitutes a good life reflects a particular standpoint in which the notion of living standard is perceived. To be sure, the notion of a 'good life' has preoccupied philosophers throughout history and it has evolved in as much as societies and values have changed over time. It is for this reason that development is an inherently value-laden concept as Sen (1999) and Nussbaum (2000) have pointed out, for it provides the basis and conditions for a better life for everyone in society. Goals such as economic growth, elimination of poverty and various forms of deprivation, economic and social equality, universal education and healthcare, rising standard of living, equal access to opportunity, political and economic participation, and development of one's capabilities are based on specific value judgments about what is 'good' and 'desirable'. So too are such notions as the right to accumulate unlimited wealth, preservation of traditional social norms and institutions including caste, race, gender and class-based hierarchical systems, the male head of household as the final authority and so forth (Todaro and Smith 2015). They reflect specific contextual values and interests on what is 'right' and therefore what should be.

Thus, any theory of economic development cannot be considered as 'value-neutral' or 'positivist', even though its author(s) may claim to have based it on objective analysis or empirical evidence. The value premises are reflected in the underlying assumptions as well as in the identification of which issue or problem is emphasized and therefore should be addressed. For the most part,

certain activities and interests that are of greater concern to women have been largely absent in economic development models.

This chapter provides some critical reflections from a gender lens on the economic development theories and the policy debates around the development trajectories undertaken by developing countries in the early 1980s. Section 2 reviews the main theories of economic development since World War II and highlights the gender blindness of these theories, and the type of policies and development strategies that they promote. It also raises questions on the ability of capitalist-oriented development path to meet the grave challenges of rising inequality and economic insecurity that have emerged. Section 3 introduces the gender dimensions of development process, which have been largely neglected in economic models and theories. Section 4 then presents the contributions of gender scholars and feminist economists to the analysis of economic development and to contemporary policy debates around globalization and market liberalization. Finally, Sect. 5 presents a forward-looking agenda toward the development of a feminist theory of sustainable development. This alternative framework shifts the emphasis away from expansion of material wealth to the development of human capabilities and social provisioning. Such a framework not only incorporates nonmarket activities and women's experiences in its description of economic processes but also captures the underlying power relations including unequal gender relations that underlie production, consumption and distributive processes. It also demonstrates the interdependence between human systems and ecological systems and the importance of accounting the different impacts and outcomes for women and men as well as for current and future generations.

## **2 Reflections on the Theories of Economic Development**

### **2.1 Growth Models of Development**

As with the construction of economics discipline, men have formulated the theories that shaped the systematic study of the problems of economic development. It is their viewpoint in which development processes are perceived, and it is primarily their interests and experience that guide as to which economic, political and institutional requirements are relevant for affecting rapid structural transformations.



The early theories of economic development developed by Walt Rostow, Roy Harrod and Evsey Domar emphasize economic growth via capital accumulation, industrialization and increased integration into the global economy via trade, foreign investment and expansion of financial markets. Underlying these theories is the notion of what constitutes a 'good life', one that maximizes the consumption of material goods and services using economic rationality to attain that end. The operational criterion for attaining the good life is the rapid growth of marketed goods and services.

Also implicit in these theories is the notion that economic development is primarily a growth-oriented process wherein development of capitalist institutions is assumed as the norm. The process involves a transition from traditional (and agricultural) to modern (and industrial) economy, a process made explicit in Rostow's theory stages of economic growth theory and the Harrod-Domar growth model. Capital formation and accumulation occupies a central place in the depiction of the process of economic and social transformation. The strategy of mobilizing domestic and foreign savings is particularly emphasized in what Rostow (1990) called the 'take-off stage' in order to generate sufficient investment and to accelerate growth. Emphasis on capital accumulation and economic growth also characterized the work of other post-World War II development economists as well. In a different form, they serve as basic tenets to the theories developed by Arthur Lewis, Ragnar Nurkse, Paul Rosenstein-Rodan and Harvey Leibenstein, to name a few. W. Arthur Lewis formulated an influential and representative model of growth and development in the early 1950s, which was later extended by John Fei and Gustav Ranis in the 1960s. The Lewis' two-sector, surplus-labor economy model assumes the co-existence of a traditional, rural subsistence sector which has abundant surplus or very low-productive labor, and the high-productivity, full-employment modern sector in the urban areas. Economic development is defined in the Lewis model as the process of labor transfer from the surplus-labor subsistence to the modern, albeit capitalist sector and the growth of output and employment in the latter. Policies that encourage rural-urban migration and promote accumulation of capital in the modern, industrial sector are therefore needed to bring about such transformation of the economy.

Structural change models that emerged in the 1970s such as those of Hollis Chenery also identified the sequential process of economic transformation of underdeveloped economies. Chenery et al. (1975) noted, however, that accumulation of capital is not a sufficient condition for economic development. A set of interrelated changes including development of institutions, transformation of production, changes in the composition of consumer demand,

international trade, urbanization, accumulation of human capital and patterns in population growth need to take place as well.

The early growth models of development were revised in the 1980s by neo-liberal policy proponents to argue that the main impediment to economic development is heavy government intervention and regulation. It was part of the resurgence of neoclassical economics as a dominant paradigm and boosted by the ascendancy of conservative governments in the US and Europe. Government interventions in their view are considered problematic for they have led to policy-induced price distortions such as overvalued exchange rates, minimum wages and repressed interest rates, leading to inefficient resource allocation and hence stagnant or slow growth. Peter Bauer, Deepak Lal, Jagdish Bhagwati, Ronald McKinnon and Anne Krueger argued for the promotion of free markets that allow the invisible hand of market prices to guide resource allocation. Their recommendations were put into practice via supply side macroeconomic policies, privatization of public enterprises and services, International Monetary Fund (IMF) stabilization policies and World Bank structural adjustment policies that were implemented in the 1980s and 1990s.

There are several striking features of these mainstream theories of growth and development, four of which merit further elaboration. The first is their focus on market activities and outputs. A second feature is their preoccupation with ever-expanding output and material wealth, implying that this is what economic progress entails and a 'good life' is all about. Third, the process of capital formation and accumulation serves as the main driver of economic growth and what is essentially development of capitalism. Fourth, the benefits of economic growth are assumed to trickle down to everyone in society in the form of increased material consumption.

The implicit assumption of the average 'economic man' that underlies the day-to-day, market-based economic activities suggests the centrality of the activities of men in defining the development process (Beneria 1995; Çağatay et al. 1995; Ferber and Nelson 1993, 2003; Kabeer 1994, 2000). Absent in the discussion of economic processes are certain activities and experiences that are of greater concern to women. Activities such as gathering water, cooking meals, cleaning house and care for the sick, elderly and children were simply not considered to be important in economic development; they were simply 'women's work'. This invisibility of women's work is institutionalized in economic concepts and statistics. For example, the conventional definition of 'work' is defined by the 1954 International Conference of Labour Statisticians (ICLS) participation as being engaged in work "for pay or profit" (Beneria et al. 2016). Likewise, the inclusion of production in the national income accounts has been defined by its connection to the market. These

concepts eventually became the norm in economic analysis and in formulation of development strategies; what mattered was the growth in the size of marketed final output and the use of labor expended in its production.

A few development theories gave acknowledgment to the role of women, such as the Lewis' two-sector labor surplus model. However, it is based on clear delineations or boundaries regarding division of labor whereby the domestic sphere is primarily women's domain and the market sphere that of men's. Women's labor can be drawn from the household into the market economy only if there are economic gains to be made, such as when there is impending labor shortage. For example, Lewis (1954) identified 'the wives and daughters of the household' as additional source of labor for the expansion of capitalist, modern sector (p. 404). The Lewis model exemplifies how, even when the role of women is mentioned, the analysis that proceeds distracts the attention away from the socially constructed norms that regulate the household division of labor and labor market operations that are prejudicial to women (Elson 1999).

The emphasis in the conventional models on growth in per-capita gross domestic product (GDP) as development objectives has made the increase in material output synonymous with the promotion of human well-being. By firmly establishing the income or output approaches to understanding economic development, the growth theories have set the primary evaluation criteria for the efficacy of a successful economy or a good life. In so doing, they have enabled the inference of well-being from income levels or the capacity of the economy to produce goods and services.

However, as Sen and Nussbaum (1993) point out, incomes can at best be a means to a good life, but it does not define that life. The income-based approach tells us little about people's well-being. It does not take into consideration care provisioning as a crucial element of societal well-being and the importance of meeting the care needs of the young, the sick and disabled and elderly members of society. Nor does it take into account differing needs of groups and the fact that the same income level can generate more well-being for one group/individual than another can. Put in another way, the preoccupation with development strategies on how to attain growth of output marginalizes or obscures the importance of social provisioning, that is, how societies organize the activities involved in making a living and meeting the necessities of life (Nelson 1993; Power 2004).

It also assumes away the questions of 'how much is enough', assuming that human needs are limitless and should be satisfied through market exchange. For example, there are aspects of market production activities contributing to economic growth which are 'superfluous', feed into the 'conspicuous material

consumption' and have accelerated the consumption of fossil fuels and the absorption of labor and natural resources (Floro 2012). At the same time, cultural and social norms have evolved alongside capitalist development and the expansion of markets, strongly defining the way that individuals behave and households, markets, governments and businesses operate.

While concerns about capital formation and accumulation in developing countries are considered central in the mainstream theories for economic development to proceed, the expansion of labor supply was simplistically assumed to be dealt by the growth of population. The fact that there is more to the reproduction of the labor force than just 'having babies' is seriously overlooked. The theories ignore the fact that the production and maintenance of the labor force as well as generation of knowledge and development of skills crucially depend not just on access to goods and services that can be bought in the market but also on nurturing and care from birth. There is a large amount of labor involved in feeding, clothing and developing a child's capacities, much of which is unpaid. Put in another way, those household members that perform the unpaid work of daily domestic chores and caring activities assume important costs of producing the labor force and social fabric (Folbre 2006).

Moreover, there is an implicit assumption in these models of development that the benefits from growth will trickle down to everyone including women (Elson 1999; Beneria et al. 2016). Lewis (1954), for example, thought, "women (would) benefit more than men ... (since) woman gains freedom from drudgery, is emancipated from the seclusion of the household, and gains at least the chance to be a full human being" (p. 422). The general proposition that economic growth benefits everyone including the poor and women is premised on the idea that development of markets and increased market participation lead to more opportunities, higher incomes, thus empowering them both economically and socially, especially as consumers who meet their needs and satisfy wants. Economic growth also is assumed to lead to higher quality of life, since higher earnings increase access to education and health services, better nutrition and so forth.

## 2.2 The Challenge of Ester Boserup

Ester Boserup's *Women's Role in Economic Development* book is seminal in presenting a challenge to the prevailing view among male development economists. She pointed out a number of observations based on her study of the problems and conditions of women in developing countries, which revealed

the weaknesses of the orthodox theories of economic development. First, she pointed out that a sexual division of labor governs societies, although this division of labor varies considerably across countries (Boserup 1970). Second, she rejected the narrow view of women as simply wives, mothers and daughters by highlighting the range of productive work performed by women. She noted the gender division of tasks in farming, with men doing the plowing and women performing tasks of planting, harvesting, threshing and drying. In Sub-Saharan Africa for example, men and women undertook different crop production for different purposes on separate plots of land.

Third, she demonstrated that economic development in post-colonial economies has had a differential impact on men and women, and the effect on the latter often has been negative. Agricultural modernization, according to Boserup, excluded women in terms of access to training, land rights and technology. She argued that women's status, for the most part, declined under European colonialism since the promotion of private property and land ownership deprived women of land use rights. These requisites for market development created social stratification in agrarian economies and reinforced unequal gender relations by bringing to the 'main male plower' more prestige and power. While women 'helped in the fields', looked after livestock and cared for the children, only men owned and controlled the use of land. Moreover, the prevailing gender norms in the colonizing country during that period were superimposed upon the traditional values of the colonized societies. Colonial and post-colonial administrators did not consider women as farmers even though there was ample evidence of women's significant role in traditional agriculture.

Boserup, in addition, argued that the belief that men were superior farmers encouraged the introduction of technology and cash crops to men, thus leaving women, especially in Africa, to continue using traditional low-yield methods for growing subsistence crops (Boserup 1970). Women particularly in landless and small holder households became incorporated to the market economy, for example, in small trade, informal sector and domestic services, in ways that reflect their relative disadvantage in terms of both training and access to resources. Overall, women's lack of access to resources meant that their productivity remained low while that of men increased.

The situation of women did not improve with industrialization, according to Boserup; they were marginalized as markets developed and modern factory systems were established. Labor market policies alongside employers' biased perception of women's capabilities, time constraints imposed by household and care responsibilities and women's lack of access to education and training proved to be serious obstacles to women's integration into the development

process. As a result, women not only were left behind relative to men but also experienced a decline in their status.

### 2.3 Heterodox Models of Development

A different set of development theories emerged alongside the orthodox, growth-oriented models of development challenging the assumptions and prescriptions of the latter. Structuralists, Marxists and proponents of the dependency school represented by Raúl Prebisch, Hans Singer, Paul Baran, John Gurley, Andre Gunder Frank, Theotonio dos Santos, Samir Amin and Arghiri Emmanuel, to name a few, developed alternative heterodox theories that situated the so-called development processes experienced by developing countries within the broader set of economic and political relations that exist within and between countries. From the heterodox perspective, these development processes are part of a global economic system designed to promote capital accumulation, which produced class differentiation.

Moreover, the orthodox models have muted the underlying power relations and issues of distribution that fundamentally determine the welfare outcomes. Analyses of imperialism, neocolonial dependence models of underdevelopment and dependent development theories that emerged in the 1960s and early 1970s, emphasized the unequal power relationships that drive the economic processes. They examined the exploitative relations between the dominant class, that is, landlords and capitalists, and the exploited class, that is, tenants and workers as well as between the center (developed countries) and periphery (developing countries).

Paul Baran (1973), for example, argued that developed capitalist countries extracted the surplus from the less developed countries not only by plundering their colonies but also by maintaining control over key economic sectors through multinational corporations and alliances with the local elites. Profits are repatriated, which provided capital for the expansion and growth of the capitalist countries. Andre Gunder Frank (1966) attributed the persistence of underdevelopment to the past and continuing unequal international capitalist system involving the rich, developed and poor, underdeveloped countries. Others such as Arghiri Emmanuel and Theotonio Dos Santos (1970) provided a modified, structuralist perspective. Emmanuel's theory of unequal exchange argued that the underdeveloped are kept as such as a result of unequal exchange with the developed capitalist countries (Brewer 1980). International trade has served as a mechanism for the transfer of surplus to the latter. Underdevelopment, according to Dos Santos, was not so much a state

of backwardness prior to capitalism but rather, was a consequence and a particular form of capitalism called dependent capitalism. That is, the expansion of the developing countries was conditioned by the development and growth of the dominant, industrialized countries endowed with technological, capital and social political advantage.

Marxists such as P. P. Rey and G. Arrighi explored the modes of production operating in the developing countries and took a different stance from the dependency theorists (Brewer 1980). They noted that the class structure of underdeveloped countries is distinctively different both from that of a feudal society and from that of the advanced capitalist society. The main barriers to development are the pre-capitalist forces of production and the relations of production that continue to prevail, for example, semi-feudalism. There is resistance of peasants to become wage labor and they provide limited market for the output of capitalist production. Thomas Weisskopf and others noted that the nature of imperialism has changed since World War II and that the development of manufacturing and industries has taken place at a rapid rate, with the support of foreign investors and multinational corporations. Others such as James Petras (1978) recognized that the patterns of capitalist-oriented development process have varied considerably over time, thus generating different class structures and appropriate type of state organization. These differences in class formation are essential to understanding the types of alliances between social classes and between countries. Alliances may be forged between capitalists in developed and underdeveloped countries, but they can also be broken or lead to rivalries. In other words, exploitative relations are not fixed or static. The uneven trajectory of capital accumulation, at times rapid while other times sluggish or even contracting, is a reflection of the unstable relationships between competing and expanding capitals and the crises (stagnation and recessions) that are produced.

Although the heterodox theories of development highlight the issues of class, power and economic inequality that the orthodox or mainstream models have ignored, they fail to address the intersection of class relations with other forms of inequality such as patriarchy and gender subordination. Absent in the heterodox theories are the unequal gender relations whereby men are given higher status and privilege over that of women.

Men's interests also prevail in the heterodox theories of development by ignoring the unequal gender relationships that permeate economic and social processes. Neither do these theories examine the manner in which development processes reconstitute nor create new forms of gender inequalities. As pointed out by several feminist economists including Beneria (1979), Beneria and Sen (1981), Agarwal (1994) and Kabeer (1994), a crucial factor in



determining the impact of economic development is what happens to the institution of patriarchy that underlies economic, social and political processes. For the most part, varying levels and forms of patriarchy continue to persist, providing men power, authority, privilege and control over resources. While economic development can weaken some forms of patriarchal norms and promote elements of gender equity, it can also reinforce others or reconstitute them in another form, allowing gender inequality to persist.

As with the mainstream development thinkers, heterodox theorists suppress in their analyses of development (and underdevelopment) the range of economic activities that are performed within households and communities using unpaid labor and yet are important for human maintenance and reproduction of the labor force. Their examination of power relations that produce inequality is incomplete; they ignore women's subordination, which is rooted in the system of household labor. The study by Deere (1976) illustrates women's exploitation by depicting rural women's subsistence work in developing economies where men were engaged in wage labor in the capitalist sector of the economy. Her analysis underlined the crucial contribution of women's unpaid work to social reproduction, pointing out how their reproductive work contributed to lower wages of male workers engaged in the capitalist sector.

This form of exploitation can be exacerbated during economic downturns and crises. Studies on coping mechanisms and survival strategies amidst economic crises, bankruptcies, high unemployment and underemployment highlight the interlinkages between processes of underdevelopment and uneven development on one hand and gender power relations on the other (Beneria and Roldan 1987; Dwyer and Bruce 1988). These power relations exist not just in markets and politics but also within households.

The works of Paula England, Marianne Ferber, Diana Strassmann, Nancy Folbre, Elizabeth Katz, Amartya Sen, Bina Agarwal, Lourdes Beneria and Julie Nelson have challenged the implicit notion of the household that underlies development theories, namely, that they are a unitary or a harmonious unit. Rather, households are recognized as constituting individuals with varying preferences and interests and with differential abilities to pursue and realize those interests. Intra-household inequalities in the division of labor, in access to education, food, land, technology and credit show that it matters who makes key decisions in the household regarding the allocation and use of earnings.



### 3 Revisiting the Development Process: A Gendered Perspective

Feminist scholars have gone beyond criticism by developing alternative, gender-aware approaches to analyzing the development process. They have transformed development-thinking and concomitant theories by incorporating women's voices and experiences. By the late 1970s, there emerged a body of feminist research that revealed the masculine bias in both orthodox and heterodox models of economic development (Elson 1999; Beneria 2003). Lourdes Beneria, Heleieth Saffioti, Martha Roldan, Gita Sen, Diane Elson, Ruth Pearson, Carmen Diana Deere, Magdalena Leon de Leal and Helen Safa, to name a few, reveal the manner in which women's experiences and gender issues have been muted in the influential body of knowledge about the process of development.

Beneria (1979) for instance argues for a closer examination of the social and material conditions of reproduction and the ways in which reproduction and production are related. She points out that the extent and terms of women's participation in the labor market are conditioned by their household duties involving social reproduction and human maintenance chores. In other words, the dynamics of the household is connected to the wider socio-economic processes. Deere and Leon de Leal (1982) highlight the important economic contributions of rural women both inside the household and in farm and off-farm activities in their study of the Andean region in Latin America. Saffioti (1977)'s study of women's employment in import-substitution industrialization stage in Brazil during the 1950s and 1960s supports Boserup's argument that development has marginalized women. She finds that while women's employment increased overall, their share of industrial labor force declined. The dependent capitalist development of Brazil meant that import substitution relied on large-scale capital-intensive technology, which created jobs for men rather than for women.

In the analysis of the growth of female employment in export factories, Elson and Pearson (1981) explore the interplay of conflicting tendencies brought about by capitalist modernization that involves intensifying, decomposing or recomposing existing forms of gender subordination. Although policies that promote export-oriented industrialization do not necessarily reduce gender subordination, the interplay of these tendencies can provide opportunities for women to act collectively and to build solidarity among women.

It should be noted that women's experiences are varied across countries and under different stages of economic development. Thus, the direct and indirect impacts of development processes on the status and situation of women do not allow easy generalizations. The framework for analyzing development processes developed by Beneria and Sen (1981) demonstrates that development is not a linear, upwardly process of improvement in living standards. Rather, it involves uneven and disruptive processes of class differentiation, which affect women and men differently. They also argue that capital accumulation and production processes impinge upon the process of labor and social reproduction in varied ways and this point is especially relevant to understanding gender inequality and the status of women in society. In a study of Mexico City's home-based women workers, Beneria and Roldan (1987) illustrate the intersectionality of class and gender, a dimension that is missing in Boserup's work. Tracing the stages of production from home to the subcontractor's workshop and manufacturer, their study demonstrates how the unequal gender relations in the household condition women's role in the development process.

A feminist analysis of economic development is therefore not merely a matter of adding 'women and stir', but rather incorporates the dynamics of gender relations as economic and social transformations proceed in the following manner. First, it necessitates a deep understanding of patriarchal power and the varied forms of gender inequalities that occur in economic and social processes. Second, it acknowledges the intersectionality of gender relations and social relations based on class, race and ethnicity, thereby incorporating the varied experiences of women throughout the process of economic development. Third, it adopts a broader notion of the economy that comprises a variety of provisioning activities involving paid and unpaid labor. Fourth, it moves away from merely focusing on growth of market-related activities and gives emphasis on the importance of care and unpaid labor in household maintenance and social reproduction.

#### **4 Feminist Economists' Contribution to the Debates on Economic Globalization and Market Liberalization**

Feminist economists have continued the tradition set forth by Ester Boserup by challenging the development policies promoted and endorsed by the neo-liberal version of growth models. Their conceptualization of the gendered

implications of development processes continually evolved from Women in Development (WID) approach of the 1970s to Women and Development (WAD) in the 1980s to Gender and Development (GAD) from the mid-1980s onward, as it became clear that the effects on women are more varied, complex and nuanced (Floro 2016; Beneria et al. 2016). The contributions of feminists and gender scholars from developing countries in particular have been crucial in recognizing differing standpoints among women by illuminating their varying experiences across social classes and cultures. Their collective body of work, both theoretical and empirical, combines qualitative as well as quantitative methodologies to highlight how gender relations are interwoven along with class, race and ethnicity into a broader set of social relations that determine the division of resources and responsibilities, claims and obligations across different social groups.

#### 4.1 Feminist Analysis of Economic Globalization

The neoliberal era of rapid economic globalization and free-market development strategies and the concomitant problems and debacles that ensued, provided a propitious period for citizen groups, some governments and academics to engage in vibrant development debates. During this period, feminist economists and gender scholars produced an extensive body of knowledge, demonstrating how the forces of globalization have created tensions and contradictions and at the same time produced spaces and opportunities for challenging gender norms. Their findings regarding the impact of global supply chains, export promotion and foreign investment have been instrumental in identifying opportunities for women to earn income and to challenge male domination in their households and communities. They also highlight the significant costs of development strategies promoting the unfettered movement of capital and expansion of markets for women and the emergence of new forms of gender inequalities.

Feminist economists argue that the adoption of neoliberal policies—endorsed by the neoclassical theories of development—has reinforced the competitive pressures from global markets and has fueled the movement of capital worldwide, further enabling the reorganization of production processes and the shifting of jobs across sectors, countries and regions, which have profound gender implications. Trade liberalization has brought about growth in employment to some sectors such as those oriented toward exports and services and at the same time has led to bankruptcies and loss of livelihood for those unable to compete with lower priced imports, or to cope with

heightened market fluctuation and volatility. Development of new technologies and economic restructuring have altered skill requirements in production and affected relative wages within and across countries. Taken together, these developments significantly affected production processes and ownership of assets. The never-ending quest for more profit has increased the demand for arable land, minerals, water and other resources, which brought about land grabbing and eviction, conflicts over water supply and ever-expanding extraction and use of fossil fuels. Production processes have become increasingly interdependent through the process of outsourcing and subcontracting, and links between the formal and informal sectors. The practice of multilayered subcontracting and 'value chain' has become widespread across sectors: from garments, toys, artificial flowers to sportswear, computers, electronics, pharmaceuticals, accounting, call centers, customer service, data entry and coding, printing and so on. It taps further into the 'seemingly abundant' female supply of labor by creating new forms of 'putting out systems' whereby workers produce goods or perform tasks in their homes (Beneria and Roldan 1987; Prügl 1999; Carr et al. 2000).

It is clear that the gains from market expansion and economic growth are unevenly distributed across sectors, among households and between men and women among those countries that have experienced them, as with the costs of economic downturns and crises. The economic divide between developed and developing countries continues to persist with a small group of countries remaining at the top of the world income distribution; only a few countries among the developing countries have joined that high-income group (UNDP 2011; Beneria et al. 2016). This trend toward increasing economic divide also exists within countries across income and social groups. The distributive elements of gender relations have influences of their own in accessing the benefits and in shouldering the costs of free-market strategies.

Since the early 1980s, an increasing proportion of the population has become dispossessed as they lost their farms, small businesses and other means of livelihood through indebtedness, eviction from land and the heavy pressure of competition either in the export market or from lower priced inputs. Moreover, the dispersion of labor earnings within countries has increased (World Bank 2012). At the same time, the bargaining and leveraging power of capital has strengthened, leading to a widening gap between owners of capital and labor. With financial market liberalization, the rules of global competition are predominantly dictated by profit and the drive toward capital accumulation. The movement of capital to low labor cost areas has become a constant threat resulting in the diminished economic and political power of labor relative to capital. Moreover, a new round of 'enclosure of the commons'

was implemented such as the privatization of social services and utilities in the Philippines and water provision in Argentina and South Africa. This opened up new terrains for capital to penetrate and invest.

The promotion of market liberalization policies, contrary to assertions of the neoliberal thinkers regarding *laissez-faire* markets, involves not only government actions that reduced or eliminated legal and other institutional barriers to the movement of capital, but also incentives to investors and businesses. Governments would provide an 'enabling business environment' as they vie to attract foreign investment and capital inflows. Regulations involving collective bargaining, minimum wages, overtime pay and occupational safety are relaxed or minimally enforced. They also provide tax incentives and tax holidays, steer budget allocations toward expenditures favorable to business growth and export production.

Workers often witnessed their labor rights violated as a result and their earnings falling behind their productivity increase or increase in cost of living. The ability of workers to enforce their bargaining position and to pull out of labor market entirely and survive is undermined as social safety nets are eroded or continue to be inadequate. Not surprisingly, indicators of income distribution are unambiguous on these growing inequalities.

Feminist economists emphasize that the processes of economic and social transformations are gendered, with differential impacts on women and men. However, the effects of these transformations for women are not easy to evaluate, particularly because they are often contradictory. For instance, access to paid employment can increase women's autonomy and bargaining power, and the market can challenge or even break up old patriarchal forms, thus opening up paths for reducing gender inequality. Similarly, the significant decline of female illiteracy and the rise in educational levels in the past decades have contributed to rising numbers of educated women. Gender wage gaps have also decreased in several countries even though they are far from disappearing and may even experience a reversal in trend (World Bank 2012). Despite these important gains, however, the majority of women remain at the bottom of the labor hierarchy and social ladder, often burdened with both domestic and labor market responsibilities.

Changes in the roles of women and men and their relation to each other have accompanied economic globalization and the structural changes in economies, but they occurred in an uneven manner. The 'male breadwinner-worker' notion that underlies many development theories in the post-World War II period has been brought into question as the predominantly male labor force with stable employment depicted in the early growth models has been replaced by a more varied and less stable workforce throughout the

world. Gender discrimination and patterns of occupational segmentation persist, albeit in different arrangements and configurations.

Standing (1989, 1999) noted a recurring pattern of 'feminization of the labor force' in several countries, with female labor force participation increasing in the last few decades while male labor force participation either staying constant or declining. In parts of Africa, women have taken on farming and off-farm employment as male household members migrate to the urban areas. Export-led growth in Asia and Latin America has resulted in the growth of female employment, especially in labor-intensive manufacturing where women have provided a cheap and flexible labor force. Female labor has also been absorbed in the service sector, including the 'global offices' of the insurance, banking airlines and other industries. Call centers with predominantly women workers have proliferated in different parts of the world such as the Caribbean region, Philippines and India. At the same time, the proclivity of firms to 'race to the bottom' in terms of labor costs has made many traditional men's jobs more similar to those held by women: insecure and with low pay (Beneria et al. 2016).

Economic processes under globalization were also characterized by increasing flexibilization of work processes and the decline in workers' voice and labor union memberships in many countries. Global corporations and local businesses increasingly use contingent labor and resort to casual or subcontracted work arrangements to minimize their costs. Many jobs, especially for women, are informalized and wages are pushed lower.

The expansion of the informal sector and the increased use of informal labor arrangements, a phenomenon that Lewis and other early development theorists did not anticipate, have created opportunities for women to earn income. Earning their own income can lessen their economic dependence on husbands and fathers and can bring greater leverage and better bargaining position in household decision-making. Nevertheless, women tend to be concentrated at the lower levels of the value chains and low-productive informal sector activities, with fewer assets or less access to credit and training and hampered by other constraints such as lack of mobility and other restrictive social norms, and the need to combine paid work with domestic chores and care responsibilities. Women's responsibilities in the household are an additional source of vulnerability for them in the labor market as it constrains their employment choices.

Thus, although recent development processes have brought about a general increase in female labor force participation, the glacial pace in which household division of labor has changed accompanied it. Social norms and cultural practices governing marriage and household division of labor continue to

ensure that the care and nurture of the family is seen as primarily women's responsibility. Engagement in paid work therefore has created tensions for many women trying to balance their roles of caring for their families with the 'added breadwinner' roles brought about by new employment opportunities. This constant tension in terms of performing paid and unpaid work leaves many women disenfranchised and disempowered. Although they might benefit in terms of having their own earned income, they also tend to suffer from increased workload and stress (Floro 1995).

The stresses and difficulties in maintaining a healthy work-life balance highlight two points relevant to the analysis of economic development. First, unpaid household and care work are vital parts of any economic system and therefore should be incorporated into the analysis of development processes. Second, the extent to which people experience long hours of work, paid and unpaid, conveys information about their quality of life, or lack thereof, that standard economic indicators do not. The concept of a 'good life' therefore is not predicated solely on a person's access to goods and services. Engagement in work—whether for own consumption or for the market—constitutes an essential element of life so that the length of the working day is an important determinant of well-being. The continued neglect of care issues in many countries has led to high levels of strain and stress among caregivers, whether paid or unpaid, pushing their capacities to the limit. It has also resulted in women's disproportionate level of participation in part-time and temporary work and their concentration in home-based work. Although the home-based work allows women to combine both paid and care work, this type of employment often sees women's ability to negotiate for better pay being compromised, especially among piece-rate or subcontracted workers (Carr and Chen 2000).

## 4.2 Gender Dimensions of Economic Crises

Many of the economic problems that became visible during the neoliberal policy era have been intensified during periods of economic downturns and crises such as the 2007–2008 global economic crisis. The emergence of that crisis was felt first in the US and was quickly transmitted to other countries. In Europe, it degenerated into a deep economic and euro-zone crisis, with its effects being felt in other countries as well. Developing countries were affected through the decrease in their exports, and the adverse consequences of global economic contraction and financial instability on employment, bankruptcies, government budgets, foreign aid and remittances have



impoverished millions, which led to rising social tensions. Labor market insecurity, government budget cuts and reversal of social policies were commonplace.

Initially, governments in many affected developing countries either maintained or increased their spending despite the decline in revenues. The fiscal stimulus for creating jobs and stimulating growth tended to take the form of large-scale infrastructure investment in areas such as electricity, transport, water and sanitation (Green et al. 2010). Cambodia, Vietnam, India, the Philippines and Indonesia, for example, received loans from the Asian Development Bank to fund infrastructure development, predominantly roads and water systems (Bauer and Thant 2010). In Mozambique, a food subsidy program targeting poor households and the unemployed was initiated, but the lack of resources meant that only 150,000 of 22 million people have been served (Green et al. 2010).

These fiscal stimuli were short-lived however. The austerity responses to recessions and economic crises that hit the developed countries in the last decade and those experienced by Latin American, African and Asian countries in the 1980s and 1990s under the World Bank-IMF-imposed structural adjustment and stabilization programs are strikingly similar. The emphasis was, as it is now, on government budget cuts and reduction of public services, privatization and pro-market solutions to replace the role of public sector. In both cases, these policies were aimed at reducing the cost of labor while making it easier for firms to dismiss workers without compensation, leading to further layoffs and shifts from regular to short-term and contingent employment.

The continued spread of economic insecurity and vulnerability pitted workers between countries, thus compelling them to accept jobs on arguably worse terms. Gender norms operating in labor markets situate women's participation within a socialized hierarchy whereby men are given a higher status and privilege over that of women. Hence, during economic downturns, the reassertion of gender norms gives priority to male workers when layoffs occur as well (Elson 2010).

To be sure, it is difficult to generalize the employment and livelihood effects across countries, and they vary from sector to sector and from country to country. It is well known that, initially at least, the crisis effects in both the US and Europe were particularly damaging in the formal sector for male workers due to men's concentration in construction and the heavy industries (Fukuda-Parr et al. 2013). The services where women tend to concentrate such as education and health-related services were less affected. Nonetheless, the majority of countries (113 out of 152) experienced higher unemployment rates for



women than men in 2008–2009. In 30 countries, female rates exceeded male rates by more than 5 percentage points (ILO 2010). Since 2008, women's unemployment in the UK has increased at double the rate for men, by 2.3 and 1.2 percentage points, respectively (Elson 2010). In areas where female labor has been key for exports, many women lost their jobs as well in specific export-oriented sectors. In Cambodia, thousands of women workers lost their jobs in the garment industry (Dasgupta and Williams 2010). In Vietnam, women workers in several export industries reported a fall in income of 24 percent, compared to 21 percent for men (Hung 2009). Similar trends are evident in other regions. In the *maquila* factories in Honduras, approximately 19,000 textile workers lost their jobs from the beginning of the crisis through April 2009; about 11,400 of them were women (Touza and Pineda 2010). Women casual workers have in some cases replaced regular or permanent workers, acting as cheap and flexible 'buffer labor', which explain why women's unemployment rate is lower than men's in some countries.

Economic downturn and crises also led to the lengthening of women's working hours, as a result of the need for women to compensate the loss of employment by other household members and by the increase in unpaid work. Kaya Bahçe and Memiş (2013) noted that during economic downturns, women's labor force participation tends to increase in order to compensate for the loss of male wages or to contribute to family income. This was the case during other economic crises as well; in Latin America, many women increased their participation in the labor market, often under precarious conditions in the informal economy (Beneria and Floro 2006). The increase in household work, mainly performed by women, was brought about by the decline in household incomes for many. Lower earnings required coping strategies that tend to intensify women's work, such as cooking at home rather eating out. For middle-income families, hiring help or domestic workers is a common solution to the problem of an increased work burden (Floro et al. 2010). For the working poor, however, hiring domestic help is unaffordable. Workers in these households are compelled to ask the help of kin or engage children in paid and unpaid domestic work so the family can meet its survival needs.

## 5 Challenge to the Neoliberal Approach to Economic Development

Critical evaluations of the development processes during the neoliberal era offer useful insights in rethinking the development paradigm. Gendered analyses of these processes in particular have led to revisiting of basic questions

about the values that underlie economic development models. Feminist economists' scrutiny raises the questions of what constitutes a good life and whether the neoliberal policy-led development processes truly enhance economic and social well-being.

The answers to these questions are not so clear-cut, nor do they necessarily lead to a critical stance of the underlying assumptions and theoretical foundations of the neoliberal policies. It is important to consider the possibility that some crucial aspects of the gender and development agenda can be integrated or co-opted by neoliberalism, without necessarily abandoning the free-market-oriented development model.

The hegemonic influence of neoliberal discourses is reflected in some of the gender mainstreaming efforts undertaken by governments and multilateral organizations such as the World Bank and the IMF. For example, the 'gender is smart economics' approach first adopted by the World Bank in mid-2000 was an attempt to address gender concerns within a mainstream economic development framework. The 'gender is smart economics' approach construes the gender equality objective to mean as empowering women economically by enhancing their participation and access to markets and by increasing human capital investment in women. A corollary supposition is that women's subordinate position stems from a lack of economic opportunities and their exclusion from the market. As a result, women tend to gain less from the prosperity brought about by economic growth than men.

This approach also presumes, as with Ester Boserup, that economic growth can be enhanced by increasing women's productivity through better access to assets such as land, education and capital. This approach is exemplified in the World Bank's Gender Equality Action Plan (GAP) that was launched in 2006, and later was revisited in its flagship report, the 2012 World Development Report (WDR.). The 2012 WDR expanded the notion of 'gender is smart economics' by taking the integration of gender several steps further. First, it acknowledges that gender inequality as manifestly unfair, leading to economic inefficiencies and therefore sub-optimal growth. Second, it takes a broader view of development by recognizing the role of cultural norms and social practices and argues that under-investing in women limits economic and social development. It raises the issue of power particularly in household decision-making and thus recommends measures for women to have greater voice within households and societies. Third, the report acknowledges the importance of unpaid household and care work in the functioning of the market economy and recognizes the unequal household division of labor that impedes women's agency and economic participation.

However, as Berik (2017) and Prügl (2017) point out, the integration of gender in the World Bank research did not really put into question the

neoliberal economic development model and neglected the role of orthodox macroeconomic policies in maintaining gender inequality. “The IMF shares the World Bank’s win-win perspective and views its gender work as complementary to that of the Bank” (Berik 2017, p. 4). As with the World Bank policies, the rhetoric of promoting gender equality made by the IMF remains disconnected from its policies. This is evident in the policy conditionalities of the IMF loan agreements for 131 countries between 1985 and 2014, particularly after a financial or economic crisis (Kentikelenis et al. 2016). These requirements include labor market liberalization, public sector downsizing and deficit reduction that often lead to privatization and reduction in public sector spending on social services. Such conditions undermine gender equitable opportunities and outcomes by exacerbating job insecurity and increasing unpaid work burden. Weak labor standards that promote non-standard contracts and discourage collective bargaining and so on further disempower vulnerable groups such as women workers and weaken their voice within households and societies. This type of gender mainstreaming fails to see the contradictions between the macroeconomic policies endorsed by orthodox economic development models and the profound effect on the terms and conditions faced by women workers.

## 5.1 The Human Development Framework

If the effect on the well-being of women and men ought to serve as the central measures of development progress, then any evaluation of development strategies and economic policies requires attention not only to aggregate levels or distributions of income and wealth, but also to whether the heterogeneity of human needs are met (Sen 1999). This means that questions of power and unequal access to power are part of any study of economic development from the outset (Albelda 2002; Power 2004). The work of Amartya Sen on entitlements, capabilities and development introduces an alternative framework of development that incorporates all human activities and in which the goal of gender equality is embedded. The human development framework shifts the focus away from increase in material consumption as the goal of development to enhancing the overall well-being of women and men—and to which economic resources and material requisites merely serve as important means to attain this objective. The concept of well-being is multidimensional, ranging from receiving care during vulnerable stages of life to having adequate food, access to decent work, safe water and active participation in community life. Its meaning therefore goes beyond the conventional targets of mainstream development models.

A key feature of this framework is its assessment of the processes within the system of entitlement relations, which at the aggregate level is a system of economic and social relations. These include market production, distribution and exchange and other institutional arrangements including cooperatives, government provisioning as well as household production. The power relations embedded in these arrangements are manifested in the way that resources, wealth, incomes and so on are distributed and the range of options (or lack thereof) faced by certain groups of people. Having a broader set of opportunities to choose from has to do as much with the distribution of land, wealth and income as it is with the social norms that determine the real opportunities of women and men. Although women may have the freedom in the sense that no law prevents them from participating in the market, they may actually be prevented by patriarchal norms, by the burden of caregiving, and/or by lack of assets or access to credit (Nussbaum 2003).

The human development framework entails the possibility of redressing the problems of the 'gender is smart economics' approach by broadening the boundary of economic analysis to include a deeper examination of the economic and social factors that limit their opportunities and the constraints that impede people's ability to use these opportunities and enjoy substantive freedoms.

## **5.2 Toward a Feminist Model of Sustainable Development**

The human development framework is not without limitation however. It has yet to provide tractable, analytical tools for exploring economic, social and institutional mechanisms that are needed to bring about improvements in living standards of everyone in a sustainable manner. These tools can be useful in the formulation of gender-aware public policies that can effect economic and social transformations. A number of points from feminist economics research are useful in providing direction for further exploration. The integration of social provisioning and care as well as environmental sustainability in particular can serve as guideposts for transforming the human development framework into a feminist model of sustainable development.

### **5.2.1 Goal of Social Provisioning**

A good starting point for such a task is to redefine economic development as a process of economic and social transformations for ensuring social provisioning

and the betterment of human well-being. A shift in the emphasis of development processes away from material accumulation of capital, wealth and increases in material consumption to the adequacy and stability of social provisioning entails a shift in values. In making social provisioning the centerpiece of economic development, the analytics get to deal with the questions of what, how, how much and for whom goods and services should be produced, in a manner that includes the fundamental question about who actually makes these economic decisions and for whose benefits are these decisions made. That is, economic development is about ensuring the provisioning of everyone, and there is willingness by society to address shortfalls in provisioning by government-based entitlements, and to regulate production, consumption, trade and capital flows.

Such a framework, as Marilyn Power points out, “draws attention away from images of pecuniary pursuits and individual competition, toward notions of sustenance, cooperation, and support” (Power 2004, p. x). It therefore does not make economic development to be synonymous to growth or expansion of capitalist institutions and markets. Rather, they become subjects to be evaluated and critiqued, raising questions as to which groups and which nations exert influence with regard to the control and use of resources and for whom do they exercise such power. By shifting the goal toward social provisioning and human well-being, the notion of economic development does not become preoccupied with markets nor their material outputs alone. The manner in which society provides for its people using natural resources, technology and labor, both paid and unpaid, allows for a broader understanding of economic activity which includes the contributions of unpaid labor and nonmarket activities. It also involves identifying the dynamics in the distribution of care labor between paid and unpaid care sectors, and its implications for aggregate supply and demand for labor, particularly female labor.

The concept of social provisioning also emphasizes the fact that the economy is an interdependent social system in which economic and social forces interact in ways that are at times reinforcing and other times contradictory. It necessitates the recognition of social norms in affecting both the process of economic change and its outcomes. Norms, culture and ideology influence the specific organization of social provisioning at any given period. In turn, the manner in which social provisioning is organized interacts with the prevailing social relations, which renders some groups to be economically dependent, marginalized and disempowered.

For example, norms about masculinity that have long defined men’s roles and notions of ‘man the herder or farmer’ in agrarian economies easily shifted to “man the breadwinner” in the industrialization or modernization stage of

development. Household transfers made by the male breadwinner became an important aspect of household dynamics, for they provided the mechanisms for the husband to assert control and authority over other household members. Values then become embodied in the tasks and in who does them. These norms and perceptions form the basis of women and men's work identities that permeate not only the household but also markets, firms and government sectors.

Unless development pathways are evaluated with awareness of the connections between development outcomes and gender inequalities, strategies such as those that promote market liberalization and economic globalization yield difficult tradeoffs for women and the overall well-being of many can end up being compromised.

### 5.2.2 Integration of Care

An emphasis on social provisioning and human well-being posits the fact that people are treated not merely as source of labor inputs but that their overall well-being should be the goal of economic development. From a gendered perspective, this means that economic development should also cover the entirety of economic processes that enable workers to survive, reproduce and develop. This means that economic development inquiry should involve provisioning of care, as well as the equal sharing of responsibilities between women and men. It requires the integration of the costs of caring for the retired workers and raising the next generation in economic development theories.

Economic development theories, for the most part, have ignored the care requirements for the reproduction of labor, assuming that households where the labor force is 'produced' and maintained will take care of themselves or that specialized care service markets will develop as the economy grows. Despite being a vital form of work that sustains human existence and promotes well-being, the presence of the care economy (both paid and unpaid care sectors) and its interface or linkages with other economic sectors has yet to be integrated in models of economic development. Marilyn Waring (1999) began an important and ongoing dialogue by pointing out that women's unpaid labor, as with the services provided by the natural environment, was counted in measurement of GDP and the UN System of National Accounts.

To be sure, the collective efforts of feminist scholars, gender and time use researchers, women's advocacy groups and the United Nations over several decades have brought about growing recognition on the importance of care in

human well-being. Their efforts, for example, have led to the new International Labor Organization (ILO) definition of work and in the recognition of unpaid work in the 2030 Agenda for Sustainable Development. In the area of economic statistics, the 19th International Conference of Labour Statisticians (ICLS) has passed a resolution that redefines work, requiring the measurement of all its forms done by persons aged 15 years and older to include household work, as well as volunteer work. The UN General Assembly declared in September 2015 17 sustainable development goals (SDGs)—ranging from ending world poverty (goal 1) to ensuring healthy lives and promoting well-being for all at all ages (goal 3); achieving gender equality and empowering women and girls (goal 5); promoting inclusive and sustainable economic growth, employment and decent work for all (goal 8) to taking urgent action to combat climate change and its impacts (goal 13) by 2030. An important premise of these SDGs and their 169 target indicators is the realization that gender equality and the empowerment of women and girls is crucial to progress toward meeting these goals and targets. One of the indicators for monitoring the SDG agenda includes, among others, the “percentage of time spent on unpaid domestic and care work, by sex, age and location” (Indicator 5.4.1). It is illustrative of the broader impact of gender research on economic issues and the importance of breaking down the hierarchy of gender values in economic development thinking that privilege men’s status, roles and interests over those of women’s.

More needs to be done however in bringing care provisioning to the attention of policymakers. Despite the recent progress mentioned earlier and the growing consensus among governments on the importance of promoting gender equality, there are silences in the current economic discourses and manifested in macroeconomic policies that are troubling (Çağatay et al. 1995). Macroeconomic policymaking remains disconnected from discussions of gender issues, even though there has been substantial progress toward gender equality in areas such as health and education. In fact, gender equality concerns were easily set aside in macroeconomic policy discussions to address economic and financial crises as evident in the structural adjustment programs of the 1980s and 1990s, the general policy responses to the 2007–2008 global financial crisis and in austerity programs imposed in Greece and the UK.

The invisibility of unpaid care in development models and macroeconomic policy formulation has led to persistent underinvestment in care provisioning, thereby reproducing and reconfiguring gender hierarchies. This is particularly important in the context of the rapidly increasing differentiation across households across the globe in terms of ability to access paid services for childcare



and elderly care, the stalling of women's participation in the labor market, and the consequent shift in global demographics (aging in some regions, population growth in others).

### 5.2.3 Addressing Ecological Concerns and Environmental Sustainability

Ultimately, social provisioning and well-being are fundamentally ecological concepts for they are intrinsically connected with the web of both living and physical components of human systems. An emphasis on these goals lends itself to concern with future generations and with sustainable production, consumption and allocative processes, implying the necessity for reliance on and interdependence with nature rather than exploitation of nature (Power 2004). As Bina Agarwal (1994) notes, "women's and men's relationship with nature needs to be understood as rooted in their material reality, in their specific forms of interaction with the environment", and it must be recognized that "insofar as there is a gender and class -based division of labor and distribution of property and power, gender and class structure people's interactions with nature and so structure the effects of environmental change on people and their responses to it" (p. 93).

The current economic, social and ecological malaise facing countries and the global community as a whole brings urgent attention to the basic questions about the nature of capitalist-driven development and its ability to construct just and sustainable societies. The solutions that address these concerns demand that a shift in individual, community and societal values toward "a common recognition of common humanity and substantive responsibilities for care that has more to do with commitment than simply altruism or selflessness" (Nelson 2011, p. 20). It requires a radical shift from the culture of individualism and preoccupation with pursuit of profit and material consumption to one that enables cooperation at a scale that many people have never before attempted—whether in addressing the shared responsibility for care of young, elderly, sick and disabled members of society or in seeking solutions to address climate change and other global issues. It requires development of analytical tools that provide a deeper understanding of the gendered, distributional and ecological dimensions of economic options and development strategies. Such a development model balances the role of complementarities, coordination and collective action with that of markets, competition and self-interest in organizing the way society produces, consumes and distributes goods and services.



## 6 Concluding Remarks

The tasks to meet the challenges mentioned earlier are demanding, but if there is one thing that feminist economics and gender analyses of development processes have taught us, it is the need for a vision for change and developing the analytical tools for identifying the requisite economic and social transformations. The challenges that countries face today alert us to the real meaning of sustainable, equitable development and the serious choices that governments and society as a whole need to grapple with. They require of development thinkers a level of creativity, rigor and gender awareness to address pressing care needs and environmental concerns including climate change that are already upon us. A sustainable economic system must take into account the interdependence not only of the market and care sectors of the economy but also between the human system and the ecosystem. This recognition demands a feminist model of sustainable development in order to ensure that the ecosystem can sustain and nurture both current and future generations.

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# **Part III**

**Socio-economic Development  
Processes: Structural Change,  
Inequality, Poverty, Institutions  
and Capabilities**



# 9

## The Recent Growth Boom in Developing Economies: A Structural-Change Perspective

Xinshen Diao, Margaret McMillan, and Dani Rodrik

### 1 Introduction

Developing countries have experienced an extraordinary period of economic development over the last couple of decades. Besides India and China, which registered record economic growth rates, countries in sub-Saharan Africa and Latin America have managed to match or exceed their performance of the 1960s and first half of the 1970s. The recent downturn in the global economy has cast a dark shadow on the future of this performance, and Latin America in particular has been badly hit by the decline in commodity prices. But growth in the low-income countries of Africa has been resilient and remains high in the non-resource-dependent countries.

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Even a cursory look at the experience of the recent growth champions indicates that their experience differs greatly from the standard East Asian path. East Asian countries such as South Korea, Taiwan and China grew through rapid export-oriented industrialization. By contrast, none of the recent growth experiences outside East Asia show evidence of rapid industrialization. Instead, Latin American countries have experienced premature deindustrialization, while in Africa manufacturing industries are barely holding their own in most countries.

How do we understand this recent wave of economic growth in developing countries? What have been the main drivers and how sustainable are they? We offer a structuralist perspective on this recent experience, focusing on the role of structural change in driving economywide labor productivity growth. In East Asian countries, the movement of labor from low-productivity agriculture and informality to modern manufacturing industries and associated activities played a critical role. Was there a similar transformation in the recent crop of growth accelerations? Even if industrialization did not play a substantial role, did the expansion of other modern activities, such as services, substitute for it? And what has been the relationship between patterns of structural change and labor productivity growth within specific sectors or the “within” component of economywide labor productivity growth?

We begin by reviewing and updating some of the stylized facts in McMillan and Rodrik (2011) on structural dualism in developing nations and relating the structuralist perspective to the neoclassical growth model (Sect. 2). We then turn to recent episodes of growth acceleration in Latin America, Africa and India (Sect. 3). We decompose labor productivity growth during these episodes into two terms: within-sector productivity growth and inter-sectoral labor reallocation.

Our most interesting finding is that recent growth accelerations were based on either rapid within-sector labor productivity growth (Latin America) or growth-increasing structural change (Africa), but rarely both at the same time (Sect. 4). There is a strong negative correlation between the two components of growth across countries, with India as the sole exception. In Latin America, within-sector labor productivity growth has been impressive, but growth-promoting structural change has been very weak. In fact, structural change has made a negative contribution to overall growth excluding agriculture, meaning labor has moved from high-productivity sectors to low-productivity activities. In Africa, the situation is the mirror image of the Latin American case. Growth-promoting structural change has been significant, especially in Ethiopia, Malawi, Rwanda, Senegal and Tanzania. But this has been accom-

panied in these countries by mostly negative labor productivity growth within nonagricultural sectors.

We also show in Sect. 4 that this experience stands in sharp contrast with the classic East Asian growth experience (such as in South Korea and China), in which both components of labor productivity contributed strongly to overall growth. Moreover, the East Asian pattern seems to be replicated in more recent Asian cases of growth accelerations as well (in Bangladesh, Cambodia, Laos, Vietnam and India as mentioned earlier).

The Latin American pattern of weak or negative structural change was noted and discussed in McMillan and Rodrik (2011) and related to the region's commodity dependence, overvalued exchange rates, (relatively) low agricultural employment shares and deindustrialization. But the African pattern is puzzling. Rapid growth-promoting structural change has become a feature of the African economic landscape—something that was not evident in the data in McMillan and Rodrik (2011)—which is surely good news. It is also somewhat surprising, given that industrialization has not figured prominently in the region. But it now comes at the expense of declining labor productivity growth in the more modern sectors of the economy. How can we make sense of this anomaly?

We develop a simple two-sector general equilibrium model in Sect. 5 to shed light on regional patterns of structural change, especially the contrast between the African and Asian models. We make specific assumptions on preferences, namely, that demand is non-homothetic (with a declining budget share of the traditional sector) and the modern-sector good is price elastic. We show that the Asian pattern of strong “within” and “between” components is consistent with growth being driven mainly by positive productivity shocks to the modern sectors. The model generates a positive correlation between the two components of aggregate labor productivity growth: as the modern sector expands thanks to the positive productivity shock, it draws labor from the other, less productive sectors of the economy.

The African model, by contrast, is consistent with growth being driven not by the modern sector, but by positive aggregate demand shocks (e.g., due to foreign transfers) or by productivity growth in the traditional sector (agriculture). In this model, the modern sector expands and growth-promoting structural change takes place as increased demand spills over to the modern sector. (Our assumptions on preferences ensure that demand shifts are sufficiently biased toward the modern sector to ensure the modern sector expands in both cases, despite relative-price adjustments.) But labor productivity in the modern sector is driven down as a by-product, as diminishing returns to capital set



in and less productive firms are drawn in. This is also consistent with the relatively poor performance of manufacturing in Africa.

These considerations suggest that positive structural change in African countries may be driven mainly from the demand side, whether due to external transfers or the induced demand effects from increased agricultural incomes. This in turn raises the question of the sustainability of recent growth, an issue we discuss in the concluding section (Sect. 6). The end of the commodity super-cycle has already thrown into question the continued rapid growth of resource-rich countries. Our analysis indicates that other fast-growing countries may face a slowdown as well, due to the self-extinguishing nature of the productive structural change that has so far fueled their growth.

## 2 Structuralism, Dualism and Labor Productivity Growth

The concept of structuralism in development economics dates back to the founding of the Economic Commission for Latin America and the Caribbean (ECLAC) in 1948. The central tenet of structuralism is that developing countries differ qualitatively from developed ones. Further, if these differences are not recognized, policies designed to stimulate growth and poverty reduction in the developing world are doomed to fail. The intellectual foundations of structuralism are attributed primarily to Raúl Prebisch, the founding director of ECLAC. A key insight of Prebisch which remains highly relevant today had to do with the important role of industrialization in the developing world. Prebisch (1950) along with Singer (1950) argued forcefully that the prices of primary commodities relative to those of manufactured goods were bound to decline over time, dooming poor countries to poverty unless they industrialized. This argument was behind the now famous period of import substituting industrialization (ISI) in Latin America. Although these policies have been widely criticized, growth in output per worker during the period of ISI—roughly 1950–1975—was higher than in any other period of Latin America's recent economic history (McMillan and Rodrik 2011).

A related but distinct concept is that of structural dualism. Structural dualism also has its roots in development economics and dates back to the work of Lewis (1954). This work draws a sharp distinction between the traditional and modern sectors of the economy; accumulation, innovation and productivity growth all take place in the modern sector while the traditional sector remains technologically backward and stagnant. Thus, economywide growth

depends largely on the rate at which resources—principally labor—can migrate from the traditional to the modern sector. The reason that this concept is still so important in the context of developing countries is because the economies of today's poor countries are still very much characterized by structural dualism. The implication of this dualism is that there are potentially large payoffs to moving workers out of the traditional sector and into the modern sector.

These schools of thought both emphasize the idea that industrialization can lead to large gains in income per capita. For structuralists, manufacturing is considered key to the development process both because of its technical sophistication and because of the growth in output per worker associated with increasing returns to scale. For dualists, the combination of unlimited supplies of labor in the traditional sector and high marginal returns to activities in the modern sector implies that the expansion of the modern sector is the key to growth in output per worker. Because labor-intensive manufacturing was the modern sector that had the ability to absorb large numbers of unskilled workers, industrialization became synonymous with the modern sector in dual economy models of growth.

While it is well documented that industrialization played a key role in raising incomes in today's developed economies, it is unclear to what extent industrialization can play a role in rapid poverty reduction going forward. For example, Rodrik (2016) documents a pattern of premature deindustrialization whereby countries are running out of opportunities for industrialization at much lower levels of income compared to early industrializers. Labor shed through this process of deindustrialization has mainly ended up in low-productivity services in both Latin America and some developing countries including the United States. This process has also made the prospects for industrialization more bleak in Africa. China and Vietnam appear to be the exceptions, but even in Vietnam it seems hard to imagine that the share of employment in manufacturing will reach the peaks observed previously in the industrialized world. If deindustrialization has become the norm then we are faced with an important puzzle. What is driving the rapid growth we are seeing in many of today's very poor countries?

One way to begin to understand the growth booms we have observed over the past couple of decades in today's poor countries is to recognize the complementarity between structuralist models of growth and the neoclassical model of growth first introduced by Solow (1956). In this model growth depends on the incentives to save, accumulate physical and human capital and (in subsequent variants that endogenize technological change) innovate by developing new products and processes (Grossman and Helpman 1991;

Aghion and Howitt 1992). These models focus on the growth process *within* modern sectors. By contrast, structural models with an emphasis on industrialization focus on relationships and flows *among* sectors.

As Rodrik (2014) has argued, the two channels may have common determinants. For example, improved incentives to invest and adopt new technologies in the modern sector may enable the sector to expand and absorb labor from the traditional sector. But the two models emphasize different processes as being critical to growth. In what follows, we first present evidence which strongly suggests that dualism is alive and well in developing countries. We then lay out our conceptual framework for thinking about the sources of growth that incorporates both the dual economy and neoclassical models of growth. Of course, this approach abstracts from a number of important issues facing today's middle-income countries emphasized by structuralists.<sup>1</sup> But it seems to us a good place to start.

## 2.1 Structural Dualism: The Data

Our evidence on structural dualism is based on the 10-sector database produced by researchers at the Groningen Growth and Development Center (GGDC). We use the most recent version of the data which were last updated in January 2015 (Timmer et al. 2015). These data consist of sectoral and aggregate employment and real value-added statistics for 30 developing countries and 9 high-income countries covering the period up to 2010 and, for some countries, to 2011 or 2012. The countries and their geographical distribution are shown in Table 9.1, along with some summary statistics. We compute labor productivity by dividing each sector's real value added by the corresponding level of sectoral employment. The sectoral breakdown we use in the rest of the chapter is shown in Table 9.2.

Using the GGDC data to compute average labor productivity by sector raises some important measurement issues. The first has to do with the extent to which the GGDC data accounts for the informal sector. The data for value added come from national accounts, and as mentioned by Timmer and de Vries (2007, 2009), the coverage of such data varies from country to country. While all countries make an effort to track the informal sector, obviously the quality of the data can vary greatly. On employment, Timmer and de Vries (2007, 2009) relied on population censuses for total employment levels and

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<sup>1</sup>Lance Taylor, probably the most prominent modern-day structuralist, along with Ocampo and Rada analyzed these issues at length in their book *Growth Policy in Developing Countries: A Structuralist Approach* (2010).

Table 9.1 Summary statistics

	Code	Economywide labor productivity	Coef. of variation of log of sectoral productivity	Sector with highest labor productivity		Sector with lowest labor productivity		Annual growth rate of economywide productivity (%)
				Sector	Labor productivity	Sector	Labor productivity	
<b>High income</b>								
United States	USA	83.2	0.065	Utilities	367.0	Personal services	52.3	1.68
Netherlands	NLD	53.1	0.108	Mining	1745.8	Personal services	28.5	1.41
United Kingdom	GBR	52.9	0.086	Mining	603.3	Agriculture	26.5	1.59
Japan	JPN	52.2	0.061	Utilities	197.9	Agriculture	16.1	1.17
France	FRA	49.2	0.047	Utilities	157.4	Business services	20.7	1.01
Sweden	SWE	47.2	0.060	Utilities	223.0	Business services	31.6	3.44
Italy	ITA	45.2	0.094	Utilities	220.0	Business services	5.2	-0.79
Denmark	DNK	44.8	0.118	Mining	1787.5	Business services	17.9	0.28
Spain	ESP	41.8	0.063	Utilities	222.4	Business services	16.7	0.30
<b>Asia</b>								
Singapore	SGP	81.3	0.090	Utilities	274.9	Agriculture	13.4	-0.35
Hong Kong	HKG	64.3	0.084	Utilities	465.6	Agriculture	20.2	3.57
Taiwan	TWN	52.0	0.092	Mining	473.6	Construction	17.0	1.29
South Korea	KOR	37.7	0.085	Utilities	304.0	Agriculture	18.0	2.38
Malaysia	MYS	29.2	0.125	Mining	1063.5	Construction	10.7	2.75
Thailand	THA	11.8	0.155	Mining	305.5	Agriculture	2.7	2.77

(continued)

Table 9.1 (continued)

	Code	Economywide labor productivity	Coef. of variation of log of sectoral productivity	Sector with highest labor productivity		Sector with lowest labor productivity		Annual growth rate of economywide productivity (%)
				Sector	Labor productivity	Sector	Labor productivity	
Philippines	PHL	7.8	0.115	Utilities	79.7	Personal services	2.5	2.51
China	CHN	7.4	0.127	Utilities	48.1	Personal services	1.4	10.38
Indonesia	IDN	7.0	0.118	Mining	102.6	Agriculture	2.3	2.66
India	IND	5.1	0.107	Utilities	40.7	Agriculture	1.7	6.38
<b>Latin America</b>								
Brazil	BRA	78.2	0.100	Utilities	774.6	Personal services	25.0	0.88
Chile	CHL	28.5	0.094	Mining	281.5	Agriculture	13.1	1.85
Venezuela	VEN	25.9	0.114	Mining	421.3	Agriculture	10.5	-0.34
Mexico	MEX	25.1	0.119	Mining	422.2	Agriculture	6.2	-0.51
Argentina	ARG	23.5	0.100	Mining	326.3	Personal services	9.3	1.75
Costa Rica	CRI	20.5	0.029	Transport services	31.2	Agriculture	12.5	1.77
Colombia	COL	14.1	0.111	Utilities	232.8	Agriculture	6.1	1.27
Peru	PER	13.7	0.107	Mining	110.7	Agriculture	3.8	3.73
Bolivia	BOL	7.5	0.126	Utilities	71.8	Construction	2.8	0.77
<b>Africa</b>								
Botswana	BWA	29.9	0.126	Mining	418.8	Agriculture	1.9	2.68
South Africa	ZAF	23.9	0.091	Utilities	96.8	Agriculture	4.3	2.57
Mauritius	MUS	22.1	0.061	Utilities	83.0	Personal services	12.3	2.87
Nigeria	NGA	5.0	0.243	Mining	1549.5	Personal services	0.8	3.81

(continued)

Table 9.1 (continued)

	Code	Economywide labor productivity	Coef. of variation of log of sectoral productivity	Sector with highest labor productivity		Sector with lowest labor productivity		Annual growth rate of economywide productivity (%)
				Sector	Labor productivity	Sector	Labor productivity	
Ghana	GHA	4.6	0.091	Utilities	23.6	Trade services	2.6	2.59
Senegal	SEN	4.0	0.161	Utilities	129.8	Agriculture	1.3	1.24
Kenya	KEN	3.1	0.114	Utilities	32.7	Agriculture	1.6	1.09
Zambia	ZMB	2.7	0.173	Utilities	36.3	Personal services	0.3	3.00
Tanzania	TZA	2.5	0.163	Business services	83.0	Personal services	0.5	4.37
Malawi	MWI	2.2	0.124	Mining	46.4	Agriculture	1.0	2.23
Ethiopia	ETH	1.4	0.148	Mining	31.2	Agriculture	0.8	5.07

Note: All data used in this table come from GGDC. All productivity numbers are for average 2000–2010 and are in 2005 purchasing power parity (PPP) \$1000  
Source: Diao et al. (2017)

**Table 9.2** Sector coverage and labor productivity ('000 of 2000 PPP USD)

Sector	Average sector labor productivity	Maximum sector labor productivity		Minimum sector labor productivity	
		Country	Labor productivity	Country	Labor productivity
Agriculture	14.9	United States	53.7	Ethiopia	0.66
Mining	311.2	Denmark	1787.5	Ethiopia	2.27
Manufacturing	40.4	Brazil	121.9	Ethiopia	1.72
Utilities	155.5	Brazil	774.6	Nigeria	2.61
Construction	26.7	United States	69.5	Malawi	3.64
Trade services	25.7	Singapore	95.0	Ethiopia	2.59
Transport services	43.6	Brazil	138.9	Nigeria	2.54
Business services	42.8	United States	154.2	Nigeria	6.69
Government services	24.4	Brazil	126.0	Nigeria	1.32
Personal services	23.9	Hong Kong	114.5	Tanzania	0.33
Total economy	30.0	United States	83.2	Ethiopia	1.37

Note: All data used in this table come from GGDC. All numbers are an unweighted average over all countries for the period 2000–2010

Source: Diao et al. (2017)

their sectoral distribution; they used labor force surveys for the growth in employment between census years. Census data and other household surveys tend to have more complete coverage of informal employment. In short, a rough characterization of the data would be that the employment numbers in the GGDC dataset broadly coincide with actual employment levels, regardless of formality status, while the extent to which value-added data include or exclude the informal sector heavily depends on the quality of national sources. For a detailed explanation of the protocols followed to compile the GGDC 10-sector database, refer to Timmer, de Vries, and de Vries (2015) and “Sources and Methods” at the database’s web page: [http://www.ggdc.net/databases/10\\_sector.htm](http://www.ggdc.net/databases/10_sector.htm).

The second concern—and one that has gotten a lot of attention in recent literature<sup>2</sup>—is that the quality of the data collected by national statistical agencies in poor countries and Africa in particular is not very good. Like Diao, Harttgen and McMillan (2017), our confidence in the estimates of value added at the sectoral level is bolstered by the following facts. First, the African coun-

<sup>2</sup> See for example Klasen and Blades (2013).

tries included in the GGDC database are the countries in Africa with the strongest national statistical offices, and these countries have been collecting national accounts data for some time. Second, researchers at the GGDC specialize in providing consistent and harmonized measures of sectoral value added and our view is that this expertise lends credibility to these numbers. Finally, using Living Standard Measurement Study (LSMS) surveys, researchers have shown that sectoral measures of value added based on national accounts data are highly correlated with sectoral measures of consumption (Gollin et al. 2014).

The third concern stems from the measurement of labor inputs. Ideally, instead of using the measured number of workers employed in a sector, we would use the number of hours worked in a sector. This would correct for biases associated with the seasonality of agriculture that might lead to an underestimation of agricultural labor productivity. This is a serious issue and for the purposes of this chapter, we rely on work by Duarte and Restuccia (2010) who show that in a sample of 29 developed and developing countries the correlation between hours worked and employment shares is close to one, and Gollin et al. (2014) who show that correcting labor productivity measures for hours worked does not overturn the result that labor productivity in agriculture is significantly lower than labor productivity in the rest of the economy. Note that this does not mean that there are not off-farm activities in rural areas that bring in less income, for example than farming. In fact, this is highly likely in very poor economies where a large share of economic activity is of a subsistence nature.<sup>3</sup>

Finally, the productivity gaps we describe here are differences in *average* labor productivity. When markets work well and structural constraints do not bind, it is productivities *at the margin* that would be equalized. Under a Cobb-Douglas production function specification, the marginal productivity of labor is the average productivity multiplied by the labor share. Thus, if labor shares differ greatly across economic activities, then comparing average labor productivities can be misleading. The fact that average productivity in mining is so high, for example, simply indicates that the labor share in this capital-intensive sector is quite small. In the case of other sectors, however, there does not appear to be a clearly significant bias. Once the share of land is taken into account, for example, it is not obvious that the labor share in agriculture is significantly lower than in manufacturing (Mundlak et al. 2012). Therefore,

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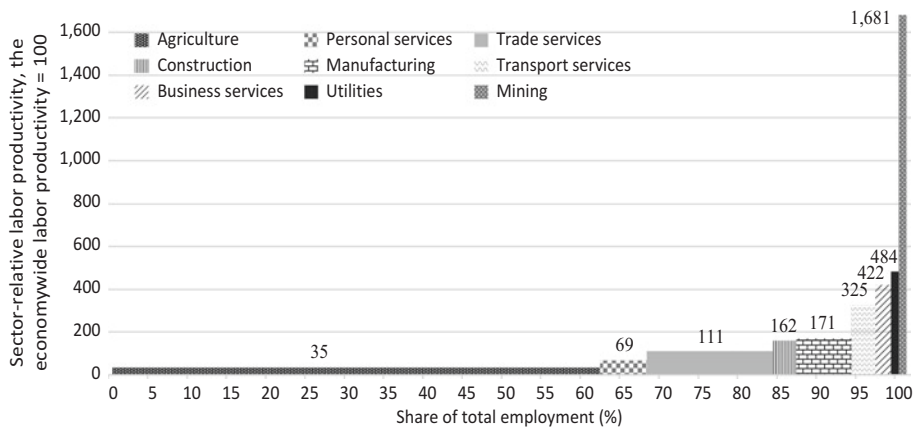
<sup>3</sup>Using LSMS-ISA data, McCullough (2015) finds that correcting for hours worked reduces the gap between labor productivity in agriculture and in other activities significantly, but she provides no explanation for the large difference between her results and the results of Gollin et al. (2014).



the large observed differences in average labor productivity between manufacturing, say, and agriculture do point to large gaps in marginal productivity.

## 2.2 Structural Dualism: The Evidence

Figure 9.1 shows that for the 11 African countries in the GGDC sample, the productivity gaps across sectors are indeed enormous.<sup>4</sup> Each bin in the figure corresponds to one of the nine sectors in the dataset,<sup>5</sup> with the width of the bin corresponding to the sector’s share of total employment, and the height corresponding to the sector’s labor productivity level as a fraction of average labor productivity in the economy. Agriculture, at 35 percent of average productivity, has the lowest productivity by far; manufacturing productivity is 1.7 times as high, and mining productivity is 16.8 times as high. Furthermore, the figure makes evident that the majority of employment in the African sample is in the most unproductive sectors, with roughly two-thirds of the labor force in the two sectors with below-average productivity (agriculture and personal services). Based on this figure, it appears that the potential for structural



**Fig. 9.1** Labor productivity gaps in Africa, 2010. (Note: The sector-relative labor productivity and sector share of employment are calculated using the weighted average for the region; the country data is in 2005 purchasing power parity dollars)  
 Source: Diao et al. (2017)

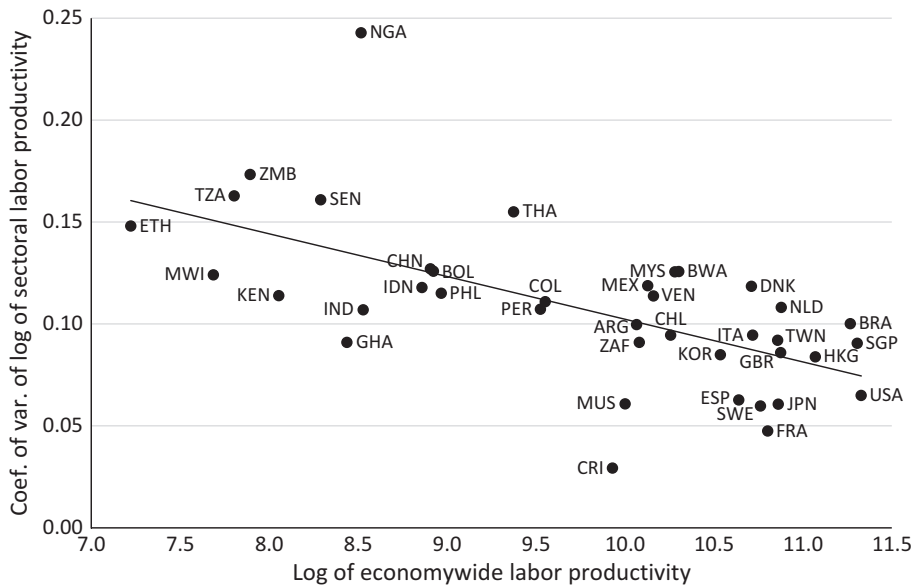
<sup>4</sup>We use Africa in this chapter to refer to the 11 sub-Saharan African countries included in the GGDC Database.

<sup>5</sup>Figure 9.1 excludes government services.

change to contribute to labor productivity growth is still quite large in most African countries.

That productivity gaps in Africa are large is not surprising. It is evident from Table 9.1 that the least productive countries in our sample are in Africa. In previous work (McMillan and Rodrik 2011), we showed that these productivity gaps tend to shrink as countries get richer. We provide updated evidence on this relationship in Fig. 9.2. The coefficient of variation is recorded on the vertical axis and the log of real value added per worker is recorded on the horizontal axis. Not surprisingly, extending the sample to 2010 does not alter our main insight; as countries get richer, the gaps in labor productivity across sectors shrink. The implication is that there is relatively more scope for achieving labor productivity gains in poor countries by moving labor out of agriculture and into other more productive sectors.

The way this process evolves tells us something important about the process of development. McMillan and Rodrik (2011) documented that the productivity gap between the agricultural and nonagricultural sectors of the economy follow a U-shaped relationship. The economic logic behind this relationship is intuitive. In very poor countries with few modern industries, the productiv-



**Fig. 9.2** Sectoral gaps in labor productivity shrink as income rises. (Note: Both economywide and sectoral labor productivities are value added at 2005 constant international PPP divided by total or sectoral employment and it is 2000–2010 average) Source: Authors’ calculations using GGDC data

ity gap between agriculture and the rest of the economy is low. As new activities start to take place in the modern sector, the gap starts to widen and the economy becomes more dual (Kuznets 1955). As labor starts to move from the traditional sector to the modern sector, productivity starts to converge between the two sectors. As noted by McMillan and Rodrik (2011), this story highlights two key dynamics of structural transformation: the rise of new industries (i.e., economic diversification) and the movement of resources from traditional industries to these new industries. Without the first, there is little that propels the economy forward. Without the second, productivity gains do not diffuse in the rest of the economy.

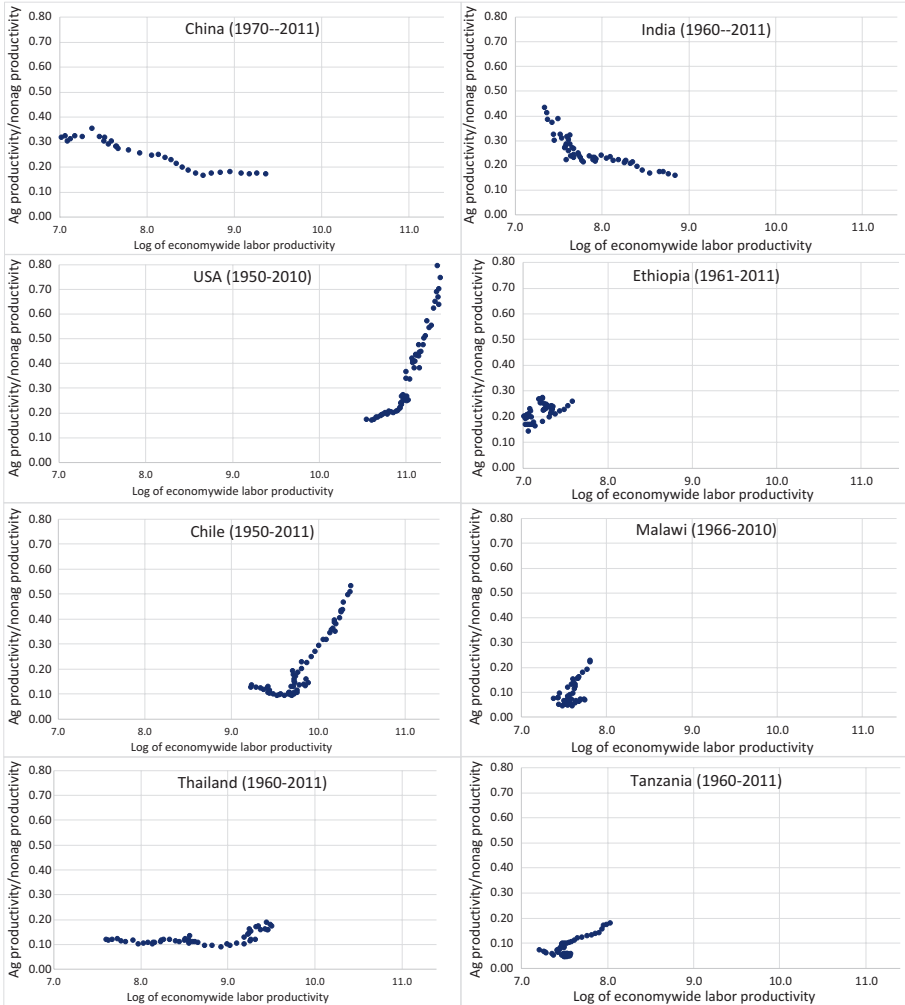
Of course these are broad patterns in the data and our story is about the way things should work if the process of development is on track. If we dig a little bit deeper, we can learn more about how the process of structural change is evolving across countries. To do this, we start with a little bit of algebra that clarifies the forces at work described in the previous paragraph. Let the relative productivity of the agricultural sector (RPA) be defined as follows:

$$RPA = \frac{Lprody_A}{Lprody_N} = \frac{VA_A}{L_A} \bigg/ \frac{VA_N}{L_N} = \frac{VAS_A}{VAS_N} \bigg/ \frac{LS_A}{LS_N} \quad (9.1)$$

where  $VAS_i = \frac{VA_i}{GDP}$  and  $LS_i = \frac{l_i}{l}$  denote shares of value added and employment in sector  $i$  respectively.

What happens to the RPA over the course of development? To understand this, we focus on the last term in Eq. (9.1), which represents the relationship between the sectoral compositions of output and employment: the two inter-related aspects of structural change. The rise of new industries and the associated increase in the value-added share of nonagricultural sectors lowers the numerator, causing the RPA to fall. At the same time however, attracted by new opportunities in the nonagricultural sector, labor exits agriculture and the employment share in agriculture falls, which in turn causes the RPA to rise. Thus, the RPA only falls when the structural changes in the sectoral composition of output outpace the shifts in employment shares. We are more likely to observe this pattern in the early stages of development when productivity growth in the nonagricultural sector is faster than productivity growth in the agricultural sector.

Very few countries in our sample actually fit this pattern, but they are big countries. The first two charts in Fig. 9.3 show that this happened in China and India but for different reasons.<sup>6</sup> In China, very rapid productivity growth in manufacturing occurred alongside structural change. As Wei and Zhang



**Fig. 9.3** Level of economywide labor productivity versus ratio of agricultural and non-agricultural productivity: China and India, United States, Chile and Thailand, and three African countries. (Note: Economywide labor productivity is total value added at 2005 constant international PPP divided by total employment. Agricultural and nonagricultural labor productivity is sectoral value added at 2005 constant PPP USD constant price divided by sector employment)  
 Source: Authors' calculations using GGDC data

<sup>6</sup>The RPA also fell in Nigeria, but this is driven solely by extremely high productivity in the oil sector without any meaningful structural changes.

(2011) have shown, the bulk of this productivity growth was a result of the entry of new private firms into the manufacturing sector. This rapid productivity growth in manufacturing outpaced labor exits from agriculture, thereby lowering the RPA. By contrast, in the case of India, recent rapid productivity growth in the modern services sector (e.g., IT) outpaced shifts in employment shares primarily because such modern services employ relatively few workers and so employment shares did not change all that much.

The more typical pattern in the data for a developing country is a long period (20–40 years) where the counterbalancing forces between changes in the sectoral composition of output and employment shares keep the RPA fairly constant. We show this pattern for Chile and Thailand in Fig. 9.3. In the case of Thailand, the RPA hovered around 0.10 for almost 40 years and it is only in the past ten years or so that it has started to inch upward at a level of economywide labor productivity over 10,000 purchasing power parity (PPP) USD. The pattern is not that different for Chile, although the data for Chile start at a much higher income level. In general, the RPA only starts to increase when shifts in employment from agriculture to nonagriculture become minimal and agricultural labor productivity growth starts to outpace productivity growth in the nonagricultural sector. This pattern can be seen for the United States in Fig. 9.3 and is typical of the developed countries in our sample. But it is also evident in a number of middle-income developing countries in Asia and Latin America.

A different pattern seems to be emerging in a number of poor African countries. We show this pattern for Ethiopia, Malawi and Tanzania in Fig. 9.3. In all three countries, the RPA seems to be trending upward but at very low levels of economywide labor productivity. Since we know that the employment share in agriculture has fallen over time in these three countries, the trend upward in the RPA implies that compositional changes in the structure of output have been slower than shifts in employment shares. In poor countries like Ethiopia, Malawi and Tanzania, we expect labor productivity in the modern sector to grow more rapidly than—or at least at the same rate as—labor productivity in agriculture, counterbalancing the labor reallocation effect. We return to the absence of this countervailing force later in the chapter.

## 2.3 A Formalization of the Two Growth Traditions

While structural dualism is clearly an important feature of developing countries, a complete accounting of labor productivity growth must take into account the fact that labor productivity growth can be achieved in one of two

ways. First, productivity can grow within existing economic activities through capital accumulation or technological change. Second, labor can move from low-productivity to high-productivity activities, increasing overall labor productivity in the economy. Following McMillan and Rodrik (2011), we express these two components of labor productivity growth using the following decomposition:

$$\Delta y^t = \sum_i \theta_i^{t-k} \Delta y_i^t + \sum_i y_i^t \Delta \theta_i^t, \quad (9.2)$$

where  $y^t$  and  $y_i^t$  refer to economywide and sectoral labor productivity levels, respectively, and  $\theta_i^t$  is the share of employment in sector  $i$ . The  $\Delta$  operator denotes the change in productivity or employment shares between  $t-k$  and  $t > k$ . The first term in the decomposition is the weighted sum of productivity growth within individual sectors, where the weights are the employment share of each sector at the beginning of the period. As in McMillan and Rodrik (2011), we call this the “within” component of productivity growth. The second term captures the productivity effect of labor reallocations across different sectors. It is the inner product of productivity levels (at the end of the period), with the change in employment shares across sectors. We call this second term the “structural change” term.

The second term in Eq. (9.2) could be further decomposed into a static and dynamic component of structural change, as in de Vries et al. (2015). We choose not to go that route here because the dynamic component of the structural-change term is often negative and difficult to interpret. For example, when agricultural productivity growth is positive and the labor share in agriculture is falling, the term is negative, even though, on average, the movement of workers out of agriculture to other more productive sectors of the economy makes a positive contribution to structural change and economywide labor productivity growth. Moreover, structural change is, by its very nature, a dynamic phenomenon; thus, we find it counterintuitive to label a part of structural-change static.

The decomposition we use clarifies how partial analyses of productivity performance within individual sectors (for example, manufacturing) can be misleading when there are large differences in labor productivities ( $y_i^t$ ) across economic activities. In particular, a high rate of productivity growth within a sector can have ambiguous implications for overall economic performance if the sector’s share of employment shrinks rather than expands. If the displaced labor ends up in activities with lower productivity, economywide growth will suffer and may even turn negative. This has been an important reason for poor

economywide productivity growth in Latin America, where modern sectors have performed very well, but without expanding their share of the economy's labor force (McMillan and Rodrik 2011).

This decomposition can be used to study broad patterns of structural change within a country and across countries. An example of this type of analysis can be found in McMillan and Rodrik (2011). We provide a brief discussion of growth decomposition methodologies and the method used in this chapter in the [Appendix](#). Individual components of the decomposition such as labor shares and within-sector changes in productivity can also be used at the country level to dig deeper into where structural change is or is not taking place and to gain a deeper understanding of the country-specific factors that drive structural change. For example, if we know that the expansion of manufacturing is a characteristic of structural change in a particular country, we could use more detailed data on manufacturing to pinpoint which specific industries expanded, how many people were employed, and whether specific events or policies contributed to the expansion or contraction of a particular sector. For country-specific analyses of this type, refer to *Structural Change, Fundamentals, and Growth: A Framework and Country Studies* (forthcoming), edited by McMillan, Rodrik and Sepulveda.

### 3 Identification of Growth Accelerations

We use data from the Penn World Tables (PWT) 9.0 to compute annualized growth rates and to identify growth accelerations for the Latin American and African countries included in the GGDC's 10-sector database plus Rwanda. Our definition of a growth acceleration is based on a slightly modified version of the filter applied by Hausmann et al. (2005)—heretofore HPR. Instead of examining annualized growth in gross domestic product (GDP) per capita over an eight-year period, we limit ourselves to a seven-year period since our analysis is primarily focused on recent growth episodes. Thus, we will say that a country has experienced a period of growth acceleration if it satisfies the following three conditions:

$$g_{t,t+n} \geq 3.5 \text{ ppa} \text{ — growth is rapid;} \quad (9.3)$$

$$\Delta g_t = g_{t,t+n} - g_{t-n,t} \geq 2.0 \text{ ppa} \text{ — growth accelerates;} \quad (9.4)$$

$$y_{t+n} \geq \max\{y_i\}, i \leq t \text{ — post – growth output exceeds pre – episode peak;} \quad (9.5)$$

where the relevant time horizon is seven years (i.e.,  $n = 6$ ).

We summarize the timing and nature of these growth accelerations in Table 9.3. We include East Asian countries in this table, most of which had a much earlier growth acceleration, to provide a broad comparative context. Column (1) of Table 9.3 indicates the year in which the growth acceleration started for each country. Columns (2) and (3) show the average annual growth rates in the pre- and post-acceleration periods, respectively. In column (4) we report the difference between the pre- and post-acceleration growth rates. In column (5) we indicate whether post-growth output exceeds the pre-episode peak. In column (6), we report the growth rates following the initial seven years of growth episodes up to 2014.<sup>7</sup>

It is evident from Table 9.3 that most countries satisfy the three conditions in Eqs. (9.3)–(9.5), but there are some exceptions. Rather than dropping countries from the analysis, we modify the filter so as to include most Latin American and African countries in our analysis. For eight countries—four in Latin America and four in Africa—that do not satisfy the first condition in Eq. (9.3), we lower the cutoff to 2.0 ppa. Additionally, in 7 out of 21 countries the level of per capita GDP in the first year of growth acceleration has not yet exceeded the pre-episode peak. We keep these countries and indicate the year in which this happens in column (5) of Table 9.3. The last column of Table 9.3 displays the growth rate after the seven-year growth acceleration and up to 2014, the last year data for which are available in PWT (9.0).<sup>8</sup> Many African countries continue to exhibit rapid growth in this period (the exceptions are Malawi, Senegal and South Africa). This is also true for Latin America where Chile, Colombia, Peru, Bolivia and Costa Rica continued to grow. Finally, in the last row of Table 9.3 we report statistics for India because unlike the rest of Asia, India's growth take-off is relatively recent. It started to pick up speed in 1983 and it has become more rapid in the 1990s and 2000s.

To check the robustness of the results reported in Table 9.3, we use GDP per capita data from the World Development Indicators (WDI) and value added per worker data from the Groningen Growth and Development Center (GGDC). The results of this comparison for Latin American and African countries are reported in Table 9.4. In column (1) we repeat the initial year of the growth acceleration based on the data in Table 9.3. Although not reported

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<sup>7</sup> Post-2014 data from WDI indicate that four of our African countries (MWI, NGA, ZAF and ZMB) have experienced either negative or almost zero growth rates on average during 2015–2016.

<sup>8</sup> Data for per capita GDP in 2015–2016 are available in the WDI. Including 2015–2016 does not change the patterns revealed in the last column of Table 9.3. However, it is true that between 2014 and 2016, the growth rate was lower in some countries and turned negative in Argentina, Brazil, Malawi, Nigeria and South Africa.



**Table 9.3** Episodes of rapid growth and magnitude of accelerations (annual average growth rate)

Country	Initial year of growth acceleration (t)	Growth in pre-acceleration period (t-6, t)	Growth in post-acceleration period (t, t+6)	Difference in pre- & post-acceleration periods	Whether GDP pc in post-acceleration period $\geq$ max in pre-acceleration period	Growth after 7-years' growth acceleration (t+6, 2014)
ARG	1992	-0.54	2.80	3.34	Yes	2.98
BRA	2002	0.50	3.00	2.50	Yes	2.90
CHL	1988	2.66	6.25	3.59	Yes	3.02
COL	2001	-0.79	3.66	4.45	Exceeded in 2003/04	3.19
MEX	1996	-0.12	2.28	2.40	Exceeded in 1997/98	0.92
PER	2002	0.76	5.47	4.71	Yes	4.17
VEN	2001	-1.11	4.20	5.31	Exceeded in 2005/06	-0.18
BOL	2003	0.34	2.93	2.59	Yes	3.77
CRI	2002	2.59	4.76	2.17	Yes	2.60
BWA	1967	3.33	13.35	10.03	Yes	4.74
ETH	2000	1.13	3.71	2.59	Yes	7.95
GHA	1984	-5.23	2.02	7.25	Exceeded in 1999	2.85
KEN	2003	-0.34	2.08	2.42	Exceeded in 2004	3.04
MWI	2002	-1.51	3.60	5.11	Exceeded in 2006	0.35
MUS	1973	1.14	6.31	5.17	Yes	4.10
NGA	2000	0.30	7.61	7.31	Yes	3.21
RWA	2002	3.07	5.73	2.66	Yes	4.46
SEN	1995	-1.65	2.23	3.88	Exceeded in 1999	0.98
ZAF	2001	0.98	3.10	2.12	Yes	0.83
TZA	1998	0.67	3.50	2.83	Yes	3.13
ZMB	2000	0.64	3.77	3.13	Yes	4.60
CHN	1978	1.82	5.59	3.77	Yes	6.61
IDN	1986	3.34	5.85	2.51	Yes	2.83
HKG	1968	4.78	7.20	2.42	Yes	3.86
KOR	1963	-0.04	6.13	6.17	Yes	3.27
MYS	1966	3.63	6.30	2.67	Yes	3.69
SGP	1966	3.00	11.24	8.24	Yes	4.48
THA	1964	5.13	8.51	3.38	Yes	4.55
TWN	1960	3.34	6.17	2.83	Yes	5.88
IND	1983	1.52	3.59	2.07	Yes	4.93

Note: Based on the method in Hausmann et al. (2005)

Source: Authors' calculations using data of PWT (9.0). <http://www.rug.nl/ggdc/productivity/pwt/>

Table 9.4 The annual growth rates for per capita GDP and labor productivity

Country	Initial year of growth acceleration		Seven years in pre-growth acceleration period (t-6, t)			Seven years in post-growth acceleration period (t, t+6)			Differences in pre- and post-growth acceleration periods		
	(t)	(1)	PWT	WDI	GGDC	PWT	WDI	GGDC	PWT	WDI	GGDC
ARG	1992		-0.54	-0.45	-1.33	2.80	2.76	3.40	3.34	3.22	4.73
BRA	2002		0.50	0.48	-0.12	3.00	3.04	1.18	2.50	2.56	1.30
CHL	1988		2.66	3.99	-0.74	6.25	6.25	4.12	3.59	2.25	4.87
COL	2001		-0.79	-0.53	-1.19	3.66	3.66	1.30	4.45	4.20	2.48
MEX	1996		-0.12	0.53	-0.77	2.28	1.57	-0.24	2.40	1.04	0.53
PER	2002		0.76	0.76	-0.97	5.47	5.47	4.47	4.71	4.71	5.44
VEN	2001		-1.11	-1.11	-1.19	4.20	4.20	0.48	5.31	5.31	1.67
BOL	2003		0.34	0.34	-0.14	2.93	2.93	1.55	2.59	2.59	1.69
CRI	2002		2.59	2.59	1.19	4.76	4.76	2.44	2.17	2.17	1.25
BWA	1967		3.33	3.41	0.00	13.35	16.11	11.62	10.03	12.71	11.62
ETH	2000		1.13	1.15	0.58	3.71	3.71	3.33	2.59	2.57	2.74
GHA	1984		-5.23	-5.23	-5.34	2.02	2.02	3.47	7.25	7.25	8.80
KEN	2003		-0.34	-0.43	-0.94	2.08	2.11	1.44	2.42	2.54	2.37
MWI	2002		-1.51	-1.43	0.39	3.60	2.93	2.52	5.11	4.36	2.14
MUS	1973		1.14	N.A.	N.A.	6.31	N.A.	7.84	5.17	N.A.	N.A.
NGA	2000		0.30	0.14	-0.27	7.61	8.71	6.06	7.31	8.57	6.33
SEN	1995		-1.65	-1.50	-0.68	2.23	1.89	1.77	3.88	3.39	2.45
ZAF	2001		0.98	0.22	1.83	3.10	3.23	2.56	2.12	3.01	0.73
TZA	1998		0.67	0.26	0.53	3.50	3.49	3.88	2.83	3.24	3.35
ZMB	2000		0.64	0.64	0.23	3.77	3.77	1.83	3.13	3.13	1.59
IND	1983		1.52	1.35	0.95	3.59	3.26	2.87	2.07	1.91	1.92

Sources: Authors' calculations using data of PWT (9.0), WDI (World Bank 2017) and GGDC (2014). Rwanda is not covered by GGDC. Accessed at <http://www.rug.nl/research/ggdc/data/africa-sector-database>

in Table 9.4, we do find that the two data sources produce identical initial years for the start of the growth acceleration in almost all of the countries while it is off by only one or two years for a few countries. Thus our comparisons are based on the initial year of the acceleration identified using the PWT data. In columns (2)–(4) we report annualized growth rates in the seven years leading up to the growth acceleration based on PWT, WDI and GGDC, and in columns (5)–(7) we report growth rates during the period of the seven-year growth acceleration. In columns (8)–(10) we report the difference in growth rates between the pre- and post-acceleration periods based on the numbers in columns (2)–(7).

The PWT and WDI data show similar growth rates before and during the growth accelerations for all countries except Mexico. For Mexico, the WDI data show a much lower growth rate over the growth episode identified using the PWT (1.57 percent vs. 2.28 percent) and a smaller difference in growth rates between pre- and post-growth acceleration (1.04 percent vs. 2.40 percent). We nevertheless keep Mexico in our sample since in the growth decomposition analysis, the within versus between components may still be informative.

By contrast, a comparison between growth in GDP per capita and growth in value added per worker or labor productivity growth using the GGDC data reveals that labor productivity growth rates are comparable to GDP growth rates, albeit slightly lower. However, Mexico and Venezuela are exceptions. Labor productivity growth in Mexico is negative during the growth acceleration phase while per capita GDP growth rate using PWT and WDI data is positive. And labor productivity growth in Venezuela is much lower than growth in GDP per capita. Overall, however, the differences in labor productivity growth over the two periods are comparable to those of GDP per capita growth. This is important because when we decompose growth into its within and between components, we use the GGDC data.

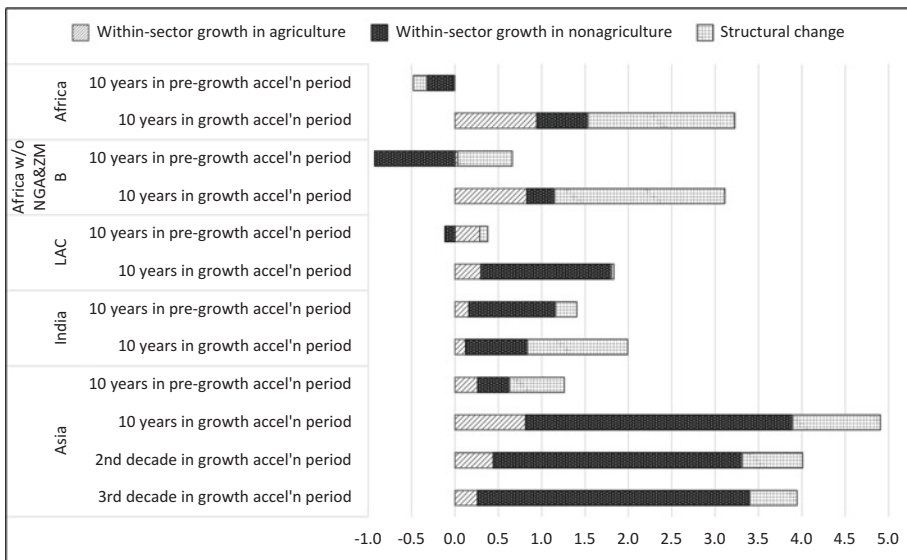
## **4 Structural Change During Growth Accelerations**

### **4.1 Comparing Patterns in Africa and Latin America**

To better understand both the sources and sustainability of the growth accelerations we identified in Sect. 3, we decompose labor productivity growth into its within and between components. We use the GGDC data for this

analysis and the methodology laid out in Sect. 2 for the growth decomposition. We examine both the pre- and post-acceleration periods as defined in Table 9.3. For the purpose of analyzing shifts in patterns of labor productivity growth, we extend the time horizon on either side of the break by three years so that in essence we study the growth decomposition in the ten years leading up to the growth acceleration and in the ten years following the initial year of growth acceleration.

We begin with broad patterns and then dig into country specifics. Figure 9.4 summarizes the growth decompositions by region. We include India as a separate “region” for purposes of comparison. Labor productivity growth is reported along the horizontal axis and ranges from around -1 percent to close to 5 percent when East Asia is included. The bars are coded according to how



**Fig. 9.4** Labor productivity growth within agricultural and nonagricultural sectors and due to structural change (annual average growth rates, percentages). (Note: The initial year of growth accelerations differs across countries. The economywide labor productivity growth equals the sum of growth from within agricultural and nonagricultural sectors and structural change. LAC includes ARG, BRA, CHL, COL, MEX, PER, VEN, BOL and CRI; Africa includes BWA, ETH, GHA, KEN, MWI, MUS, NGA, RWA, SEN, ZAF, TZA and ZMB; and Asia includes CHN, IDN, HKG, KOR, MYS, SGP, THA and TWN. Data for Rwanda are from national sources and only available for the growth acceleration period. Data for before growth acceleration period are not available for HKG, KOR, MYS, SGP and TWN in GGDC. A simple average method is used for each region. Asia average for pre-growth acceleration period is based on CHN, IDN and THA) Source: Authors’ calculations using GGDC data (except for RWA, for which country sources are used)

much of labor productivity growth comes from structural change (in Gantt chart) and how much comes from within-sector labor productivity growth in agriculture (in diagonal lines) and in nonagriculture (in black). We exclude Venezuela from this analysis because its growth was not sustained (see Table 9.3). We also exclude Botswana and Mauritius on the grounds that they do not belong in our group of countries with “late” growth accelerations (see Table 9.3, first column).

Figure 9.4 shows the much higher labor productivity growth during growth acceleration periods in all regions and the low or negative labor productivity growth rates prior to the growth acceleration. This is as expected and is by design. Turning to the growth decomposition, we can see that for Africa, both the within-sector and structural-change components of labor productivity growth are negative prior to the acceleration. In Latin America, prior to the growth acceleration labor productivity growth in the nonagricultural sector is negative and structural change contributes modestly to labor productivity growth.

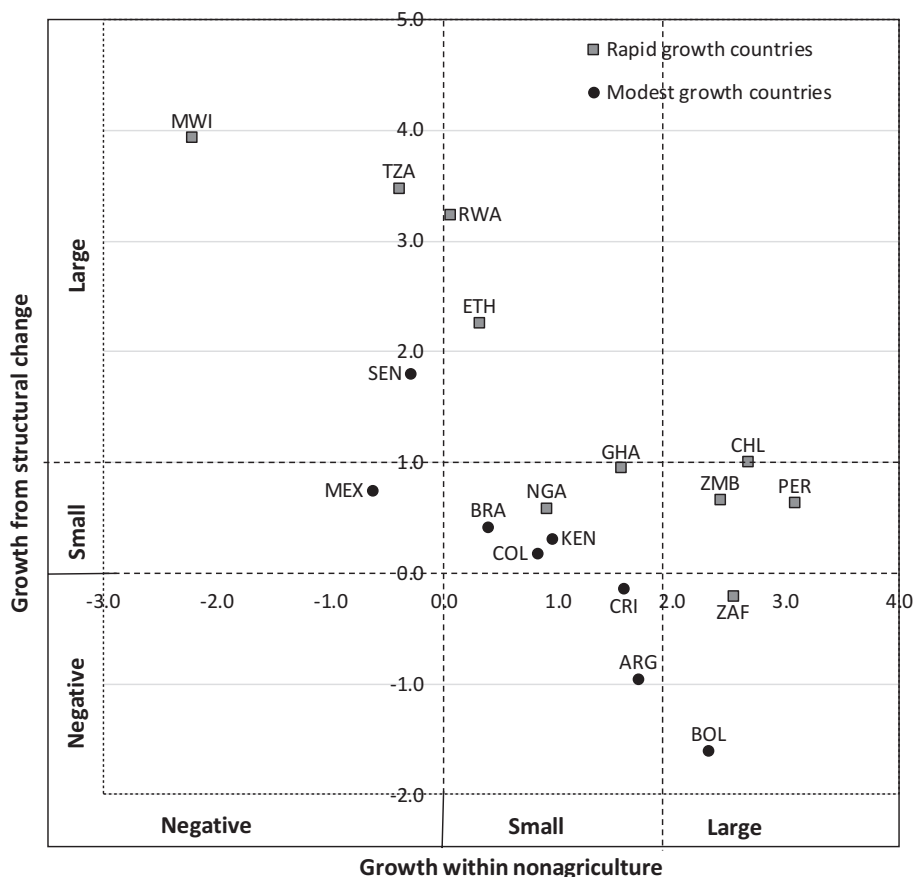
After the growth acceleration, structural change contributes significantly to growth in Africa. This is not surprising since we expect the payoff to structural change to be greatest in poor countries. However, the contribution of within-sector labor productivity growth in the nonagricultural sector is smaller than labor productivity growth in agriculture in Africa during this period, a phenomenon we come back to later in this chapter. For Latin America, Fig. 9.4 shows that during the period of rapid growth, structural change contributes only minimally to growth for the region as a whole. In fact, this component is negative if we focus on nonagriculture only.<sup>9</sup> This finding implies that labor has moved from more productive subsectors to less productive subsectors within nonagriculture during the period of relatively high growth in Latin America. This pattern of deindustrialization accompanied by an expansion in low-productivity services which expand to absorb the workers displaced from the manufacturing sector is discussed at length in Ocampo et al. 2009. India differs from both regions in that the difference between the economywide labor productivity growth rates pre- and post-acceleration is more modest. However, during the relatively high-growth period, India is similar to Latin America in terms of showing strong productivity growth within the nonagricultural sector. But unlike Latin America and like Africa, structural change also contributed significantly to labor productivity growth in India.

Figure 9.5 is a scatter plot of the relationship between within-sector productivity growth (in the nonagricultural sector only, horizontal axis) and the

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<sup>9</sup>The decomposition of structural change into agriculture and nonagriculture was not shown in Fig. 9.4.

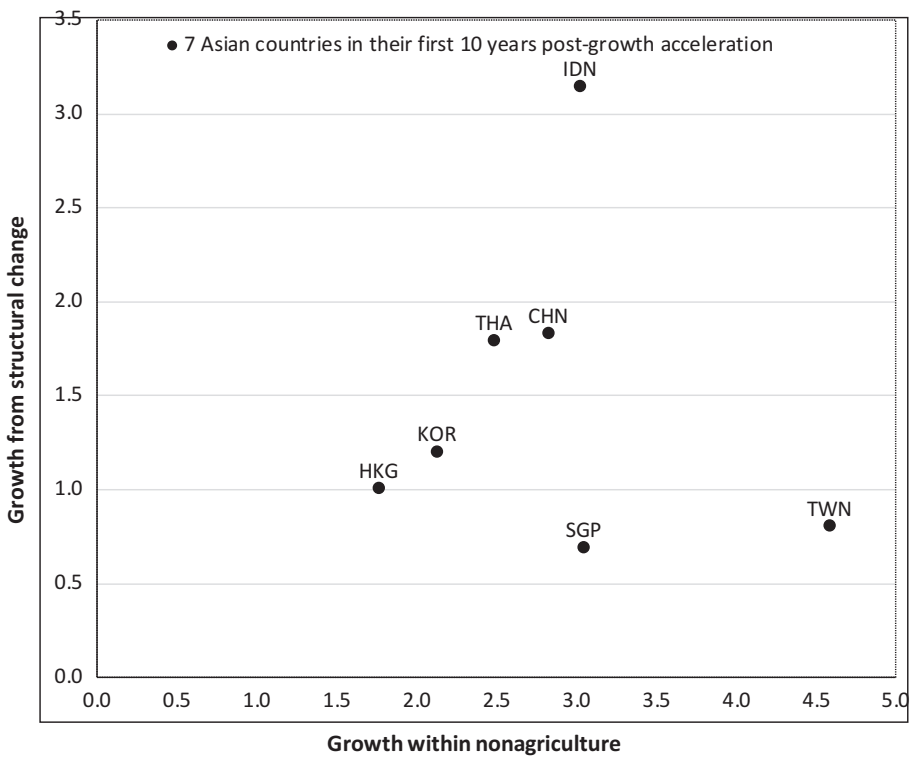
labor productivity growth that arises as a result of structural change (vertical axis). Country details in growth decomposition are reported in Tables 9.9 and 9.10. The most important pattern revealed by Fig. 9.5 is the negative correlation between these two components of overall growth. The correlation implies that changes in the output structure are slower than changes in the



**Fig. 9.5** Patterns of labor productivity growth within nonagricultural sector and from structural change in African and Latin American countries (measured in percentage points of economywide annual labor productivity growth). (Notes: Both x-axis and y-axis are percentages that measure the economywide annual labor productivity growth rate in the ten-year period of growth accelerations. The initial year of growth accelerations differs across countries. Squares are countries with rapid growth acceleration and dots are countries with modest growth, measured by economywide labor productivity growth. The correlation value is  $-0.891$  among the rapid growth countries,  $-0.901$  among the modest growth countries and  $-0.702$  for all countries) Source: Authors' calculations using GGDC data (except for RWA, for which country sources are used)

employment structure across most African countries during the period of growth accelerations. This pattern of growth is intriguing, as it contrasts with the Asian growth experience in which both within-sector labor productivity growth and structural change contributed positively—and strongly—to aggregate labor productivity growth (Fig. 9.6). In other words, the recent high-growth experiences in Africa and Latin America have been based on either high-productivity growth in the modern sectors or shifts in employment from traditional to modern sectors, but rarely both at the same time. We return to this anomaly and possible explanations later in the chapter.

Figure 9.4 hides some of the cross-country heterogeneity. In particular, Chile and Peru, the two Latin American countries with the most rapid economywide labor productivity growth during the period of relatively high growth



**Fig. 9.6** Labor productivity growth within nonagricultural sector and from structural change in seven Asian countries (measured in percentage points of economywide annual labor productivity growth). (Notes: Both x-axis and y-axis are percentages that measure the economywide annual labor productivity growth in the ten-year period of growth accelerations. The initial year of growth accelerations differs across countries) Source: Authors’ calculations using GGDC data

(4.13 percent and 4.03 percent, respectively) are characterized by strong contributions from both the within-sector component of labor productivity growth and the structural-change component. However, for the rest of the countries in Latin America the pattern is similar to the regional average. There is a strong negative correlation between within-sector productivity growth and structural change ( $-0.892$ ) across these countries; this negative correlation disappears when Chile and Peru are added.

For some African countries, the rapid economywide productivity growth is even higher than in Chile and Peru. For example, the economywide labor productivity growth rate is 4.65 percent for Ethiopia, 4.51 percent for Rwanda and 4.23 percent for Tanzania in the period of rapid growth. However, the negative correlation between labor productivity growth within the nonagricultural sector and the labor productivity growth as a result of structural change remains negative even when these three countries are included (correlation coefficient is  $-0.866$  for all the ten African countries and is  $-0.920$  when Ethiopia, Rwanda and Tanzania are excluded).

#### **4.2 Digging Deeper: Strong Structural Change with Weak Nonagricultural Productivity Growth in Africa**

We classify African countries according to the relative contributions of within and between terms (for the nonagricultural sectors only) to economywide labor productivity growth during the period of growth acceleration. We include the following six nonagricultural subsectors in the exercise: manufacturing, construction, trade services, transport services, business services and personal services. We exclude mining, utilities and government services since these are not sectors which can be expected to contribute in a meaningful way to economywide labor productivity growth.

Inspection of the data indicates that we can classify the countries into two groups:

*Group 1: Strong structural change with negative productivity growth in the non-agricultural sector.* The countries in this group are Ethiopia, Malawi, Rwanda, Senegal and Tanzania.

*Group 2: Weak structural change.* Four countries fall into this group and they are Ghana, Kenya, Nigeria and South Africa.



We observe a large negative correlation coefficient ( $-0.680$ ) between productivity growth within these six nonagricultural sectors and their contributions to structural change for the countries in Group 1, indicating the sectors that positively contribute to structural change are often those that experienced declines in within-sector labor productivity. For the countries in Group 2, there exists a weak negative correlation between modest structural change and within-sector labor productivity growth (with coefficient of  $-0.246$ ). Table 9.5 provides the details for the five Group 1 countries. While expansion of manufacturing does contribute overall to these countries' labor productivity growth (the structural-change term), labor productivity growth within manufacturing tends to be either negative or close to zero.

An alternative way of looking at these patterns is to focus on correlations across countries for individual nonagricultural subsectors. This is done in Table 9.6, which shows the correlation between the structural-change term and within-sector productivity growth across different countries, sector by

**Table 9.5** Number of nonagricultural sectors contributing to structural change with and without labor productivity growth within sector (Group 1 countries only)

		# of sectors with positive SC but negative within sector	# of sectors with positive SC & positive within sector	Manufacturing is in SC-1 & its growth contribution (within sector vs. SC, percentage point)	Manufacturing is in SC-2 & its growth contribution (within sector vs. SC, percentage point)
Total SC-led growth, (percentage points)		SC-1	SC-2		
MWI	3.93	5	1	( $-0.23, 0.77$ )	
TZA	3.47	4	2		( $0.02, 0.44$ )
RWA	3.23	4	5	( $-0.12, 0.39$ )	
ETH	2.25	4	1	( $-0.17, 0.36$ )	
SEN	1.80	4	2	( $-0.39, 0.54$ )	

Source: Authors' calculations using GGDC data (except for RWA, for which country sources are used)

**Table 9.6** Correlation across African countries by nonagricultural sector

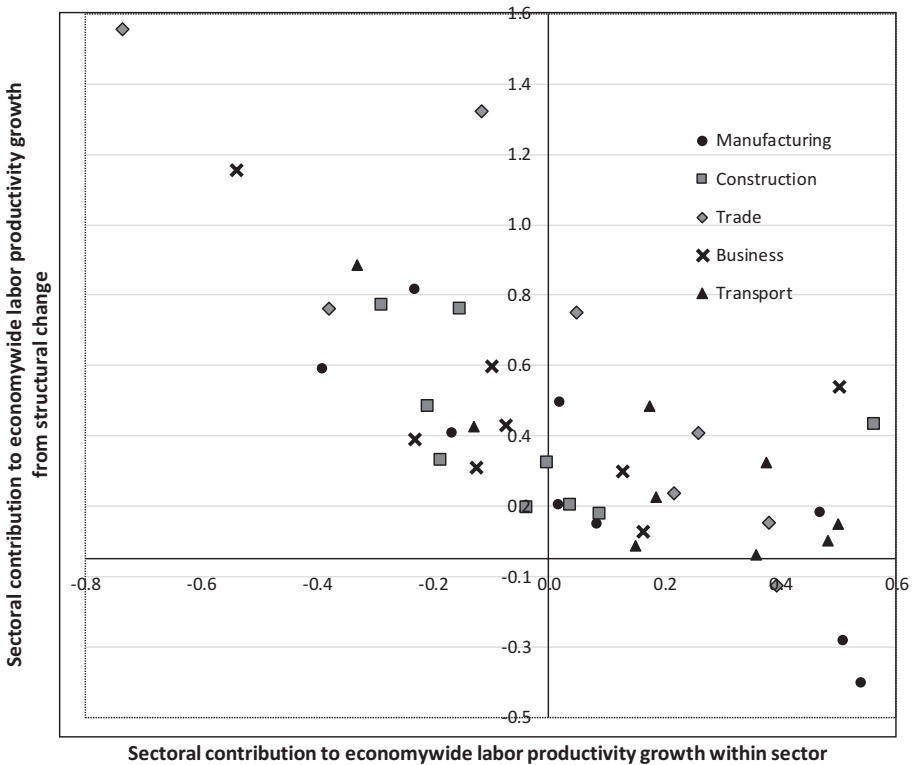
	All countries	Group 1 countries	Group 2 countries
Manufacturing	$-0.878$	$-0.427$	$-0.726$
Construction	$-0.327$	$-0.531$	$0.589$
Trade services	$-0.877$	$-0.673$	$-0.759$
Business services	$-0.568$	$-0.966$	$0.695$
Transport services	$-0.808$	$-0.727$	$0.176$

Source: Authors' calculations using GGDC data (except for RWA, for which country sources are used)

sector. Figure 9.7 displays the relationship in a scatter plot. The preponderance of negative correlations is striking, especially for Group 1 countries. Once again, sectors that contribute strongly to structural change-led growth tend to be the ones that do worse in terms of within-sector productivity growth.

### 4.3 African Versus Asian Patterns of Structural Transformation

For purposes of comparison, we present similar information for seven Asian countries during their first ten years after their initial growth accelerations in



**Fig. 9.7** Labor productivity growth within sector and from structural change across African countries for specific nonagricultural sectors (measured in percentage points of economywide annual labor productivity growth). (Notes: Both x-axis and y-axis are percentages that measure the economywide annual labor productivity growth in the ten-year period of growth accelerations)

Source: Authors' calculations using GGDC data

Fig. 9.8. The countries covered are those included in the GGDC dataset. In contrast to the African countries, Fig. 9.8 shows that the Asian countries exhibit a positive correlation between the within and structural-change components of labor productivity growth for each specific nonagricultural sector. In other words, in Asia well-performing nonagricultural sectors have contributed to economywide productivity growth both by drawing labor from lower productivity sectors and by experiencing rapid productivity improvements.

Could these patterns be due to differences in the timing of growth accelerations? Using the same HPR filter and data from the PWT 9.0, we identify four low-income Asian countries which experienced growth accelerations starting in the 1990s or early 2000s; these are Bangladesh, Cambodia, Lao

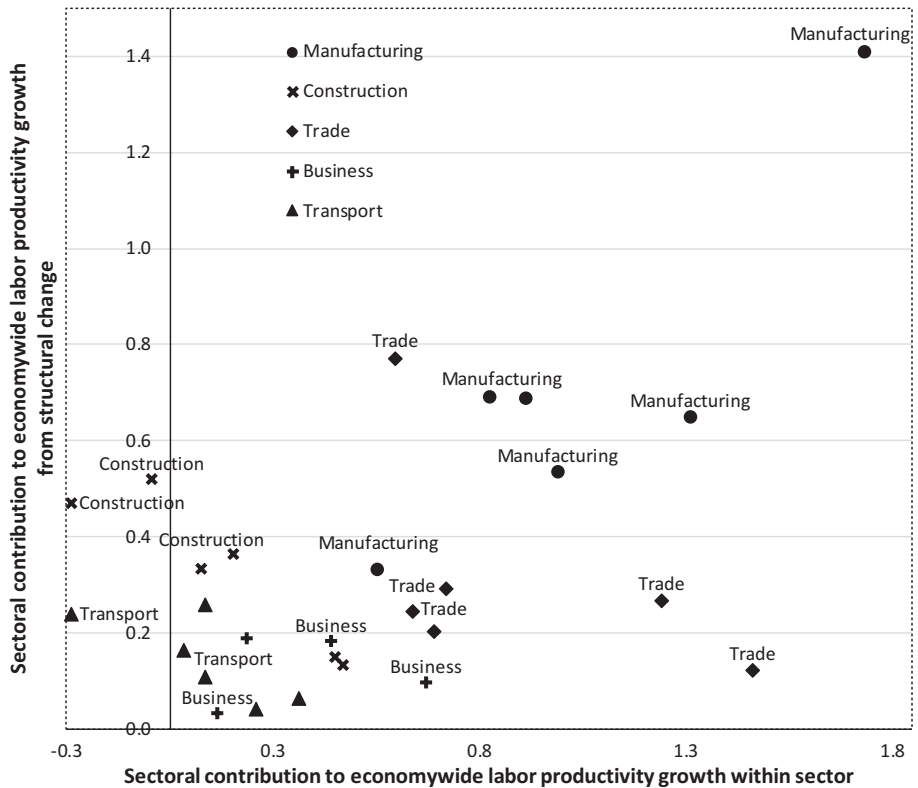
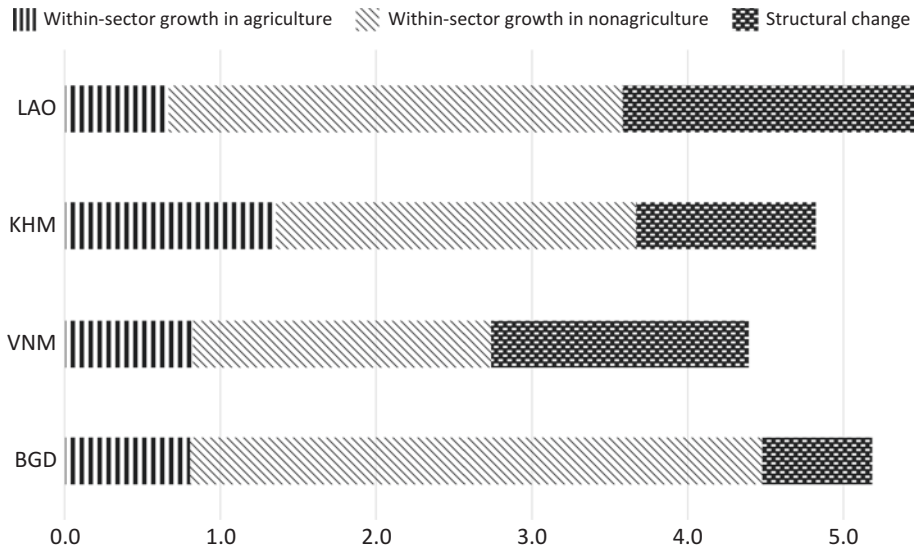


Fig. 9.8 Labor productivity growth within sector and from structural change across seven Asian countries for specific nonagricultural sectors (measured in percentage points of economywide annual labor productivity growth). (Notes: Both x-axis and y-axis are percentages that measure the economywide annual labor productivity growth in the first ten years of growth accelerations)

Source: Authors' calculations using GGDC data

and Vietnam. Since these countries are not included in the GGDC dataset, we instead use value-added data from the United Nations Statistics Division (UNSD) website and employment data from the International Labor Organization (ILO). These data allow us to decompose output and employment among three broad sectors only: agriculture, industry and services. We note that manufacturing tends to dominate employment and value added in these countries so that industry primarily reflects manufacturing and not mining. A second limitation is that the ILO provides sectoral employment data only for the 2003–2014 period. Apart from Bangladesh, all of these countries experienced their growth accelerations during the 1990s. Nevertheless, since growth accelerated and the industrial share of employment continued to increase in the 2000s for all four countries, we rely on 2003–2014 data to examine the patterns during the period of growth acceleration.

The results are shown in Fig. 9.9. In all four countries, the within-sector component of productivity growth in the nonagricultural sector was the largest contributor to overall labor productivity growth, but the structural-change component was also positive and made a substantial contribution in at least three of the four cases. Looking at the role of the specific nonagricultural sectors as we did earlier, we find that with almost no exception, industry and



**Fig. 9.9** Labor productivity growth within agricultural and nonagricultural sectors and due to structural change, four low-income Asian countries (annual percentages). (Note: The period covered is 2003–2014. See text for sources)

services contributed significantly to both the within and structural-change components of labor productivity growth (Fig. 9.10).

The main conclusion we can draw from these numbers is that when structural change contributed significantly to overall growth as it did in all four low-income Asian countries, it was not at the expense of poor productivity performance in the expanding sectors as in Africa. As previously noted, within-sector productivity growth and structural change also went hand in hand in China, Korea and Thailand in Asia, but also in Botswana and Mauritius in Africa.

In the next section, we develop a model that attempts to further explain the intriguing differences between African and Asian countries in the aftermath of growth accelerations. Here we simply note that the Asian comparison does raise concerns about the sustainability of the recent African growth experience. While structural change is strong and has led to rapid productivity

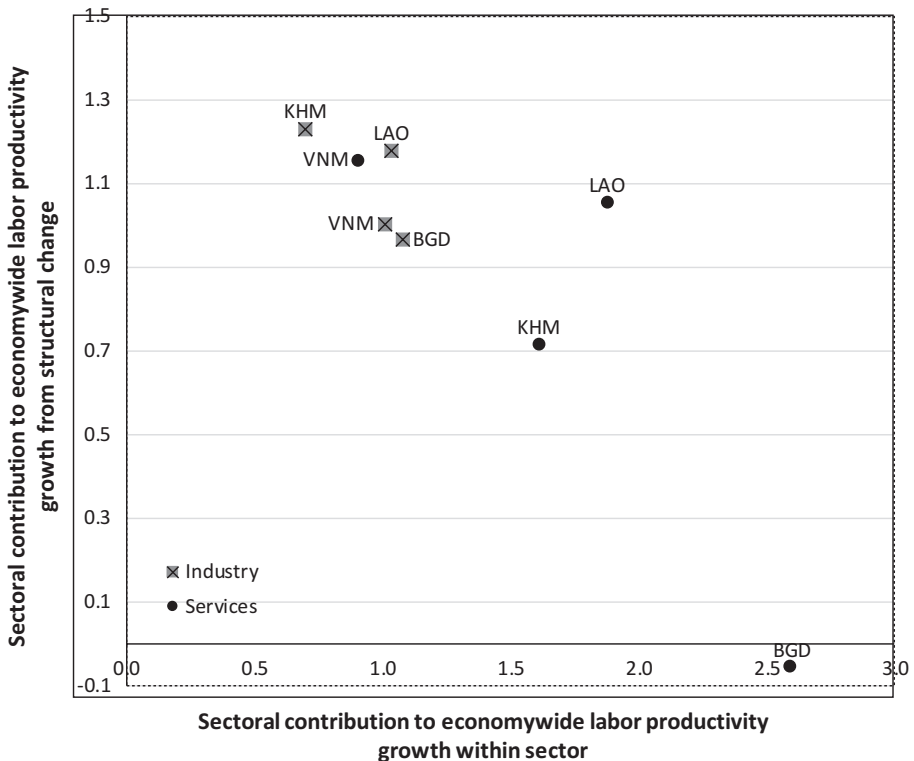


Fig. 9.10 Nonagricultural sectors' contribution to growth accelerations, four low-income Asian countries (annual percentage). (Note: The period covered is 2003–2014. See text for sources)

growth in African countries, it has been accompanied by weak to negative performance in within-sector productivity growth in the nonagricultural sectors of the economy.<sup>10</sup> If this trend were to continue, the gap in labor productivity between high-productivity nonagricultural sectors and the agricultural sector would shrink prematurely, that is, while these countries still remain relatively poor. This would in turn lead to a decline in overall growth potential and limit the role of growth-inducing structural change in the future.

## 5 A Simple Economic Framework

In this section we develop a simple economic model to help us interpret the pattern of correlations we discussed previously. Our focus is on understanding the relationship between various types of demand and supply side shocks, on the one hand, and patterns of structural change and within-sector labor productivity performance, on the other. In particular, what might explain the difference between the Asian pattern and the more recent African pattern? In the former, high-productivity sectors that expanded also experienced high rates of productivity growth, whereas in the latter expanding high-productivity sectors have experienced poor productivity growth.

We will stress that this and other related asymmetries are likely the result of differences in the nature of the shocks driving growth in the two regions. In Asia, it was the expansion of modern sectors (especially manufacturing) that acted as the engine of growth. In the more recent growth accelerations in Africa, the impetus came not from manufacturing or the modern parts of the economy but from positive demand shocks or productivity growth in agriculture.

We divide the economy into traditional and modern sectors, identified by subscripts  $t$  and  $m$ . In terms of the classification we used earlier, agriculture is the main traditional sector, while urban services and manufacturing comprise the modern sector.

Production functions in the two sectors are written as

$$y_t = \theta_t g(1 - l_m)$$

$$y_m = \theta_m f(l_m)$$

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<sup>10</sup>Timmer et al. (2015) have pointed earlier that sectors that expanded their employment shares tended to have productivity growth rates below those of shrinking sectors over the 1990–2010 period. The same point is also made in starker form in the African context in de Vries et al. (2015).

where  $y_t$  and  $y_m$  are the outputs of the two sectors,  $l_m$  is the share of the economy's employment in the modern sectors, and  $f(\cdot)$  and  $g(\cdot)$  are neo-classical production functions with  $f', g' > 0$  and  $f'', g'' < 0$ . The parameters  $\theta_m$  and  $\theta_t$  are shifters that will allow us to do comparative statics for supply side shocks in different parts of the economy. Denoting the relative price of modern goods by  $p$ , aggregate output (GDP) is

$$y = y_t + py_m.$$

We allow total expenditures in the economy to differ from GDP so that we can perform comparative statics also around demand-side shifts. We express total expenditures,  $z$ , as the sum of GDP and an external transfer,  $b$ .

$$z = y + b.$$

On the side of consumer preferences, we posit a Stone-Geary-type utility function so that demand patterns will be non-homothetic between traditional and modern goods. In addition, we assume demand for the modern good is price elastic. If  $\sigma_t$  is the "subsistence" level of the traditional good, expenditure on the modern good is expressed as:

$$pc_m = \gamma(p)(z - \sigma_t),$$

where  $c_m$  is the physical consumption level of the modern good and  $\gamma'(p) < 0$ . Note that the budget share of the modern good increases with total expenditures  $z$ , since  $\frac{pc_m}{z} = \gamma(p)\left(1 - \frac{\sigma_t}{z}\right)$ . In the limit, when  $z$  becomes very large relative to the subsistence consumption  $\sigma_t$ , the budget share of the modern good converges from below to  $\gamma(p)$ . And since  $\gamma'(p) < 0$ , this budget share is also decreasing in the relative price of the modern sector. Demand for the goods produced by the traditional sector is correspondingly written as

$$c_t = \sigma_t + (1 - \gamma(p))(z - \sigma_t).$$

Note that the budget constraint  $c_t + pc_m = z$  is satisfied.

We need to express market-clearing for at least one of the sectors, which we do for the modern one:

$$c_m = y_m + \rho(b)$$

where  $\rho(b)$  is the component of the external transfer that comes in the form of the modern good.

Labor is mobile between the two sectors, but we state labor market equilibrium in a manner that allows for structural misallocation in the economy. In particular, we assume there is a wedge of magnitude  $\varphi > 0$  that prevents the equalization of the value of marginal products of labor in the two sectors. So:

$$p\theta_m f'(l_m) = \theta_t g'(1-l_m) + \varphi.$$

Since the value of the marginal product of labor is higher in the modern sector than in the traditional sector in equilibrium, the economy has too few workers in the modern sector. Structural change in the direction of the modern sector—a movement of workers from the traditional to modern sector—would increase economywide labor productivity.

This completes the description of the formal model. We have a system of eight independent equations that determines the following eight endogenous variables:  $p, l_m, c_m, c_t, y_m, y_t, y$  and  $z$ . We will use this system to perform comparative statics on both demand-side ( $b$ ) and supply side shocks ( $\theta_m, \theta_t$ ).

The equilibrium of the model can be pictured with the help of Fig. 9.11. The horizontal axis represents the size of the labor force, with the two vertices as the origins of the modern and traditional sectors, respectively. The vertical axes measure the value marginal product of labor in the modern (left axis) and traditional (right axis) sectors ( $VMPL_m$  and  $VMPL_t$ ). The downward sloping schedules, from the perspective of each origin, capture the declining physical marginal product of labor as employment increases, holding all else constant. The equilibrium allocation of labor is determined such that  $VMPL_m$  exceeds  $VMPL_t$  exactly by  $\varphi$ , the wedge between productivity in the two sectors. Note that the  $VMPL_m$  schedule is drawn for the equilibrium value of the relative price  $p$ , which is determined with the addition of the demand side of the system.

We begin by analyzing supply side shocks, setting  $b = 0$ . Consider first a positive supply shock to the modern sector that leads the sector to expand on impact. In terms of the model, this corresponds to an increase in  $\theta_m$ . This shifts the  $VMPL_m$  schedule up, as shown in Fig. 9.12. However, this cannot be the end of the story, since the increase in income that is generated in the modern sector has implications for relative prices. On impact, the supply shock raises the supply of modern goods, while leaving the supply of traditional goods unchanged. The resulting income gains will show up as increases in demand for both goods. Consequently, the impact effect of the shock is to create an excess supply of the modern good (and an excess demand for the



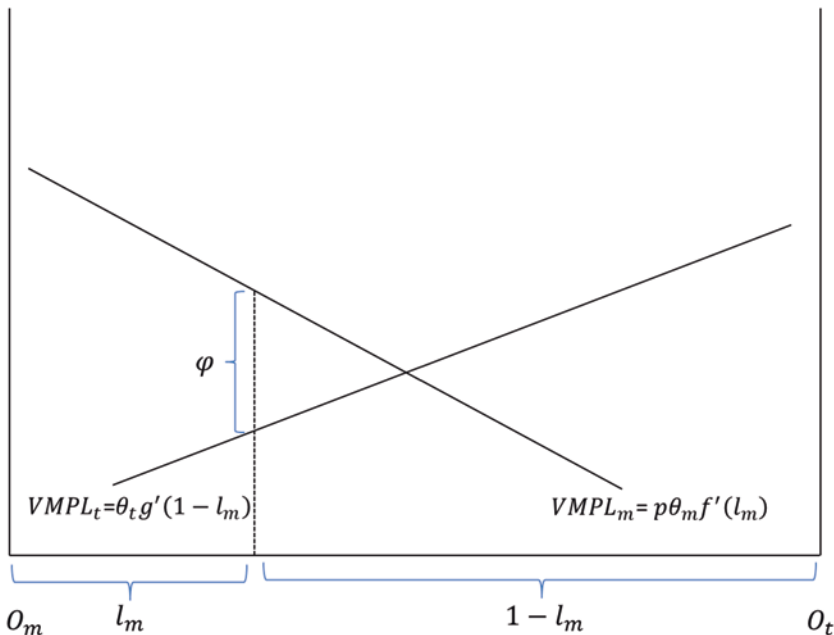


Fig. 9.11 Equilibrium allocation of labor

traditional good). The relative price of the modern good ( $p$ ) will therefore have to decline.

The magnitude of the decline depends on preferences. Given our assumption of price elastic demand for the modern good, the decline in  $p$  has to be smaller in proportional terms than the increase in  $\theta_m$ . To see why, assume, counterfactually, that the decline was proportionally identical, so that the  $VMPL_m$  schedule returned to its original, pre-shock position (i.e., that  $\frac{dp}{p} = -\frac{d\theta_m}{\theta_m}$ ). Since the fall in  $p$  exactly offsets the rise in  $y_m$ ,

there would be no income effect on the composition of expenditures (recall that  $z = y = y_t + py_m$ ). However, there would still be an excess demand for the modern good, because price elastic demand implies that the quantity demanded would have risen more than the supply. Hence to reinstate goods-

market equilibrium  $p$  must fall by less (so that  $\left|\frac{dp}{p}\right| < \left|\frac{d\theta_m}{\theta_m}\right|$ ). Consequently, the  $VMPL_m$  schedule shifts only partway back in the final equilibrium (see Fig. 9.15).<sup>11</sup>

<sup>11</sup> The general case, but with homothetic preferences, is derived in a similar model in Dani Rodrik (2016). For the case of non-homothetic preferences, see Kiminori Matsuyama (1992). However, Matsuyama

The result is that the positive supply shock to the modern sector ends up increasing both labor productivity ( $\theta_m f'(l_m)$ ) and employment ( $l_m$ ) in the modern sector (Fig. 9.12). Note further that any increase in total expenditures  $z$  due to the positive productivity shock would reinforce this outcome, as it would lead to greater demand at the margin for the modern sector, and hence expanded employment there. As we discussed in the previous section, this is the canonical East Asian pattern of structural change during the process of economic development.

Next, consider a positive productivity shock in the traditional sector ( $d\theta_t > 0$ ). This shifts the  $VMPL_t$  schedule up (Fig. 9.13). Once again, there will be a relative-price adjustment. The excess supply of the traditional good will drive up the relative price of the modern sector,  $p$ . As regards the direction of change in the equilibrium allocation of labor, what matters is whether the rise in  $p$  is proportionally larger or smaller than the increase in  $\theta_t$ . Our assumptions on preferences pull in conflicting directions in this case. The income effect produces a desired increase in the budget share of the modern

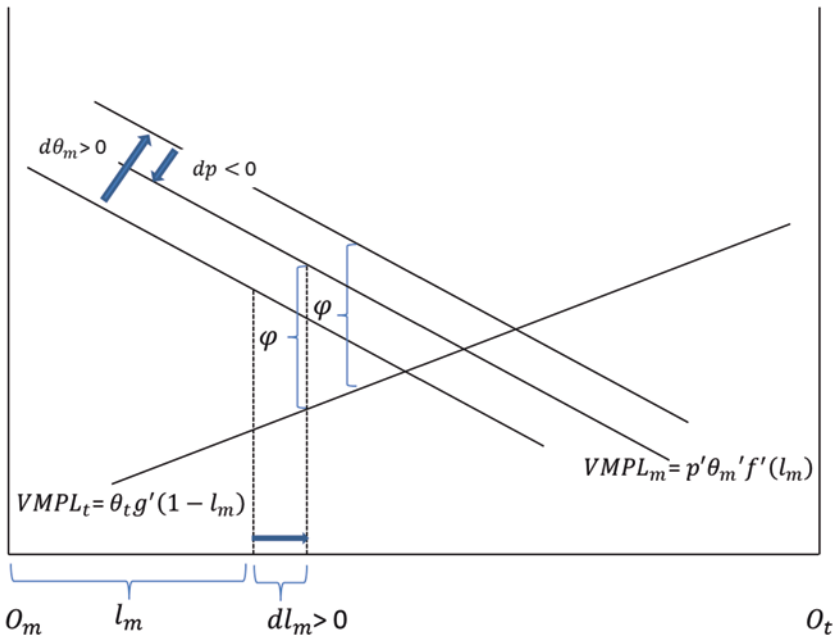


Fig. 9.12 A positive supply shock to modern sector

assumes the price elasticity of demand for manufacturing is unity, which implies that an increase in manufacturing productivity leaves manufacturing employment unchanged. Our assumption of price elastic demand for the modern good produces a different result, as explained in the text.

good, which requires a proportionately larger increase in  $p$ . But the fact that the budget share of the modern good is decreasing in  $p$  pushes it in the opposite direction. We assume here that the income effect dominates (as in Matsuyama 1992), so that  $\frac{dp}{p} > \frac{d\theta_t}{\theta_t}$ .

In terms of our figure, this means there will be a commensurately greater upward shift in the  $VMPL_m$  schedule relative to the  $VMPL_t$  schedule. The result, as shown in Fig. 9.13, is once again an increase in employment in the modern sector,  $l_m$ . However, in this case expansion of the modern sector is accompanied by a decline in labor productivity in the modern sector ( $\theta_m f'(l_m)$ ) because of the declining marginal productivity of labor (and the absence of any increase in  $\theta_m$ ). This outcome is reminiscent of the African model of structural change we discussed previously.

There is reason to believe that developments in African agriculture in particular have been important in driving economic growth there. A large part of total employment (60–80 percent) in low-income African counties remains in the agricultural sector. Even modest growth in agriculture can have a significant demand effect in domestic markets for nonagricultural goods and services. Among the low-income African countries in the GGDC dataset, total within-sector labor productivity growth is mainly explained by agricultural productivity growth in six of the eight countries, and agricultural productivity

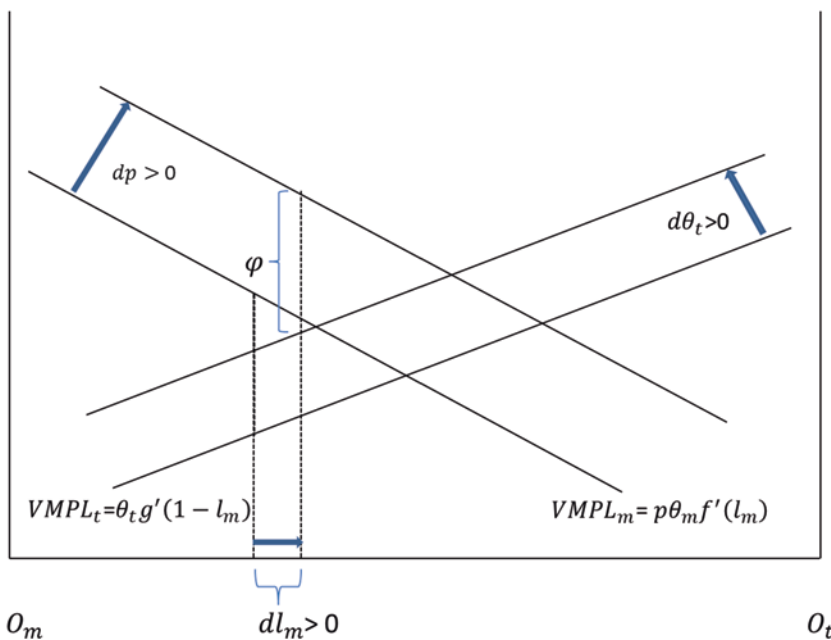


Fig. 9.13 A positive productivity shock in the traditional sector

growth is important in three of the four countries in Group 1 (ETH, TZA and MWI). When income increases among the rural population and it is spent disproportionately on nonagricultural products, this creates a market for small businesses in the informal economy, including micro and small manufacturing firms that can provide import substitutes but at much lower prices (and often with lower quality). Such informal manufacturing operations often have low labor productivity. This explains why modern-sector labor productivity (including in manufacturing) falls with structural change.

Finally, we consider a positive demand-side shock to the economy, in the form an external transfer  $b$ . The relative-price implications of this would depend on the specific composition of the transfer in terms of the modern and traditional goods. We consider a neutral “aggregate demand” shock such that the transfer expands the supply of the two goods available to domestic consumers in equal proportions. Therefore, at the initial relative prices, the expenditure shares of the two goods remain unchanged.

However, since consumers are now richer, their desired budget share of the modern good increases. This implies that the relative price of the modern sector  $p$  must rise. This shifts the  $VMPL_m$  schedule up and induces an increase in modern-sector employment. The equilibrium is as shown in Fig. 9.14. In the new equilibrium, labor productivity in the modern sector falls as employ-

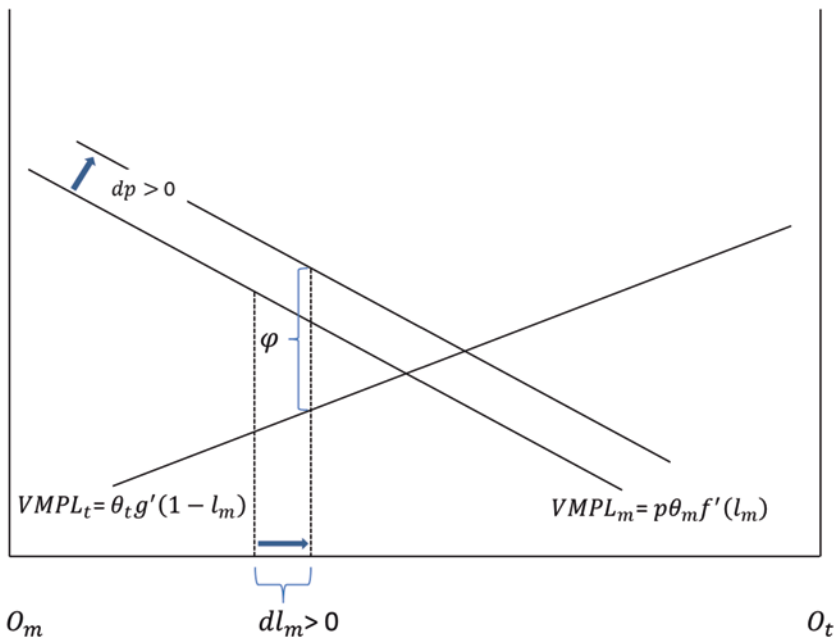


Fig. 9.14 An increase in aggregate “demand”

**Table 9.7** Correlation between changes in relative sector prices and shares of sectoral value added

	Group 1	Group 2	All countries
With manufacturing	0.325	0.080	0.185
Without manufacturing	0.294	0.084	0.168

Source: Authors' calculations using GGDC data

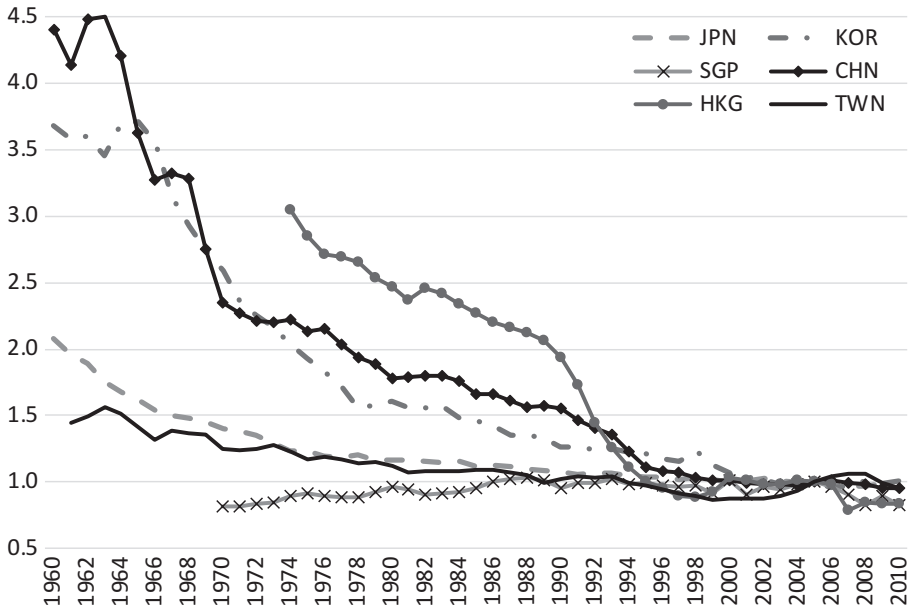
ment expands. This demand-driven pattern of structural change is also in line with the African model.

The shocks that generate Asian versus African patterns of structural change have differing implications for relative prices as well, as sketched out earlier. A positive supply side shock in the modern sector reduces the relative price of the modern sector, while a positive aggregate demand shock or a productivity shock in the traditional sector raises it. When structural change is driven from the demand-side or by productivity increase in the traditional sector, expanding modern sectors will also experience a rise in their relative prices. As Table 9.7 shows, this is broadly consistent with the African experience for countries in Group 1—those that experienced strong structural change with declining within-sector labor productivity in modern sectors.

We also compare the domestic relative prices of manufacturing (the archetypal modern sector) in the Asian and African countries during their high-growth periods. As Fig. 9.15 shows, manufacturing prices in Asia exhibit a very sharp drop relative to economywide prices, especially during the high-growth years of the 1960s and 1970s. The decline is by a factor of 2–4 over a period of three decades. In Africa, by contrast, there is either a much smaller decline or no downward trend at all (Fig. 9.16). During the growth acceleration years, African countries exhibit no fall in manufacturing relative prices. This is consistent with the expansion in African manufacturing (such as it is) being driven mostly by the demand effects of developments originating elsewhere in the economy.

## 6 Concluding Remarks: The Sustainability of Recent Growth Accelerations

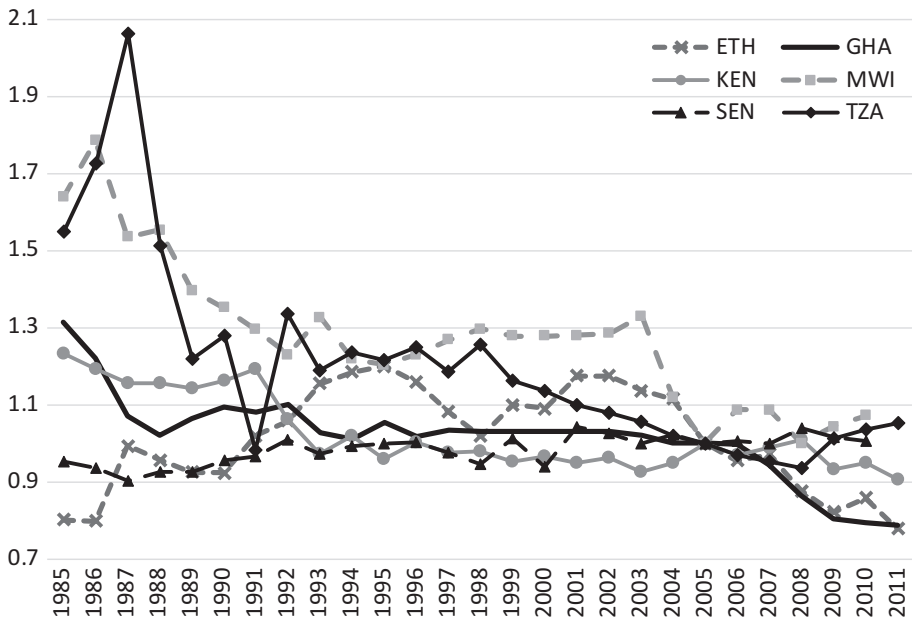
A large number of countries in Latin America and sub-Saharan Africa have experienced growth accelerations beginning in the early 1990s, making the most recent couple of decades a rare period of economic convergence with advanced economies. Yet we know from the history of growth spurts in the developing world that many growth accelerations eventually peter out



**Fig. 9.15** Domestic real prices for manufacturing in Asia. (Note: Implicit price indices are derived by taking the ratio of nominal and constant price value-added series. The manufacturing price is then normalized by the economywide price index)  
Source: Authors' calculations using GGDC data

(Hausmann et al. 2005; Jones and Olken 2008). The present sample includes four countries where, after the initial acceleration, annual labor productivity growth fell below 1 percent (Mexico, Malawi, Senegal and South Africa) and one country where it turned negative (Venezuela). By contrast, growth accelerated early and lasted for three to four decades in Botswana, Ghana, India and Mauritius (see Table 9.3). The latter countries' longer term growth patterns could help us better understand the potential paths of other countries in Africa and Latin America.

We present in Fig. 9.17 the long-term growth patterns in each decade following these four countries' growth take-offs. Their growth accelerations were triggered by different mechanisms: diamond discoveries in Botswana in the mid-1960s; the creation of an export processing zone and the emergence of a labor-intensive manufacturing sector in Mauritius during the early 1970s; and business- and market-friendly reforms that unleashed private sector investment in Ghana and India during the 1980s. Because of these different initial triggers, we are likely to find different patterns of growth across these four countries.

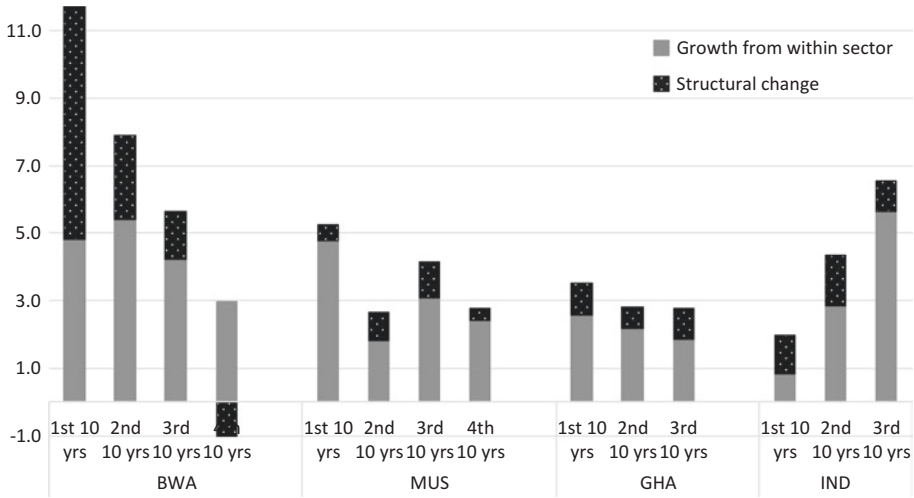


**Fig. 9.16** Domestic real prices for manufacturing in Africa

Source: Same as the previous figure

We summarize the salient features of each country's experience in Table 9.8, paying particular attention to the roles of within-sector labor productivity growth and structural change. One thing that Table 9.8 makes clear is the importance of robust within-sector productivity growth. In all four countries, within-sector labor productivity growth makes a positive contribution to labor productivity growth in the early years and becomes increasingly important as time goes on. By contrast, structural change plays an important role in the early years and becomes less important over time. This is as expected: we pointed out in Sect. 2 the diminishing importance of inter-sectoral labor reallocation over the course of development, as structural productivity gaps diminish.

In addition, we can see from Table 9.8 that the manufacturing sector has not always contributed a significant growth impetus. Mauritius followed the East Asian path and industrialization figured prominently in economywide labor productivity growth, especially during the first two decades when structural change also played an important role. The share of manufacturing employment peaked at more than 30 percent of total employment in the late 1980s. Botswana, on the other hand, never established a sizable manufacturing sector. In Ghana, manufacturing contributed to within-sector



**Fig. 9.17** Sustained growth in four countries in each post-growth acceleration decade (annual percentage)  
 Source: Authors' calculations using GGDC data

labor productivity growth and exhibited modest increases in employment in the early years of the country's growth acceleration. But in subsequent periods manufacturing's employment share has remained stagnant. Ghana's labor productivity growth has been balanced across sectors, making it difficult to identify a leading sector.

As in Ghana, the share of manufacturing employment in India has stagnated at around 12 percent. Manufacturing did contribute to labor productivity growth through structural change, although within-sector labor productivity growth has been the main driver of growth in India. Over a period of nearly 30 years, India's manufacturing employment share increased by a mere 2 percentage points. Overall labor productivity growth in India was modest during the first decade of the growth acceleration, but it accelerated in the following decades. Meanwhile, agriculture's share of employment fell by 16 percentage points, as employment in service sectors grew. In terms of broad patterns of structural change, Ghana and India are quite similar, although India has experienced much higher within-sector labor productivity growth in recent years.

The growth experiences that raise the greatest concern with respect to sustainability are those that exhibit stagnant or declining within-sector labor productivity in the modern sectors, as in many of our African cases. As the experience with sustained growth we have just summarized indicates, productivity growth in the modern sectors is the sine qua non of longer term development.



**Table 9.8** Summary of three early growth African countries plus India

	Botswana	Mauritius	Ghana	India
Per capita GDP growth rate in 7 years prior to growth acceleration	3.33	1.14	-5.23	1.52
Triggers of growth accelerations	Discovery of diamonds	Development of labor-intensive manufacturing	Reforms associated with crisis	Reforms out of stagnant growth
The most important sectors contributing to growth accelerations in the early years	Mining, construction, private and public services	Manufacturing and public services	Hard to identify	Hard to identify
Impact of structural change in the early years post-growth accelerations	+ and strong	+	+	+
Impact of structural change in the later years post-growth accelerations	-	+ but smaller than the early years	+ and similar to the early years	+ but smaller than the early years
Impact of labor productivity growth within sector in the early years after growth accelerations	+ and strong	+ and strong	+ and strong	+ and similar to structural change
Impact of labor productivity growth within sector in later years	+ and strong	+ and strong	+ and strong	+ and strong

Source: Based on authors' calculations/assessment using GGDC data

This is not to belittle the significance of rapid productivity growth in agriculture, the archetypal traditional sector. Our model suggests agriculture has played a key role in Africa not only on its own account but also as a driver of growth-increasing structural change. Diversification into non-traditional products and adoption of new production techniques can transform agriculture into a modern activity in part. But there are limits to how far this process can carry the economy. In part because of the low-income elasticity of demand

for agricultural products, a movement of labor out of agriculture is an inevitable outcome during the process of development. The labor that is released has to be absorbed in modern activities. And if productivity is not growing in these modern sectors, economywide growth ultimately will stall. This is so on account of both the within and structural-change components. The contribution that the structural-change component can make is necessarily self-limiting if the modern sector does not experience rapid productivity growth on its own.

It is possible of course that the increase in demand for modern-sector goods would lead to capital accumulation and technology adoption in modern services, setting off a process of productivity growth. Perhaps this will eventually happen in Africa. But it does not show up in the data so far.

None of this is to suggest that low-income African countries cannot sustain moderate rates of productivity growth, on the back of steady improvements in human capital and governance. In view of the prospects for advanced economies, continued convergence seems quite achievable. But the recent exceptional growth rates engineered with the help of rapid growth-promoting structural change may well be out of reach.

**Acknowledgments** We acknowledge Peixun Fang for excellent research assistance. Diao and McMillan gratefully acknowledge the support of the CGIAR's research program Policies, Institutions and Markets (PIM) led by the International Food Policy Research Institute. We also thank Jose Antonio Ocampo for helpful comments.

## Appendix: Methodological Notes on Growth Decompositions

Equation (9.2) in Sect. 2 indicates that the growth decomposition is an accounting exercise which can have various economic interpretations. Besides Eq. (9.2), there are a few different ways to decompose economywide labor productivity. In general, we are facing three sets of choices: (1) which weights to use, (2) whether to use annual data or simply period end points and (3) how to annualize the growth rates. While aggregate labor productivity growth rates are little affected by these choices, they could influence the magnitude of labor productivity growth rates within sector and from structural change. The difference in results among the three choices disappears only in the limit where the length of a period is infinitely short.

The following discussion explains how different choices could possibly affect the magnitude of growth in both the within and between components

of the growth decomposition. A few examples based on the GGDC data are also provided. We then explain our preferred methodology for decomposing labor productivity growth into its within and between components.

Equation (9.6) is a starting point that describes a change in economywide labor productivity in a given period of  $(t-k, t)$  with  $k$  years:

$$y^t - y^{t-k} = \Delta y^t = \sum_i y_i^t \theta_i^t - \sum_i y_i^{t-k} \theta_i^{t-k} \tag{9.6}$$

where  $y^t$  and  $y^{t-k}$  are economywide labor productivity at time  $t$  and  $t-k$  respectively,  $y_i^t$  and  $y_i^{t-k}$  are sector  $i$ 's labor productivity at  $t$  and  $t-k$ ,  $\theta_i^t = \frac{L_i^t}{L^t}$  and  $\theta_i^{t-k} = \frac{L_i^{t-k}}{L^{t-k}}$  are share of labor ( $L$ ) employed in sector  $i$  at  $t$  and  $t-k$ , and  $t > k$ .

By rearranging (9.6), we can express the growth decomposition as

$$\Delta y^t = \sum_i \theta_i^{t-k} \Delta y_i^t + \sum_i y_i^t \Delta \theta_i^t \tag{9.7}$$

or

$$\Delta y^t = \sum_i \theta_i^t \Delta y_i^t + \sum_i y_i^{t-k} \Delta \theta_i^t \tag{9.8}$$

where  $\Delta y_i^t = y_i^t - y_i^{t-k}$  and  $\Delta \theta_i^t = \theta_i^t - \theta_i^{t-k}$ . Equation (9.7) is identical to Eq. (9.2) in Sect. 2 and is the version of the decomposition most commonly used in the literature (as in McMillan and Rodrik 2011, and de Vries et al. 2015).

In (9.7), weights in the “within term” are sectors’ labor shares at the beginning of the period (start-point weight) and weights in the “between term” are sectors’ labor productivity at the end of the period (end-point weight). In (9.8), weights are the opposite of those in (9.7), that is, the within term uses end-point weights and the between term uses start-point weights. Both  $\Delta y_i^t$  and  $\Delta \theta_i^t$  can be positive or negative for a given sector, while  $\sum \Delta \theta_i^t = 0$ .

Assuming  $\Delta y_i^t \neq 0$  and  $\Delta \theta_i^t \neq 0$ , for a given sector  $i$ , there are four possibilities for combined  $\Delta y_i^t$  and  $\Delta \theta_i^t$  with different signs, that is, (a)  $\Delta y_i^t > 0$  &  $\Delta \theta_i^t < 0$ , (b)  $\Delta y_i^t > 0$  &  $\Delta \theta_i^t > 0$ , (c)  $\Delta y_i^t < 0$  &  $\Delta \theta_i^t > 0$ , and (d)  $\Delta y_i^t < 0$  &  $\Delta \theta_i^t < 0$ . Under different situations, the choice of the weights affects the

magnitudes of the two components at the sector level. We consider each case below.

*Case (a):*  $y_i^t > y_i^{t-k}$  and  $\theta_i^t < \theta_i^{t-k}$ . This is commonly seen for  $i =$  agriculture among developing countries.

In this case, sector  $i$  positively contributes to within-sector growth and negatively contributes to growth from structural change. Moreover, since  $\theta_i^{t-k} \Delta y_i^t > \theta_i^t \Delta y_i^t$  and  $|y_i^t \Delta \theta_i^t| > |y_i^{t-k} \Delta \theta_i^t|$ , compared to Eq. (9.8), Eq. (9.7) could overstate the contribution of sector  $i$ 's (agricultural) within-sector productivity growth and hence also overstate the negative contribution of this sector to structural change.

*Case (b):*  $y_i^t > y_i^{t-k}$  and  $\theta_i^t > \theta_i^{t-k}$ . This is commonly seen among East Asian countries for  $i =$  manufacturing.

In this case,  $\theta_i^{t-k} \Delta y_i^t < \theta_i^t \Delta y_i^t$  and  $y_i^t \Delta \theta_i^t > y_i^{t-k} \Delta \theta_i^t$ . Compared to Eq. (9.8), Eq. (9.7) could understate the contribution of sector  $i$ 's (manufacturing) within-sector productivity growth and overstate the contribution of this sector to structural change.

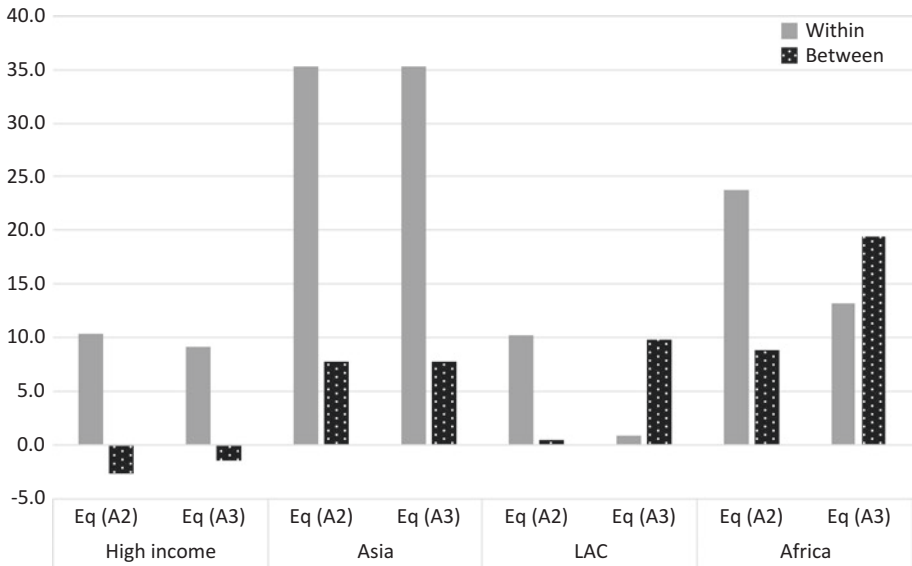
*Case (c):*  $y_i^t < y_i^{t-k}$  and  $\theta_i^t > \theta_i^{t-k}$ . We have seen this in this chapter in the case of African countries for many nonagricultural sectors.

In this case,  $\Delta y_i^t < 0$ ,  $|\theta_i^{t-k} \Delta y_i^t| < |\theta_i^t \Delta y_i^t|$ , but  $y_i^t \Delta \theta_i^t < y_i^{t-k} \Delta \theta_i^t$ , which implies that Eq. (9.7) could understate both the negative contribution of sector  $i$  to within-sector productivity changes and its positive contribution from structural change in comparison with Eq. (9.8).

*Case (d):*  $y_i^t < y_i^{t-k}$  and  $\theta_i^t < \theta_i^{t-k}$ , which is a rare case, but we do see it in Hong Kong for the construction sector for the period 1990–2010 in the GGDC data.

Because both  $\Delta y_i^t < 0$  and  $\Delta \theta_i^t < 0$ ,  $|\theta_i^{t-k} \Delta y_i^t| > |\theta_i^t \Delta y_i^t|$  and  $|y_i^t \Delta \theta_i^t| < |y_i^{t-k} \Delta \theta_i^t|$ , Eq. (9.7) could overstate sector  $i$ 's negative contribution within sector and understate the negative contribution to structural change in comparison with Eq. (9.8).

The discussion of these four cases is for individual sectors. There is never a situation where all sectors of a country follow a single case, and thus, combined



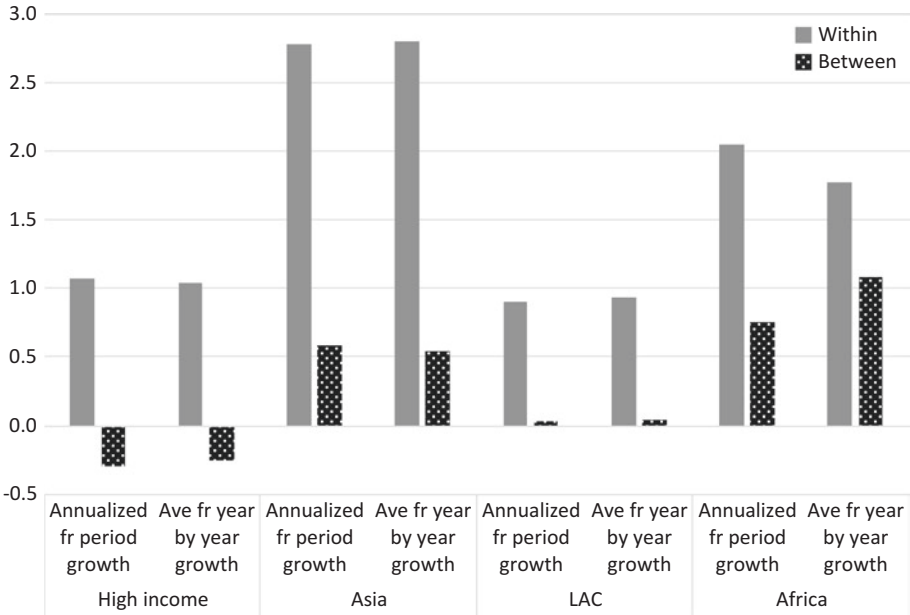
**Fig. 9.18** Comparison of two methods in Eqs. (9.7) and (9.8) for labor productivity growth in 2000–2010 (percentages)

Source: Authors' calculations using GGDC data

effects across sectors often produce ambiguity. In general, there is less concern for which equation should be used when productivity gaps across sectors are small or changes in employment structure over time are modest. In the examples shown in Fig. 9.18, however, it is clear that the choice between these two equations affects the decomposition in the African and Latin American country groups significantly, while there is little effect for the high-income country group or for Asian countries.

We have checked the robustness of the main findings discussed in the body of the chapter by comparing them with the results when we use Eq. (9.8) instead of Eq. (9.7). As expected, we get a somewhat different quantitative decomposition into the between and within terms. But we still have a negative correlation between the magnitudes of the within and between terms. In addition, Latin America's growth acceleration is due overwhelmingly to the improvement in the within terms, while Africa's is due to the between terms, as discussed.

The second and third choices related to the growth decomposition exercise are whether we just calculate changes in labor productivity growth within sector and from structural change in a given period (e.g., over ten years) as shown in Eq. (9.7) or (9.8), or whether we compute their annual growth rates. Reporting annual growth rates in labor productivity growth



**Fig. 9.19** Comparison of different approaches to annualize labor productivity growth rate in 2000–2010 (percentages). (Note: Equation (9.2) is used in both approaches)  
 Source: Authors’ calculations using GGDC data

within sector and from structural change has the advantage that we can relate these to annual growth rates in GDP as we do in Table 9.4 of this chapter. A commonly used method is to first get the changes in within and between terms across sectors over an entire period, and then annualize them to get an average annual growth rate. This method is used by McMillan and Rodrik (2011) and de Vries et al. (2015). One advantage of this method is that we only need value added and employment data across sectors at two data points (two years). The disadvantage is that when time series data are available, this method simply ignores all the data between the initial and end points in a growth decomposition analysis. Again, when sectoral labor productivity and shares of employment do not fluctuate over time and follow a monotonic trend in growth (a trend either up or down) during the period in question, different methods of annualizing matter little. Indeed, we do not see much difference for the two different methods of annualizing the data for the high-income and Asian country groups, but there are some differences for African countries (Fig. 9.19).

In this chapter, we focus on recent growth accelerations in African and Latin American countries. Therefore, we decided to use a year-by-year calculation using the weights defined in Eq. (9.7) but to calculate each year's growth rate for the within and between components at sector level across countries as follows:

$$g_y^t = \sum_i \theta_i^{t-1} \pi_i^{t-1} g_{y_i}^t + \sum_i \Delta \theta_i^t \pi_i^{t-1} (1 + g_{y_i}^t). \quad (9.9)$$

where  $g_y^t = \frac{\Delta y^t}{y^{t-1}}$ ,  $g_{y_i}^t = \frac{\Delta y_i^t}{y_i^{t-1}}$ , and  $\pi_i^t$  is relative labor productivity for sector  $i$  defined as  $\pi_i^t = \frac{y_i^t}{y^t}$ . We then calculate the average annual growth rates for the within and between terms in a given period (e.g., over ten years) for each sector by taking a simple average as follows:

$$\bar{g}_i^{within} = \frac{1}{10} \sum_{t=10}^{t=1} \theta_i^{t-1} \pi_i^{t-1} g_{y_i}^t$$

and

$$\bar{g}_i^{between} = \frac{1}{10} \sum_{t=10}^{t=1} \Delta \theta_i^t \pi_i^{t-1} (1 + g_{y_i}^t)$$

where  $\bar{g}_i^{within}$  and  $\bar{g}_i^{between}$  are the average labor productivity growth rates of sector  $i$  within sector and from structural change in a given ten-year period, and where both  $\bar{g}_i^{within}$  and  $\bar{g}_i^{between}$  are measured as fractions of the average annual growth rate of economywide labor productivity in this period. Thus, the annual economywide labor productivity growth rate and its two components in this given period are defined as follows:

$$\bar{g} = \sum_i \bar{g}_i^{within} + \sum_i \bar{g}_i^{between} \quad (9.10)$$

Tables 9.9 and 9.10 present  $\bar{g}$ ,  $\sum_i \bar{g}_i^{within}$ , and  $\sum_i \bar{g}_i^{between}$  at the country level, while the details for  $\bar{g}_i^{within}$  and  $\bar{g}_i^{between}$  at the sector level across countries can be obtained from the authors upon request.

**Table 9.9** Labor productivity growth within sector and due to structural change, before and during growth accelerations—LAC, Africa and India (ten years in each period, annual average)

	Labor productivity growth		Within sector		Structural change	
	Before growth acceleration (t-9, t)	Growth acceleration period (t, t+9)	Before growth acceleration (t-9, t)	Growth acceleration period (t, t+9)	Before growth acceleration (t-9, t)	Growth acceleration period (t, t+9)
ARG	-0.66	1.19	-0.46	2.15	-0.21	-0.96
BOL	0.81	1.04	0.71	2.65	0.00	-1.61
BRA	0.94	1.06	0.71	0.65	0.23	0.41
CHL	0.05	4.15	-0.52	3.15	0.57	1.00
COL	-0.19	1.21	0.06	1.04	-0.25	0.17
CRI	0.73	1.78	0.47	1.92	0.26	-0.14
MEX	-0.43	0.20	-1.04	-0.54	0.60	0.74
PER	0.84	4.03	1.32	3.40	-0.48	0.64
ETH	1.22	4.65	-0.44	2.40	1.66	2.25
GHA	-4.13	3.51	-3.15	2.56	-0.98	0.95
KEN	-1.17	1.48	-2.38	1.18	1.21	0.30
MWI	0.88	2.52	-0.62	-1.41	1.49	3.93
NGA	-0.27	4.34	3.49	3.76	-3.75	0.58
RWA		4.51		1.28		3.23
SEN	-1.30	1.56	-1.98	-0.24	0.69	1.80
ZAF	1.75	2.44	1.87	2.65	-0.12	-0.21
TZA	0.89	4.23	0.43	0.76	0.46	3.47
ZMB	-2.18	3.04	-0.17	2.38	-2.01	0.66
LAC average	0.26	1.83	0.17	1.80	0.09	0.03
Africa average	-0.48	3.23	-0.33	1.53	-0.15	1.70
Africa average w/o NGA & ZMB	-0.27	3.11	-0.89	1.15	0.63	1.96
India	1.77	1.99	1.41	0.84	0.36	1.16

Notes: The initial year (t) of growth accelerations differs across countries. The numbers are in percentage points, measured in terms of economywide annual labor productivity growth, that is, the economywide labor productivity growth in the first two columns equals the sum of growth from within-sector versus structural-change terms in columns 3-4 and columns 5-6. Data for Rwanda are from national sources and are only available for the growth acceleration period. A simple average method is used for the regional average

Source: Authors' calculations using GGDC data



**Table 9.10** Labor productivity growth within sector and due to structural change, before and during growth accelerations—Asia (ten years in each period, annual average)

	Structural change											
	Within sector					Structural change						
	Before growth acceleration (t-9, t)	Post-growth acceleration 1st decade (t, t+9)	Post-growth acceleration 2nd decade (t+19, t+29)	Post-growth acceleration 3rd decade (t+19, t+29)	Before growth acceleration (t-9, t)	Post-growth acceleration 1st decade (t, t+9)	Post-growth acceleration 2nd decade (t+19, t+29)	Post-growth acceleration 3rd decade (t+19, t+29)	Before growth acceleration (t-9, t)	Post-growth acceleration 1st decade (t, t+9)	Post-growth acceleration 2nd decade (t+19, t+29)	Post-growth acceleration 3rd decade (t+19, t+29)
CHN	4.19	6.70	6.82	9.17	2.57	4.87	6.12	8.21	1.63	1.83	0.70	0.95
HKG		5.07	4.18	3.07		1.93	3.38	2.48		3.15	0.80	0.59
IDN	1.43	4.51	2.14		-0.59	3.31	1.85		2.03	1.20	0.28	
KOR		3.81	2.77	5.16		2.81	2.33	3.36		1.00	0.44	1.80
MYS		3.51	3.76	2.52		5.87	4.17	2.84		-2.36	-0.40	-0.32
SGP		3.76	3.53	2.06		3.07	3.24	2.16		0.69	0.29	-0.10
THA	4.46	5.10	4.17	4.59	3.03	3.31	1.58	3.37	1.43	1.79	2.58	1.22
TWN		6.78	4.71	5.00		5.97	3.82	4.80		0.81	0.89	0.20
Asia average	1.26	4.91	4.01	3.94	0.63	3.89	3.31	3.40	0.64	1.01	0.70	0.54

Notes: The initial year (t) of growth accelerations differs across countries. The numbers are in percentage points, measured in terms of economywide annual labor productivity growth, that is, the economywide labor productivity growth in the first four columns equals the sum of growth from within sector in columns 5–8 versus structural-change terms in columns 9–12. Data for before growth acceleration period are not available for HKG, KOR, MYS, SGP and TWN in GGDC. The initial year of growth acceleration for IDN is 1986, and data are available only for the first two decades post-growth acceleration in this case. Asia average for before growth acceleration period is based on CHN, IDN and THA. Source: Authors' calculations using GGDC data

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# 10

## Income Inequality in Developing Countries, Past and Present

Rolph van der Hoeven

### 1 Introduction

Data on household income inequality show a rising trend from the early 1990s to the early 2010s<sup>1</sup> in a majority of countries. In a sample of 116 countries, household income inequality, as measured by the Gini index, increased by 9 per cent for the group of high-income<sup>2</sup> countries and by 11 per cent for low and middle-income countries (UNDP 2013). Thus, inequality rose faster in developing countries than in developed countries.

This chapter deals with income inequality in developing countries.<sup>3</sup> It first gives a historical overview on how income inequality has been addressed in developing countries. Section 2 discusses contemporary issues of income inequality, especially in the context of growing globalization. Section 3 pays special attention to the vexed issue of income inequality and economic growth. In order to get a better understanding of income inequality issues and policy solutions thereto, Sect. 4 discusses drivers of income inequality. It distinguishes

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<sup>1</sup> The actual year of the early 1990s and the early 2000s differs by country depending on data availability. In these calculations, the starting years range from 1990 to 1993 and the end years range from 2003 to 2010.

<sup>2</sup> Following UN country income classifications, the high-income group represents developed economies, and the low-income and middle-income (both lower and upper) groups represent developing economies.

<sup>3</sup> For a lucid treatment of global income inequality, see Milanovic (2016).

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between functional income inequality (the distribution between labour and capital income) and various forms of household income distribution as well between exogenous (international) drivers and endogenous (national) drivers of income inequality. Exogenous drivers such as trade and financial globalization as well as technological change are further elaborated. Section 5 gives evidence of growing income inequality under globalization focusing on both factor income inequality and household income inequality. Section 6 concentrates on endogenous drivers of inequality and discusses how national policies can reduce income inequality. Section 7 concludes the chapter.

## 2 Income Distribution Issues in Development Economics: A Brief History

### 2.1 How Distribution Issues Have Been Addressed in Development Economics

In the first two decades after the Second World War, the issue of income inequality within developing countries received little attention. Development economics rather emphasized developing countries catching up with developed countries. For example, the background document to the first Development Decade of the United Nations (UN) (1960–1970), in its discussing poverty, adhered to the idea of economic growth trickling down and was silent on reducing income inequality.<sup>4</sup>

In the early 1970s, however, more and more scholars and activists started to voice concern about growing inequality and enduring poverty, especially those from Latin American countries where progress coincided with high or growing income inequality. The Prebisch report in 1970 advocated therefore a reduction of income inequality in Latin America. It argued also that reducing inequality would not hamper growth and economic progress (Prebisch 1970). It showed that more equal income inequality could lead to a more balanced growth, through which poverty could reduce faster. The International Labour Organization (ILO) carried out, in cooperation with development institutes in developing and developed countries, a number of targeted country analyses on

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<sup>4</sup> *It is true that the General Assembly resolution lays down a precise quantitative target only for the increase in aggregate incomes, and that there is no similar quantitative target for changes in income distribution. We can, however, take it for granted that the 5 per cent growth target established by the resolution also implies that the increment in income thus achieved should be wisely used for the benefit of the poorer sections of the population and should result in a degree of social progress which is at least in "balance" with the rise in aggregate national income (Meier 1971, p. 54).*

employment and inequality and did put the issue of unacceptable high levels of inequality on the international agenda. The ideas gathered by the ILO and by research groups in various countries resulted in 1974 in the publication of *Redistribution from Growth* by the Institute of Development Studies in Sussex, in cooperation with the World Bank (Chenery et al. 1974). This publication documented for several countries growing inequality and emphasized practical redistribution policies. Adelman (1979) brought the idea of redistribution from growth further to *Redistribution Before Growth*, based on successful development patterns in Taiwan and Korea. She argued that redistributing factors of production (land, secondary and higher education, investment capital) before these factors would become scarce in a strong growth phase (and thus commanding higher factor rewards such as wages and prices) would be a superior way to achieve a more equal income distribution during the course of development.

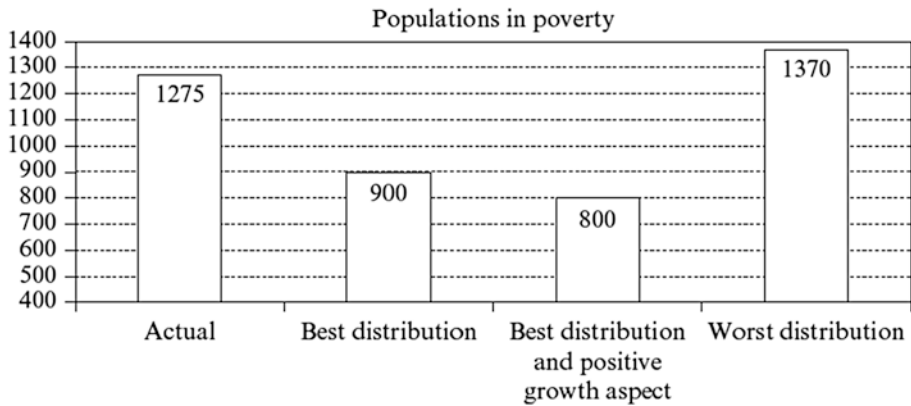
The attention to greater equality in the mid-1970s also led to the so-called basic needs approach to development, partly based on the first five-year development plans in India after independence. It became a focus in various development institutes and international organizations. The logic was as follows: If the satisfaction of basic needs would be a main objective of development, then logically more attention to redistribution is warranted in order to arrive faster at providing basic needs (Hopkins and van der Hoeven 1983). This approach, however, was not entirely accepted. According to some scholars, the basic needs approach focused too much on the poorest developing countries and gave too little attention to international measures to foster national economic growth (van der Hoeven 1988). Basic needs were thus interpreted as a distraction from the 1970s debate on a New International Economic Order (NIEO) that envisaged reforms in the international relations so that developing countries could grow faster. This fear was actually fed by the fact that the World Bank became interested in the basic needs approach; however, more as a social planning instrument without redistributive elements, than as a strategy for large structural changes within countries and between countries.

However, while these discussions were going on, structural adjustment programmes (SAPs) started, especially in the International Financial Institutions to dominate development thinking and financing. After two oil crises in the 1970s and an increase in foreign debt in many developing countries—caused by the abundance of petrodollars on the world market—and after the debt crisis of Mexico in 1982, the World Bank and the International Monetary Fund (IMF) introduced SAPs. Their focus was on budgetary cuts, liberalization of markets and active promotion of exports, aiming at stimulating growth and at strengthening capacity in developing countries to repay debts in foreign currency (Addison 2002). Attention to social problems and domestic income

inequality moved to the background. Late 1980s, however, saw a counter-movement. For critics saw the SAPs, because of their liberal economic policy, became a major cause for increasing inequality and other social problems, especially in those countries that were obliged to take part in the SAP. The criticism of the structural adjustment programmes rose, not only from a social angle but also more and more from an economic angle, as the programmes often did not lead to accelerated growth and reduction in debt. (A special programme for debt forgiveness in poorer countries—heavily indebted poor countries (HIPC)—had to therefore also be set up in the 1990s.) It would take until the middle of the 1990s until more social objectives of development cooperation gained traction again.

In the early 1990s the UN organized a number of World Summits on development issues. Since Cold War issues no longer dominated the discussions in the UN. Amongst these was the Social Summit in Copenhagen in 1995 (World Summit for Social Development), which dealt with the problems of, and gave policy recommendations for, poverty reduction, employment and social inclusion. The Social Summit contained explicit recommendations for the reduction of political, legal, economic and social factors that promoted or maintained inequality in income.

The results of the renewed attention to social issues led to preparations for the UN Millennium Summit in 2000 and to the subsequent formulation of the Millennium Development Goals (MDGs), in which a 50 per cent reduction of poverty and improving several social targets at the global level were among the eight goals. That attention to national income inequality in that context was warranted can best be underscored by a thought experiment on inequality on raising the question what if all *developing* countries would have in the year 2000 an inequality level, which was the lowest they had seen since the Second World War. It showed that the number of poor people in developing countries in 2000 could have been one-third less if countries would have a level of inequality equal to that what they would have had in the past. A second thought experiment added another fact, namely that a country with moderate inequality would grow faster than a country with greater inequality. Under this second thought experiment the number of poor would have been reduced by almost 40 per cent (Fig. 10.1). *Yet the MDGs did not contain any reference to reducing income inequality.* The Sustainable Development Goals (SDGs) adopted in 2015 do, however, contain goal 10 to reduce income inequality, but as the discussion in Box 10.2 shows, the formulation of goal 10 and the related indicators is found wanting.



**Fig. 10.1** Population in poverty in the year 2000 according to actual and hypothetical best-income distribution scenarios

Source: Compiled from Luebker 2002

At the end of the 1990s, the United Nations University World Institute for Development Economics Research (UNU-WIDER) started a large research programme on inequality, growth, poverty and globalization. Globalization is characterized by greater integration in terms of trade and capital flows, made possible by new technologies but more so by international conventions and agreements that liberalized the rules governing external markets, as explained in the report of the World Commission on the Social Dimensions of Globalization (ILO 2004).

One of the findings of the UNU-WIDER programme was that too high-income inequality hampers a kick off of growth, but also too little inequality, as happened in the former communist countries in Eastern Europe. The project looked first at, what it labelled, the old explanatory factors of inequality (land inequality, poor education, poor infrastructure, urban bias) and found that, while these still explained the *level* of inequality, these could not explain well the *rise* in inequality. The main causes of the *increase* in national income inequality were the liberalization of trade and especially of capital markets, very much associated with globalization, the significantly increased financialization of national economies and of international relations, technological change and the growing limitations of labour market institutions that had led to greater inequality between unskilled and skilled workers (Cornia 2004, Shorrocks and van der Hoeven 2004). Despite these and various other analyses, the MDGs, as mentioned earlier, did not include reducing national income disparity in the targets for poverty reduction, and, for that matter, did not include reducing national inequality in other targets.



In the early years of the twenty-first century, some major developing countries, now more appropriately called ‘emerging countries’, showed strong growth in national income. These countries are *catching up* (Nayyar 2013). Also some poorer countries showed faster growth for the first time. However, income inequality rose in many countries, developing countries, emerging countries and developed countries alike. A number of countries in Latin America showed some decrease in income inequality, but this was not enough to get them out of the leading group of countries with the greatest income inequality in the world.

Halfway through the first decade of the twenty-first century, a large number of reports from, among others, the UN, the World Bank, United Nations Development Programme (UNDP) and ILO appeared which all called for a reduction of rising or high-income inequality, based on extensive research and data collections in this field. The validity of the Kuznets curve (which argued that during a process of development, income inequality would rise and thereafter would decline, and hence there would be no need for special attention) was rejected and valid arguments were put forward that a more equal distribution of income and assets did not have to lead to a decrease in economic growth.

After the 2007–2008 financial crisis, even the more traditional financial and economic circles sounded the alarm bell, fearing that large and rising income inequalities could affect the foundations of the free-market system. Piketty’s book *Capital in the Twenty-First Century* (Piketty 2014) was well received (see also Box 10.1). *Globalization, at least the unrestricted globalization that we see now, and income equality are clearly at odds with each other* (see also Gunther and van der Hoeven 2004; van der Hoeven 2011a, b; Vos 2011; Bourguignon 2015). Research on the effects of the 2007–2008 financial crisis shows that the poorer segments in the developed countries face a triple whammy: they did not profit from globalization, they were hardest hit in terms of unemployment and are now bearing the consequences of fiscal tightening, following the massive stimulus and bank bailouts (Table 10.1). The situation for developing countries though is more complex. The growth path of the emerging developing economies shows similar movements as that of developed countries, but of less intensity, and these economies were thus less affected by the crisis. However, except for some Latin American countries, the growing inequality that was building up or being reinforced is not yet being halted, and also wage shares in most emerging market economies are still declining, with a negative effect on domestic demand. The poorer developing countries, mainly in Africa, were less affected as their banking system was less developed, but still suffered from slower exports proceeds, remittances and lower aid levels.

**Table 10.1** Effects of financial crisis on various socio-economic groups in different country groupings

	Pre crisis	Crisis	Postcrisis stimulus	Postcrisis fiscal austerity
<b>Developed countries</b>				
Capital owners	++	–	++	+
Skilled workers	++	–	+	–
Unskilled workers	–	–	+	–
Excluded	–	0	0	–
<b>Emerging developing countries</b>				
Capital owners	++	+	++	+
Skilled workers	++	–	+	+
Unskilled workers	+	–	+	–
Peasants	–	–	+	–
<b>Poor developing countries</b>				
Capital owners	+	0	+	+
Skilled workers	+	–	+	–
Unskilled workers	–	–	+	–
Peasants	–	0	+	–

Source: Van Bergeijk et al. (2011, p. 13)

### 3 Income Inequality and Growth

Analyses from the 1950s into the 1970s emphasized a possible trade-offs between growth and income distribution. This derived in part from an interpretation, by some labelled as an erroneous, of Kuznets's famous 'inverted-U hypothesis', which postulated that inequality would rise in the initial phases of development, then decline after some crucial level was reached and hence policy action to reduce inequality was unwarranted.<sup>5</sup> Growth theories were cited in support of the hypothesis, such as the Lewis model of "economic development with unlimited supplies of labour" (Lewis 1954).

After a brief period in the 1970s in which some policy attention was given to redistribution without hampering growth, the policy arena became dominated by neoliberalism, in particular the Washington Consensus of the late 1980s. This Consensus held that growth itself would be the vehicle for poverty reduction, to be achieved through 'trickle-down' mechanisms, which themselves were not always clearly specified and with no specific role for income (re) distribution (van der Hoeven and Saget 2004).

Because poverty and inequality have a transitional component, induced by external shocks such as business cycles and price instability, they can be

<sup>5</sup> Kuznets himself never claimed that the decline in inequality that he observed in the later stages of development was 'natural'. On the contrary, the major factor that Kuznets identified as reducing inequality was "legislative interference and political decisions" driven by "the growing political power of the urban lower-income groups" Kuznets (1955). See also Luebker (2007).

affected by short-term macro-policies as well as by long-term growth. Particularly controversial are the possible adverse effects on poverty of the already mentioned SAPs. In response to the controversy over the effects of adjustment on the poor, the World Bank and International Monetary Fund (IMF) proposed 'social safety nets' and 'social funds' in some countries, to target adjustment-induced poverty. These programmes were typically designed for a limited period. An evaluation of social safety nets suggests that these programmes, sometimes financed by multilateral lending, had some positive impact on what might be called 'adjustment losers', but it did not reduce inequality or necessarily reach the poor.<sup>6</sup>

The perceived ineffectiveness of redistributive measures under the Washington Consensus led some to advocate targeting public expenditure to the poor, and judging effectiveness by the accuracy of that targeting. However, the targeting of expenditures in developing countries has been fraught with difficulty. Sen (1995) argued against targeting public spending for a number of reasons: (1) information asymmetries reduce the effectiveness of targeting in the presence of 'cheating', (2) the prospect of losing targeted subsidies may reduce beneficiaries' economic activity, (3) targeting may undermine the poor's self-respect and (4) the sustainability of targeted programmes is doubtful, as the potential beneficiaries are politically weak. To Sen's list, one can add the formidable measurement problem of identifying who qualifies. Targeting public spending is more likely to be effective where the poor form a small proportion of the population, that is, if poverty is not a major problem. For countries in which poverty is widespread, the administrative costs of identification, monitoring and delivery of programmes may outweigh benefits.

In the early 1990s a strand of theory invoked the so-called political economy arguments in relation to inequality and, by implication, poverty (Alesina and Rodrik 1994). This analysis predicted a negative relationship between income inequality and growth on the grounds that higher initial inequality would (1) lead to increased public expenditure because it prompts a demand for redistributive policies and (2) incite political instability that undermines growth. This excursion into political science is nonetheless somewhat dubious. For example, it is not at all clear how a society with the power relationships to generate inequality would, at the same time, produce an underclass with the political clout to force redistributive policies upon a government.

On somewhat firmer analytical ground is the argument that inequality hinders growth through imperfect capital markets to which the poor have limited

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<sup>6</sup> Stewart argues that internally funded and locally designed antipoverty programmes are more effective in reaching the poor than social funds (Stewart 1995).

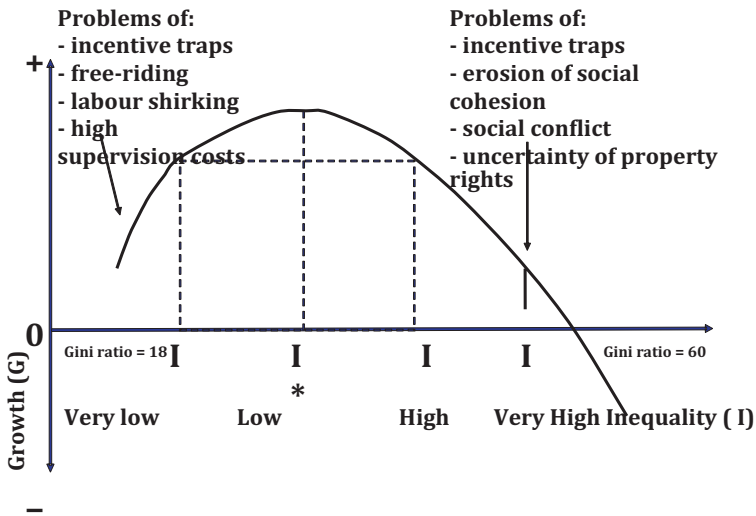
access (Aghion et al. 1999). In other words, if capital markets discriminate against the poor, potentially profitable activities by the poor are constrained by lack of credit. However, the imperfect capital markets argument has practical limitations, in that it presumes the poor to be self-employed or to have the option to become so. While this may apply to a portion of the households in poverty, empirical evidence suggests that during the 1990s those in the lowest income quintile, in Latin America at least and perhaps elsewhere, were increasingly in wage employment. Indeed, the idea that most low-income wage earners could escape poverty through self-employment challenges the imagination as well as historical trends.

Towards the end of the 1990s, a number of studies challenged both the neoliberal analysis and the earlier view of a trade-off between growth and equity (Ferreira 1999; Milanovic 1999; van der Hoeven 2002; Weeks 1997). In particular, doubt fell upon the sanguine view that orthodox macro-policies were, by their nature, inequality- and poverty-reducing. On the one hand, mainstream literature, with its emphasis on the efficiency of markets, tended to view inequality and poverty as accidental or occasional outcomes of a deregulated growth process. On the other hand, the persistence and severity of poverty in many, if not most, developing countries fuelled periodic arguments for their alleviation. The shifts in emphasis in the literature reflect the difficulty of reconciling these two perspectives.

Focusing specifically on the effects of inequality and growth, Cornia (2004) found a distinct non-linear relationship between initial income inequality and economic growth in subsequent periods. Figure 10.2, based on these results, shows that too low inequality is bad for growth (leading to a proclivity for free-riding and high supervision costs), but that too high inequality levels can also have serious negative consequences. Income inequality in most developing countries is in the high range.

Birdsall (2005) therefore argues that income inequality in developing countries affects growth for at least three instrumental reasons:

- Where markets are underdeveloped, inequality inhibits growth through economic mechanisms.
- Where institutions of government are weak, inequality exacerbates problems in creating and maintaining accountable government, increasing the probability of economic and social policies that inhibit growth and poverty reduction.
- Where social institutions are fragile, inequality further discourages the civic and social life that girds the effective collective decision-making necessary for the functioning of healthy societies.



**Fig. 10.2** Inequality and growth

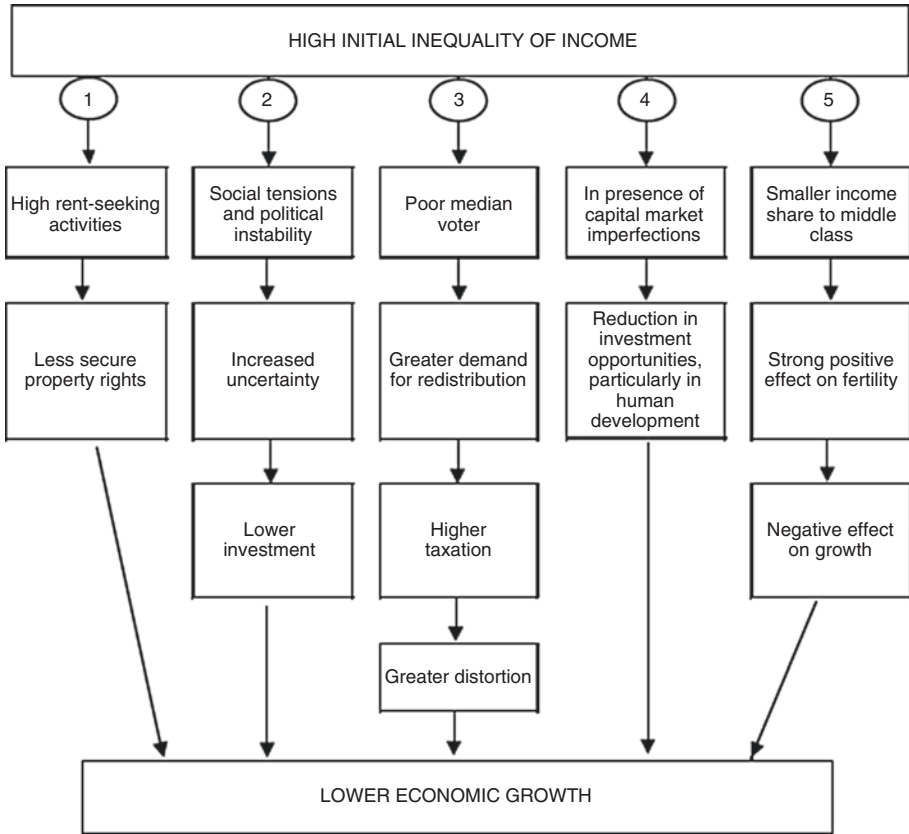
Source: Cornia 2004, p. 45

These and various other arguments why initial high-income inequality might hamper growth are depicted in Fig. 10.3. Niskanen and Thorbecke (2005, 2006) provide a useful discussion.

A recent survey of the literature in a staff note of the IMF (Ostry et al. 2014) concludes that:

the statistical evidence generally supports the view that inequality impedes growth, at least over the medium term. In a sequence that mirrors intellectual fashions on the empirics of growth, researchers have looked at rates of growth over long periods of time (for example, Persson and Tabellini 1996; Perotti 1996; Alesina and Rodrik 1994), the level of income across countries (Easterly 2007), and the duration of growth spells (Berg et al. 2012), and have found that inequality is associated with slower and less durable growth. The few exceptions (Forbes 2000; Banerjee and Duflo 2003) tend to pick up ambiguous short-run correlations. (Aghion et al. 1999; Halter et al. 2010)

The growing consensus is thus that countries with an ‘initial condition’ of relatively egalitarian distribution of assets and income tend to grow faster than countries with high initial inequality. *This is an extremely important conclusion, because it means that reducing inequality strikes a double blow against poverty.* On the one hand, a growth path characterized by greater equality at the margin directly benefits the poor in the short run. On the other hand, the resulting decrease in inequality creates in each period an ‘initial condition’ for a



**Fig. 10.3** High initial income inequality and economic growth: Illustrative causal relation patterns

Source: Niskanen and Thorbecke 2005, Figure 1

future that is growth enhancing. Hence, any growth path that reduces inequality reduces poverty through redistribution and via ‘trickle down’.

As discussed, a nowadays common accepted position is that low-income inequality does not hamper growth, and under reasonable assumptions can even result in higher growth. However, in order to achieve low initial income inequality in a given growth process, a relevant policy question is *whether redistributive measures to achieve low-income inequality have a neutral effect on growth or not*. This has been less clear in the literature. Some authors who argue that low initial income inequality will result in higher growth, base their conclusion just on the observation that high initial income inequality will lead to redistributive measures which will hamper growth (Alesina and Perotti 1996; Alesina and Rodrik 1994). Ostry et al. (2014, p. 10) report however that:

the empirical studies on the relation between redistribution and growth are also somewhat divided. When studies look at presumptive indicators of redistribution (such as taxes or government spending), they tend to suggest that more redistribution is detrimental to growth. On the revenue side, there is surprisingly little evidence that increases in tax rates impede medium-to-long-run economic growth. Overall, it seems hard to improve on the conclusions of Tanzi and Zee (1997), who find some general indication that the relationship between growth and the level of total taxes or of income taxes is negative but that this relationship is not robust and is sensitive to model specification. With respect to spending, Lindert (2004) sees something of a “free lunch” paradox in that some categories of public spending that are redistributive have no apparent adverse impact on growth (for example, spending on health and education, or tax-financed infrastructure spending).

Ostry et al. (2014) on the basis of an extended statistical analysis concludes:

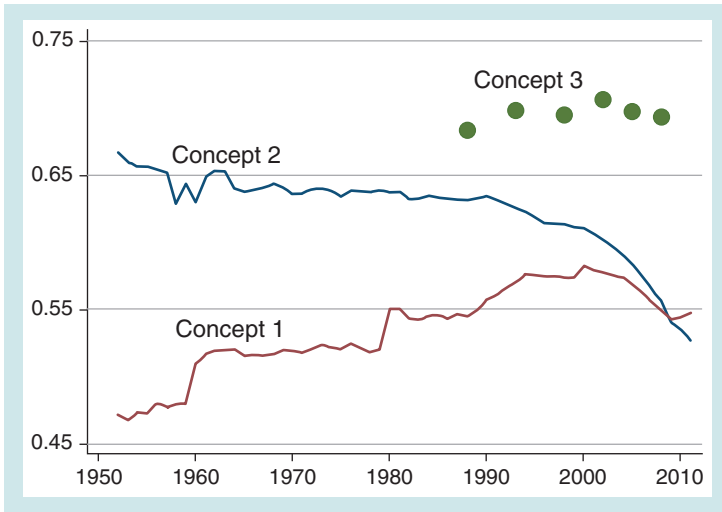
we find no evidence that redistribution is harmful. The data tend to reject the Okun assumption that there is in general a trade-off between redistribution and growth. On the contrary, on average—because with these regressions we are looking only at what happens on average in the sample—redistribution is overall pro-growth, taking into account its effects on inequality. And these results do not seem to depend on the levels of inequality or redistribution. Moreover, they hold even in the restrictive sample, which makes relatively conservative assumptions about which data to include in the regression, as well as in the full sample, which makes use of all available data.

## 4 Drivers of Income Inequality

### 4.1 General

What are the drivers of inequality? In order to answer that question one must first define income inequality more precisely. Until now income inequality within countries was discussed one may say should we not have a more cosmopolitan approach, especially given the strong growth of several emerging economies, and rather look at inequality in the world? Several authors have done so in detail, for example, Milanovic (2012) and van Bergeijk (2013). UNDP (2013) based on Milanovic (2012) has demonstrated what this entails (Fig. 10.4).

If we treat each country as a unit (Concept 1), average incomes across countries have actually become more unequal until 2000 with a slight decline



**Fig. 10.4** Gini index of global income inequality

Source: UNDP 2013, Box 3.1

thereafter. However, if countries are weighted only by the size of the population (Concept 2), incomes across the world become more equal. But if we take incomes of all households individually into account (Concept 3 for which much less data are available), the Gini index of global income inequality is around 0.7, much higher than the level of income inequality found within any individual country. Despite the convergence in world income of some big emerging countries, rising income inequalities within these countries resulted in overall global inequality, declining only slightly after some increase during the globalization era from the mid-1980s to the early 2000s (Milanovic 2012).<sup>7</sup> It remains therefore important to consider national income inequality.

What are the drivers of inequality? In order to answer that question we must first define income inequality more precisely. The classical economists paid attention mainly to the distribution of income between labour and capital, the main factors of production. This type of inequality is therefore called the factor income or functional inequality. The distinction between labour and capital income drove the great classical debates for many years. In the post-Second World War period, however, less attention was given to this type of inequality, as neoclassical production functions often assumed a constant capital share under the assumption that wage increases follow productivity

<sup>7</sup> Bourguignon (2015) arrives at similar high levels. According to his figures, the decline in world inequality started in the 1990s, somewhat earlier than Milanovic indicates. Nayyar (2017) discusses the figures provided by Bourguignon (2015).



increases. Attention shifted to personal income or household income distribution.

One can interpret household income distribution in three ways (van der Hoeven 2011):

- *Primary* income distribution: the distribution of household incomes, consisting of the (sometimes cumulated) different factor incomes in each household, before taxes and subsidies as determined by markets and market institutions.
- *Secondary* income distribution: the distribution of household incomes after deduction of taxes and inclusion of transfer payments (i.e. as determined by fiscal policies).
- *Tertiary* income distribution: the distribution of household incomes when imputed benefits from public expenditure are added to household income after taxes and subsidies. This interpretation of household income is particularly relevant for developing countries as different services and government services are often provided for free or below market prices.

Most policy discussions on inequality though focus on secondary household income distribution (take-home pay, rents, interest earnings and profits after taxes).

Over the last ten years attention is shifting back to factor income distribution.<sup>8</sup> Daudey and Garcia-Penalosa (2007) argue that the distribution of personal or household income depends on three factors: the distribution of labour endowments, the distribution of capital endowments and the way in which aggregate output is shared between the two production factors. The factor distribution of income is a statistically significant determinant of the personal distribution of income<sup>9</sup>: a larger labour share is statistically associated with a lower Gini index of personal incomes. It is therefore important to also (re)consider the factor distribution of income.

The focus on factor income inequality points to the importance of better understanding the changing position of labour in the production process in order to correctly interpret inequality trends, as labour has been losing ground relative to capital over the past 20 years (ILO 2011). Furthermore, experience

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<sup>8</sup>The IMF (Jaumotte and Tytell 2007) investigated the effect of globalization on the labour income share in developed countries as did the OECD (Bessanini and Manfredi 2012), while UNDP (Rodriguez and Jayadev 2010) and ILO (2011) and (2013) carried out several analyses on a broader set of data encompassing all countries in the world.

<sup>9</sup>Other variables used are manufacturing share, GDP per capita, openness, civil liberties and human capital.

has shown that it is not possible to reduce primary household income inequality without addressing how incomes are generated in the production process and how this affects factor income inequality (van der Hoeven 2011). Atkinson (2009) argues convincingly that there are at least three reasons to pay again greater attention to factor income distribution:

- to make a link between incomes at the macroeconomic level (national accounts) and incomes at the level of the household;
- to help understand inequality in the personal distribution of income; and
- to address the social justice concerns with the fairness of different returns to different sources of income.

Glyn (2009) argues that factor income distribution matters to people for at least two reasons. Firstly, despite broader access to capital among households, wealth, and especially high-yielding wealth, is still extremely unevenly distributed (see also Piketty 2014 and Box 10.1). Therefore redistribution from labour to property still has a significant effect in raising household income inequality. Secondly, the fact that profits may be rising much faster than wages conflicts with widely held views of social justice and fairness.

More recently Trapp (2015) has argued that dynamics in the factor income distribution are of particular relevance for developing countries, especially in their effort to fight poverty. Regressive redistribution of factors and their remuneration will be felt strongly in these countries due to weak social safety nets and limited access to capital by the poor. The main asset of the poor certainly is labour. As such, the labour income share can serve as an indicator in designing policies for social protection and tax systems as these usually target the factor income distribution (minimum wage policies, tax concessions for investments, etc.).

It is therefore important to be more explicit about the drivers of factor income distribution, as well as the drivers of primary, secondary and tertiary household income distributions and the relation between these different types of inequality.

There are many drivers that affect the different types of income distribution. One can distinguish between drivers that are largely exogenous (outside the purview of domestic policy) and endogenous drivers (i.e. drivers that are mainly determined by domestic policy). However, a clear line is difficult to draw because even drivers that may at first sight appear to be exogenous or autonomous are often the outcome of policy decisions in the past or the outcome of a domestic political decision to create international institutions (e.g. the creation of World Trade Organization (WTO) to establish trade liberalization or the decision to invest in technical progress). With increased globalization, exogenous drivers gain in importance. As a consequence more

is expected from national policy drivers to counteract the effect of the more exogenous drivers. Table 10.2 shows the interactions between the major drivers and the various types of income distribution.

The crosses in the table indicate where the effects of these various drivers are the strongest. We see that exogenous factors (globalization) affect mainly factor income and primary distribution (upper left quadrant of Table 10.2), while endogenous drivers affect both factor income and various types of household income distributions (lower left- and right-hand quadrants).

Many aspects of globalization can be seen as drivers of income inequality, especially of factor and of primary household income inequality (van der Hoeven 2011). Traditionally, most attention has been given to the effects of trade and trade openness on income inequality, but more recently financialization and technical change (particularly in relation to its effect on wage differentials) have also been the focus of much attention. The impact of these globalization drivers on income inequality depends however also on national macroeconomic and labour market policies, which can either counteract or intensify their effects.

**Table 10.2** Interactions between main drivers and various types of income distribution

Distribution type			Primary	Secondary	Tertiary
Drivers	Factor income distribution	Wage distribution	household income distribution	household income distribution	household income distribution
<b>Exogenous driver</b>					
1. Trade globalization	X	X	X		
2. Financial globalization	X	X	X		
3. Technical change	X	X	X		
<b>Endogenous driver</b>					
4. Macroeconomic policies	X	X	X		
5. Labour market policies	X	X	X	X	
6. Wealth inequality	X	X	X		
7. Fiscal policies: Taxation and transfers	X		X	X	X
8. Government expenditure					X

Source: UNDP (2013, Table 3.8)

## 4.2 Trade Globalization and Investment Liberalization

The leading framework for understanding the possible link between trade and inequality until the 1990s was the Heckscher-Ohlin (HO) model. This model predicts that countries export goods that use intensively the factor with which they are most abundantly supplied and that therefore trade increases the real return to the factor that is relatively abundant in each country, lowering the real return to the other factor. According to the HO model, inequality in developing countries that are well endowed with unskilled labour should have declined with trade as the real returns to unskilled labour rises (Harrison et al. 2011). However, this is contradicted by evidence of rising inequality in developing countries in a period of rapid globalization. An additional problem for the HO theory has been widespread evidence of within-industry increases in demand for skilled workers (UNCTAD 2012).

An alternative—and currently more credited—framework to explain the relation between globalization and inequality trends looks at how technological change increased the demand of skilled workers (Harrison et al. 2011). Other factors that have been cited by economists include changes in labour market institutions, leading to the weakening of labour collective action platforms such as unions and the declining real value of minimum wages; differential access to schooling; and immigration. Most labour and trade economists were sceptical of assigning too great an importance to trade-based explanations for the increase in inequality (Freeman 2004).

Seguino (2007) suggests that investment liberalization, instead of, as frequently assumed, raising living standards, could lead to slower wage growth. Investment liberalization leading to increased firm mobility may be read by workers as a credible threat that firms are able to relocate in the event of unacceptably strong wage demands on the part of labour. The increase in firm bargaining power, even if not acted on via firm relocation, can lead to slower wage growth. This in turn can reduce pressure on firms to innovate or adopt new technologies, leading to slower productivity growth than in an era of regulated foreign direct investment (FDI) flows.

## 4.3 Financial Globalization

One of the reasons explaining that, despite the expectations of declining inequality according to the HO model, inequality in developing countries instead increased, is the fact that trade openness was often combined with capital openness (financial liberalization). According to Taylor (2004), the opening

of the capital account, without compensating national measures, caused the real exchange rate to rise in many countries. This, in turn, shifted aggregate demand towards imports, and led to a restructuring of production, (thus reducing the absorption of unskilled labour), increasing informalization and raising wage inequality. The opening of the capital account is only one of the many (interrelated) aspects of a global process, often called financialization, which also includes various forms of financial deregulation. Developing countries have been especially vulnerable to financial volatility (Ghosh 2011). For instance, financial deregulation in some countries, notably the United States, has had a destabilizing effect on developing countries that otherwise had fairly prudent financial management framework. This is because international capital flows largely respond to the ‘manics’ and ‘panics’ of financial markets, in addition to economic fundamentals (Freeman 2010).

Financialization has had four important effects on the bargaining position of labour. Firstly, as a result of financialization, firms and wealth holders have gained more options for investing. Secondly, they have gained mobility in terms of the geographical location within countries and between countries as well as in terms of the content of investment. Thirdly, financialization has empowered shareholders relative to workers by putting additional constraints on firms to create immediate profits, while the development of a market for corporate control has aligned management’s interest to that of shareholders (Stockhammer 2013). ILO (2008a, b) observes that “financial globalization has led to a depression of the share of wages in GDP”. A fourth mechanism by which financial liberalization has led to slow wage growth is the effect on countries’ monetary policy. Wealth holders fear inflation and thus pressure governments to keep inflation low, often leading to a negative pressure on public sector deficits. Lower public spending further dampens the ability to invest in education. Thus, financial liberalization is intrinsically deflationary, leading to lower employment and wage growth (Epstein and Yeldan 2009). Van der Hoeven and Luebker (2007) argue furthermore that financialization has increased macroeconomic instability in many developing countries with a more than proportional negative effect on the income of poorer workers and a consequent worsening of both functional and primary income inequality.

#### 4.4 Technical Change

Technological change influences the distribution of income through its effect on different factors of production. If technological change results in greater demand for skilled labour (more educated or more experienced) rather than

for unskilled labour by increasing its relative productivity, the skill premium—the ratio of skilled to unskilled wages—might increase, driving at the same time an increase in income inequality (unless compensating measures are taken). Technological change also affects the functional distribution of income by raising the productivity of, and returns to, capital relative to labour. Primary income inequality might increase therefore as capital incomes are less equally distributed and accrue to the upper income deciles of households. A declining labour income share means that that aggregate demand is depressed because income shifts from those with a high propensity to consume to those with a lower propensity to consume (firms and the wealthy). This then leads to a lower employment rate and downward pressure on wages. The growth of wage rates lags behind growth of labour productivity (possibly because of the presence of a large pool of rural surplus labour typical of many developing countries). The pool of surplus labour weakens the bargaining power of labour and depresses wages in the non-agricultural sectors, contributing to declines in the labour income share when globalization and market-oriented reforms lead to rapid growth (ADB 2012).

However, it would be wrong to focus on the skill premium in isolation, as there may well be a race between technological progress, on the one hand, which tends to increase the demand for skilled labour, thereby raising more than proportionally the wages of the skilled labour, and educational attainment on the other, which increases the supply of skilled labour and thereby having a downward effect of the wages of skilled labour (Tinbergen 1975). Goldin and Katz (2008) argued that, following a long period of relatively stable technological progress, rapid progress in information technology and the widespread use of computers in the workplace accelerated the rate of technological change in the 1980s and 1990s. The resulting increase in the demand for skilled labour outpaced educational advances in developed and developing countries alike, causing increases in wage inequality (UNCTAD 2012). However, the theory of a race between technological progress and supply of education rests on two premises, which may not be always fulfilled. The first one is the assumption that the education system can indeed provide the new skills required by technological change. The second one is that the labour market will cause the excess supply of skilled workers to bring their wages down. However, in many countries highly paid interest groups can neutralize downward pressure on their wages arising from labour market dynamics.

Concerns about inequality in developing and transition economies often focus on distributional effects stemming from changing production structures. Such effects are likely to be larger in developing than in developed countries because productivity gaps between different economic sectors, as

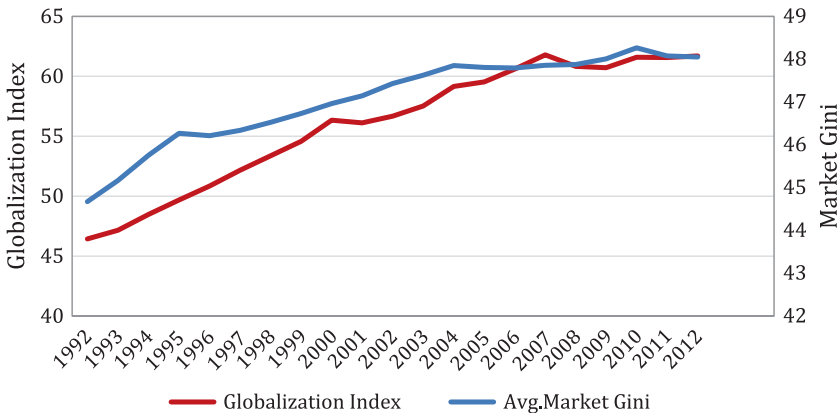
well as among enterprises within the same sector, tend to be much larger in developing countries (McMillan and Rodrik 2011).

## 5 Evidence of Globalization and Income Inequality

### 5.1 General

Evidence of globalization affecting income inequality is provided in Fig. 10.5, where the Gini index of household market income<sup>10</sup> is plotted against the Globalization index<sup>11</sup> for a sample of all countries in the world.

Figure 10.5 shows that the rise in the Gini index coincided with an increase in globalization. An analysis based on a data set from 1992 to 2005 (UNDP 2013) found that this strong correlation for all countries holds also when high-income (developed) and developing countries are considered separately. The correlations between the two indicators in each group are 68 per cent and 67 per cent respectively.



**Fig. 10.5** Income inequality and globalization across the world, 1992–2012  
 Source: SWIID, see Solt (2016), and Globalization Index, see Dreher et al. (2008). Thanks to Sophie van Huellen (SOAS) for analysing these data sources

<sup>10</sup> For the Standardized World Income Inequality Database (SWIID), see Solt (2016)

<sup>11</sup> The Globalization index is the most widely based index of globalization as it combines the major de facto indicators of globalization (trade, FDI stocks, portfolio investment and income payments to foreign nationals) with various de jure indicators (hidden import barriers, the mean tariff rate, taxes on international trade and capital account restrictions). For detailed definitions of index components and weights, see Dreher, Gaston and Martens (2008). <http://globalization.kof.ethz.ch/>

## 5.2 Globalization and Factor Income Inequality

The decline in labour income shares, during a phase of globalization, is not limited to specific sector but is an economy-wide phenomenon. Rodriguez and Jayadev (2010) investigated by means of a large panel data set for 135 developed and developing countries whether the secular decline in labour income shares is due to the decline of the labour income share in particular sectors or whether the decline in labour income share is economy wide. By matching national economy-wide results with results for the labour income share at the three-digit industry level, they conclude that the decline in labour income shares is primarily driven by decreases in intra-sector labour shares as opposed to movements in activity towards sectors with lower labour income shares. *This suggests that the decline in labour shares is driven by economy-wide phenomena and therefore, national policies rather than industry specific policies are needed to reverse it.*

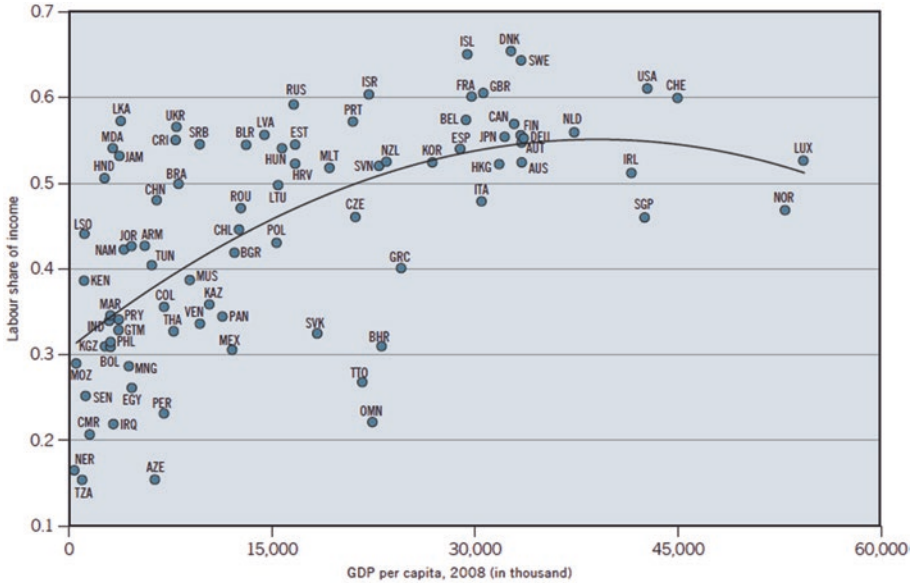
The downward trend of the labour income share is even more pronounced in many emerging and developing countries, with considerable declines in Asia and North Africa and more stable, but still declining, labour income shares in Latin America (ILO 2011). ILO 2013 and Stockhammer 2013 have used an enlarged panel data set encompassing developed, developing and emerging economies to investigate the drivers of declining labour income shares. The average of labour shares in a group of 16 developing and emerging economies, declined from around 62 per cent of gross domestic product (GDP) in the early 1990s to 58 per cent just before the crisis.

These results confirm of Diwan's earlier observation (Diwan 1999) that currency crises are associated with sharp declines in the labour income share, reiterating that the cost of financial instability affects labour disproportionately. More recent analyses (Stockhammer 2013; ILO 2013) find decline of the welfare state and weakening of labour market institutions in addition to financialization, globalization and technical change as drivers of factor income inequality.

The decline of the labour income share in developing countries is more worrying as, according to past patterns of development, the labour income shares in developing countries should actually rise with increasing per capita GDP (Fig. 10.6).

More recent data confirm the trend of a declining labour income share observed before the crisis of 2008. In a recent study, using an augmented data set (distinguishing labour income share in the corporate sector and in the whole economy), Karabarbounis and Neiman (2015) found that the global corporate labour share has exhibited a relatively steady downward trend, from a level of roughly 64 per cent, reaching about 59 per cent at the end of the





Note: The labour share of income is measured as the ratio of compensation of employees to GDP at factor cost in 2008. GDP at factor cost is measured as GDP at market prices, minus the difference between taxes, less subsidies for production and imports.

**Fig. 10.6** The unadjusted labour income share and GDP per capita in 2008  
 Source: ILO 2014, Figure 8.2

period, while labour’s share of the overall economy also declined globally from 58 per cent to 53 per cent.

Trapp (2015) used an original way to determine changes in the labour share in developing countries, by collecting social accounting matrices of a large number of countries to estimate labour income shares in these countries. Her finding confirms the other analyses mentioned earlier of a downward trend of the labour income share in most developing regions (Fig. 10.7). East Asia and the Pacific is the region that experienced the fastest decrease (on average 14 percentage points since 1990), closely followed by Eastern Europe and Central Asia (both about 11 percentage points), and Latin America and the Caribbean (both about 10 percentage points). A considerable decline also occurred in sub-Saharan Africa, where labour income shares fell by 6 percentage points between 1990 and 2011. Exceptions to the downward trend are only visible in South Asia, the Middle East and North Africa, where labour income shares fluctuated, but more or less remained on a stable average level (note that labour income shares in these regions should actually have increased, as mentioned earlier, given the positive growth in GDP in these regions).

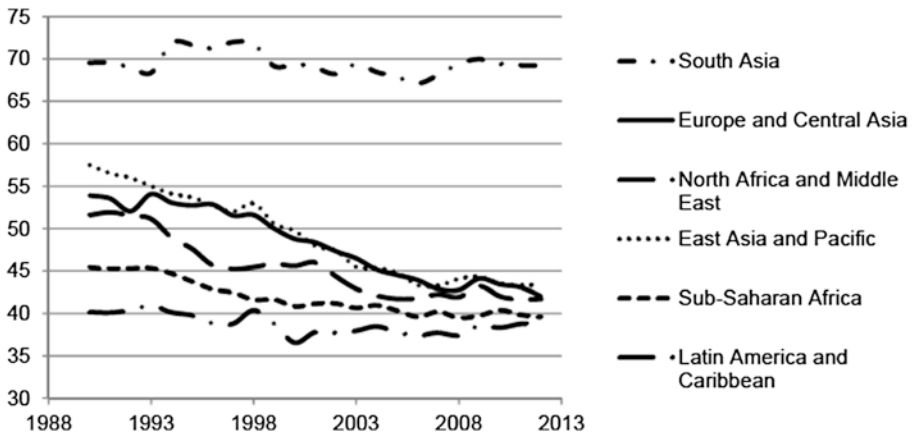


Fig. 10.7 Labour income share by region, 1990–2011  
Source: Trapp 2015, Figure 6

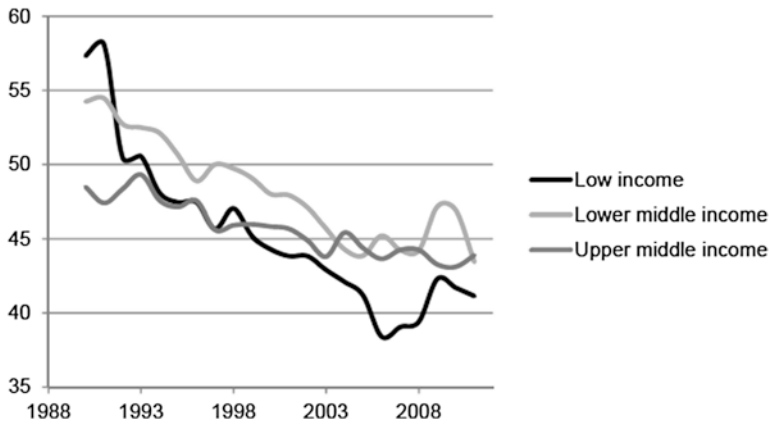


Fig. 10.8 Labour income shares by GDP classification 1990–2011  
Source: Trapp 2015, Figure 7

Looking at different GDP per capita groups (according to World Bank country classifications), one notices that the negative trend occurs in all income groups. However, it is more pronounced in low-income countries, followed by lower middle-income and upper middle-income countries (Fig. 10.8).

The last two sets of analyses range until 2011–2012, that is, they include and well extend beyond the financial crisis and its immediate aftermath. *It is clear from these analyses, that the decline of the labour share has not halted or been reversed after the financial crisis. And also do not attest to the sometimes-heard thesis that the financial crisis did hit capital owners harder than ordinary workers*

*and their families.* We see actually that the share of the top 1 per cent is increasing in almost all developing countries, a consequence of the declining labour share and of greater inequality between wages themselves.

### 5.3 Globalization and Top Incomes

If the labour income of the top 1 per cent of income earners were excluded in the nationwide computation, the decline in the labour income share would probably have been even greater than what we observed in Fig. 10.8. This reflects the sharp increase, especially in English-speaking developed countries, of wage and salaries (including bonuses and exercised stock options) of top executives, who now cohabit with capital owners at the top of the income hierarchy (Atkinson et al. 2011). Data for the share of top incomes in developing countries are scarce, but for 15 developing countries, for which data are available, a similar trend as in developed countries can be observed (Fig. 10.9). For example, the share of the 1 per cent top income group in Colombia reaches 20 per cent, a level similar to that in the United States. It is increasing also for all other countries in the sample, except for Indonesia.

#### Box 10.1 Thomas Piketty: Capital in the Twenty-first Century

Piketty (2014) has engendered a heated discussion about the growing income inequality, and especially that of wealth, in industrialized countries and what to do about it. How important are Piketty's analysis, findings and policy advice for developing countries?

The beginning of Piketty's (2014) discussion gives an analysis of income distribution in the world and he rightly argues that economists must have a more historical and political perspective (p. 574). Very important is also his analysis of the Kuznets curve (p. 13–14). According to this curve, inequality increases in low-income countries, inequality somewhere has a peak at middle-income levels and then decreases at a high-income level. Piketty argues that the decline of inequality in high-income countries, that took place in the years after the Second World War, did not prove at all lawfulness of the Kuznets curve, but was due to special circumstances in developed countries at that time, which are now no longer valid. In developed countries, income inequality rises again. This observation is important for developing and emerging countries. Attention to inequality must always play an important role in poorer countries, as waiting for better times when economic growth takes place is often an illusion.

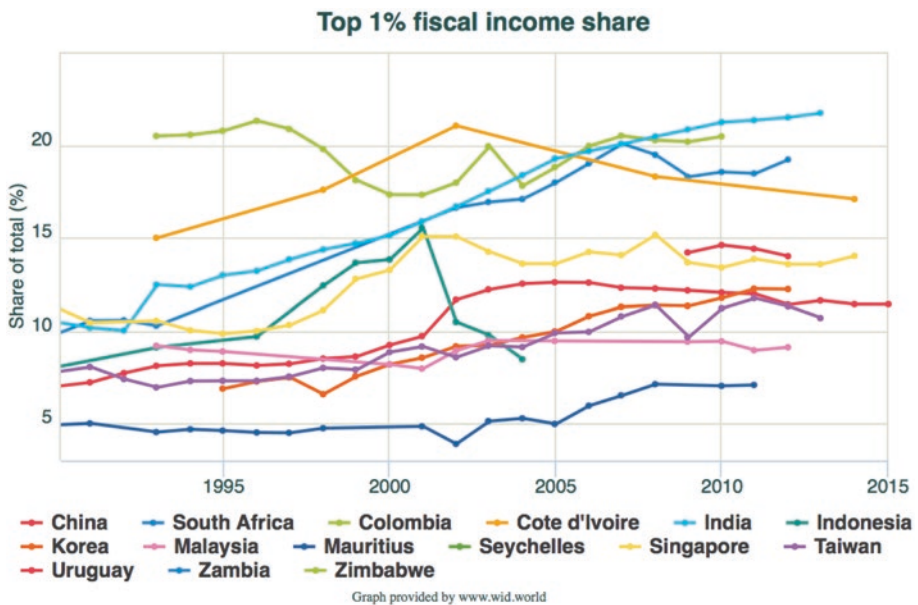
Piketty's analysis rests on two important premises. The first is that the ratio of capital to national income increases. This is the result of two forces: the increase in the return of capital in national income (the so-called capital income quote) and the rapid growth of top income, not only through capital income but also by huge high salaries and bonuses in certain sectors (page 333ff). The second premise of Piketty is that, firstly, the income growth of capital, in contrast to the

assumptions of the neoclassical economists, is greater than the growth of national income (the famous formula  $r > G$ ) and, secondly, that people with more capital, by investing better, in the long run, have higher income from capital than people with little capital. (Thus, a higher  $r$  for the rich than for the poor.)

As for developing countries, we see also a growing share of capital income in national income. It is less clear, though, whether the relationship of return of capital growing faster than GDP has already taken place in developing countries. The growth rate of GDP, even if it is due to population growth, is, with great variations, higher than in developed countries. Piketty himself assumes a current growth rate in developed countries of 1–1.5 per cent and argues that today’s developing and emerging countries will also attain such a growth rate at the middle or end of the twenty-first century. But so far this is not yet the case. Even a decade or two is long for predictions in the rapidly changing world.

Piketty (2017) comments on the situation in developing countries as follows: “The basic structure of inequality is not the same in post-apartheid South Africa, ex-slave societies like Brazil, oil-rich kingdom’s and Islamic republics like in the Middle East, or post-caste societies like India”. Piketty is therefore wary of economic laws explaining inequality and emphasizes societal and political factors.

Piketty’s work implies that developing countries and emerging countries must take stronger measures to counteract current (growing) income inequality (especially the growing income gap between capital and labour income as well as high wage rewards in certain sectors) than only emphasizing higher taxes on capital.



**Fig. 10.9** The incomes of the top 1 per cent (15 developing countries)  
 Source: The World Top Income Database. <http://topincomes.g-mond.parisschoolofeconomics.eu>, Downloaded with permission

## 6 Reducing Income Inequality in Developing Countries

### 6.1 General

Which measures are necessary to stem the growing inequality in developing countries?<sup>12</sup> To answer this question, it is useful to return to Table 10.2 which distinguishes between *exogenous* and *endogenous* drivers of inequality. *Exogenous* drivers of inequality are shaped by international trade and investment agreements as part of an improved system of global governance, giving developing countries more policy space and allowing them to set in motion a process of structural change. *But equally important are the endogenous drivers of inequality.* The literature has shown that domestic policies can have a great effect on inequality (Dagdeviren et al. 2004). National institutions and national policies can play an important role in reducing primary or market outcome inequality. Moreover, the degree of inequality reduction from primary to secondary distribution does not seem to be related to the level of initial primary or market outcome inequality.

*The adverse effect of exogenous drivers, such as financial and trade globalization, on income inequality during the past three decades have been exacerbated by national policies that had a negative impact on income distribution.* Monetary policies that emphasized price stability over growth, labour market policies that weakened bargaining position of labour vis-à-vis employers and fiscal policies that prioritized fiscal consolidation at the expense of benefits and progressive taxation, all contributed to driving income inequality. It is important to point out these exogenous effects on national income distribution and to analyse and propose changes in the international and financial systems to redress this.

Despite the effects of exogenous drivers, national policies (including a strengthening of institutions to deal with inequality) can be reoriented to promote income equality. National policies can play an important role on reducing income inequality. Additionally, the right mix of macroeconomic, fiscal, labour market and social policies can reverse the rising trend in income inequality as exemplified by various Latin American countries. A number of countries in that region have been able to arrest the upward trend of growing inequality, despite being subject to the continuing challenges of globalization, like all countries in the world.<sup>13</sup>

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<sup>12</sup> Atkinson (2015) provides, in a very understandable and well-argued manner, 15 proposals to reduce income inequality in developed economies.

<sup>13</sup> This success is now however contested, following changes in domestic policies in various countries in the wake of strong adverse international conditions leading to a lower GDP growth rate (Cornia 2017).

## 6.2 Macroeconomic Policies

Macroeconomic policies address the overall aggregates of the economy: prices, output, employment, investment and savings, government balances and balances on the external account. There are three major policies to manage these macroeconomic aggregates: exchange rate policies, fiscal policies and monetary policies (Ghosh 2007). The emphasis on full employment and growth in the post-Second World War years led in most countries to an increase in the wage share and an improving functional income distribution (Ocampo 2003). However, since the 1980s onwards, fiscal balance and price stability moved to centre stage, replacing the Keynesian emphasis on real economic activity. The shift in macroeconomic thinking in a large number of developing countries was mainly driven by the earlier mentioned Washington Consensus. The changes in monetary, fiscal and exchange rate policies under the aegis of the Washington Consensus were often (new) drivers for growing inequality (e.g. Cornia 2004; Taylor 2004; van der Hoeven and Saget 2004).

Monetary policy used the interest rate as a policy instrument to curb inflation below the 5 per cent guideline set by international financial institutions in developing countries (UNESCAP 2013). This policy effectively induced a recession in developing economies by increasing the cost of capital, thus lowering both investment and growth. And indeed, growth was lower in the 1980–2000 period compared to 1960–1980 (Cornia 2012). Furthermore, these contractionary monetary policies led to a surge in unemployment and in several cases even an increase in informal employment. Financial liberalization and high real interest rates encouraged large capital inflows including speculative capital. This led to an appreciation of the Real Effective Exchange Rate (REER) that in turn led to a worsening of the trade balance as exports became more expensive abroad and imports cheaper. While increased capital flows increased demand, the appreciated REER meant that this demand is satisfied with imports rather than local production, thus depressing growth and employment.

Exchange rate policies adopted during the period to achieve macroeconomic stability had adverse impacts on inequality. In this context, many developing countries were encouraged by international financial institutions to maintain either a fixed nominal exchange rate regime or a free-floating exchange regime. Each of these “two corner solutions” put developing economies at the risk of currency crises and large currency devaluations. On the one hand, fixed nominal exchange rate regimes are unable to cope with external shocks such as trade shocks, and are prone to speculative attacks, thus increasing the risk of a currency crisis. On the other hand, free floats often turn into

a 'free fall', given the volatile and pro-cyclical behaviour of capital flows (Reinhart and Rogoff 2009). Massive currency devaluations and crises that arose as a result of adopting these two 'extreme' exchange rate regimes led to rapid declining real wages, often affecting lower wage earners disproportionately in comparison to other wage earners, capital owners and land owners (van der Hoeven and Luebker 2007).

Capital account openness and the resulting large capital inflows combined with high interest rates meant that banks were more likely to lend to high-risk/high-return activities in sectors with lower concentrations of unskilled workers such as finance, insurance and real estate. Conversely, poor households and the small and medium enterprises (SME) sector, where most of the poor and unskilled workers are employed, were locked out of the benefits of the expansion in credit markets due to lack of collateral, insufficient profit margin and prohibitive transaction costs (Cornia 2012). As noted by UNESCAP (2013, p. 153), this asymmetric distribution of the benefits of finance can "lead to poverty traps, negative effects on social and human development and a rise in inequality".

As a result of the Washington Consensus, fiscal policies abandoned their development and distributional role and became geared towards achieving stabilization. Policies to maintain low budget deficits (or even surpluses) were seen as essential to achieve low inflation. This was achieved through expenditure cuts, with little regard for the composition of those cuts and whether they happened at the expense of public investment in infrastructure or social expenditures (UNESCAP 2013). This had an adverse impact on both growth and distribution. Public investment in infrastructure diminished with a negative effect on both growth and poverty reduction, while expenditure cuts in social services like health and education worsened tertiary income distribution and reduced the opportunities for social mobility.

In addition to expenditure cuts, governments reduced trade taxes to encourage globalization and income and corporate tax rates to encourage the private sector. The resulting fall in tax revenue in turn led to higher government deficits, which necessitated even further expenditure cuts. Indirect taxes that were introduced to compensate for the loss of tax revenue, such as value-added tax (VAT), did not generate enough revenue but reduced the progressivity of the taxation system. In summary, the redistributive role of taxation was minimized by reducing the size of tax revenues available for social spending and by making the tax system less progressive. Issues of fiscal policy are discussed in more detail in the following section on the drivers of secondary and tertiary inequality.



### 6.3 Labour Market Policies

Changes in labour market policies have been an important driver of inequality (van der Hoeven and Taylor 2000). In particular, the labour market policies undertaken in the wake of structural adjustment policies as part of the Washington Consensus have increased income inequality in all countries where these policies have been applied (Cornia 2004; van der Hoeven and Saget 2004). Especially relevant for income inequality are the labour market policies concerned with the distribution of wages, the gender gap therein and minimum wages.

Not only has the share of wages in national income declined as discussed in the section on exogenous drivers and functional inequality but also the distribution of wages themselves has become more unequal. The distance between the top 10 per cent and the bottom 10 per cent of wage earners has increased since 1995–1997 in 23 out of 31 countries surveyed; while the proportion of workers with low pay (defined as less than two-thirds of the median wage) has also increased in 25 out of 37 countries (ILO 2008a, b). These trends towards growing inequality remain strong even when other income sources, taxation and income transfer are considered (ILO 2011). Gropello and Sakellariou (2010), in reviewing levels and trends in education and skill premiums, and skilled labour force, across eight East Asian countries, observe that while there are increasing proportions of skilled/educated workers over the long run across the region, this is combined with stable or increasing education/skill wage premiums. The importance of skills premia as driver of inequality becomes even stronger in countries where access to post-secondary education is more skewly distributed than incomes (Sharma et al. 2011).

Conventional economic theory would predict that education and schooling would reduce skill premiums in the medium term as the supply of skilled labour increases in response to the higher wage premia. However, this did not seem to happen in many developing countries. Behar (2011) reviews why schooling has not countered the pervasive rises in wage inequality, driven by skill-biased technical change (SBTC). He concludes that technological change is skill-biased in the South simply because it is in the North, which causes permanently rising wage inequality in the South. Other authors however caution against seeing SBTC as a major driver of wage inequality. For example, Singh and Dhumale (2004) show evidence for middle- and high-income countries that supports the SBTC hypothesis only weakly. They suggest other factors such as changes in remuneration norms, labour institutions and financial markets being more relevant in explaining rises in wage inequality than SBTC.



Another important driver of wage inequality is the gender gap. Elson (2007) and Heintz (2006) find that many factors drive the gender gap in earnings—differences in education, shorter tenure in the labour market and interruptions in women's employment histories associated with raising children. Nevertheless, a large quantity of research has shown that, even after controlling for education, age and job tenure, gender gaps in remuneration remain. In part, this is due to the persistence of earnings gaps within occupational categories (Horton 1999), suggesting that wage discrimination remains influential. Research also suggests that earnings differentials between men and women are also apparent across the various forms of informal work (Chen et al. 2005). Furthermore, Seguíno (2000) finds that firm mobility is one contributing factor to higher wage inequality in Taiwan. Since women are more concentrated in industries in which firm mobility is high, their bargaining power, and hence their wages, would fall relative to men as global integration progresses.

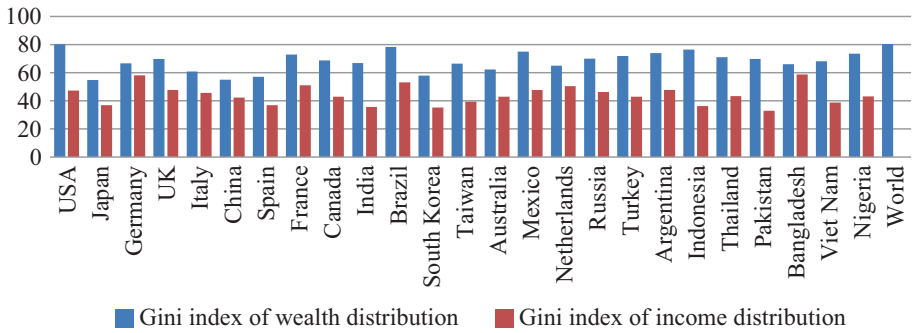
Several ILO studies (Saget 2001 2008; ILO 2008a, b) have indeed observed that, as a consequence of structural adjustment, liberalization policies and changes in labour market institutions, the minimum wage in a sizeable number of countries is so low that it does not contribute to reducing inequalities or poverty reduction and has become meaningless. This has also led to poorly developed collective bargaining where frustrated minimum wage consultations are the only forum where trade unions can make their demands known.

On the other hand, changes in labour market policies, that improve and enforce minimum wage policies, can have a positive impact on reducing inequality (Freeman 2005). For instance in the early 2000s several Latin American countries revised their stance on minimum wages, with important increases, in some countries even a doubling of previous levels. These changes have been an important driver of reductions in income inequality in Latin America (Lopez-Calva and Lustig 2010) and gender inequality in employment (Braunstein and Seguíno 2012).

## 6.4 Wealth Inequality and Intergenerational Transmission as Drivers of Inequality

One of the important drivers of income inequality is the large inequality in wealth and in human capital. Wealth is distributed far more unequally than incomes in all countries for which data are available (Fig. 10.10).

Davies (2008) shows that the Gini index of the distribution of personal wealth ranges from 55 to 80, which are in all countries higher or much higher



**Fig. 10.10** Gini indices of wealth and income distribution in selected countries, early 2000s

Source: Davies 2008 (wealth Gini index) and Solt 2016 (primary income Gini index)

than for the distribution of primary (market) income. Another feature of the distribution of wealth is that the rich (high-income countries) hold greater proportions of wealth in financial assets than poorer or middle-income households (countries) where wealth is predominantly held in real assets such as land, houses and farm infrastructure.

Closely linked to the question of wealth is the intergenerational transmission of inequality. According to the Credit Suisse (2012), inheritance is an important component of wealth. Worldwide, 31 per cent of Forbes billionaires inherited at least some of their wealth. If China, Russia and other transition countries are excluded, the figure is 38 per cent. More broadly, Credit Suisse (2012) suggests that inherited wealth likely accounts for 30–50 per cent of total household wealth in Organisation for Economic Co-operation and Development (OECD) countries. In low-growth or traditional societies, the share is probably higher. At the other end of the scale, very little household wealth in today's transition economies was inherited.

Equally dominant is the effect of acquirement of human capital. The previous section alluded already to the higher education as a driver for greater inequality in some Asian countries and to the fact that access to higher education is still skewed and often depending on family's wealth and incomes. Stephen Machin (2009) shows for example how important the influence of family background is on students' test scores. In 53 out of 54 countries, including developing and emerging countries, the family background is statistically significant and the implied gaps in test scores are large. According to ECLAC (2010), the pattern of secondary school graduation in the Latin American region has increased substantially but contrary to what was expected has remained highly stratified in secondary and tertiary completion rates.

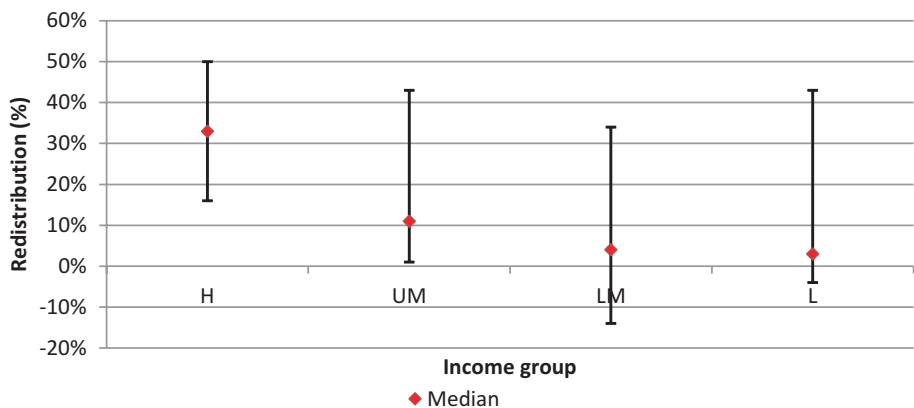
While gender parity has been more than achieved (a greater percentage of young women than men complete secondary school), in general the average graduation rate is very low (51 per cent), and its distribution very large: in the first quintile, only one in five young people will complete secondary school, while four in five will do so in the fifth quintile. These contrasts show that education in its current form reinforces the intergenerational transmission of inequality instead of reversing it.

## 6.5 Fiscal Policy: Taxes and Transfers

Fiscal policy is an important driver of higher (or lower) income inequality because it affects both the secondary and tertiary income distribution.

Fiscal policies are mainly determined by a combination of political will and institutions of economic and social governance and can vary a great deal between countries, even between countries with similar levels of development. Figure 10.11 shows the maximum, minimum and median reduction in inequality from primary to secondary distribution by income groups in the early 2000s decade.

For all country groupings there is a great variation in the reduction of primary income inequality, especially noticeable for the low-income category countries, where the highest level of reduction in inequality changed from under 10 per cent before 2000 to over 40 per cent after 2000 (UNDP 2013). National institutions and national policies can therefore play an important role in reducing primary inequality, in developing countries also.



**Fig. 10.11** The degree of redistribution in the early 2000s decade by country income group (high, upper middle, lower middle and low)

Source: UNDP (2013) Table 3.13 calculations using data from Solt (2016)

Moreover, the degree of inequality reduction from primary to secondary distributions does not seem to be related to the level of primary inequality. Luebker (2013) investigated for a select group of developing and developed countries how policy drivers of taxation and subsidies affect primary and secondary distribution and found a simple correlation between Gini indices for the primary and secondary distribution of only  $r = 0.499$  ( $p$ -value: 0.011). Initial inequality thus matters, but can explain only about half of the variation in the Gini indices from primary to secondary inequality.

Transfers, more than taxation, can be very progressive and have a strong impact on reducing inequality. ADB (2012) argues that tax systems tend to show a mildly progressive incidence impact, but that direct cash transfers and in-kind transfers can be quite progressive unless there are serious targeting problems. The international experience shows that the expenditure side of the budget (including transfers) can have a more significant impact on income distribution. Cash transfers to lower income groups through government social protection programmes have had a major impact on inequality in a number of developing countries. In Latin America and other developing regions, the system of cash transfers (either conditional or unconditional) to alleviate poverty has gained importance over the past decades. Lustig et al. (2012) find that these cash transfers are also important drivers for reducing income inequality. For countries where information is available, they found that these various systems of transfers drove inequality down, ranging from 7 percentage points in Argentina to 1 percentage point in Peru.

## 6.6 Fiscal Policy: The Role of Public Expenditure

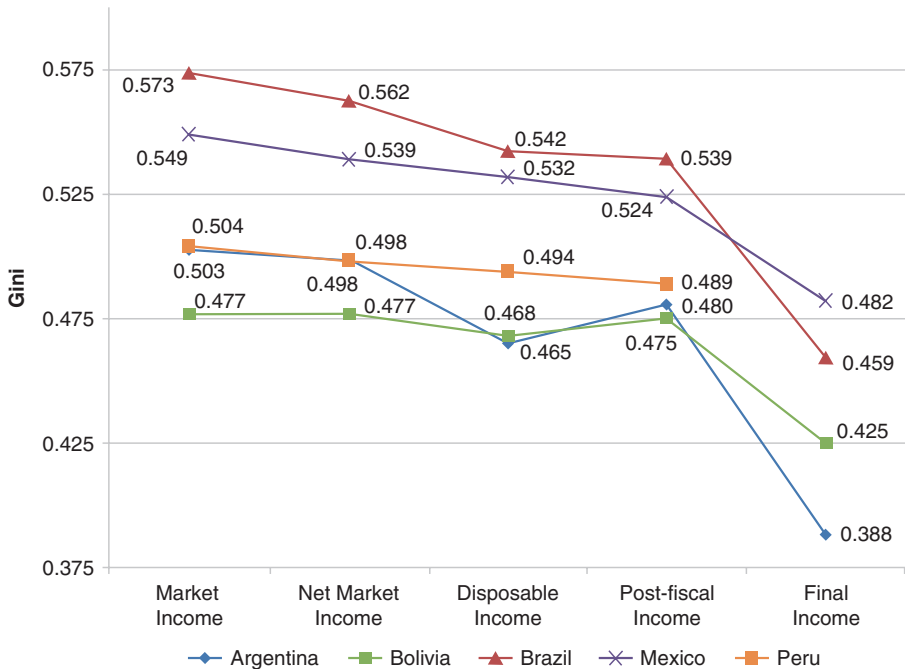
How does government expenditure on social sectors drive reduce the tertiary income inequality? Or in other words, how much does income inequality change when the imputed value of government expenditure is added to net household incomes (secondary income)? An important point is of course which types of government expenditure are considered in this respect. It is not a foregone conclusion that government expenditure has an equalizing effect in reducing secondary income inequality. It is foreseeable that higher income groups might benefit more from government expenditure than poorer groups (e.g. heavily subsidized hospitals in well-off urban areas, tertiary education, opera tickets, etc.).

While the prime objective of social services is often not redistribution, but the provision of a decent education, basic health care and acceptable living standards for all, they are in fact redistributive. Expenditure programmes in

the social sectors (education and health) are more progressive the more is spent in relative and absolute terms on those goods and services more frequently used by the poor (basic education and primary health care). However, the effective targeting of lower income groups in expenditure programmes is hard to design and implement.

Lustig et al. (2012) has performed in-depth studies on several countries to understand how government taxes, subsidies and expenditure have affected different forms of inequality.<sup>14</sup> Figure 10.12 shows that the reduction from secondary inequality (disposable income) to tertiary inequality (final income) can be substantial. In Argentina and Brazil, the Gini index dropped substantially from 46.5 to 38.8, and from 54.2 to 45.9, respectively, and in Bolivia and Mexico, from 46.5 to 42.5 and from 53.2 to 48.2, respectively.

**Gini Coefficient**



**Fig. 10.12** Changes in the distribution of primary, secondary and tertiary income in various Latin American Countries (around 2008)

Source: UNDP 2013, Figure 3.15, based on Lustig et al. 2012

<sup>14</sup> Lustig is using slightly different terms: primary income = market income, secondary income = disposable income and tertiary income = final income.

## 7 Conclusion

Over the past 30 years, on average, household income inequality has risen in both high-income (developed) and developing countries. Countries moving up income classification have had steeper increases in income inequality than most other countries. Examining regional trends over the whole period from the early 1990s, the average inequality fell in some regions (Latin America) and rose in others (Asia).

Looking at periods before and after the turn of the century shows a non-linear pattern in some countries, inequality rose during the 1980s and 1990s but then fell in the 2000s; in others, inequality fell during the 1980s and 1990s but rose in the 2000s. However, despite reversals in some countries, the intensity of change has been greater in the direction of rising income inequality. It remains therefore important to focus on drivers of income inequality and by examining different forms of income distribution, such as functional distribution, wage distribution, primary distribution (household market income), secondary distribution (market income corrected for taxes and subsidies) and tertiary distribution (taking into account imputed household income from services).

Globalization and especially financialization and to a certain extent skills-based technical change have been important exogenous drivers of inequality. These drivers have in various cases strengthened existing patterns of inequality through a stubbornly high wealth inequality and through intergenerational transfers of inequality due to skewed access to higher-level education.

The adverse effect of financial and trade globalization on income inequality during the past three decades has been exacerbated by national policies that had a negative impact on income distribution. Monetary policies that emphasized price stability over growth, labour market policies that weakened bargaining position of labour vis-à-vis employers and fiscal policies that prioritized fiscal consolidation at the expense of benefits and progressive taxation, all contributed to increasing income inequality.

However national policies, including a strengthening of institutions to deal with inequality, can play an important role on reducing income inequality. Several countries have managed to use fiscal policies to mitigate a high primary income inequality down to lower levels of secondary and tertiary inequality. Additionally, the right mix of macroeconomic, fiscal, labour market and social policies can reverse the rising trend in income inequality as exemplified by various Latin American countries.

### Box 10.2 Inequality and Sustainable Development Goals

Various authors (van der Hoeven 2012; Vandemoortele 2011; Melaned 2012) have argued that the United Nations Millennium Development Goals (MDGs), established in 2000 for a period of 15 years, by emphasizing targets at a global level (with implications for targets at the national level), have ignored the inequalities that averages conceal. They suggested therefore that attention to inequality should be a basic element of the United Nations Sustainable Development Goals (SDGs), established in 2015 for a period of 15 years, and that targets for all SDGs should be broken down for different socio-economic classes or for different income groups. These argumentations have been strengthened by recent analyses that conclude that greater equality and more equal access to government services will contribute to improved and sustained development in general (Wilkinson and Pickett 2009).

In the evaluation of the results of the MDGs, it became clear that the lack of any reference to inequality was a great oversight in the MDGs (van der Hoeven 2015). This was exacerbated by the fact that currently most poor people, defined as those living on less than \$1.25 a day, do not live any more in low-income countries. A group of some 90 concerned scholars urged in an open letter to the Secretary of the High-Level Panel of Eminent Persons on the Post-2015 Development Agenda that the SDGs should take inequality on board in all its aspects and adopt as a goal the reduction of the Palma ratio, which indicates how much more the income of the 10 per cent richest is, compared to 40 per cent poorest (van der Hoeven 2015). As Palma (2011) argued, this ratio not only gives a better picture of inequality but also can shed light on the specific situation of the middle class. Palma correctly argued that differences in inequality are less an outcome of technical factors and more the result of the political process, where norms and habits determine the degree of inequality and where the attitude of the middle class plays an important role. Unfortunately a much weaker goal (SDG10.1) was accepted in 2015: By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average (van der Hoeven 2017).

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# 11

## The Distribution of Productive Assets and the Economics of Rural Development and Poverty Reduction

Michael R. Carter and Aleksandr Michuda

### 1 Introduction

The goal of this chapter is to give the reader an interpretive intellectual history of contemporary economic thinking on rural poverty and development. We organize the history around the agrarian questions of whether, when and how the initial distribution of productive assets (the means of production) shapes the dynamics of poverty and rural development. While these questions have been analyzed from a number of methodological perspectives, we concentrate here on literature that adopts a rational choice or neoclassical microeconomic stance. This choice in part reflects the authors' own predilections, which are themselves founded on the observation that this approach provides an open platform for exploring these agrarian questions, once we take the economics of asymmetric information and non-Walrasian market equilibria seriously (see Carter 1997).

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Harkening back to earlier European and Russian agrarian debates, we begin in Sect. 2 with the Chayanovian farm household model (Chayanov et al. 1966). Transported forward to the development economic debates of the 1960s and 1970s, this model was taken by many to reliably underwrite an economic case for asset redistribution that would reshape agrarian class structure, spur development and reduce rural poverty. Section 3 of this chapter then picks up the story of the farm household model once the understanding of technologies and markets was expanded beyond the simplifying assumptions of the Chayanovian model. Emblematic of this new approach, the 1986 paper by Eswaran and Kotwal showed that equivalent to asset redistribution, levels of poverty and productivity in a rural economy could be affected by altering the rules of access to capital (and with much less political fuss).

While the single time period analysis of Eswaran and Kotwal (1986) leaves open many dynamic questions (to which we return in Sect. 5), it provides a bridge to the subsequent “microfinance revolution” and other interventions intended to alter poverty and productivity without directly altering the underlying distribution of assets. As Sect. 4 elaborates, this intervention-centric perspective led quite naturally to a preoccupation with empirical impact evaluation. The spread of development economics as impact evaluation, powered by the “discovery” of randomized controlled trials (RCTs) as a reliable, mostly harmless econometric method, submerged traditional theoretical preoccupations, including questions about the distribution of means of production (Ravallion 2012).

Ironically, perhaps, one of the strongest findings to emerge from the wave of development experiments was the effectiveness of asset transfer programs as an intervention to alter poverty dynamics. Closing the circle, Sect. 5 reflects on what we have learned from these experiments and how they relate to the agrarian questions around which this chapter is organized. Drawing on the more recent theoretical developments around rural poverty dynamics and “poverty traps,” Sect. 5 reconsiders the role that asset transfers play in lifting households above the minimum asset levels required before a successful transition out of poverty can take place. We also integrate into this discussion recent findings on the importance of what might be termed “psychological assets,” and the role they play in poverty transitions. Section 6 concludes by reflecting on the extent to which our thinking on rural poverty has come full circle over the last 50 years of development economics.

## 2 The Distribution of Productive Assets and Rural Poverty: The Chayanovian Foundations

Introduced to the English-speaking world with the 1965 translation of his book *The Theory of Peasant Economy*, the Russian economist A.V. Chayanov was keenly interested in how agrarian class structure evolves as economies industrialize.<sup>1</sup> To inform his understanding of structural evolution, Chayanov offered microfoundations in the form of a theory of how the peasant household—understood as a joint production-consumption unit—allocates its resources. Building on the Sen (1966) subsequent formalization of Chayanov, we here write down a generalization of the Chayanovian model that will aid us in our discussion of assets, market access and rural poverty.

Following Chayanov, we assume that a household is composed of  $\beta$  consumers and  $\alpha$  working-age individuals (with  $\beta \geq \alpha$ ). The household is endowed with  $\bar{T}$  units of a productive asset (land) and  $\bar{L}$  units of labor. The household can allocate its resources to constant returns to scale agricultural production technology ( $F(L_f, K, T_f)$ ), which depends on land allocated to the home production process ( $T_f$ ); labor, measured in efficiency units ( $L_f$ ); and purchased inputs, such as fertilizer ( $K$ ). Depending on how factor markets operate, the household can also potentially rent out its land ( $T_r < 0$ ) and labor ( $L_s$ ) at prices  $w$  and  $r$ , respectively. It can also potentially rent land in ( $T_r > 0$ ) and hire labor ( $L_b$ ) at those same prices. As discussed in Sect. 3, when labor effort contracts are not costlessly enforceable, the household may have to devote supervisory time ( $S$ ) to extract effort from hired workers. In the model below, we write the labor effort extraction function in general form as  $L_f(L_o, L_b, S)$ .

Finally because production is roundabout, the household faces a working capital constraint, meaning that the amount of funds it allocates to purchased inputs, hired labor and renting-in land can be no more than the capital it can leverage from financial markets ( $B(\bar{T})$ ) plus any earnings from selling its own labor or renting out its land. To avoid further notational clutter, we will assume that the rate of interest on both borrowing and savings is zero.

Under the assumption that the households allocate resources in order to maximize the utility of per-capita consumption ( $u(c)$  with  $u' \geq 0$ ;  $u'' \leq 0$ ) less the

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<sup>1</sup>In his own day, Chayanov was involved in a debate with Lenin among others on whether or not the Russian peasantry was stable or whether it was differentiating into a structure of large farm capitalists and landless workers. Using his variant of the model developed below, Chayanov argued that the peasantry was stable despite regular cycles of farm growth and contraction, which he argued were explicable solely by demographic lifecycle factors.



disutility per-worker labor ( $v(\ell)$  with  $v', v'' \geq 0$ ),<sup>2</sup> our expanded Chayanovian household model of peasant resource allocation can be written as:

$$\begin{aligned}
 & \max_{c, \ell, L_o, L_h, L_s, K, T_r} \beta u(c) - \alpha v(\ell) \\
 & \text{subject to:} \\
 & c = [pF(L_f, K, T_f) - wL_h + wL_w - K + rT_r] / \beta \\
 & \ell = [L_o + L_w + S] / \alpha \\
 & L_f = L_f(L_o, L_h, S) \\
 & K \leq B(\bar{T}) - rT_r - w(L_h - L_w) \\
 & T_f = \bar{T} + T_r \\
 & L_o + L_w + S \leq \bar{L} \\
 & L_h, L_w, L_o, S \geq 0
 \end{aligned} \tag{11.1}$$

Chayanov himself considered a world in which capital inputs were unimportant and land and labor markets did not exist ( $L_s, L_b, S, K, T_r = 0$ ). Imposing these simplifying Chayanovian constraints, maximization problem (11.1) yields the following first-order condition for utility maximization:

$$pf' u' = v' \tag{11.2}$$

In Chayanov’s own words, this condition implies that the household applies labor to their farm up to the point where the marginal utility value of the incremental output produced ( $pf' u'$ ) is just offset by the additional drudgery of the labor required to produce it ( $v'$ ).

Note that the marginal disutility of work is simply the marginal utility of leisure and the ratio  $\frac{v'}{u'}$  is the marginal rate of substitution between leisure and consumption. Using this ratio as a measure of the subjective cost of labor or shadow wage ( $\tilde{w}$ ), first-order condition (11.2) can be rewritten as:

$$pf' = \tilde{w}(\bar{T}, \bar{L}, \beta / \alpha),$$

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<sup>2</sup>The assumption that the utility of consumption and the disutility of work are additively separable is both faithful to Chayanov’s discussion and rules out pesky cross-partial derivatives that add clutter but little additional insight to the model. Note also that the assumption that household well-being depends on per-capita values of consumption and works ignores the overwhelming evidence that neither consumption goods nor work hours are shared equally between members of the household (see Folbre 1984 for an early and still compelling exposition).

where the shadow wage,  $\tilde{w}$ , is a function of the household's endowments and its demographic structure, represented by its consumer-worker ratio ( $\beta/\alpha$ ). Writing the first-order condition in this way makes clear that the Chayanovian peasant household operates analogously to the profit-maximizing firm except that the marginal revenue product of the labor input is equated to a shadow wage rather than a market wage.

The implications of this model are rich. Chayanov himself was interested in how household resource allocation and living standards evolve as the consumer-worker ratio follows an inverted U-shaped time path over the family's lifecycle. For purposes of our discussion, the key implications of this model are two:

1. Holding demographic variables fixed, households with land endowments below a threshold level,  $\bar{T}^p$ , will be income poor; and,
2. Poor households, with low consumption levels, will have a high  $u'$  and a low shadow wage  $\tilde{w}$ . These households will optimally react to the desperation of their poverty by "self-exploiting" themselves by cultivating their land more intensively (producing more output per-unit area than better-off households), driving marginal returns to labor toward zero, effectively earning a lower shadow wage  $\tilde{w}$ .

Endowments become fate in this model, with the poverty of asset-poor households deepened by the fact that they obtain low marginal rates of return to their labor.<sup>3</sup> While this resource allocation logic of asset-poor households can be considered as an innate peasant mode of production, the Chayanovian household model shows that this behavior is consistent with an instrumentally rational choice—self-exploitation and a poor standard of living are the best the household can do, given market structures and its inherited wealth.<sup>4</sup>

These two implications of the Chayanovian model imply that redistribution of land from better-off to poor households can create a win-win scenario, reducing the poverty of the latter while boosting aggregate productivity of the rural economy by moving land from lower to higher productivity uses. Dorner and Kanel (1979) make precisely this argument in their aptly titled paper

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<sup>3</sup> Access to labor markets at which they could sell their labor at a fixed  $w > \tilde{w}$  would ameliorate the poverty of these households as would the option to exploit their cheap labor by renting-in land from land-abundant households with higher price labor (Feder 1985).

<sup>4</sup> In the language of Elster (1994), this peasant-like self-exploitation is an example of endowment necessitated behavior. That is, people are not born peasants, but they adopt peasant-like behavior when it is the best they can do given their endowments and the constraints they face (an observation also recorded by Lehmann 1986).

“The economic case for land reform.” Despite the conventional wisdom that World War II era land reforms in East Asia had created a productive agricultural sector built on small-scale farms, efforts to apply the economic case for land reform in Latin America met with at best mixed success (see the discussion in Thiesenhusen 1989). Reasons behind this record include often fierce political opposition as well as the increasing complexity of agriculture which belies the simplifying assumptions of the original Chayanov model.

### 3 The Economics of Asymmetric Information and Rural Poverty

Irrespective of whether redistributive land reform was undercut by contentious politics or faulty economics, the Chayanovian model which underpins the putative economic case for land rests on difficult-to-justify assumptions about the nature of technology ( $K = 0$ ) and markets ( $L_s, L_h, T_r = 0$ ). Labor exchange between households is found in most places, as are various forms of land exchange or rental. With the seed-fertilizer green revolution of the 1960s, and the expansion of capital-intensive agricultural export opportunities, ignoring the role of purchased inputs in production became increasingly objectionable as well.

The implications of relaxing the Chayanovian assumptions depend on what is assumed about the nature of the markets for labor, capital and land. At one extreme, we might make “Walrasian” assumptions that all behavior between parties that exchange labor, capital or land is fully and costlessly contractible. Specifically, these assumptions would imply the following:

- *In Labor Markets*, full contractibility would assume that employment contracts specify an amount of effort on the job in exchange for a wage. Along with the assumption of no search costs to finding labor to hire, these assumptions would imply that hired and family labor are perfect substitutes for each other, despite the fact that family labor enjoys the extra incentive of enjoying the residual income from the production process. Efficiency labor in the household model above can be written as  $L_f = L_o + L_h$  with own and hired labor perfectly substituting for each other with no labor supervision required.
- *In Capital Markets*, full contractibility would imply that borrowers could credibly commit to use loans only as the lender desires and to always fully repay, implying that households could always borrow adequate capital to fully fund profitable investments in  $K$ .

- *In Land Markets*, full contractibility would imply that the agent would not leave the soil exhausted of nutrients after it is returned to its owner and that there would not be an attempt to take over ownership of the land through the assertion of squatter's rights.

Under these assumptions, the implications of the peasant household model change radically. Asset-poor households could rent-in additional units of land, boosting returns to their labor and changing the agrarian class structure as they transitioned from peasant to small-scale commercial production. They could also begin selling their labor on the market as  $pf'$  reached the market wage,  $w$ . Land productivity would be equalized across all operating farm units as marginal returns to all factors would be equated to their respective market prices.<sup>5</sup> Poverty would not be reinforced by low returns to labor, and redistribution of land would have no productivity impacts and would purely redistribute land rents.

While the win-win economic case for poverty reduction through asset redistribution evaporates under the Walrasian factor market assumptions, the economics of asymmetric information—developed systematically across the 1970s and 1980s—suggest that these Walrasian assumptions are no more credible than the Chayanovian assumption that factor markets simply do not exist. While this chapter cannot provide an exhaustive overview of the voluminous literature on asymmetric information, a few sentinel pieces suffice to communicate the importance of asymmetric information for rural poverty.

Regarding labor markets, a number of observers noted that asymmetric information makes it impossible for employers to costlessly observe workers' effort levels. The fact that incentives are imperfectly aligned between wage workers and employers (residual claimants) suddenly becomes relevant. Non-price rationing (equilibrium unemployment as a worker discipline device) with wage stickiness can result, as Shapiro and Stiglitz (1984) and Bowles (1985) show. Two kinds of outcomes emerge in this literature. Either overpay hired workers relative to their opportunity cost (using the unemployed as worker discipline device, allowing workers to collect enforcement rents, as in Shapiro and Stiglitz (1984) and Eswaran and Kotwal (1985), or spend resources on labor supervision, enforcing hard work commitments (Bowles 1985)). Either way, the full cost of employing a worker rises above the opportunity cost of labor.<sup>6</sup>

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<sup>5</sup> In fact, as Feder (1985) suggests, there does not need to be full contractibility in all three markets, but rather only a working capital and land market. In that case, each household would lease enough land to maintain an operational size proportionate to the size of their family and achieve the social optimum.

<sup>6</sup> This point was actually made as early as John Brewster's "The Machine Process in Agriculture and Industry" in 1950, where it described moral hazard in labor hiring as being one of the reasons for the persistence of family farming even as agriculture became more mechanized (because on the family farm, all labor has residual claimant incentives to provide optimal effort).

Regarding credit markets, work such as Stiglitz and Weiss (1981) and Carter (1988) makes the point that an arm's length lender's inability to (i) observe borrower types (e.g., their intrinsic riskiness) and (ii) monitor how borrowers use credit exposes lenders to adverse selection and moral hazard. The root of the problem is again incentive misalignment. The result is non-price rationing and especially wealth-biased capital access. Only those with collateralizable wealth can borrow money—that is, it takes money to get money.<sup>7</sup>

As a whole, this work on the economics of asymmetric information suggests a set of factor market assumptions intermediate between the Chayanovian assumption that such markets simply do not exist and the Walrasian assumption that all contract features are costlessly enforceable. The Eswaran and Kotwal (1986) paper, "Access to Capital and Agrarian Production Organization," takes on this task of exploring the economics of asymmetric information in order to revisit key agrarian questions about rural poverty and the distribution of assets. Specifically, they make two key assumptions motivated by the economics of asymmetric information:

- *Unequal Access to Capital:* Access to capital is governed by a capital access function,  $B(\bar{T}) = \phi + \theta \bar{T}$ . While simple, varying the parameters of this function allows them to capture an array of scenarios. For example, Walrasian capital access untethered to collateral wealth implies  $\phi > 0, \theta = 0$ , while wealth-biased capital access of the sort described by Carter (1988) could be captured with  $\phi \leq 0, \theta > 0$ .
- *Agency Costs in Labor Markets:* Hired labor must be supervised by the residual claimant landowner if labor is to be productive. Specifically they assume that  $L_f = L_o + L_b$ , but only when the landowner dedicates time to labor supervision given by the function  $S = s(L_b)$  (with  $s', s'' \geq 0$ ).

After modifying the Chayanovian household model with these key assumptions,<sup>8</sup> Eswaran and Kotwal consider how the performance of a stylized agrarian economy, with  $N$  households and a fixed aggregate stock of land, is influenced by the distribution of land and by the rules of access to capital.

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<sup>7</sup> Bardhan (1984) pushes this even further, asserting that imperfectly aligned incentives are also linked to how institutions form. Institutional formation is not just cursory to economic outcomes or should be seen as "just being there," but may be shaped by both information asymmetries and power asymmetries caused by these misaligned incentives. Economies with higher rates of moral hazard in labor can see sharecropping arrangements form. Or perhaps, high initial inequality in land and assets can lead to inefficiently large latifundia farms that can limit households' outside opportunities as in Conning (2002).

<sup>8</sup> As well as a few more, including that  $u'' = 0; \alpha = \beta = 1$  and assuming a fixed cost to cultivate.

Their asymmetric information-based assumptions create two countervailing forces. Farms with small land endowments that rely on own labor may enjoy a labor cost advantage because they do not need to expend resources on labor supervision. At the same time, if access to capital is linked to owned land endowments, these same farms face a higher shadow price of capital potentially offsetting the small farm productivity advantage that was celebrated in the economic case for land reform. These offsetting cost advantages of large and small farms may create decreasing, increasing or even U-shaped relationships between land productivity and farm size (as discussed theoretically by Feder (1985) and explored empirically in the more recent literature such as Helfand and Taylor (2018)).

Turning specifically to the Eswaran and Kotwal model, note that increasingly wealthier households (those with larger land endowments) will find labor to be increasingly expensive if they choose to operate at large scale with hired labor. In contrast, less wealthy households who would rely on their own family labor will face effectively a lower wage should they choose to operate their small-scale landholdings.<sup>9</sup> While this arrangement preserves the key Chayanovian insight that poor households are also reservoirs of cheap labor, the Eswaran and Kotwal model allows households to potentially rent-in land. Given their labor cost advantage, we might expect cheap labor households to rent-in land from wealthier households, as in the Walrasian model just discussed.

However, it is here that unequal access to capital matters. If access to capital is wealth biased, then even a low-wealth household with a “bankable project” (renting-in land to profitably cultivate it using their less expensive labor) will not be able to front the capital needed to rent-in land. In other words, unequal access to capital generates a second, or countervailing, market failure that prevents rental market transactions from delinking economic performance from the initial distribution of land endowments. Under asymmetric information constrained factor markets, agrarian class structure, or what some literature calls “occupational choice,”<sup>10</sup> becomes relinked to individual endowments, which again become fate.

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<sup>9</sup>Note that for the family labor farm, the opportunity cost of labor is  $w$ , while  $w(1 + s')$  is for the larger farm that hires in labor that must be supervised.

<sup>10</sup>Models of occupational choice (e.g., Banerjee and Newman 1993; Ghatak and Jiang 2002; Buera et al. 2018) consider the sorting of a population into entrepreneurs and workers based on wealth endowments and access to capital. While this literature is not specifically agrarian in orientation, it revisits the same issue about whether and how the distribution of initial wealth shapes the structure of an economy and its performance.

Arraying households along the endowment continuum from richest to poorest, solution regimes to the household maximization problem, or classes, will emerge in the following order in the Eswaran and Kotwal model:

1. *Proletariat*: No agricultural production, only wage labor
2. *Semi-proletariat*: Agricultural production with only family labor, off-farm wage labor
3. *Autarkic peasants*: Agricultural production with family labor utilized, no off-farm wage labor
4. *Small-scale capitalists*: Agricultural production with family labor and hired labor, no off-farm wage labor
5. *Large-scale capitalists*: Agricultural production with only hired labor, no off-farm wage labor

In this model, the boundaries between these classes—that is, the endowment value at which it becomes optimal to shift from one solution class to the next—depend on the market prices for land and labor.<sup>11</sup> A higher wage, for example, will delay the shift from semi-proletarian to peasant producer to a higher endowment level.

Eswaran and Kotwal's approach builds directly on that of Roemer (1985). In the language of Elster (1994), class in this rational choice modeling approach is "endowment necessitated behavior." Ultimately, class is plastic, depending on endowments as well as technology and on the functioning of markets. While not always resting comfortably with other approaches to class, as we shall see, a virtue of this approach is that it opens the door to the analysis of mobility and poverty dynamics as economies evolve and the structure of markets changes.

Figure 11.1 displays a key finding from the Eswaran and Kotwal model under the assumption of wealth-biased access to capital. The horizontal axis measures how equally land assets are distributed, with the far right representing an egalitarian economy and the far left a completely inequalitarian land distribution. The vertical axis measures various measures of economic performance including poverty rates and aggregate social welfare.<sup>12</sup> As can be seen, land redistribution, understood as moving from light to right in the figure, generates a win-win, reducing rural poverty rates and boosting aggregate output. As in the Chayanovian model, but with more defensible factor market

<sup>11</sup> Indeed, not all classes will exist at all factor price configurations.

<sup>12</sup> Eswaran and Kotwal employ a Benthamite social welfare function, giving equal weight to all households in the economy, regardless of the distribution of initial endowments.

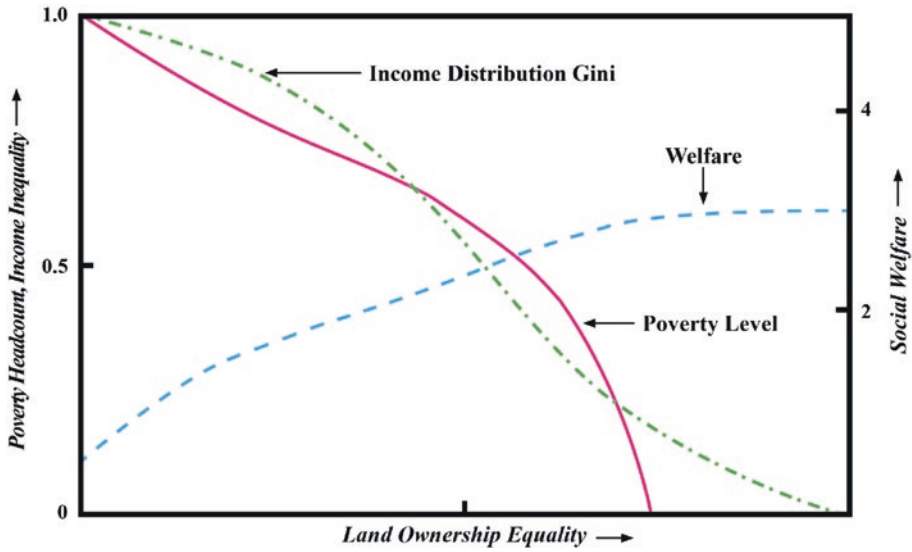


Fig. 11.1 Poverty and land distribution  
 Source: Eswaran and Kotwal 1986

assumptions, the understanding of rural poverty as rooted in unequal distribution of the means of production, and an economic case for land redistribution as growth with poverty reduction, reappears.

However, one key difference between this asymmetric information model and the classical Chayanovian treatment is that endowments only become fate in the presence of unequal access to capital. More equal access to capital should allow households to borrow their way out of poverty by renting-in needed means of production, capitalize a business and move forward economically. Figure 11.2 illustrates this approximate equivalence between land and credit market reforms. Drawn for an economy with a high level of asset inequality, the diagram explores what happens to the key economic performance measures as access to capital is delinked from land wealth (the left side of the figure, where the key capital leverage parameter  $\theta = 0$ ) versus when capital access is tightly linked to land endowments (the right side of the figure). As can be seen, leveling the playing field in terms of access to capital also eradicates poverty and realizes social welfare levels similar to those obtainable when assets are distributed equally in Fig. 11.1.

Although Eswaran and Kotwal do not make it explicit, the shift in class structure from Fig. 11.2 can also be regarded as a shift in the occupational choice problem that households face. Households that are unable to become self-employed peasants or capitalists can now meet the conditions to make that choice, with greater access to capital. Entrepreneurs with high potential



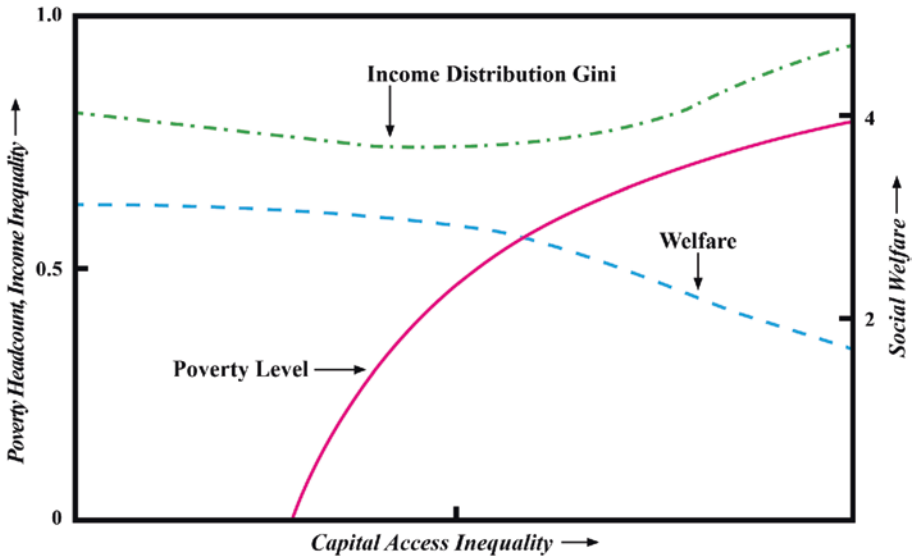


Fig. 11.2 Equivalence of credit market reform and asset redistribution  
Source: Eswaran and Kotwal 1986

capabilities can select into occupations where that potential can be realized.<sup>13</sup> This is an important distinction as it opens up an array of supplemental interventions that can go along with credit access to alleviate rural poverty. As will be discussed below, if a household's potential capabilities can be released with, for example, coaching and psychological interventions, it can be pivotal to the success of an intervention that improves access to land and/or credit.

While powerful, the credit-land reform equivalence of Eswaran and Kotwal illustrated in Fig. 11.2 depends on the rather strong assumption that credit reform that delinks credit access from land wealth not only improves the credit access of the land poor but also restricts the credit access of the land rich.<sup>14</sup> In contrast, microfinance programs can more typically be seen as boosting  $\phi$  (the amount that can be borrowed by a household without conventional real collateral) without necessarily reducing  $\theta$  (the leverage value of conventional collateral). Thus, while there is a partial equivalence between full-scale land redistribution and credit access, the nature of the credit reform required to make that equivalence true is almost as radical as that of full-scale land redistribution. While not analyzed by Eswaran and Kotwal, a more mod-

<sup>13</sup>Indeed, what Eswaran and Kotwal (as well as Marxian economists like John Roemer) call class structure, neoclassical economics would call occupational choice.

<sup>14</sup>In order to keep aggregate credit constant when varying  $\theta$ , Eswaran and Kotwal also vary  $\phi$ , by the equation  $\phi = B_T - \theta T$ , where  $B_T$  is the aggregate amount of credit in the economy.

est credit reform would be expected to weaken but not completely eliminate the linkage between initial asset distribution and poverty and economic performance.

These shortcomings notwithstanding, the at least partial equivalence between land reform and access to capital suggests promotion of improved access to capital for poor rural households may achieve many of the same objectives that had been hypothesized to attend efforts to redistribute land. Politically, it would certainly seem easier to pursue a policy that asks high wealth households to loan money to microfinance projects (where they would also get a return on their investment) to help the rural poor, rather than to give up a part of their asset holdings.<sup>15</sup>

## 4 Lending, Not Redistributing Wealth: The Microfinance Revolution and Impact Evaluation Economics

While the Eswaran and Kotwal (1986) paper demonstrates how delinking access to capital from collateral wealth as a tool to combat rural poverty (by placing land-scarce households on an entrepreneurial path to become medium-scale farmers), the practice of credit market reform preceded their theoretical work by a decade when Muhammad Yunus began making uncollateralized loans to villagers in Bangladesh. Yunus' efforts spawned the Grameen Bank and, eventually, the "microcredit revolution" built around the Grameen model of group, or joint liability, loans that did not require conventional collateral.

The early academic literature on microcredit largely focused on the logic of joint liability and group lending (e.g., Stiglitz 1990; Besley and Coate 1995). As development economics textbooks now routinely discuss (e.g., De Janvry and Sadoulet 2015), joint liability circumvents the asymmetric information problems that lead conventional lenders to rely on collateral assets to manage borrower adverse selection and moral hazard. More specifically, microcredit is founded on the idea that information is symmetric between neighbors, who know each other's characteristics (skill, work ethic, honesty, self-control, etc.)

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<sup>15</sup> Another limitation of both the asymmetric information-based model of Eswaran and Kotwal and the original Chayanovian model is that they treat the distribution of land endowments as fixed. While that treatment is unobjectionable in the short run, it is less defensible over the longer term if we consider time as a degree of freedom that might also allow households to lower consumption and build up stocks of money to either self-finance production or purchase land and gain access to capital that way. We return to these dynamic issues in Sect. 5.

and who can monitor each other's behavior and credit use in real time at near-zero cost. Because they will be responsible for paying off the loans of any defaulters, joint liability group credit incentivizes neighbors to use the information they have on each other to perform the borrower selection and credit monitoring roles that traditionally fall to the lender.<sup>16</sup> In addition, social ties between neighbor borrowers give them potential leverage over each other should one take actions that reduce the likelihood of credit repayment. Effectively, social relationships (or capital) become a type of intangible collateral asset. Putting these pieces together, the miracle of microfinance is that it allows prudent lending to cost-effective individuals who lack conventional collateralizable assets. The efficacy of microfinance in agricultural economies is an issue to which we return in Sect. 5.

Beginning with the few loans offered by Yunnus in 1976, microcredit experienced a meteoric growth in both numbers and popularity. Yunnus' Grameen Bank grew to over 2.5 million members by 2002. The Microcredit Summit Campaign (2015) reported that by 1997 there were already 13.5 million microcredit borrowers, 7.6 million of whom they classified as being among the poorest strata of society. By 2013, these figures had reached 211 and 114 million, respectively. The 114 million borrowers classified as being among the poorest was actually a decline of 24 million from its peak of 138 million in 2010.

Accompanying and helping spur this growth in microcredit was an outpouring of anecdotal evidence on the transformative power of microfinance for poor households. However, more rigorous research evaluating the claims of the microfinance revolution was somewhat slow to evolve. Coupled with the rapid spread of microfinance, this evaluation lag made credible evaluation of the impacts of microfinance doubly difficult to achieve.

The key to any rigorous evaluation is the creation of a credible measure of what the economic status of microfinance beneficiaries would have counterfactually been without microfinance. Concretely, if microfinance borrowers had higher living standards than non-microfinance borrowers, and had transitioned from wage work to more remunerative entrepreneurial activity, was that because of the impact of microfinance, or would the type of person who participated in microfinance have been better off than the non-participating types even in the absence of the credit market intervention? Answering this question is especially hard in the case of microfinance. Because a key element

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<sup>16</sup>In an important theoretical study, Conning 2005 asks whether the presumed benefits of joint liability lending (symmetric information and costless mutual monitoring) are in fact more imagined than real. Conning notes that Yunnus and the Grameen Bank itself began shifting to individual liability loans, closely monitored by bank officers. ...

of joint liability lending is local selection of borrowers based on local information not easily available to outside lenders (or to econometrically inclined observers), individuals in communities with microfinance programs but who were not selected into microfinance are unlikely to be good control replicates for selected borrowers. Given that neighbor-based selection is as likely to be based as much on externally unobservable as observable characteristics, conventional econometric methods used to control for the differences between borrowers and non-borrowers are likely to be wobbly.

Given that microfinance non-participants are unlikely to be good controls for what would have happened to microfinance beneficiaries in the absence of microcredit, other places to look for good control replicates are of course communities without microfinance programs. However, the rapid spread of microfinance meant that untreated communities became fewer and farther between, raising the concern that communities without microfinance were somehow different (too isolated for small-scale enterprise to take off). If correct, inhabitants in these communities are unlikely to be good controls, meaning that their living standards and occupation choice could show what the counterfactual status of microfinance beneficiaries in more favored locations is. In other words, microfinance programs were endogenously placed geographically by their implementers, presumably in relation to the programs' expected impacts.

Armendariz and Morduch (2004) provide a thoughtful discussion of the early literature that tried to evaluate the impact of microfinance despite these challenges. The important study by Pitt and Khandker (1998) relied on data collected in the early 1990s from Bangladeshi communities with and without one of three flagship microfinance programs, including the Grameen Bank. They grappled with the aforementioned statistical identification problems and attempted to exploit wealth-based eligibility rules to help identify which households in untreated communities would have borrowed (had microfinance been available) and who could thus serve as a plausible control group for microfinance beneficiaries in treated communities. Their findings were quite striking as they estimated that women borrowers experienced an \$0.18 increase in their income for every microfinance dollar borrowed. Leverage, rather than redistribution, seemed to go some distance toward closing the poverty gap.

However, leaving detailed discussion of the econometrics to Armendariz and Morduch (2004), subsequent studies that either analyzed the same data with different statistical approaches or added follow-up survey rounds to the original Pitt and Khandker (1998) data found smaller impacts. The Morduch (1998) study found no impact of microfinance on average incomes, although it did find evidence that microfinance helped insulate beneficiaries' consump-

tion from shocks. Khandker (2005) found some positive impacts of microfinance on income, but they were less than half the size of those estimated in the original Pitt and Khandker (1998) study. Despite the enormity of the question about whether access to capital could really alter poverty dynamics and class structure (and the billions of dollars spent on microfinance), these early studies that tried hard to harvest impact estimates despite the rapid spread of the microfinance revolution were unsatisfying in their ambiguity and imprecision.

This dissatisfaction with the microfinance literature intersected neatly with academic economics' rediscovery<sup>17</sup> of randomized controlled trials (RCTs) as a way to generate more reliable control groups for purposes of evaluating program impacts. Within development economics, the PROGRESA evaluation (e.g., Schultz 2001) along with the Miguel and Kremer (2004) more epidemiological study of deworming medicine attracted substantial attention for the simplicity and credibility with which they were able to estimate program impacts. One early study that employed RCT methods to evaluate the impacts of microfinance, Banerjee et al. (2015a),<sup>18</sup> worked with a microfinance lender (Spandana) expanding its program in India. The lender agreed to hold back a randomly selected subset of the communities where it intended to expand, to serve as a control group for an approximately two-year period. While this community-level randomization design solves the endogenous placement problem described above by assuring that areas with Spandana should be no different than areas without Spandana. However, Spandana's expansion took place against the background noise of the more general microfinance revolution. While the communities targeted by Spandana had low microfinance penetration at baseline, with less than 2% of households having microfinance loans, that figure had risen to 18% in "untreated" control communities in the follow-up survey conducted a year and a half later. In the Spandana expansion treatment areas, microfinance users rose by an additional 8% to 26% of households. This modest 8% net compliance rate with the Spandana treatment of course reduces the statistical prospects for detecting any impacts of the treatment.<sup>19</sup> Indeed, a second follow-up survey, conducted

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<sup>17</sup> One of us attended graduate school in the late 1970s when a series of RCTs were implemented with US government sponsorship to study the impacts of different social welfare programs and work and labor supply incentives.

<sup>18</sup> Despite its lagged publication date, the RCT for this study was implemented beginning in 2006.

<sup>19</sup> The net compliance rate of an experiment is the difference between the fraction of individuals in the treatment group who took or complied with their treatment (e.g., a microfinance loan) and the fraction of individuals in the control group who also took the treatment. Note that in a classic well-controlled medical trial, the net compliance rate will be 100%, with all the treatment groups taking their medicine and the control group only taking a placebo. The ability to detect treatment impacts declines precipitously with net compliance.

two years after the first, revealed no difference at all between treated and untreated areas in terms of microfinance borrowing with about 35% of households in both areas having microfinance loans.

While lacking the *tabula rasa* of a world without microfinance, the Banerjee et al. (2015a) study uses the modest 8% differential in microcredit loan uptake in the first 18 months of the experiment to identify the value-added impacts of Spandana on top of what was already going on within control areas. Keeping this limitation in mind, the authors find essentially no impacts of the Spandana expansion at either the first or second follow-up surveys. Missing are impacts on income, assets and, most tellingly, business start-ups or expansion or other changes in occupational choice.

The character of these findings is matched by the other five RCT-based microfinance evaluations summarized in Banerjee et al. (2015c). Methodologically, like the Spandana study these studies also suffer from control groups affected by the uncontrolled expansion of microfinance. Similar to that study, the other analyses detect little to no impact of microfinance on occupational choice and the transition to more remunerative livelihoods. In short, despite the promise of microfinance, there is scant evidence that it impacted class structure and poverty. Unknown, and probably now unknowable, is whether this lack of evidence reflects the lack of impacts, or simply our inability to reliably detect them given the rapid spread of microfinance.

Before turning back to consider the role of asset transfers and redistribution on rural poverty, it is worth remarking on land titling interventions as a way to improve the capital access of low-wealth households, interventions that ran parallel to the microfinance revolution. As popularized by De Soto (2001), land titling programs were hypothesized to turn the “dead assets” of the poor into collateralizable capital. While the early study of Feder et al. (1988) found some positive impacts of land titling on investment and land values, the evidence is at best mixed regarding the impact of titling on the credit access of low-wealth rural households (Dower and Potamites (2014) provide a recent review of the literature). In a study of rural Paraguay for example, Carter and Olinto (2003) find that while land titling enhances investment demand for all, it only unlocks access to capital for the cohort of wealthier landowners. In their study of Indonesia, Dower and Potamites (2014) find more positive evidence that titling boosts credit access, but via signaling rather than a conventional collateral effect espoused by De Soto (2001) and others. Similar to microfinance, land titling is politically more palatable than redistributing assets. Nonetheless, also like microfinance there is sparse evidence that land titling has opened a pathway of upward mobility for low wealth rural households.

## 5 The Return of Redistribution: Asset Transfers and the Economics of Accumulation by Poor Households

Even as academic economics was busy evaluating the impacts of microfinance, often eschewing theoretical perspective for a reactive impact evaluation culture,<sup>20</sup> one prominent microfinance institution—the Bangladesh-based NGO, BRAC—recognized the inadequacy of the leverage not redistribution model, at least for their poorest households. As described by Hulme and Moore (2008), BRAC realized that its microfinance program failed to reach the poorest, especially the poorest women. The reasons behind this failure are instructive about the limitations of improving access to capital as a solution to resolving poverty when productive assets are unequally distributed.

First, in a microfinance analogue to collateral-based quantity rationing by conventional lenders (see the discussion in Sect. 3), BRAC discovered that their borrowing groups tend to exclude the poorest households with the weakest social collateral. Second, and somewhat more subtly, Hulme and Moore (2008, page 196) note that, in addition, the poorest tended to *self-exclude* from BRAC's microfinance programs because they were worried “about the consequences of not being able to make weekly loan repayments.”

This self-exclusion of the poorest is an example of what (Boucher et al. 2008) call risk rationing. As those authors demonstrate theoretically, in a world in which investment returns are uncertain, households with few assets may be loathed to collateralize those assets and risk losing them even when improved access to capital grants the opportunity to leverage their assets and invest in projects that are risky, but profitable in expectation. These authors find that like conventional quantity rationing, risk rationing is likely to weigh most heavily on poorer households with smaller endowments of productive assets.<sup>21</sup> They further show that increasing the collateralizability of the resources that poor households already have may simply shift those households from being quantity rationed to being risk rationed, with little change

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<sup>20</sup> As Barrett and Carter 2010 discuss, one of the unfortunate, but avoidable, side effects of the shift of development to impact evaluation is that theoretical insights have often been left aside with the economics profession following the programming decisions of government and non-governmental organizations (NGOs).

<sup>21</sup> Boucher, Carter, and Guirking (2008) argue that risk rationed households are in a sense involuntarily rationed because they would be expected to borrow if the available contract offered higher interest rates but lower collateral requirements. A similar argument could be made for self-excluding microfinance borrowers who fear placing their few social relationships at risk as collateral for group loans.



in production or in their living standards.<sup>22</sup> While the collateral under microfinance loans are often intangible social assets, the insights of Hulme and Moore (2008) suggest another limitation of a microfinance-led approach to improving the economic circumstances of low-wealth households.

More generally, the risks that attend agricultural production have long been suspected to reduce the efficacy of microfinance in the small farm sector. Among other things, the reality that much of agricultural risk is a common or covariant risk within a community means that joint liability mechanisms do little to reduce default risk for lenders, as the members of a group will tend to all succeed or fail at the same time. This observation has led to efforts to inter-link small farm credit with index insurance mechanisms designed to remove covariant risk (see Carter et al. 2016; Miranda and Farrin 2012).

Beyond discouraging taking advantage of opportunities to access capital, risk can also discourage from accumulating productive wealth itself. Before turning to this latter consideration, we first consider the rediscovery of asset transfers as a solution to rural poverty.

## 5.1 Asset Transfer and Asset Building Graduation Programs

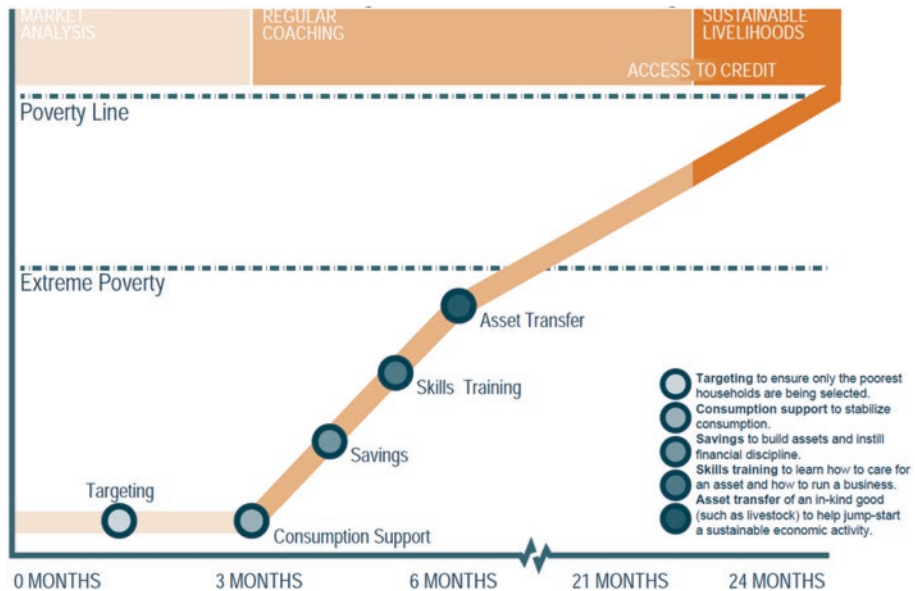
Hulme and Moore (2008) and Hashemi and De Montesquiou (2011) explain the emergence of “graduation” program from BRAC’s efforts to find a set of interventions that would work for households excluded from standard microfinance programs. Given the evidence that microfinance at best weakly promotes the creation of new businesses and has little impact on class structure and rural poverty, lessons from these programs become even more important. Figure 11.3, taken from Hashemi and De Montesquiou (2011) portrays the key elements of graduation programs as taken from BRAC’s TUP (Targeting the Ultra-Poor) program.

As can be seen in the figure, the graduation program begins with a period of consumption support designed to stabilize the household economy, allowing the household to focus on the future freed from the preoccupation of securing immediate consumption. This intervention is then followed by a period of “coaching” intended to build up both conventional business and technical skills and soft skills, or psychological assets, including a sense of

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<sup>22</sup>While the Boucher et al. (2008) results are theoretical, they also show empirical evidence from four countries showing that as much as 25% of the small farmer population is risk rationed and that their failure to exploit available loan contracts leaves them poorer than they need be and in a circumstance akin to that of households that are completely excluded from credit markets.





**Fig. 11.3** Graduation programs

Source: Hashemi and De Montesquiou 2011

individual worth and self-efficacy. With these pieces in place, a transfer of a productive asset occurs (valued in the \$500–\$1000 range) with the hope of launching the household on a path of improved economic well-being and sustained asset accumulation and growth.

BRAC's own evaluation of its initial program found highly positive results on program beneficiaries as compared to a control group of near-eligible households.<sup>23</sup> As reported in Rabbani et al. (2006), three years after the initiation of the program, compared to the control group, participants had accumulated more assets (tangible, financial and social), improved their land access and moved up the livelihood or wealth ranking ladder, surpassing the level of the initially better-off control group. The fraction of treated households below a dollar-a-day poverty threshold fell by 30 percentage points. Participant households had also graduated to participate in regular BRAC microfinance groups by the end of the evaluation period.

These encouraging results motivated a set of studies across six different countries (Ethiopia, Ghana, Honduras, India, Pakistan and Peru) to test the robustness of the graduation model. As reported in Banerjee et al. (2015b),

<sup>23</sup>The BRAC analysis compares “selected” with “non-selected” ultra-poor households. Non-selected households passed the means test for inclusion in the program, but failed to otherwise qualify for the program based on other characteristics. At baseline, the non-selected control group was modestly better off than the group selected for inclusion in the TUP program.

three years after the productive asset transfer, program beneficiaries enjoyed consumption that was 5% higher than that of a randomly generated control group. Increases in income and assets were proportionately even higher. Savings and borrowing both increased as did hours worked and mental health indicators. Similar results are found by Gobin et al. (2017) who find that a graduation program targeted at the poorest women in the remote pastoralist regions of northern Kenya boosted incomes by almost 30% 18 months after program inception.

Reporting on the scaled-up BRAC TUP program in Bangladesh, Bandiera et al. (2017) study impacts two, four and seven years after program inception.<sup>24</sup> At baseline, study households allocated most of their time to low-paying, casual wage jobs. Participation in the graduation program fundamentally shifted the time allocation of the treatment group toward more remunerative entrepreneurial activities built on the initial asset transfer. The authors find that program impacts continued to grow between years two and four of the study, powered by an autonomous process of capital accumulation. At year two, income in the beneficiary population had grown some 25% compared to the control group, with that impact rising to 39% by year 4. Similarly, consumption rose by 5% after two years, with that impact doubling by year 4.

These growing impacts signal that the BRAC graduation program had indeed placed households on a trajectory of upward asset accumulation that sustained itself long after the initial asset transfer had been made. The poverty headcount among the beneficiary population fell 8 percentage points over 4 years relative to the control group off a baseline poverty headcount of 55%. Finally, the year 7 results show that these average impacts were sustained, although they did not grow any larger suggesting perhaps that the beneficiary households had reached a new equilibrium position.<sup>25</sup>

Compared to the estimated tepid impacts of microfinance, graduation programs built around the transfer of productive assets (and investment in human

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<sup>24</sup> Four years after the study's inception, control group households were brought into the program. The seven-year results reported by Bandiera et al. (2017) assume that the control group replicated the pattern of the treatment group in the first years of the study and synthetically reduce downward the position of control households at year 7 in order to obtain estimates of the long-term impacts on the treatment group.

<sup>25</sup> Interestingly, Bandiera et al. (2017) show that these average impacts disguise a pattern of heterogeneity in which roughly 40% of households benefit modestly from the program, while the rest benefit substantially more than the average treatment effects indicate. In a study of small farm development program in Nicaragua, Carter et al. (2018) discuss in more detail the reasons why such heterogeneity exists in programs intended to address rural poverty with asset transfers and other interventions intended to place households on an entrepreneurial pathway.

and psychological assets) appear to be highly effective in reducing rural poverty. The programs are also highly expensive. The BRAC program studied by Bandiera et al. (2017) costs about \$1200 per beneficiary household, while the six programs studied by Banerjee et al. (2015b) cost between \$1500 and \$6000 per beneficiary. These costs are split roughly equally between the direct cost of the asset transfer and the cost of the coaching intervention and program administration. How much of the impact of these programs is due to these different program components (and their potentially synergistic interaction) remains an open question. It is perhaps telling that the Escobal and Ponce (2016) study of a pure asset transfer program in Peru that lacked the coaching intervention found income impacts less than 10%, or about a third of the level seen in the other studies.

While the income benefits to beneficiary households generally outweigh the program expenditures under reasonable assumptions, the shift from a microfinance leverage model back to an asset redistribution model is striking. Indeed, they invite comparison with the Keswell and Carter (2014) impact evaluation of a more conventional South African land redistribution program implemented in the early 2000s.<sup>26</sup> The Land Redistribution and Development (LRAD) program provided an asset grant worth approximately \$3000 that had to be used to purchase land on a willing-seller, willing-buyer basis. Program participants enjoyed business planning support from the South African government. Using a pipeline identification strategy, Keswell and Carter (2014) find that the land transfer boosted household per-capita consumption by 40% three years after the transfer. With control households hovering around the current \$1.90 poverty line, an increase in this magnitude implies a substantial shift of poor households from just below to well above the poverty line. This increase in consumption is substantially higher than those recorded by the graduation program studies and bespeaks an income increase (not measured directly in the South African study) at least as large those found by these other studies. Keswell and Carter (2014) note that these large returns on the once-off land transfer suggest substantial additional accumulation by these households as well as a shift from lower to higher productivity uses of their labor time.

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<sup>26</sup> As discussed by these authors, identification of the impact of such land reform programs has historically proven difficult because major redistribution efforts typically take place in the midst of a broader mix of political and economic changes (see, e.g., the studies in Thiesenhusen 1989).

## 5.2 Risk, Poverty and the Dynamics of Asset Accumulation

While the graduation program studies largely took place in an a-theoretic, impact evaluation vacuum, their findings invite a return to theoretically grounded understandings of rural poverty discussed in the earlier sections of this chapter. At the first level, they appear to confirm the most basic perspective that emerged from the Chayanovian literature, namely that households are poor because they lack ownership over assets and receive low returns to their labor endowments. Improving households' holding of productive assets allows them to shift to a more entrepreneurial strategy and earn higher returns to their labor. However, at a deeper level, the sustained and high impacts found in these studies also reveal that a once-off asset transfer sparks, over time, additional investment and asset accumulation that otherwise would not have taken place.

This revelation returns us to an issue left unresolved by the static models in the Chayanovian tradition. As noted in Sect. 3, these models assume that the distribution of owned land (or other productive assets) is fixed. And yet, in a world in which land-poor households have cheap labor but lack access to capital, there would appear to be incentives for the poor households to use time as their ally, allowing them over time to either accumulate financial wealth or purchase land from larger landowners, gaining leverage in financial markets.

A pair of papers (Carter and Zimmerman 2000; Zimmerman and Carter 2003) explicitly address the question of how the poor accumulate assets in a world of imperfect factor markets. Carter and Zimmerman (2000) show that, ignoring risk, low-wealth households will find it dynamically optimal to sacrifice consumption in the short term and purchase assets and eventually gain the financial market leverage needed to fully fund an efficient production process. While this process is slow and economically costly, it does show that initially poor agents will slowly save their way out of poverty and transition to a more entrepreneurial posture. In contrast, Zimmerman and Carter (2003) show that adding risk into this general problem can completely derail the poor's self-financed ascent from low living standards.

However missing from both of these models is the psychological dimension that has been brought into focus by the graduation studies. To gain purchase on the integrated problem, we draw on the following intertemporal choice model that has been more recently analyzed in the literature on asset accumulation by poor households:

$$\begin{aligned}
& \max_{c_{jt}} && E_0 \sum_{t=0}^{\infty} \beta^t u(c_{jt}) \\
& \text{subject to:} && \\
& && c_{jt} \leq T_{jt} + f(\psi_j, T_{jt}) \\
& && f(\psi_j, T_{jt}) = \psi_j \max[f_H(T_{jt}), f_L(T_{jt})] \\
& && T_{j,t+1} = (T_{jt} + f(\psi_j, T_{jt}) - c_{jt})(\theta_{j,t+1} - \delta) \\
& && T_{jt} \geq 0
\end{aligned} \tag{11.3}$$

In contrast to the Chayanovian model outlined in Sect. 2, the household in this model is forward looking, making a stream of consumption and investment decisions in order to maximize its discounted stream of expected utility. Specifically, consumption in each time period  $t$  is constrained to be less than the households' total wealth (or cash on hand) at that time, defined as the value of its productive assets ( $T_t$ ) plus current income ( $f(\psi_t, T_t)$ ). Next period's stock of productive assets evolves according to the third constraint, which says that next period's assets equal this period's plus net investment, adjusted for depreciation ( $\delta \geq 0$ ) and stochastic shocks ( $0 < \theta \leq 1$ ). Importantly, borrowing is not permitted in this stylized model, and consumption and investment are restricted to current cash on hand. To keep things relatively simple, labor agency costs and working capital constraints are ignored.

An important addition to this model is that it gives the household the choice between a traditional, low-returning technology,  $f_L$ , and a higher-returning technology,  $f_H$ , that is characterized by fixed costs. In addition, the productivity of both technologies is shaped by the household's specific level of human capabilities, denoted as  $\psi_t$ . We can conceive of human capabilities in a very general sense so that it includes innate skill, human capital as well as psychological characteristics such as perceived self-efficacy. As stressed by de Quidt and Haushofer (2017), it is the household's own perception of its capabilities that matters for decision-making, and those perceptions are in turn shaped by depression and other psychological phenomena and perhaps by poverty directly (Dean et al. 2017).

As has been studied by a number of authors (e.g., Buera 2009; Carter and Barrett 2006), a model with a non-convex production set like this one can generate multiple equilibria, with some households optimally gravitating toward a "poor" equilibrium associated with the low technology and others gravitating toward a better-off equilibrium using the high technology. The key insight of these models is that there may exist a critical asset level or tipping point in asset space. Below that level, it makes no sense to try to escape poverty (the odds of escaping are too low and the time required too long), and

individuals or families who find themselves below the tipping point will remain persistently poor. Above that critical asset level, it makes economic sense (in these sense of optimization problem (11.3)) to strive to escape poverty and reach the higher equilibrium. In poverty trap models of this sort, initial asset holdings matter (endowments are fate) and shocks that push households below the critical asset level have permanent, irreversible consequences.

While the empirical existence of such a multiple equilibrium poverty trap has been a matter of some dispute (e.g., see the discussions in Barrett and Carter 2013; Kraay and McKenzie 2014), the model above provides a fairly general framing against which we can consider the ways in which asset transfer programs and psychological asset building might work. Figure 11.4 is a stylized representation of the solution to dynamic optimization problem (11.3).<sup>27</sup> The curve labeled  $T_h^*(\psi)$  ( $T_l^*(\psi)$ ) represents the steady-state equilibrium capital holdings for those that employ the high-returning (low-returning) technology. As we would expect, optimal capital holdings under either technology are increasing in capability level  $\psi$ . The dashed curve labeled  $M(\psi, T)$  divides the space into those asset/capability positions from which it is optimal to move toward the non-poor equilibrium associated with the adoption of the high technology (asset combinations northeast of  $M$ ) and

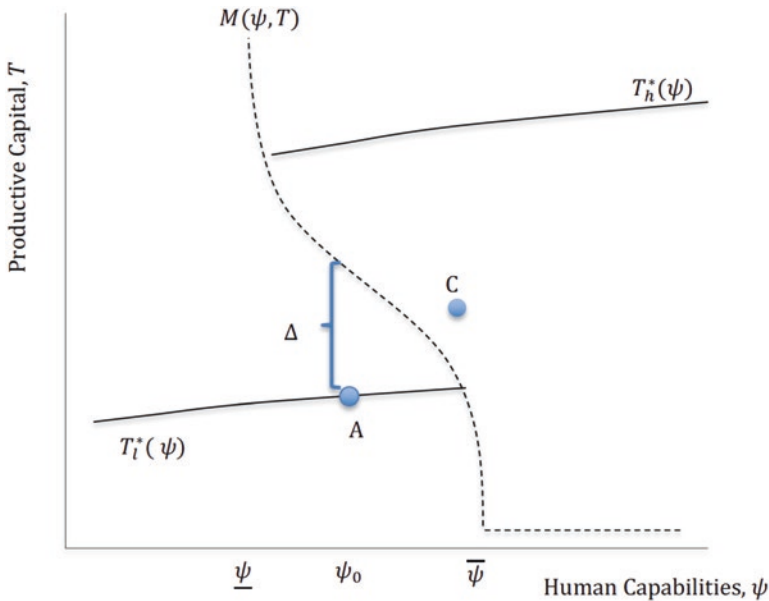


Fig. 11.4 Poverty and asset accumulation

<sup>27</sup>Numerical dynamic programming solutions to this type of model are found in Ikegami et al. (2017).

those from which it is not. That is, this “Micawber Frontier” (to use the terminology of Zimmerman and Carter 2003) maps a household’s asset position into its dynamically optimal strategy. It is important to stress that not all households to the northeast of the frontier will succeed and reach the non-poor equilibrium in the long run. The prospect of a severe shock that destroys assets and pushes the household below the frontier makes it probabilistic that a household will not reach the high equilibrium even if they attempt to accumulate the assets required to reach it (see Ikegami et al. 2017). As can be seen, for households with capabilities below the critical level,  $\underline{\psi}$  will never find it optimal to try to move to the high equilibrium irrespective of their initial holdings of tangible capital. Those with capabilities above  $\bar{\psi}$  will always strive to reach the high equilibrium even if they begin with a zero endowment of productive capital.

Consider a household initially found at position  $A$  in Fig. 11.4, with initial capability level of  $\psi_0$  and productive assets of  $T_t^*(\psi_0)$ . Absent of any intervention or other change, this household would be expected to remain at this steady-state position. The fact that the household is southeast of the Micawber Frontier signals that further efforts to accumulate additional assets and move to the high steady state ( $T^*$ ) is not optimal.<sup>28</sup>

Imagine now an intervention that boosts the household’s stock of productive assets, but leaves its capabilities unchanged. Any asset transfer  $\varepsilon < \Delta$  will not be sufficient to lift the household out of poverty in the long run as the new, augmented asset position ( $T_0 + \varepsilon$ ) remains below  $M(\psi_0, T)$ . Under optimal behavior defined by optimization problem (11.3), the household will optimally revert to the poor steady state despite the asset transfer.

For this household to have any probability of escaping poverty, one of two things needs to take place. Either the overall asset transfer must exceed  $\Delta$ , or the household’s capabilities must be bolstered. Graphically, if a graduation program moves the household from  $A$  to  $B$  in Fig. 11.4, by transferring  $\varepsilon_T < \Delta$  and boosts the household’s capabilities (perhaps through coaching that reduces depression and bolsters the household’s perceived self-efficacy), then the household will place itself on a path to try to escape poverty and reach the higher equilibrium.

While abstract, this theoretical framing helps make sense of some of the more interesting empirical findings in the literature. In a particularly provocative study, Macours and Vakis (2014) have the opportunity to study the

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<sup>28</sup>Note that at the steady-state position, marginal returns to further investment are worth less than the certain cost of the foregone consumption required to finance the accumulation. Given that these costs are certain and that the gains from further accumulation are uncertain, it is suboptimal for the household to try to move beyond the low equilibrium steady-state value.



impact of modest asset transfers (valued at \$400) to poor, rural Nicaraguan women when those transfers were or were not accompanied by a complementary intervention that boosted households' aspirations and beliefs in their own self-efficacy. Interestingly, when the asset transfer was not accompanied by the complementary intervention, its impact on household income and investment was nil. In contrast, when the asset transfer was accompanied by the strong exposure to leaders, its impact boosted earned income by 30% and livestock holdings by 77%.

While the studies of graduation programs discussed in Sect. 5.1 were unable to study the separate impacts of asset transfers (northward movements in Fig. 11.4) from coaching interventions (east movement in Fig. 11.4), the model does help shed light on one puzzling aspect of these interventions. The Bandiera et al. (2017) study finds substantial heterogeneity in program impacts. For example, the high average impacts reported above are driven by an uneven pattern of benefit. Their analysis of quantile treatment effects for productive capital shows that about 40% of the sample experienced no longer-term impact, while 15% to 20% of the households experienced extraordinarily high rates of capital accumulation.

From the perspective of the poverty trap model of accumulation, the strong heterogeneity of these results would be expected if the target population was distributed with different levels of capital and capabilities. For some, the intervention may well have lifted them above the Micawber threshold and placed on a self-sustaining trajectory to a higher equilibrium. For others, the program may have failed to adequately boost either the stock of productive assets or human capabilities to allow escape from the poverty trap equilibrium.

## 6 In Conclusion

The distribution of land has long been a central preoccupation in agrarian economics and the economics of rural poverty. Casual empirical comparison of the economic performance of East Asian economies with those of other world regions supports the notion that the egalitarian land distributions of the former explained their relatively rapid rates of economic growth and rural poverty reduction. While the economic case that land redistribution can be a win-win scenario, promoting both growth and poverty reduction, has deep roots, the politics of asset redistribution have of course never been easy. Even as the economic analysis of agrarian economies became more sophisticated suggesting that enhanced capital access could substitute for asset redistribution, the microfinance revolution took hold with the promise that poverty



could be eliminated by finding mechanisms that allow the poor to borrow the wealth of the rich, rather than redistributing it.

While the full merits of that argument may never be known, development economics became increasingly preoccupied and sophisticated in its effort to empirically evaluate this claim. Despite the hype surrounding the microfinance revolution, the empirical analysis found its impacts wanting. Ironically, attention turned to a new generation of graduation programs that provided modest asset transfers in combination with other interventions meant to stabilize households and allow them to build their self-confidence and psychological assets. In contrast to the tepid findings on the impacts of microfinance, evaluation of these next generation anti-poverty programs has found them to be remarkably impactful, on average and at least for a subset of beneficiaries.

Have we come full circle? Yes and no. Consistent with a new body of theory on asset accumulation, it seems that at least a minimum asset base is required to allow households to escape poverty. Improved access to capital by itself seems inadequate. While this sounds like an old story, deeper appreciation of the psychology of poverty suggests that the transfer of tangible assets alone may be inadequate to reduce rural poverty and that there are important synergies between efforts to simultaneously build up both the physical and psychological assets of poor rural households. Finally, in risk-prone rural regions, there is a set of questions about the stability of transitions out of poverty generated by asset building and asset transfer programs. Finding ways to secure those gains stands as a priority for future research and experimentation.

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# 12

## Institutions and the Process of Industrialisation: Towards a Theory of Social Capability Development

Ha-Joon Chang and Antonio Andreoni

### 1 Introduction

The relationship between institutions and economic development is central for understanding how today's developed countries managed to transform their economies and, more critically, for designing policies for today's developing economies. There has been a long-running debate on the definition of economic development. While the majority of people have considered income level to be the ultimate measure of development, there have always been critics who emphasise that development is something more than providing higher material standards of living.

For example, according to Cimoli, Dosi and Stiglitz, development is “a process that links micro learning dynamics, economy-wide accumulation of technological capabilities and industrial development” (Cimoli et al. 2009: 543). More recently, Andreoni and Chang (2017: 173) conceptualised development as “a process of production transformation, led by the expansion of collective capabilities and resulting in the creation of good quality jobs and sustainable structural change”.

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In both these definitions, development is intrinsically associated with processes of production transformation and learning, involving large segments of the society and its institutions. Institutions play a key role in the process of industrialisation. Indeed, they are at the same time both the result and one of the main drivers of economic development and manifest themselves in different ways in different contexts and time.

In economics and development economics, the research on institutions and institutional change has gone through different stages and has encountered several problems, mainly related to the difficulties that economists face in understanding the nature, variety and pervasive roles of institutions. This chapter takes up this challenge and discusses the role of institutions with specific reference to the industrialisation process. This focus is grounded on a specific structuralist view of economic development, that is, one emphasising the relationship between production transformation and institutional change.

The chapter engages with this complex subject by reviewing the history of economic analysis of institutions in economic development since the 1940s (Sect. 2). Building on this review, in Sect. 3 we critically analyse the mainstream views on institutions and economic development by focusing on four main issues: (1) the definition of institutions, in particular the analytical distinction pertaining their forms and functions, as well as distinctions between institutions and organisations, and between formal and informal rules; (2) the conceptualisation of the role of institutions, beyond its constraining function; (3) fallacies in the theory of the relationship between institutions and economic development; and finally (4) the theory of economic development.

Building on this analytical review, in Sect. 4 we advance an alternative theory of the role of institutions in economic development, drawing, most importantly, on Moses Abramovitz's concept of 'social capability' and its emphasis on 'societal characteristics' encapsulated in productive organisations as much as political, commercial, industrial and financial institutions. Section 5 develops Abramovitz's idea of social capability by identifying and characterising a number of specific institutions which have played a key role in the industrialisation process across today's developed countries. Specifically, we discuss various institutions needed for effective industrialisation—institutions of production (Sect. 5.1), institutions of productive capabilities development (Sect. 5.2), institutions of corporate governance (Sect. 5.3), institutions of industrial financing (Sect. 5.4), institutions of industrial change and restructuring (Sect. 5.5) and institutions of macroeconomic management for industrialisation (Sect. 5.6). The new institutional taxonomy of institutions for industrialisation advanced here is a first step towards a theory of social capability development.

Section 6 concludes by pointing out the need to advance our understanding of social capability development in the process of industrialisation. In particular, we emphasise the importance of recognising the variety of forms, functions and broader manifestations of institutions in different historical contexts and the ways in which they enable higher coordination in society and constitute their identity.

## 2 History of Economic Analysis of Institutions in Development Economics

Institutions were at the foundation of development economics when it was first established as a separate branch of economics in the 1940s and the 1950s. Indeed, one important impetus behind the emergence of development economics was the recognition that developing countries have socio-economic institutions that are different from the ones that exist in the industrialised countries and therefore cannot be analysed with theories taking those institutions for granted—such as Neoclassical economics and Keynesian economics.<sup>1</sup>

For example, many early development economists—especially those who worked in the tradition of Chayanovian ‘peasant economy’ discourse—argued that agriculture in developing countries cannot be analysed with Neoclassical economics because agricultural producers in developing countries are not profit-maximisers, as assumed in Neoclassical economics (for a review and a critic of the theory of the ‘peasant economy’, see Georgescu-Roegen 1976; Kitching 1982). This is because agricultural production in developing countries is mostly conducted by traditional extended family units, or peasant households, which aim to maximise the average consumption of its members, and not by capitalist farms, which aim to maximise profit.

Even when the differences in institutions between the developed and the developing countries were not as explicitly highlighted as in the ‘peasant economy’ theory, they played important roles in early development economics. For example, in the debate concerning the famous ‘falling terms of trade for primary commodities’, one important argument was that the tendency exists because of the differences in the nature of the firm and the structure of the market in the developed and the developing countries (see Spraos 1983, for further discussions). The argument was that the manufacturing firms in the

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<sup>1</sup> Insights from Classical and Marxist economics, in contrast, were used much more by early development economists—Albert Hirschman, Simon Kuznets, Arthur Lewis and Michal Kalecki being the best examples—because their theories were based on the institutions of early capitalism, which were much more similar to those that existed in developing countries in the 1940s and the 1950s.



developed countries are oligopolies that do not have to pass on their productivity gains to the consumers (in the developed and the developing countries), while those producing primary commodities in developing countries are mostly small firms or farms operating in competitive markets and thus have to pass on their productivity growths to the consumers (mostly in the developed countries).

While development economics was evolving, the rest of economics became less and less interested in institutions. Given the aspiration of the increasingly dominant Neoclassical school to make economics a 'science', it was thought that context-specific and often 'irrational' things like institutions have no place in economics. Neoclassical economists in the US, which established itself as the home of Neoclassical economics after World War II, ignored institutions even more wilfully, because they had to establish their dominance by beating back the Institutionalist school (à la Veblen), which had been the dominant school of economics in the country in the late nineteenth and the early twentieth centuries. By the 1970s, when the defeat of the (American) Institutionalist school was complete, development economics remained the only field of economics that takes institutions seriously.

Unfortunately, even this state of affairs did not last long. With the neo-liberal revolution in the world of politics and in the academia, the 1980s saw the spreading—and then dominance—of Neoclassical economics even into the field of development economics. When the World Bank and the International Monetary Fund (IMF) were criticised for applying 'one-size-fits-all' policies through their structural adjustment programmes (SAPs), which ignored local institutional contexts, the reaction from the increasingly confident Neoclassical school was that economics is a science built on universal human nature of self-seeking and rationality and therefore that policies based on scientific (Neoclassical) economic theories should work in any country, regardless of its institutional characteristics. Only those who cannot handle rigorous analytical tools of economic science, it was said, worry about 'woolly' things like institutions. As a result, during the 1980s and the 1990s, institutions largely disappeared from development economics.

However, there was an unexpected change in the fortune of institutions in development economics. Even while the dismissal of institutions by the Neoclassical economists was at its peak, the 1980s saw the rise of the so-called New Institutional Economics (NIE), which developed theoretical tools—most notably the concept of transaction costs—that allowed the analysis of institutions to be conducted in a way that is compatible with Neoclassical economics (Langlois (ed.) 1986, is a good collection of the then-cutting-edge works in NIE; see also Harriss et al. 1995).

According to Douglass North, one of the founding fathers of the NIE, the NIE “builds on, modifies and extends neoclassical theory” (North 1995: 17) by rethinking the instrumental rationality assumption and by recognising institutions as “a critical constraint” in the natural order of the market. North (1990: 3) proposes the following definition: “Institutions are the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interactions [structuring] incentives in human exchange, whether political, social or economic”. In the NIE, institutions are mainly understood as necessary constraints—that is, formal and informal systems of rules—built by human beings to reduce the high degree of uncertainty that characterises their interactions.

This uncertainty derives from two factors: firstly the fact that, as Herbert Simon (1983) had already argued in *Reason in Human Affairs*, human knowledge and information are necessarily incomplete and asymmetrically distributed because of the mental computational limitation “to process, organize and utilize information”; secondly from the “non-ergodic” structure of the human domain (North 1990: 25). Transaction costs are thus considered as the very manifestation of this widespread degree of uncertainty and are used within the Neoclassical framework to explain the existence of market inefficiencies and justify the role of institutions.

The NIE was initially not welcomed by either the traditional Institutional economists, who thought it was not a ‘real’ institutional economics, or most Neoclassical economists, who thought it was not rigorous enough. However, with the awarding of Nobel Prize in economics to Ronald Coase (in 1991) and Douglass North (in 1993), it got clear recognition and rapidly gained in popularity, spreading beyond its original homes of the theory of the firm and the law (Coase and Oliver Williamson, who got the Prize in 2009) and of economic history (North), into other fields of economics, most notably development economics.

In the field of development economics, the big change in the fortune of institutions came between the late 1990s and the early 2000s. Institutions were suddenly talked about a lot by Neoclassical development economists and some of them even started arguing that institutions are the most fundamental determinants of economic development. The series of ‘legal origins’ papers by Rafael La Porta and his associates, which extended North’s work on the positive effect of the common law on economic development, was started in 1997 (La Porta et al. 1997).<sup>2</sup> In 1999, the World Bank team led by Daniel Kaufmann started to publish the *Governance Matters* series of reports, in which they tried

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<sup>2</sup>The other important work is La Porta et al. (2008).

to measure the quality of institutions across the world and tried to link it with economic performance (Kaufmann et al. 1999). In 2001, Daron Acemoglu and James Robinson, who have popularised the view that institutions that restrain the executive power are the most fundamental determinants of economic development, published the first of their many joint publications (Acemoglu et al. 2001).<sup>3</sup>

In 2002, under the slogan ‘institutions matter’, the World Bank dedicated its flagship annual report *World Development Report* to the issue of institutions, although the sub-title, *Building Institutions for Markets*, suggested a very Neoclassical approach to institutions. In 2003, the first *Doing Business* report of the World Bank, which soon became the barometer of business friendliness of a country’s institutions (and policies), was published. The 2017 *World Development Report* is the most recent attempt to capture the role of institution in economic development, with a specific focus on governance and the law. Despite some (timid) recognition of the limitations of the NIE framework, the report remains well anchored in the same framework, where institutions are reduced to mechanisms for reducing uncertainty and informational asymmetries, ultimately understood as things that enhance the functioning of the market.

The incorporation of institutions into Neoclassical development economics was not a case of an innocent scholastic awakening. Those Neoclassical economists who write about institutions rarely openly admit that Neoclassical economics was wrong to dismiss the importance of institutions. Moreover, this incorporation was suddenly made in the late 1990s, at a time when Neoclassical economists ran out of excuses for the failure of SAPs (most of which started in the late 1970s and the early 1980s), which contained all the ‘good’ policies based on ‘scientific’ Neoclassical economic theories—you could blame the teething problems and time lags only for so many years, while poor implementation was a poor excuse when countries were put under very strict conditionalities. Poor institutions were a convenient ‘explanation’ of the failures of Neoclassical economics in action in so many developing countries. This interpretation is corroborated by the fact that the late 1990s saw a general flood of explanations of poor economic performance in developing countries (despite the introduction of SAPs) in terms of ‘meta-structural’ factors—like climate, geography, resource endowments, ethnic diversity, culture and institutions (Chang 2018). In other words, the new interest in institutions was a part of what Chang (2018) calls the ABP (or Anything But

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<sup>3</sup>The other important works are Acemoglu et al. (2005) and Acemoglu and Robinson (2012).

Policy) movement, intended to protect Neoclassical economics from criticisms, given the abject failure of SAPs.

Since the late 1990s, the NIE-based mainstream institutional argument has had tremendous impacts on policymaking in the developing world as well as development economics in the academia. From the late 1990s, the World Bank and the IMF started to attach a lot of ‘governance conditionalities’ to their loans, despite the fact that they did not have the mandate to do so (Kapur and Webber 2000; also see chapters in Chang (ed.) 2007a). The Doing Business (henceforth DB) report—largely based on potentially highly biased ‘perception-based’ indices—set off an international race among quite a few developing countries to climb up the league table—Rwanda even established a national Doing Business Unit in 2007 (Michaels 2009: 772).<sup>4</sup> Governance index now forms an important part of the World Bank’s Country Policy and Institutional Assessment (CPIA) index, which is used for allocating resources between the poorer countries that qualify for subsidised loans from the International Development Association (IDA), an arm of the World Bank.<sup>5</sup>

### 3 Problems with the Mainstream View on Institutions and Economic Development

There are many problems with the mainstream (Neoclassical) literature on the role of institutions in economic development. Let us discuss the most important ones (see Chang 2011, for a comprehensive critique; also see the commentaries that try to defend NIE against Chang’s criticisms in the same special issue of the *Journal of Institutional Economics* where his article was published and Chang’s reply to them).

#### 3.1 Definition of Institutions

The first problem with the definition of institutions in the current mainstream discourse is that it fails to clearly distinguish between the forms and the functions of institutions (see Chang 2007b, for further discussions). For

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<sup>4</sup> However, the DB index has often been criticised for being partial, not least by the former chief economist of the World Bank, Paul Romer, who, while he was in the job, argued that a former director in charge of the index manipulated it, so that Chile would rank lower than otherwise, in an apparent attempt to hurt the left-leaning government of Michelle Bachelet (Source: <https://www.wsj.com/articles/world-bank-unfairly-influenced-its-own-competitiveness-rankings-1515797620>).

<sup>5</sup> The evaluation by the Independent Evaluation Group (IEG) of the World Bank has expressed a strong reservation about the ‘governance’ components of the CPIA (IEG 2010).

example, if we look at the World Bank's *Governance Matters* exercise, which compiles most major indexes of institutional quality, we find that these indexes often mix up variables that capture the differences in the *forms* of institutions (e.g., democracy, independent judiciary, absence of state ownership) and the *functions* that they perform (e.g., rule of law, respect for private property, contract enforcement, maintenance of price stability, the restraint on corruption). In response to this confusion, some have argued that the 'function' variables should be preferred over the 'form' variables (e.g., Aron 2000), but we cannot completely ignore institutional forms. If we did that, we will be like a dietician who talks about eating a 'healthy, balanced diet' without telling people how much of what they should have.

Moreover, the mainstream institutional discourse often equates institutions with property rights—or even more narrowly the 'security' of it against expropriation by the state.<sup>6</sup> Moreover, property rights are defined in a very narrow way. Essentially only open-access, state-owned property and private property are recognised, of which the last is uncritically assumed to be superior.<sup>7</sup> There is little, if not no, attention paid to common property (e.g., management of the 'commons' whether they are village forests in India or sharewares on the internet), while virtually nothing is said of hybrid forms of property rights, such as cooperatives (where independent producers jointly own some properties).<sup>8</sup>

Even if we accepted that property rights are the paramount institutions, it is not clear how the institution of property rights is exactly defined. Unlike some other institutions, like the central bank or the bureaucracy, which are clearly and narrowly definable, the institution of property rights is a complex of an impossibly wide array of component institutions—just to name several most important ones, contract law, company law, tax laws, bankruptcy law, intellectual property laws, land law, urban zoning law and customs regarding common property. If you cannot precisely define what the institution of property rights is, it is pointless to discuss its impacts.

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<sup>6</sup>This thought is behind the extraordinary claim that "the most important contributions to the study of institutions and development have nothing to do with ... issues like legal systems, state-owned enterprises, financial regulation and corporate governance to corruption and political systems" (Keefer 2011: 547). Also note the emphasis on institutional function (security of property rights) over institutional forms.

<sup>7</sup>Moreover, in measuring the quality of private property rights, the focus is on the protection of property holders against 'appropriation' by the government, when a lot of appropriation happens by other private-sector agents (van Noor 2018).

<sup>8</sup>Notable exceptions can be found in the work of Elinor Ostrom on governing the commons (for which she received—the only female winner—Nobel Prize in Economics), as well as contributions by Masahiko Aoki and Yujiro Hayami on the role of communities alongside markets in economics development (see Ostrom 1990; Aoki and Hayami 2001).

Another critical issue arising from the widely adopted definition of institutions developed by North (1990) is the distinction between institutions and *organisations*. According to North (1990: 4) “what must be clearly differentiated are the rules from the players”, that is, the institutions setting up the incentive structures of the game from the organisations (or ‘teams’ and ‘their entrepreneurs’) which are the players. This conceptualisation has led to distinguishing institutions—let us say property rights—from organisations such as firms, trade unions, political parties and so on and to treat the latter as internally homogeneous players. North (1994: 361) himself states that organisations “are made up of groups of individuals bound together by some common purpose”.

However, organisations are far from homogeneous entities; they are themselves made up of agents with both similar *and* conflicting interests. As a result, in order to function and pursue a certain goal, organisations must themselves establish internal rules of interaction which make the achievement of their goals possible. In this sense, organisations like the firm can be thought of as a collection of rules—thus, institutions—operating within a broader institutional framework—let us say a certain country or a market with a certain set of rules (see March and Simon 1958 and Penrose 1958). This example suggests that the distinction between institutions and organisations might be misleading and that in fact there might be other qualities distinguishing institutions of different types, for example, their ‘rate of change’—how stable they are or how long it takes to change them—or their ‘boundaries’—that is, the extent of players or groups involved and the different interests they represent.

One final ambiguity in the mainstream definition of institutions is related to the distinction between *formal* and *informal* rules, specifically, the idea that institutions are formal constraints such as “laws and constitutions”, while informal constraints are mainly associated with “norms of behaviour, conventions, self-imposed code of conduct” (North 1994: 360). In developing countries, in particular, this distinction is highly problematic as all formal rules are intertwined with informal processes, especially with respect to the enforcement of the formal rules themselves. For example, property rights on lands are written in systems of both formal and informal rules—that is, registries and informal community entitlements—and the enforcement of these rules relies on both external and community-level mechanisms—for example, courts and peer pressure.

To conclude, institutions (and organisations understood as institutions themselves) can take different forms and perform one or more functions, the latter being different; finally, the degree of formality of institutions is not easy to discern as it depends on the broader contextual system of rules and enforcement mechanisms.

### 3.2 Conceptualising the Role of Institutions: Constraining, Enabling and Constitutive

In the mainstream institutional discourse, institutions are mainly understood as “the humanly devised constraints that shape human interactions”, to use the quote from North again. This emphasis on institutions as ‘constraints’ stems from a mistaken perception of institutions as ‘unnatural’ man-made tools in contrast with the market as the natural meta-historical order.

However, as soon as we reject this ‘market primacy assumption’, the ‘enabling’ and ‘constitutive’ role of institutions become evident (Chang 2002; Chang and Evans 2005; Hodgson 2006). The consideration of these two roles plays a critical role in understanding the link between institutions and economic development, as well as in designing the institutions for industrialisation through policies.

First, as stressed by Hodgson (2006: 2), “[t]he existence of rules implies constraints. However, such a constraint can open up possibilities: it may enable choices and actions that otherwise would not exist.” More specifically, by “putting constraints on everyone’s behaviour”, institutions enable everyone “collectively to do more things” (Chang and Evans 2005: 103), namely achieving more complex forms of coordination within and beyond the market. For example, let us consider the restriction of property rights in the form of taxation or, as another case, limitations in the use of certain assets. In the first case, by restricting the possibility of capturing the full return from an activity, taxation enables the pulling and redistribution of resources in the form of public goods and services provision. In the second case, the limitations on certain activities in the form of labour regulations or industry standards enable the achievement of higher and more complex levels of social coordination.

Second, as recognised by the old institutional economists like Veblen (1899), according to whom institutions are special types of social structures, institutions play a ‘constitutive’ role by shaping interests but also beliefs, motivations and values (Chang and Evans 2005; Hodgson 2009). While the direct provision of incentives, credible sanctions or constraints can modify the individual payoffs associated with different behaviours (Aoki 2001; North 2005), these mechanisms do not change in any fundamental way individual motivations or the individual interpretations of rules. However, institutions can also reshape motivations, values and beliefs of human agents as well as the internal representation and understanding of rules, by affecting shared habits—that is, dispositions to follow particular behaviours or rules under certain structural conditions. As Hodgson (2006: 7 *italic added*) argues, “habit is the key mechanism in this transformation. Institutions are social structures that can involve reconstitu-



tive downward causation, acting to some degree upon individual habits of thought and action.” The fact that institutions “are simultaneously both structures outside individuals and ideas inside their heads” (Hodgson 2000: 30) allows institutions to exercise their ‘constitutive’ role.

The recognition of this constitutive dimension should not lead to a structurally deterministic interpretation of the relationship between institutions and individuals. Instead, by combining the widely recognised mechanism of ‘upward causation’—that is, the idea that individual agents affect the development and functioning of institutions—with the idea of ‘downward causation’, it is possible to consider the existence of a “two-way causation between individuals’ motivation and social institutions” (Chang and Evans 2005: 104).

### 3.3 Theory of the Relationship Between Institutions and Economic Development

Mainstream institutional economics theorises the relationship between institutions and economic development in a very simplistic way.

First, mainstream institutional economics believes that the relationship between institutions and economic development is *linear*—once an institution is identified as ‘good’, it is believed that more of it is better. However, the impact of an institution is not linear. For example, even if some protection of intellectual property rights (IPRs) may be necessary for knowledge generation, at least in industries where copying is easy (e.g., pharmaceutical, software), too strong a protection of them is bad for the society, as it may actually discourage further innovation by making cross-fertilisation of ideas more difficult and by increasing the chance of technological deadlock caused by disputes between holders of inter-related patents (Chang 2001, 2007c, ch. 6; Stiglitz 2007, ch. 4).

Second, the relationship between an institution and economic development is implicitly assumed to be *uniform* across countries. So, using the IPR example again, a level of protection of IPRs that brings net benefit to a developed country may harm a developing country, as the latter will reap fewer benefits (developing countries have fewer economic agents that can take advantage of stronger protection of IPRs by inventing new knowledge) and pay higher costs (with a stronger protection of IPRs, they have to pay higher royalties to the holders of IPRs, most of whom are foreign entities) (Chang 2001). So what may be an optimal degree of IPR protection for a developed country would be too strong for a developing country.



Third, mainstream institutional theories do not recognise the fact that the impact of the same institution on economic development changes over time even in the same society. The changing functionality of an institution over time has been a key insight of the Marxist economic theory, which argues that institutions (or ‘the relations of production’ in its language) that once promoted economic development (or the development in ‘the forces of production’ in its language) can—or rather will—turn into an obstacle to it over time. Indeed, if the strongest possible protection of private property rights were the best for economic development, as mainstream institutional economists believe, we would all still be living in in slave-based or feudal economies that we had started with.

Fourth, mainstream institutional theories fail to recognise the inherently political nature of the evolution of the relationship between institutions and economic development. Institutions are crystallisations of power relations and therefore constantly change according to changing balance of power in a given society. Indeed, the changing functionality of an institution over time, discussed earlier, may be ultimately driven by the changes in ‘economic’ variables (e.g., technology, production structure and productive capabilities), but those changes are mediated by the struggle between newly emerging classes (economic groups, if you like) that call for new economic institutions and the old classes that resist such changes. The advocacy of the institution of banking by the newly emerging capitalist class and the resistance to it by the landlord class in today’s rich countries of the eighteenth and the early nineteenth centuries, on the one hand, and the struggle for the institution of the welfare state by the increasingly powerful working class and the resistance to its introduction by the capitalist class in those countries in the early twentieth century, on the other hand, are the best examples.

### 3.4 Poor Theory of Economic Development

The failure of mainstream institutional economists to properly theorise the relationship between institutions and economic development owes not only to their poor theory of institutions but also to their poor theory of economic development (see Andreoni and Chang 2017 for a critique of the Neoclassical theory of economic development and specifically its lack of focus on production; also see Chang 2010). The NIE, which is at the basis of mainstream discourse on institutions and development, has a really very poor theory of how economies develop and therefore a very poor understanding of the range of functions that institutions need to perform for economic development and the forms that those institutions could take.

In the NIE, all that is needed for economic development is to protect property rights (so that investors can be assured of their ability to reap the fruits of their investments) and, secondarily, to reduce transaction costs (making it easier to ‘do business’ by reducing ‘red tapes’ and by improving potential entrepreneurs’ access to finance through financial deregulation). There is no theory of how things are produced, before they can be ‘transacted’, and how the process of production can be improved.

In the Coasian theory of the firm (Coase 1937), “production costs determine the technical substitution choices [while] transaction costs determine which stages of the productive process are assigned to the institution of the price system and which to the institution of the firm” (Langlois 1998: 186). Thus, the firm emerges as a more convenient way of implementing the production process and the lowest cost option for obtaining control over the relevant factors of production. However, the institution of the firm may not simply be a way of reducing transaction costs. It may in fact be the most effective vehicle for the creation and development of productive capabilities. Penrose’s (1959: 149) definition of the firm as “a pool of resources the utilisation of which is organized in an administrative framework” highlights a theory of economic development centred around the process of learning-in-production, in which the firm is the main institutional vehicle for structural transformation, in contrast to the Coasian theory in which the firm is simply a way of reducing transaction costs (Andreoni 2014).

Given the narrow conceptualisation of the firm in the NIE framework, it is not surprising that there is no recognition in the mainstream institutional literature that active attempts need to be made to establish effective production units—modern firms, as opposed to traditional craft units, for example (Andreoni and Scazzieri 2014). There may be technology and knowledge in the mainstream models, but there is scant recognition that a lot of institutions are needed in order to help firms acquire, adapt and improve their productive knowledge (e.g., technologies, managerial techniques, organisational capabilities and worker skills).

There is particularly poor understanding that these learning activities are conducted by firms not in isolation but as parts of an industrial ecosystem (Andreoni 2018), which is made up of an array of institutions that promote *collective* productive capabilities. The importance of certain inputs with public goods nature that are important for economic development (e.g., infrastructure, investment in basic—rather than commercial—R&D) is recognised, but their provision is vaguely seen as the job of the ‘government’, and the diverse institutional forms that can—and should—provide such inputs (e.g., government ministries,

public intermediaries, industry associations, public-private partnership, cooperatives) are not recognised.

## 4 Institutions and Social Capability Development

Moses Abramovitz (1986) introduced the concept of social capability to capture exactly those “tenacious societal characteristics” that determine the responses of given societies to economic opportunities. Abramovitz includes in social capabilities not just managerial competencies (especially in the organisation and management of large-scale enterprises) and technical competences but, more crucially, also the set of political, commercial, industrial and financial institutions with which a country is endowed.

The concept of social capability was thus introduced with the specific aim of bringing in a series of specific types of institutions that remained outside mainstream explanations of economic development and traditional growth models. Abramovitz’s most complete systematisation of the concept was presented in 1991 and published in volume on social capabilities in 1995. His analysis starts from an historical account of different countries’ catch-up experiences and technology convergence trajectories (the latter measured in terms of the reduction in productivity gaps). Looking at a large number of countries, the historical evidence reported by Abramovitz (see Kuznets 1966; Maddison 1989) suggested certain general tendencies. Specifically, Abramovitz found that “in the post World War II years from 1950 to 1980, only among the small set of highly industrialized countries is there a clear tendency for levels of productivity to converge. There was no such clear tendency among the group of partially industrialized, middle income countries. And among the poorest countries, there was even a suggestion of divergent experience” (Abramovitz 1995: 22).

Abramovitz’s historical and comparative national evidence clearly contradicted the convergence/catch-up hypothesis and represented a puzzle for mainstream theories of economic development and growth. Abramovitz focused on four potential explanations, namely (1) natural resource scarcity, (2) technology congruence, (3) factors supporting the rate of realisation potential and (4) social capability.

The relevance of the first factor is considered “hard to appraise a priori” but increasingly “of much diminished importance”. Abramovitz also stressed that “apparent scarcity may itself be a result of failure to develop the resources avail-

able but badly exploited” (Abramovitz 1995: 26; see Andreoni 2015 for an in-depth analysis of manufacturing development under resource constraints).

The second factor corresponds to what Kuznets (1968) called “relevant technology”. If we remove the mainstream economic assumption that “technology that represents best practice in [the countries that have the highest productivities] can [always] be efficiently exploited by the backward economies”, we can explain why economies may fail to catch up and converge in productivity levels (Abramovitz 1995: 14–15). Technological incongruity or irrelevance may result from disparate factor proportions (typically when the technologies are capital-intensive and, thus, expensive to apply in a capital-scarce/labour-abundant context) or from scale problems, both with respect to market size and institutional factors.

The third factor is defined by both internal and international policies affecting trade, capital flows, currency exchange rates and employment. The design, implementation and enforcement of domestic policies via several institutional arrangements play a key role in triggering countries’ structural transformation. However, the effectiveness of these internal policies, indeed the same possibility of implementing them, will critically depend on the international policies and how they potentially affect the policy space of governments in developing countries. The international policies include several multilateral and bilateral trade agreements, but also institutions like intellectual property rights, standards and regulations (Andreoni et al. 2019).

Fourth and finally, the social capability factor is understood as composed of two classes of elements: (1) “people’s basic social attitudes and political institutions” and (2) collective “ability to exploit modern technology”. The former encapsulates the so-called Kuznets triad (secularism, egalitarianism and nationalism), while the latter comprises the capacity of collectivities to deal with the “three technological feature of modern production—scale and specialisation, capital-intensity, and expanded auxiliary activity” (Abramovitz 1995: 35). This latter delineation of the idea of social capability is consistent with a view of development as “a process of production transformation, led by the expansion of collective capabilities and resulting in the creation of good quality jobs and sustainable structural change” (Andreoni and Chang 2017: 173).

The concept of social capability advances a powerful idea, namely that economic development is not simply a firm-level affair (or state endeavour), but rather is made possible by the development of various types of social capability encapsulated in specific types of institutions operating at different levels of the economic system and at its interstices (intermediate institutions) to coordinate productive activities. In different historical contexts, these institutions

take different forms and perform different combinations of functions and might show different levels of social capability.

In Abramovitz's original definition, social capabilities were mainly associated with productive organisations and the set of political, commercial, industrial and financial institutions driving economic growth. In the following section, we develop Abramovitz's idea of social capability by identifying and characterising a number of specific institutions which have played a key role in the industrialisation process across today's developed countries. Indeed, alongside institutions for industrialisation, there are others who have been equally important in providing public goods and favouring social cohesion throughout phases of structural transformation of the economy. Given that the consideration of these latter institutions goes beyond the scope of this chapter, for a thorough analysis of the role of the state and other institutions in economic change see Chang and Rowthorn (1995).

## 5 Institutions for Industrialisation

In the previous sections, we argued that the NIE-based mainstream literature discusses the role of institutions in economic development at an excessively general level and at that on the basis of a very poor theory of how economies develop. This means that we need to discuss institutions at a much more disaggregated level and with more reference to concrete institutional forms. Specifically, we need to understand how specific types of institutions equip societies with those social capabilities without which the industrialisation process would not be possible.

This need for a more disaggregated and concrete approach becomes even stronger when we focus on industrialisation (and in particular the development of the manufacturing industry), rather than economic development in general. Even though we believe that industrialisation is the central motor force of economic development, it has characteristics that separate it from other aspects of economic development, which in turn means that its promotion requires particular institutions that serve functions that are particularly necessary for industrialisation.

Let us examine some of the key institutions that are crucial for successful industrialisation.

## 5.1 Institutions of Production

As symbolised by Adam Smith's discussion of division of labour in a pin factory in the very first chapter of his book, *The Wealth of Nations*, the rise of the factory system lay at the root of modern economic development. Drawing on Charles Babbage, Karl Marx also wrote extensively—and very incisively—about the rise of the factory system and its evolution until the mid-nineteenth century. The factory system departed from both the job-shop system and the putting-out system (a primordial buyer-driven value chain), which were dominant until the late eighteenth century. The factory was a new institution of production that brought together related producers ('artisans') under one roof, forced them to specialise, combined their physical power and skills with machines, and bound them together in an integrated process of production.

Naturally, the factory system has gone through a long and complicated process of evolution since the days of Smith and Marx (see Andreoni 2014 for an in-depth discussion of the evolution of the different modes of production). In the late nineteenth century emerged the institution of Taylorism (or scientific management system) based on de-skilling of workers and the reduction of their control over the labour process. In the early twentieth century came the institution of mass production, or Fordism, which used standardised (and thus interchangeable) parts, dedicated machinery and moving assembly line to produce standardised products on a large scale at a low unit cost. In the late twentieth century emerged the lean production system, or Toyotaism, which uses machines that allow quick change-overs between different models (e.g., by allowing a quick exchange of dies), workers who have multiple skills and greater control over their labour process, and components and parts delivered 'just in time' (and thus eliminating inventory costs) by long-term subcontractors (with dedication to enhancing product quality).

Alongside these organisational innovations within the firm, the organisation of the industry increasingly relied on new institutional forms—industrial districts, industrial clusters and industrial ecosystems. While industrial districts were already discovered by Alfred Marshall, their diffusion since the 1970s represented an important move beyond the institutional dichotomy juxtaposing the market and the vertically integrated firm as the two main coordination mechanisms (Richardson 1972; Piore and Sabel 1984; Andreoni 2018). Since the late 1990s, we have also seen the geographical spread and the organisational sophistication (but not the 'invention'—it was invented in the

1950s, with countries like South Korea and Taiwan as the lowest level sub-contractors) of the global value chains (GVCs).

Developing countries that aspire to industrialise these days need to adopt and develop simultaneously all these different institutions of production from different eras. Indeed, technological changes might lead to the rediscovery of old institutional solutions in advanced economies as well. The institution of the factory is taken for granted in the industrialised countries, but the least productive producers in developing countries will struggle even just to run a factory. Many others may be able to run the Taylorist system but would find the technological and organisational complexities involved in the Fordist mass production system overwhelming. The more advanced ones that can manage a Fordist system may find it difficult to operate with the institution of lean production. With the growing importance of GVCs, many of the more advanced producers in developing countries will have to learn to climb up the value chain alongside developing their local production systems, while the most advanced ones will have to find a way to establish their positions as main top-tier suppliers in GVCs or even establish their own GVCs, based on a significant amount of unique knowledge in terms of technologies, managerial techniques and worker skills.

## 5.2 Institutions of Productive Capabilities Development

Needless to say, the evolution of the institutions of production that we discussed earlier—the factory system, the Taylorist system, the Fordist system, the lean production system, the industrial districts and clusters and the GVCs—is precisely a manifestation of productive capabilities development. These institutions have increased our capabilities to produce by organising existing productive capabilities better (e.g., greater division of labour that allows specialisation and the exploitation of increasing returns, the introduction of the conveyor belt system that improves work flows, outsourcing to foreign companies with potentially greater efficiency). However, producers also need to develop institutions that *increase* their capabilities to produce.

Some of the institutions that promote developments in productive capabilities are internal to the firm. Since the late nineteenth century, many corporations have set up their own research laboratories ('corporate labs') and generated own innovations as well as adapting existing technologies, as emphasised by Joseph Schumpeter and Alfred Chandler. Perhaps among the most famous examples are the Bell Laboratories. Some companies have developed rather elaborate institutions of worker training in an attempt to



encourage knowledge accumulation and transfers among workers. These include dedicated training institutes, systemised on-the-job training schemes, and job-rotation and secondment systems (that broaden the capabilities of the workers).

However, many of institutions for productive capability development are at least partly external to the firm, reflecting the fact that innovation (and knowledge generation more generally) is a collective endeavour that goes beyond the boundaries of the firm. In fact, today's industrialised countries have all established "public technology intermediate institutions" at early stages of their industrialisation (Andreoni 2016). During the nineteenth century, the US established a network of agricultural extension and engineering experimental stations. During World War II, the US federal government built on and extended this technology infrastructure model to other sectors. This led to the establishment of one of the most advanced institutional infrastructures conducting basic research and development (R&D), comprising national laboratories as well as other institutions managing technological innovations initiatives. Today's major players include the Department of Defense, the National Institutes of Health, the National Science Foundation (NSF), the National Institute for Standards and Technology (NIST), the Departments of Energy and Agriculture and the National Aeronautics and Space Administration.

Modelled after the US network of agricultural extension and engineering experimentation stations, in 1902 Japan established the Kohsetsushi centres. Since then, these centres have constituted the main intermediate institutions supporting local small and medium-sized enterprises (SMEs) with a variety of quasi-public good technologies for testing, trial production and scaling-up, as well as training services. A number of sector-specific centres also support SMEs in the adoption of new advanced technologies and conduct joint applied research. This institutional network is complemented by cutting-edge research institutes, such as the National Institute of Advanced Industrial Science and Technology (AIST).

Many of the intermediate institutions are 'hybrid' institutions, involving both public- and private-sector actors. This is the case of the Fraunhofer-Gesellschaft Institutes, founded in Germany in 1949 to undertake collaborative manufacturing research and address technological challenges for the entire industrial system (big and small companies, public sector included). Over the years, the network has grown to 57 institutes (with 18,000 staff members) and come to specialise in joint pre-competitive research, joint bilateral applied research with individual firms, prototyping, scaling-up of production, commercialisation of new product ideas and technology transfer



schemes. Fraunhofer Institutes also conduct cutting-edge research not only at the sectoral level but also at the level of technology platforms, such as optics, photonics, micro-electromechanical systems, advanced and composite materials, advanced machining and so on.

These institutional models were adopted by the successful late industrialisers in East Asia—including South Korea (ETRI: Electronics and Technology Research Institute), Taiwan (ITRI: Industrial Technology Research Institute) and Singapore (Singapore Institute of Manufacturing Technology)—but also in Latin America and Africa, especially in the agricultural sector. Brazil's Embrapa (Empresa Brasileira de Pesquisa Agropecuária or Brazilian Agricultural Research Corporation) is the best example (see Andreoni and Chang 2014). They were also adopted as elements of regional industrial policies in successful regions in Europe (e.g., Emilia Romagna in Italy; see Andreoni et al. 2017). These institutions provide critical technology, especially the provision to SMEs of public- and quasi-public-good technologies.<sup>9</sup> They have also helped companies with absorbing new technologies, adopting more effective organisational model, commercialising innovations and meeting international (product and process) standards.<sup>10</sup>

Some countries have produced high-quality skilled workers through (predominantly public) institutions of technical vocational education and training (TVET). These are especially famous in Germany and Switzerland where the dual-apprenticeship models were invented and refined over the years, but were also successfully used in countries like Japan and Korea. These institutions have played a central role in providing industrial sectors with a skilled workforce, including through re-training of existing workers.

Moreover, private-sector firms themselves have set up institutions that promote productive capability development beyond their individual boundaries. In many countries, 'peak' business organisations (e.g., chamber of commerce, the employers' association) and sectoral councils have provided institutional mechanisms of knowledge sharing and development in selected areas. In some countries, most notably in Italy and Germany, SMEs have formed cooperative institutions that promote their knowledge acquisition—such as joint R&D

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<sup>9</sup> As highlighted by Gregory Tassef (2005: 103), basic science is a public good, while “the fact that specific elements of an industrial technology are quasi-public goods means that their efficient development over the entire life cycle requires a mixture of public and private funding, distributed according to the magnitude and duration of various market barriers”.

<sup>10</sup> With the spreading of international trade, institutions in charge of developing, certifying and enforcing technical standards have acquired a central role. Standards play an important role in technological innovation activities, especially with the increasing complexity of product and their product system features.

labs or the mechanisms to share orders (and thus the productive knowledge involved) amongst member firms (Andreoni et al. 2017).

### 5.3 Institutions of Corporate Governance

Industrialisation in today's developing countries requires the development of large, modern corporations that can mobilise large-scale finance, handle large-scale technologies and operate within sophisticated global supply chains. Thus, the institutions of corporate governance, which is a non-issue in underdeveloped economies with small farms and artisanal producers, become extremely important for a country that wants to industrialise.

In mainstream institutional economics, there is a lot of discussion of corporate governance, although it is focused on the fight over the division of 'surplus' between the (professional or owner-) managers, different groups of shareholders (e.g., dominant, minority) and other stakeholders (especially bond-holders or lending banks but also workers or 'local communities'). The main argument, exemplified by the 'legal origins' literature, is that a corporate governance system that accords stronger protection of investors—especially minority shareholders, who are subject to the risk of appropriation by dominant shareholders—is better for corporate investments and thus for economic development.

We have already raised issues with the view that a stronger protection of property rights is better for economic development, but that view becomes even more problematic when it comes to industrialisation (or the development of the manufacturing industries), which requires particularly long-term commitments of capital to assets that are often very specific to particular industries. So, what are the functions that institutions of corporate governance have to perform, if industrialisation is to be promoted?

The 'global standard' (read Anglo-American) corporate governance institutions, recommended by mainstream institutional economics, are based on the view that shareholders will maximise their investments when they find exit from a company easy. If exit is difficult, these shareholders lose their only power to discipline the dominant shareholders and/or the professional managers and expose themselves to the risk of exploitation by the latter groups. However, writers like Ajit Singh (1971, 2003) and William Lazonick (2009, 2014) have shown that the ease of entry and exit by shareholders in their corporate governance system is exactly what is making it difficult for Anglo-American companies to make long-term-oriented investments needed in manufacturing industries.

Non-Anglo-American developed countries have developed institutions that create blocs of stable, long-term shareholders (or some other stakeholders, like workers) and thus managed to create a better environment for long-term investments, although these institutions are currently under pressure from short-term shareholders, especially from the US and the UK. The most prominent examples include (1) shares with differential voting rights—an institution that is most prominently used in Sweden<sup>11</sup> but also used by the US as well as other European countries; (2) cross-shareholding between friendly companies, most prominently used in Japan; (3) circular shareholding between companies in a family dominated business group, which is most prominently used in South Korea; (4) the co-determination system that gives power to workers, who tend to have longer term view than shareholders, in long-term decisions like M&As (mergers and acquisitions), most prominently used in Germany but also by some other European countries.

## 5.4 Institutions of Industrial Financing

In addition to the corporate governance system that can encourage long-term-oriented investments, industrialisation requires external financial institutions that can provide long-term financing.

Financial system structures have been continuously transformed since the beginning of the industrial revolution. Historically, cooperative and popular banks have played a central role during the initial stages of countries' industrialisation, by specialising their role in the financial system. The structural transformations of the productive sector and the increasing use of capital-intensive technologies have induced changes in the financial systems' structure, at least in those countries that underwent the second industrial revolution (Gerschenkron (1962): especially chapter 5).

In developing countries, commercial banks typically provide short-term loans of six months to a year, even though they may roll them over for over a substantial period. Similarly, in developed countries, while commercial banks can provide medium- to long-term financing, they tend to lend mainly short-term. However, many industrial investment projects have long gestation periods, making it very difficult to secure the necessary financing through those banks. Consequently, many countries have tried to set up financial institutions that allow companies to get access to long-term financing as well as

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<sup>11</sup> This has enabled the Wallenberg family in Sweden to have controlling stakes in companies whose collective capitalisation accounts for around 50 per cent of Stockholm stock exchange.

other forms of hybrid financial services combining credit, grants and public procurement (Andreoni 2016).

First, there is the development bank, which typically provides long-term loans of five years or more. The most successful ones have been KfW (Kreditanstalt für Wiederaufbau: Bank for Reconstruction) of Germany, JDB (Japan Development Bank) of Japan, KDB (Korea Development Bank) of Korea and BNDES (Banco Nacional de Desenvolvimento Econômico e Social: National Bank for Economic and Social Development) of Brazil. Many of them have undergone institutional changes in response to the changing needs of the industrial sector. For example, since its foundation in 1947, KfW has increasingly moved away from direct lending and become a long-term refinancing bank specialised in lending to banks working with industries. KfW is still owned by the Federal government today (80 per cent) as well as by landers (20 per cent).<sup>12</sup>

Second, countries like Germany, Japan and Korea have set up public banks that specialise in lending to manufacturing firms—especially SMEs. Among the late industrialisers, China is the most striking example in this respect. State ‘policy banks’, as well as local governments, have played a critical role in providing targeted financial support (and special conditions) to companies in ‘pillar’ industries, especially the state-owned enterprises (SOEs). The Export-Import (Exim) Bank of China, the Agricultural Development Bank of China (ADBC) and China Development Bank (CDB) are still critical arms of industrial policy implementation in China.

Third, some countries have set up long-term-oriented public investment funds as well as relying on hybrid financial solutions. For example, in the US, the Small Business Administration (SBA) runs two funds, namely the Small Business Investment Company (SBIC) and the Small Business Innovation Research and Technology Transfer (SBIR/STTR). These funds combine loans, R&D grants and pre-commercial public procurement to support small businesses, original equipment manufacturers (OEMs) and specialist manufacturing contractors engaged in the development and the scaling-up of technological systems or components (sometimes for niche segments).

## 5.5 Institutions of Industrial Change and Restructuring

Manufacturing industries require not only long-term investments but also investments in (physical and human) assets with high specificity—or limited

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<sup>12</sup>The German financial infrastructure also includes the German Bank for Settlements (AG) and an articulated multi-layered system of public saving banks and credit cooperatives working with SMEs.

mobility, if you will. This means that the restructuring process in manufacturing is far more difficult—both technologically and politically—than a similar process in other sectors of the economy. This also means that restructuring becomes increasingly difficult with industrial development, as higher productivity industries typically involve more specific assets. An agrarian producer trying to change its main crop to another may have little capital equipment and few skilled workers that can be used only for the existing crop. A producer of garments trying to move into making stuffed toys may have to change some machines and train workers in the new operation for several weeks. The task involved will be far more difficult than when a producer of steel tries to move into manufacturing computers, as the blast furnace cannot be re-moulded into machines making computers and the steel workers cannot be easily re-trained as computer engineers. Therefore, the restructuring process becomes very conflictual and institutions that can manage conflicts need to be devised (for further arguments on conflict management, see Chang and Rowthorn 1995; Hope and Chang 2018).

In the mainstream literature, these restructurings are seen as mainly happening through (1) the M&A mechanism of the stock market; (2) the bankruptcy law, which helps wind down existing enterprises; (3) private equity funds, especially the ‘vulture funds’, that specialise in restructuring companies; (4) the bond market both through the issuing of ‘junk bonds’ (which are issued by managers who have taken over and are restructuring ailing companies) and through the dealing in secondary bond markets (in the bonds of companies that are going through restructuring).

These institutions, however, tend not to be very good at long-term-oriented restructuring, as the incentives they create are all short-term-oriented. Shareholders support M&A attempts because they give them greater dividends, higher share buy-backs and capital gains (even if the M&A is not successful), even though the process may (and indeed is highly likely to) reduce long-term investments. Private equity funds typically have explicitly limited time horizons of three to five years. Junk bonds necessitate highly speculative investment projects, while secondary bond markets are by definition highly speculative, trading in bonds whose returns are highly—if not totally—uncertain.

The problem of short-termism in the Anglo-American institutions of corporate restructuring has prompted many countries to come up with alternative institutional mechanisms for corporate restructuring. First, many countries have made hostile takeovers impossible or very difficult through various measures—Japan used cross-shareholding and Korea used circular shareholding to make hostile takeover practically impossible, while Germany

used the co-determination system to achieve the same purpose. Second, the 'main bank' system of Germany and Japan, in which the leading lending bank of a company plays a leading role in its management (especially in hard times), has resulted in more long-term-oriented corporate restructuring. Between the 1950s and the 1990s, similar results were produced in France and Korea by a government-dominated corporate system (through government ownership of banks and state-owned enterprises).

Another important, but neglected, set of institutions of industrial restructuring is those institutions that facilitate the re-allocation of workers according to the new industrial needs. Industrial restructuring is often delayed—or even thwarted altogether—due to resistance from the workers, who understandably resist changes that involve job losses and/or significant re-configuration of their skills, which carries a lot of risk and resources. The decline of many British and American industries has owed a lot to such resistances. As a result, countries that have institutions that reduce workers' resistances to restructuring are better at industrial restructuring. In Japan, this was facilitated by the so-called 'lifetime employment' system, in which corporations implicitly guaranteed their core workers (roughly top two-thirds of them in large corporations and top one-third in smaller ones) employment and re-assigned them to new jobs (including to jobs in supplier companies, in case of large companies), if their existing jobs are eliminated. In Scandinavia, corporate restructuring was facilitated by the combination of the institution of a strong welfare state, which guaranteed decent living standards during unemployment, and the institutions of effective worker re-training and re-location programmes, which together made the workers very accepting of industrial restructuring.

## 5.6 Institutions of Macroeconomic Management for Industrialisation

Studies of institutions have been mostly in microeconomics—such as the studies of property rights institutions and corporate governance institutions—and political economy—such as democracy and state bureaucracy. In contrast, macroeconomics has almost been an 'institution-free-zone', with the wage bargaining institutions in the developed countries being the only major exception. However, there are other several institutions playing a critical role in the macroeconomic management of the industrialisation process.

Successful industrialisation requires institutions of macroeconomic management that provide long-term-oriented finance at reasonable interest rates,

an exchange rate that is not structurally over-valued and economic stability (not just narrowly defined in terms of consumer prices but also in terms of output, employment, balance of payments, asset prices and wages). The major institutions that are required to provide such a macroeconomic environment include the following.

First, we need a central bank that is designed to provide (1) economic stability in the broader sense and not just focused on keeping consumer price inflation low; (2) real interest rates that are not overly high; (3) currencies that are not 'over-valued' (especially important in natural-resource-rich countries with potentials for 'Dutch Disease'); and (4) targeted and subsidised financing for projects of national significance (for further discussions, see Epstein 2007).

Second, we need a set of budgetary institutions that include (1) a broad-based tax system with minimum possibilities of tax evasion; (2) a public expenditure system that provides automatic stabilisers (e.g., the welfare state, expenditure rules that limit pro-cyclical spending); and (3) budgetary rules that allow active Keynesian fiscal policy (so, no rigid rules on public debt or budget deficit).

Third, we need institutions of financial regulation that (1) reduce the pro-cyclicality of the financial system; (2) control asset price inflation (which is often ignored in the making of monetary policy by the central bank); and (3) encourage long-term finance (see Sect. 5.4).

Fourth, we need price- and wage-setting institutions that encourage macroeconomic stability, reduce social conflict and encourage efficient industrial restructuring. The necessary institutions would include (1) a collective wage bargaining system that reduces competitive wage inflation or deflation across firms and sectors (e.g., centralised wage bargaining as in Scandinavia or strong norm-setting by leading unions, as in Germany); (2) a competition commission that acknowledges the need of collusive price-setting arrangements by leading firms during economic downturn or times of major industrial restructuring (e.g., Japan's state-sanctioned recession cartels) but strictly supervises them.

## 6 Concluding Remarks

While the role of institutions in economic development, and industrialisation in particular, was central among classical development economists in the 1940s–1960s, this idea remained largely ignored by the mainstream (Neoclassical) economists for several decades, to be rediscovered only at the



end of the last century among development economists. By reviewing the history of economic analysis of institutions in economic development, the chapter has provided a long-term perspective to engage critically with current debates on the role of institutions in economic development. In particular, we have disentangled the problems associated with widely adopted definitions of institutions as well as poor conceptualisation of their relationship with economic development.

The chapter has proposed to move beyond mainstream analyses of institutions and their relationships with economic development by focusing on the variety of forms and functions that institutions have taken historically and even more critically on their *collective* nature. Building on Abramovitz's concept of *social capability* understood as 'tenacious societal characteristics' embedded in productive organisations, as well as a variety of political, commercial, industrial and financial institutions, the chapter has emphasised the importance of developing productive capabilities, not just at the individual or the firm level but also at the sectoral and social levels, in the process of economic development and especially industrialisation.

This development requires long-term investments in specific human and physical assets, in private and public knowledge and in industrial ecosystems. The range of institutions required to facilitate these investments are many and complex, which means that the recipe for institutional reform made by mainstream institutional discourse—a (Anglo-American) legal system that strongly protects private property rights and provides maximum freedom to 'do business'—is far too simplistic. The review of six different types of institutions for industrialisation has highlighted both the variety of types, forms and functions that they have taken historically among today's developed countries and the need for coordination among different constituencies across the private and public spectra.

Only when we understand the multiplicity and the complexity of the institutions necessary for industrialisation, on the one hand, and the variety of the institutional forms that we can adopt, on the other hand, will the developing countries be able to change their institutions in ways that are truly helpful for their economic development. Research engaging with the variety of types, forms and functions of institutions is critical in this respect as they allow policymakers to engage with the policy opportunities as well as the implementation challenges involved in governing complex processes of institutional building and change.



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# 13

## Capability Approach and Human Development

Sakiko Fukuda-Parr and Ismael Cid-Martinez

### 1 Introduction

In treating the concept of development in the very first volume of the *Handbook of Development Economics*, Amartya Sen (1988) describes the close link between development and economic growth as both a matter of importance and a source of considerable confusion. Since its origins in the late 1940s, modern development economics has been concerned with the economic transformation of ‘internationally depressed’ and economically ‘backward’ areas (Rosenstein-Rodan 1943; Syrquin 1988). But by the 1980s, the great hopes began to fade. Hirschman (1981) captured this sentiment in a reflective essay where he characterized the loss of civil and human rights that accompanied the promotion of economic growth and modernization in some countries of the so-called underdeveloped world as the ‘real wounding of development economics’ (p. 65–67). Going further back in the history or economic thought, Sen, Martha Nussbaum, and Mahbub ul Haq—pioneers of human development—frequently quote from Aristotle to point out ‘wealth is not the good we are seeking, for it is merely useful and for the sake of something else’ (quoted in Haq 1995, p. 13). They remind us of the works of philosophers and political economists over the centuries that reflected the same perspective, from Adam Smith to Immanuel Kant to Thomas R. Malthus (Sen 1989; Nussbaum 2011; Haq 1995).

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The confusion over means and ends remains true today. Much of development economics, whether in the mainstream or heterodox tradition, is concerned with the workings of the economy. National and international policies continue to reflect the insufficient recognition that the expansion of opulence is no more than a means to social and political objectives. Yet paradoxically, there is little disagreement that the ultimate purpose of development is to improve people's well-being. The idea of a 'people-centered' development has become an accepted discourse of global debates, as reflected in the UN's 2030 Agenda for Sustainable Development adopted in September 2015. The disagreement is over whether economic growth automatically leads to improving human well-being, how that should be defined, and how the benefits should be shared within and between generations.

The capability approach makes a key contribution to the field of development economics by addressing these questions. In introducing the idea of capabilities (Sen 1980), and of development as 'capability expansion', Sen (1989) opened a way to conceptualize the purpose of development in a manner that builds on a coherent conception of human flourishing. Ultimately, Sen (1983a) argued, the process of development must be concerned with what people can or cannot be or do and the freedom to live the life they have reason to value—capabilities. Sen called this line of reasoning the 'capability approach', and it envisions human life, not the economy, as the main currency of assessment (Alkire and Deneulin 2009). This makes possible a more systematic assessment of development progress based on improvements in human lives and to explore the effectiveness of economic growth in promoting it.

The capability approach provides a theoretical basis for several development paradigms that do not take as a given that economic growth translates automatically to human well-being but explore the relationship between the two. Foremost among these is human development—a term that is sometimes used synonymously with the capability approach, a point that we shall clarify later in this chapter. It has also facilitated and reinforced the human rights-based approach to development, feminist economics and development, as well as 'human-centered development' as a general discourse in the development community.

The aim of this chapter is to discuss the role and influence of the approach within development economics and the human development paradigm. These are placed within the context of development thought and practice. Thus it does not provide a comprehensive overview of the capability (or

capabilities<sup>1</sup>) approach as a whole. This chapter starts with a summary of key concepts. Section 3 highlights the distinctive features that challenge some of the fundamental assumptions of conventional development economics. The chapter then moves on to the application of the concept in development, focusing particularly on human development. Thus Sect. 4 explains the origins of the human development paradigm in the capability approach, among others. Section 5 explores the human development policy agenda. The final section (Sect. 6) elaborates on the complementarity of the capability approach with human rights and feminist thought. The chapter concludes by observing the important influence of the capability approach as a theoretical framework in the development of people-centered paradigms and discourse in development policy. But it also points out that the very popularity of the term ‘human development’ has led to a narrow (mis)conception of the capability approach as a set of theoretical explorations of human well-being and its connections to economic development.

## 2 The Capability Approach: The Core Elements

Developed from the 1980s by Sen (1980, 1985a, b, 1987, 1988, 1989, 1992, 1993a, b, 1999), Sen and Williams (1982), and Nussbaum (1988, 1992, 1995, 1997, 2000, 2003, 2006, 2011) in a series of publications on quality of life, poverty, inequality, and justice, the capability approach offers a normative framework for assessment of well-being, social arrangements or institutions, and public policy. This section presents a very brief summary of the core elements of this approach. The term ‘approach’ is used in place of ‘theory’ in the literature, because it refers to a general and open framework that is underspecified and that can be applied in a number of ways to develop a more closed theory, such as a theory of justice (Robeyns 2017, p. 29). For a more detailed overview of the capability approach, readers are referred to more comprehensive works that bring together the dispersed literature to elaborate on the concept in an accessible way to a development audience, notably: Sen’s *Development as Freedom* (1999); Nussbaum’s *Creating Capabilities* (2011); Robeyns’ *Well-being, Freedom and Justice: The Capability Approach Re-examined* (2017); and shorter survey articles on the concept,

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<sup>1</sup> ‘Capability’ and ‘capabilities’ are both used widely in the literature. While Sen uses the singular form to refer to a set of capabilities, Nussbaum prefers the plural ‘in order to emphasize that the most important elements of people’s quality of life are plural and qualitatively distinct: health, bodily integrity, education, and other aspects of individual lives cannot be reduced to a single metric without distortion’ (Nussbaum 2011, p. 18). See Robeyns (2017) for a discussion of these and other differences.



such as Robeyns (2005), Alkire (2005), and Alkire and Deneulin (2009), and works focused on its application in development analysis (UNDP 1990; Agarwal et al. 2006; Fukuda-Parr and Shiva Kumar 2009; Ibrahim and Tiwari 2014; Stewart et al. 2018).

In its essence, the capability approach is a normative framework that conceptualizes the ends of development, well-being, and justice in terms of whether people are able to lead lives they value (Robeyns 2005). Sen describes it succinctly as ‘an intellectual discipline that gives a central role to the evaluation of a person’s achievements and freedoms in terms of his or her actual ability to do the different things a person has reason to value doing or being’ (Sen 2009, as quoted in Robeyns 2017, p. 7). While Sen was concerned with gaps in development economics, Nussbaum (2011) emphasizes capabilities as an approach to social justice, arguing that ‘the key question to ask, when comparing societies and assessing them for their basic decency or justice, is “what is each person able to do and to be?”’ (p. 18).

The capability approach builds on four core interrelated concepts: functionings, capabilities and freedoms, and agency as defined below, taken from Alkire and Deneulin (2009, p. 31):

- **Functioning** refers to ‘the various things a person may value doing or being’ (Sen 1999, p. 75). In other words, functionings are valuable activities and states that make up people’s well-being—such as being healthy and well-nourished, being safe, being educated, having a good job, and being able to visit loved ones.
- **Capability** refers to the *freedom* to enjoy various functionings. In particular, capability is defined as ‘the various combinations of functionings (beings and doings) that the person can achieve. Capability is, thus, a set of vectors of functionings, reflecting the person’s freedom to lead one type of life or another ... to choose from possible livings’ (Sen 1992, p. 40). Put differently, capabilities are ‘the substantive freedoms [a person] enjoys to lead the kind of life he or she has reason to value’ (Sen 1999, p. 87)
- **Agency** is the ability to pursue goals that one values, and has reason to value. An agent is ‘someone who acts and brings about change’ (Sen 1999, p. 19).

Sen (1983b) provides a simple illustration of these concepts with the example of a bicycle. A commodity, the bicycle has a number of characteristics, such as enabling one to play, or move about, and commute. These characteristics can be thought of as enabling these functionings, of play and movement. Thus, providing a contrast between commodities, functionings, and



capabilities, we can say that a bicycle may provide one with the capability to achieve the functioning of play. But because we can imagine cases in which an individual is unable to ride a bike, it is the capabilities and freedoms of people to enjoy functionings that we should observe if we share a concern for the quality and nature of human life, and not the possession of an object (Sen 1983b, 1988). The agency of the individual to ride a bike for a particular purpose is what makes the capability and functioning meaningful.

The example above illustrates the relationship between material means and human ends; the material commodity is essential for the individual's functioning, yet it is only a means to achieving movement and a means to enlarging the set of capabilities. Moreover, the *conversion* between command over material resources and achieved functioning varies from one individual to another (e.g., how well the person is able to make use of the bike). Thus, the evaluation of achieved functioning and freedom cannot be based on income or consumption. The distinction between means and ends and the conversion from income to capabilities are two of the most important concepts in the capability approach. They represent what really differentiates the approach from conventional economics in development analysis, as we shall emphasize throughout this chapter.

It must also be emphasized that it is capabilities, and not functionings, that are important ends as the substantive role of freedom is at the heart of the approach. To illustrate this point, Sen (1985b) uses the example of two individuals with identical (insufficient) nutritional functioning: one is in a state of undernourishment due to starvation and destitution, while the other fasts—and is equally undernourished—due to religious beliefs. Although both individuals may have the same functioning achievement in terms of nourishment, they do not share the same capability.<sup>2</sup> The first individual who is very poor lacks the freedom to choose not to be undernourished, while the second clearly does. Thus the informational base of capabilities enables us to observe more than achievements, giving us insights into one's freedom to choose from 'possible livings' (Sen 1989, 1992; Nussbaum 2011).

Since the foundational work of Amartya Sen and Martha Nussbaum of the 1980s, the literature on the capability approach has grown large and diverse, encompassing a wide range of contributions by leading philosophers, economists, and other social thinkers in wide-ranging fields such as development studies,

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<sup>2</sup>Sen describes 'fasting' as exemplifying a 'refined functioning', which is different from the 'unrefined functioning' of 'starvation'—the latter not reflecting a matter of choice (1989, p. 49). He introduces the concept of 'refined functioning achievements' in his Dewey lectures and uses it alongside that of 'capability sets of primitive functionings'—both noting the choices exercised given relevant alternatives available (Sen 1985b, p. 202).

education, and health. The capability framework has been both elaborated as a core set of concepts and explored in different applications: in philosophy and accounts of justice (e.g., Nussbaum 2006, 2011; Anderson 1999; Wolff and de-Shalit 2007); in welfare economics (e.g., Sen 1980, Kuklys 2005; Basu and López-Calva 2011); and in development (e.g., Sen 1983a, 1988, 1999; Alkire 2005, 2016; Alkire and Deneulin 2009; Fukuda-Parr and Kumar 2009; Ibrahim and Tiwari 2014; Deneulin and Shahani 2009; Stewart et al. 2018) and human rights (e.g., Vizard 2006; Fukuda-Parr 2009; Vizard et al. 2011). But the framework is also employed in project evaluations (Alkire 2002) and institutional assessments. Robeyns (2016, 2017) points to assessments of the market, by Sen (1993a) and Claassen (2009), based on values other than justice (e.g., efficiency) that are conceptualized around capabilities.

Other capability conceptions and applications are also found in relation to issues concerning economics and ethics (e.g., Crocker 2008; Robeyns 2009), poverty (Sen 1983b; Bourguignon and Chakravarty 2003; Alkire and Foster 2011; Alkire et al. 2015), the environment and sustainability (e.g., Sen 2013; Schlosberg 2012; Holland 2014), education (e.g., Chiappero-Martinetti and Sabadash 2014), health and disability (e.g., Coast et al. 2008; Venkatapuram 2011; Burchardt and Vizard 2014; Ruger and Mitra 2015), gender (e.g., Sen 1990; Razavi 1996; Nussbaum 2000; Robeyns 2003; Walker et al. 2014), children (e.g., Biggeri et al. 2011), and much more. The flourishing of this literature is evident in the *Journal of Human Development and Capabilities*, published quarterly, that covers such diverse topics as these and much more.

While the literature has extended the scope of analysis and raised further debates, the conceptual framework is still evolving and becoming richer. There are also long-standing debates including differences between Sen and Nussbaum over issues such as the list of essential capabilities, the role of agency, and differences in terminology (see discussion in Agarwal et al. 2006; Robeyns 2005, 2017). These have been mostly settled as not necessarily contradictory nor exposing flaws in argumentation. The capability approach is mainly a normative framework used across disciplines, with various methods, and for a variety of purposes. This makes it difficult to come up with a more precise set of evaluative criteria such as a list of universal capabilities and weighting of capabilities.

An important recent work by Robeyns (2017) proposes a re-articulation of the capability approach, taking account of this evolution in the literature. She proposes a structure—a ‘modular approach’. A core foundational set (module A) would have eight essential principles (Robeyns 2017, p. 38):

- functionings and capabilities as core concepts;
- functionings and capabilities are value-neutral categories;
- conversion factors;
- the distinction between means and ends;
- functionings and/or capabilities form the evaluative space;
- other dimensions of ultimate value;
- value pluralism; and
- valuing each person as an end.

Robeyns then proposes that as capability theories are applied in different contexts, additional ‘modules’ should be added depending on its specific application, whether, for example, it is in developing a theory of justice, making international comparisons on development outcomes, or evaluating policy choices in terms of their effects on well-being.

### **3 Capability Approach and Development Economics**

As a theoretical framework, the capability approach differs in some fundamental ways from other, more mainstream, approaches in development economics. It challenges some of the foundational concepts of welfare economics such as utility maximization, the rational economic man, the relationship between economic means and human ends, the relevance of equality, and the role of humans as agents of change.

#### **3.1 Defining Well-Being: Being and Doing Versus Mental State and Pluralism Versus Reductionism**

Most other schools of thought in development economics also acknowledge that the ultimate purpose of development is to improve the human condition. But the capability approach evaluates human well-being in the space of capabilities and departs from other approaches that concentrate on mental states, notably the maximization of utilities by satisfaction of preferences.

Sen (1980) first articulated the idea of capabilities in his Tanner Lecture at Stanford University in 1979, where he examines the limitations of measuring equality in the space of marginal or total utility (as done by utilitarian philosophers and economists) and that of primary goods, as called by Rawls (1971).

While Rawls' list of primary goods is broad—encompassing rights, liberties, and opportunities—the approach is still concerned with judging advantages on the basis of material good things, 'rather than with what these good things *do* to human beings' (1980, p. 218).

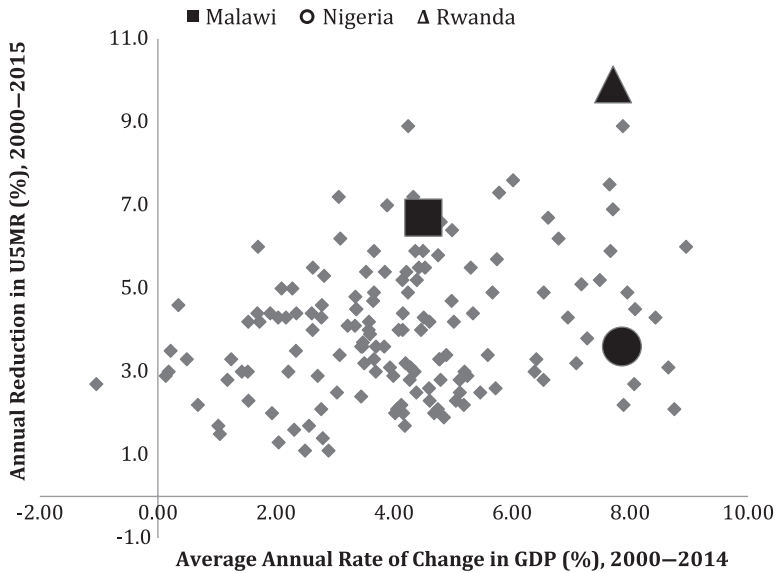
Both Sen and Nussbaum highlight the limitations of utilitarianism, among which the most significant are the neglect of rights, freedoms, agency, adaptation, and mental conditioning (Sen and Williams 1982; Sen 1999). This approach aggregates across different life experiences into a single metric of 'satisfaction' in a single scale, assuming that all individuals are identical in their preferences (Nussbaum 2011, p. 51–52). It also assumes that preferences are given, ignoring that they are subject to social expectations and form 'adaptive preferences' (Sen 1980, 1985a, 2002). Finally, and most importantly, it undervalues freedom as an end in itself, not just a means to some other activity (Nussbaum 2011).

This contrasts with the capabilities approach that recognizes pluralism and the distinctiveness of individuals, emphasizing freedoms. As Nussbaum argues, 'the most important elements of people's quality of life are plural and qualitatively distinct' (2011, p. 18). While the range of capabilities is infinite and the value that individuals assign to each one can vary from person to person, the aggregative and reductionist approach leads to a ready use of income as a proxy for utility in the utilitarian framework.

### 3.2 Ends and Means

The capability approach carefully differentiates between ends and means both conceptually and in empirical work. Conceptually, ends (such as being healthy) have 'intrinsic value' while means (such as income) are valuable for instrumental reasons. In standard economic analyses, without this explicit conceptual differentiation between human ends and economic means, the two become conflated. A widely used textbook on development economics, for example, introduces the challenge of development by quoting Robert Lucas, who presents the process of development as '[...] the problem of accounting for the observed pattern, across countries and across time, in levels and rates of growth of per capita income' (1988, p. 3). Lucas himself viewed this as 'too narrow a definition' of development (1988, p. 3) but justifies this perspective on the grounds that one cannot help but look at economic growth as representing anything other than 'possibilities' (Lucas 1988, p. 5).

Differentiating between human ends and material means is also important in empirical analyses. Empirical studies consistently show that the expansion



**Fig. 13.1** Economic growth and reduction of under-five child mortality rate (U5MR) since 2000

Source: Authors' calculation

of income does not always translate into improving peoples' lives. Indeed, for some ends (e.g., avoiding premature death) income may not even be a very effective, nor the only, means (Sen 1988). This has been documented multiple times by Sen and other authors in making a case for the capability approach as being policy relevant. We illustrate it here with data on under-five mortality rates (U5MR).

In Fig. 13.1, we see that there is no fixed relationship between the annual rate of reduction of U5MR and the annual rate of growth in gross domestic product (GDP) per capita.<sup>3</sup> In fact, some fast-growing countries, like Nigeria, are being outpaced in reducing U5MR by much less well-resourced, and slower-growing, neighbors like Malawi and Rwanda. This is just one example of similar empirical analyses that show a weak relationship between income and consumption on the one hand and human functioning on the other, or between national wealth and average human achievements and freedoms (Sen 1998; Cutler et al. 2006; Deaton 2007; UNICEF 2016). It is precisely for this reason that Sen (1989) calls for an even more expansive view of development, factoring the 'social and economic instrumentalities involved in the ends-means relations', when we use human capabilities as a yardstick for success and failure (p. 55).

<sup>3</sup> See Minujin et al. (2002) and UNICEF (2016) for similar exercises.

### 3.3 Equality

As a normative framework, the capability approach is explicit in valuing each individual equally. Questions of distribution, of inequality and poverty, are therefore essential parts of development evaluation in the capability framework, while standard economic analysis sees them as questions for political debate (Burchardt and Hick 2018). This has extended more recently to inter-generational equity, to the emphasis on sustainability, and to the importance of the environment (Sen 2013).

### 3.4 Human Resources or Agents of Change

According to theories of human capital and new growth, investing in people is important for instrumental purposes, given that skills constitute human resources, which in turn are essential for economic growth (Schultz 1961; Becker 1964). The rationale is that investing in education, nutrition, and health enhances human productivity. In contrast, under the capability and human development approach, such investments (and others that improve human well-being) have intrinsic in addition to instrumental value. That is, being educated and healthy are valuable functionings, a part of a life that people have reason to value. Moreover, under this view, people are seen not only as ‘human resources’ in a production process but as agents of social change (Sen 1999).

## 4 Human Development: Concept and Origins

Pioneered by Mahbub ul Haq in the *Human Development Report* (HDR), and launched by the United Nations Development Programme (UNDP) in 1990, human development is a paradigm of development that applies the capability approach as its normative framework (Haq 1995; Fukuda-Parr 2003b). Given the complexity of the capability concept, human development is difficult to define succinctly. But a succinct definition is necessary in a development discourse. Thus Haq defined it in the first HDR as:

A process of enlarging people’s choices. The most critical ones are to lead a long and healthy life, to be educated and to enjoy a decent standard of living. Additional choices include political freedom, guaranteed human rights and personal self-respect—what Adam Smith called the ability to mix with others without being ‘ashamed to appear in public’. (UNDP 1990, p. 10)

The HDR 2010 restates this definition as follows to make more explicit the elements of freedom, agency, groups, process, equity, and sustainability, while dropping the term ‘choice’<sup>4</sup>:

Human development is the expansion of people’s freedoms to live long, healthy and creative lives; to advance other goals they have reason to value; and to engage actively in shaping development equitably and sustainably on a shared planet. People are both the beneficiaries and the drivers of human development, as individuals and in groups. (UNDP 2010, p. 2)

The term ‘human development’ is sometimes used synonymously with the capability approach. However, this is misleading because the two are ‘not the same idea’ (Robeyns 2017, p. 197). There is clearly an essential overlap between the core concept of human development and the core elements of the capability approach. Human development is a fulsome application of the capability approach in conceptualizing, analyzing, and promoting development. Sen had been actively involved in conceptualizing human development as a paradigm and its measure, the Human Development Index (HDI), and contributed the conceptual frameworks for analyses in the reports, particularly in contributing chapters on concepts of poverty, sustainability, cultural liberty, and human rights (Fukuda-Parr 2003b). In the same way, inasmuch as the empirical and policy analyses of human development enrich theorizing about capabilities and its analytical tools,<sup>5</sup> the overlap is not a complete one. The capability approach is used in a wide range of fields, not just in development. So the literature of capabilities extends beyond what is relevant for human development. And human development draws on concepts and tools of economics and social sciences in other traditions than capabilities.

Haq (1995) had an explicit political purpose in creating the HDRs. It was an instrument to redirect the development discourse and put people—rather than economic growth—as the central objective and ‘to shift the focus of development economics from national income accounting to people-centered policies’ (Haq 1995). Over the previous decades, Haq had worked in the Planning Commission of Pakistan and the World Bank. He started his career as a highly trained economist following the conventional strategy of promoting growth. He became disillusioned with this approach as success in economic growth

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<sup>4</sup>Choice is a problematic proxy for ‘capabilities’. Expanding choices implies that the goal of human development is to expand all choices, that more choices is always better than less, even when not all choices are desirable or important (Alkire 2010; Alkire and Deneulin 2009).

<sup>5</sup>Sen acknowledges the contribution that collaborations with HDRs have made to his own publications such as *Development as Freedom* (1999), *Identity and Violence: The Illusion of Destiny* (2007), and *Idea of Justice* (2009).

failed to do much to improve living standards, leaving more than half its adult population illiterate, while most of the gains were concentrated in the hands of 22 families (Haq 1976). By the early 1970s, as a key adviser to the President Robert McNamara, he was instrumental in introducing poverty reduction as the policy priority of the World Bank and in developing the basic needs approach (Streeten et al. 1981).

Putting people at the center of development was a particularly important question in the context of the 1980s and 1990s, which saw the advent of ‘neoliberalism’ as a political and economic agenda throughout much of the world. The development community was divided over their support or opposition to the macroeconomic stabilization and liberalization programs in countries of Latin America and Africa—Washington Consensus policies—implemented through ‘structural adjustment programs’. These programs imposed severe costs to ordinary people by introducing retrenchment programs that cut social expenditures and public employment, closed state-owned enterprises, imposed school fees, and took other grievous measures. These programs were underpinned by the neoliberal analysis that attributed economic crises to ‘government failure’ and the belief in free markets as the most effective strategy for economic growth and development. There was strident opposition to this thinking. Among the most forceful were arguments made in the UNICEF publication *Adjustment with a Human Face* authored by Cornia et al. (1987), illustrating that macroeconomic stabilization could be promoted while maintaining social priorities and protecting the vulnerable.

The HDR was not a frontal attack on structural adjustment programs or neoliberalism; Haq’s strategy was to influence policymakers and the general public by changing minds. His aim was to change the discourse of development by offering a new way to think about development. Accordingly, he explains:

People are the real wealth of a nation. The basic objective of development is to create an enabling environment for people to enjoy long, healthy and creative lives. This may appear to be a simple truth. But it is often forgotten in the immediate concern with the accumulation of material commodities. (UNDP 1990, p. 9)

Haq elaborated human development as a coherent paradigm underpinned by the normative framework of the capabilities approach, capable of generating rigorous analysis of development trends, emerging challenges, and policy alternatives. The purpose of the HDRs was to provide a consistent and



systematic analysis of development integrating people as its end and means. The report would publish findings that revealed how people were really faring, behind reports of economic performance, and search for the reasons why economic growth failed to produce human progress. These reports introduced innovations in measurement, conceptualization, and policy to rethink development challenges. They are also intended to change policy approaches and correct the neglect of the human element that led to failures of growth to translate into development.

To develop human development as a coherent paradigm, Haq brought together a group of fellow development economists and friends, among them Paul Streeten and Frances Stewart who had worked with him on developing the basic needs approach; Gus Ranis and Keith Griffin, his collaborators in Pakistan; and others such as Sudhir Anand and Meghnad Desai, who had creative expertise in quantitative methods. But it was Sen's work on capabilities that became the conceptual foundation for the paradigm. Sen's (1989) definition of development as a process of enlarging a person's 'functionings and capabilities to function, the range of things that a person could do and be in her life' was expressed in the HDRs as expanding 'choices', using language that would be more accessible to a non-academic reader. The basic needs approach brought to this paradigm a commitment to the poor and a policy priority to investing in primary social services to improve their living conditions (Stewart et al. 2018). While this remains important, the policy priorities of human development broadened considerably over the years, as we shall elaborate later.

## 5 Human Development Agenda and Policy Priorities

Human development as an agenda has strong commitments to expanding human freedoms in terms of both outcomes and process, to equality, people's individual and collective agency, and sustainability. Embedded in the concept is a firm commitment to democracy, human rights, and a respect for the environment. It brings into sharp focus concerns with poverty and inequality within and between groups and among countries. But human development is not an agenda with a set list of priorities in terms of sectors or policies. It is a paradigm with a clear articulation of normative frameworks coupled with the necessary analytical concepts and tools of analysis.

## 5.1 A Paradigm and a Normative Framework

Just as the capability approach is an open-ended and flexible framework, human development is not a set of outcomes and policy prescriptions. Rather, the capability approach is used as a normative framework to assess development progress and evaluate social arrangements. The policy proposals depend on the context.

Human development is a holistic concept and is much broader in scope than conventional development economics. It is concerned with the full range of economic, social, cultural, political, and environmental conditions and social institutions that affect peoples' lives. In Haq's words:

Nor should human welfare concepts or social safety nets or investment in education and health be equated with the human development paradigm which includes these aspects, but only as parts of the whole. The human development paradigm covers all aspect of development—whether economic growth or international trade; budget deficits or fiscal policy; savings, investment or technology; basic social services or safety nets for the poor. No aspect of development model falls outside its scope. (Haq 1995, p. 20)

Thus annual HDRs, as well as many other studies by academics, think tanks, non-governmental organizations (NGOs), and development agencies, have included topics such as poverty, international trade, gender equality, environment and consumption patterns, human security, human rights, democracy, corruption, global governance, technology, and more. In addressing each of these topics, the capability framework is applied to re-conceptualize the development problem, identify key constraints, and use data to quantify its extent. It can be employed to critically evaluate existing policy strategies and propose alternatives. As elaborated earlier in this chapter, some of the most distinctive elements of this approach that differ from other approaches include differentiating between human ends and economic means; a focus on what people are effectively able to do; and the centrality of pluralism, equality, and agency.

These elements can be illustrated in the analysis of poverty. First of all, the conventional concept of poverty as lack of income is re-conceptualized as capability deprivation (UNDP 1997). The analysis of poverty investigates the deprivations that people experience in what they are able to do and be and the causes of these deprivations that may be related to social institutions. Rather

than using the conventional income-based measure of poverty such as the headcount below a threshold level, human development analysis uses a more pluralistic measurement tool that captures multiple dimensions of deprivation—the Multidimensional Poverty Index (MPI) (Alkire and Foster 2011; Alkire et al. 2015). Policy agendas for poverty reduction would explore a range of interventions, from fiscal priorities to social spending, but also macroeconomic policies, technological innovation, and more. In particular, the analysis would recognize people not only as the end but as the means of development and seek to enhance their agency. This would mean addressing the root causes of poverty such as through land reform, progressive tax systems, removal of discrimination based on race, gender, and other identities, or the removal of barriers to entry into politics. In other words, the human development perspective challenges structures of economic and political power.

By refocusing policy analysis on people, it is not surprising then that policy proposals have been quite radical, critical of the interest-driven policies of powerful countries. For example HDRs have highlighted the corporate and rich-country interests that shaped the intellectual property provisions of the World Trade Organization (WTO) trade agreements that constrain access to life-saving medicines and leave gaps in financing technology that empowers the poor (UNDP 2001) and the effects of agricultural subsidies—such as on cotton—in developed countries that severely penalize small-scale farmers in Africa. Such analyses are a consistent part of HDRs and other human development studies and publications.

The most important contribution of the human development approach in setting policy priorities is in re-conceptualizing the problem. For example, the issue of cultural identity is not treated as merely an unambiguous defense of all cultures but as an issue of ‘cultural liberty’ and the importance of the choice that people have to define their own identities, as well as policies to remove discrimination. The issue of human rights does not focus only on violations but addresses rather a comprehensive set of claims that people have on the state; it articulates how human rights overlap with human development as a policy agenda (UNDP 2000). These are just a few examples of how setting human development policy agendas starts with re-conceptualizing the problem, seeing people as ends and means of development. As Haq (1995) had intended, human development is a paradigm that challenges conventional thinking and analysis about social problems in a way that reprioritizes human flourishing as the key objective.

## 5.2 Information Base and Measurement for Evaluation

One of the key objectives in developing the human development approach was to shift the information base from the economy to people. This requires new metrics; the Human Development Index (HDI), for example, combines education, health, and ‘decent standard of living’ as the three important dimensions of human development. Launched in the first HDR, the index has become widely used and better known than the concept itself. Subsequently, other complementary measures have been developed, including measures of gender inequality (Gender Inequality Index and its antecedents Empowerment Measure, Gender-Related Development Measure) and human poverty (MPI and its antecedent Human Poverty Index).

Human development is complex and measuring its progress holistically is a difficult—and arguably an impossible—task for both conceptual and practical reasons. Conceptually it raises a host of questions such as which of the infinite array of capabilities should be included, whether different capabilities should be given different weights, whether capabilities and freedoms should be amenable to quantification and measurement, and how pluralism can be reconciled with the need for an aggregate measure of national progress and more. While Sen helped Haq develop the HDI, he initially resisted the idea. He eventually recognized the need for a single index—a single number—of development progress that was not as blind to human concerns as the GDP per capita. Ultimately, the HDI was constructed combining three capabilities that are universally important for all people and that were important for opening up other capabilities. The index, as its creators readily and emphatically explain, is narrow and ‘crude’ and does not fully capture the broader and more complex concept of human development. The indicators used served only as proxies based on observations of functionings rather than capabilities. The dimensions are very limited and some critical ones such as political freedoms and security are missing. Sen explains, ‘we have to see the human development index as a deliberately constructed crude measure, offered to rival the GNP’ and that would ‘serve to broaden public interest’ in a fuller accounting of human progress (Sen 2003, p. x).

The HDI has been spectacularly successful in communicating the core idea of people as the purpose of development. Yet as social scientists have long pointed out, indicators have a tendency to redefine the social reality that they are intended to reflect (Merry 2016; Porter 1995). The HDI is no different and had the unintended effect of communicating the concept of human development as the component of the HDI. The power of numbers has led

to the rich and complex concept being reinterpreted by its reductionist index (Fukuda-Parr 2017).

### 5.3 Agency and Five Instrumental Freedoms

An important but often overlooked aspect of the human development agenda is agency: the ability of people to be agents, in their own lives as well as in the community. As Sen emphasizes, human development is concerned with ‘how human agency can deliberately bring about radical change through improving societal organization and commitment’ (Sen 2003, p. vii).

In *Development as Freedom*, Sen (1999) suggests five categories of important instrumental freedoms: (i) political freedoms including civil rights and entitlements of democratic governance and institutions such as a free media and elections; (ii) economic facilities or opportunities that individuals or households have to use resources for consumption, production, or exchange (this depends not only on the level or growth of national income but on its distribution within the population and access to finance); (iii) social opportunities such as health care and education that expand opportunities that people have to participate in economic, social, and political life; (iv) transparency guarantees that are essential for relationships of trust in transactions, preventing corruption and financial negligence; and (v) protective security or a social safety net (Sen 1999, p. 38–40).

These freedoms have both intrinsic and instrumental value and are interconnected. For example, education has intrinsic value as a freedom, but education also strengthens a mother’s agency in making decisions that advance human development, for example, decisions about children’s education or family planning. It also strengthens her voice in mobilizing and advocating for gender equality in employment, laws against domestic violence, and so forth. People can be agents of social change through both individual action and collective action. Both types of actions can shape development by enhancing human freedoms, but also by bringing pressure for change in policies, and bringing about political change. These processes emphasize the importance of political freedoms that expand peoples’ voices and build democratic governance. This is illustrated by Sen’s work on famines; the occurrence of famines can be prevented when citizens demand action through an active media and legislature (Sen 1982). And collective action, in the form of social movements, has played a key role in driving progress in achieving major policy shifts such as the recognition of gender equality, the need to protect the environment, or the protection and fulfillment of human rights.

Thus, an important area of engaging debates in the recent literature relates to the role of collective capabilities, social structures, and groups (Evans 2002; Robeyns 2005; Stewart 2005). Ibrahim (2006), for example, stresses the intrinsic and instrumental roles of social structures in developing an analytical framework for collective capabilities. Similarly, in analyzing the persistence of group inequality, Stewart (2009) highlights the importance of ‘capability inequality’ and ‘capital poverty’ traps (p. 324) and identifies some capabilities (e.g., political power and cultural status) that are better understood as group capabilities (Stewart 2009, p. 318). The emerging literature in stratification economics also highlights the centrality of agency in the capability approach while developing a framework for the study of intergroup disparities (Hamilton and Darity 2017). More specifically, Panzironi (2009) applies the capability approach to the right of self-determination of indigenous people.

## 5.4 Human Development Misinterpreted

There is a widely held and erroneous perception that human development is about education and health or investing in the social sectors or identical to an agenda of meeting basic needs. Indeed, the term ‘human development’ has been used by the World Bank to refer to social sectors, not as a framework for evaluating all sectors. Such an interpretation of human development would add nothing to earlier concepts of human resources and basic needs. As already explained, human resources focus on people as instrumental to a production process, not as ends. The basic needs agenda is also much narrower, emphasizing the provision of social sectors. Human development encompasses a much broader set of priorities, equally emphasizing macroeconomic policies, and reforms in political, cultural, and environmental areas, and is concerned with all human beings, not only the poor in poor countries. But the (mis)perception is not surprising because of the roots of the human development concept in basic needs, the communication power of the HDI, and the reductionist nature of this and other indicators.

The basic needs approach gave priority to advancing primary human needs through the provision of basic social services. Ranis, Stewart, and Samman argue that the HDRs ‘combined Sen’s capability approach and the basic needs focus on the needs of the most deprived [...] the strong focus on the need to give priority to improving the conditions of the poor, and a concentration on goods and services for the poor, reflects the basic needs approach’ (Stewart et al. 2018, p. 21). In the context of the early 1990s, this focus was particularly important since the structural adjustment programs of the 1980s had cut public spending for these priorities.

The focus on education and health became institutionalized in the measurement tool, HDI, which includes three components: education, health, and a broad range of other capabilities represented by adjusted income as a proxy measure. The ‘other capabilities’ such as political freedom, human rights, self-respect, and participation were thus left out of the measure. As Sen points out, ‘it would be a great mistake—alas one that is often made—to identify the capacious human development approach with the use of this useful but intellectually limited index’ (Sen 2003, p. x). Though it has been repeatedly stressed that the concept of human development is far larger than the HDI, the power of numbers as a communication device imprisoned human development in this narrow measure (Fukuda-Parr 2003a).

The HDRs and other leading studies further reinforced the narrow interpretation of the human development concept by focusing on the three dimensions of the HDI in quantitative analyses of trends. For example, an important set of analyses by Stewart and Ranis on the relationship between economic growth and human development use education and health indicators as proxy measures of ‘human development’ (Stewart et al. 2018). Even more paradoxically, the 2010 HDR, which articulates the full account of the human development concept in one chapter, follows it with a chapter on ‘the advance of people’ that traces human development reduced to education, health, and standard of living, with attention to inequality (UNDP 2010).

## 6 Human Development and Other Human-Centered Approaches

The capability approach has been an influential element in the evolution of development thought and discourse centered around human concerns beyond human development, such as human rights-based development, feminist economics, sustainable livelihoods, participation, and the discourse of development as a ‘human-centered’ process. Through these paradigms, the capability approach has had enormous reach in development thought and practice.

### 6.1 Human Rights

The concept of human development has facilitated the emergence of the human rights-based approach to development and the conception of the right to development. Insofar as development was conceived as material accumulation, it was thought to be antagonistic to the promotion



of human rights. Development conceptualized as expansion of human freedoms has helped articulate the human rights approach to poverty, public health, education, and many other areas, including sustainable development as an international agenda.

Both Nussbaum (1997, 2000, 2003) and Sen (1982, 1999, 2004, 2005) present human rights and capabilities as closely related but distinct concepts that share a common commitment to justice and human freedom as central political objectives. Both have emphasized the complementarities between the two concepts and their benefits in advancing their shared objectives. Nussbaum (2011) argues that capabilities are fundamental entitlements just as rights are, and capabilities are also a species of the human rights approach. Such fundamental entitlements should be a political objective of all countries enshrined in their constitutions. On the other hand, capabilities as entitlements can provide a theory of rights claims, a question that has remained ambiguous and contested (Sen 2004).

Human rights and capabilities are also complementary frameworks for public policy. They have overlapping commitments to the dignity, substantive freedoms, and equality of individuals. An important difference is that rights incur correlate obligations; while rights holders have rights, duty bearers have the obligation to respect, protect, and fulfill those rights. These obligations are institutionalized in national and international law. The promotion of human rights and the legal frameworks that guarantee them are important not only for their intrinsic value but in strengthening agency. People mobilize to claim their rights. Rights impose correlate obligations—duties—on the part of the state and others to respect, protect, and fulfill them, enforceable by law. This greatly enhances the agency for human development; for example, the legal guarantee for freedom of speech and association enables people to bring issues up for public debate that challenge powerful actors.

The application of human rights to development has been elaborated as a ‘human rights based approach to development’ that emphasizes equality of rights and participation; these align with human development concerns for equity and agency. This approach more emphatically highlights the importance of power structures as a source of human vulnerability and an obstacle to development and uses international norms and standards.

## 6.2 Feminist Approaches to Development

Gender inequality has been one of the central themes of human development assessments and policy agenda (Sen 1990; Nussbaum 1995). While feminist



scholarship and activism arose in parallel with human development, they are complementary and have greatly enriched one another with concepts, tools, and agency. Arising out of the ‘unraveling of development problems and the political fervor of the 1970s and 1980s, and the growing social movements and voices of protest from vulnerable and disadvantaged groups’ (Floro 2016, p. 423), feminism shares with human development a core belief that economics should be about how the economy can serve human purposes (Floro 2016). They are complementary frameworks of evaluation and agency that can enrich public policy agendas with relevant concepts, analytical tools, and knowledge.

Feminist scholarship has enriched the human development framework in a number of ways. Feminist economists have challenged utilitarianism and the core assumptions of the rational economic man (Ferber and Nelson 1993). It has highlighted the importance of non-market activities in the process of creating human capabilities and in social reproduction. Where conventional economics only takes account of market activities, feminist economists have pointed out the essential role of unpaid care work and social reproduction in human flourishing (Folbre 2001). Feminist activism has brought out the importance of individual and collective agency in overcoming institutionalized barriers to gender equality as a human development priority. Feminist thinking has also explored power hierarchies in social, economic, and political relationships as an important obstacle that needs to be incorporated into development agendas.<sup>6</sup>

## 7 Conclusions

This chapter has provided a brief overview of the capability approach and its application in human development as an important school of thought in development economics that has sought to explore the relationship between economic growth and its human purpose. What has been the nature and extent of its influence in development thought and policy agendas?

The idea that people should be at the center of the development process has now become widely accepted. Issues of poverty and inequality have gained prominence as social and political concerns in the development field. ‘Human-centered development’ has become mainstream discourse. Moreover, the

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<sup>6</sup>This has been a common theme in feminist advocacy positions in international negotiations, especially in UN fora. See, for example, publications of the South-based feminist network: Development Alternatives for Women in a New Era (DAWN): <http://dawnnet.org/resources/publications/> accessed 09.20.2018.

adoption of the Sustainable Development Goals (SDGs) in 2015 as the international agenda, and their predecessor goals the Millennium Development Goals (MDGs), has shifted the consensus on reducing human poverty as the central objective of international development.

Yet a closer look at these trends shows that the influence of human development and the capability approach has not been a wholesale adoption of these concepts and policy agendas. The MDGs reflected a narrow, minimalist conception of human development as meeting basic needs, without reference to key elements such as agency and participation, inequality, human rights, or the recognition that ending poverty must address their structural causes in political, economic, and social institutions (e.g., Saith 2006; Fukuda-Parr et al. 2014; Fukuda-Parr 2017). In that sense, they were a major setback to the early 1980s and displaced the human development perspective on poverty. The SDGs are more transformative, and reflect human rights principles and standards better, but still fall short in many ways. With respect to economic policies, mainstream approaches continue to follow the neoliberal model. The human development and capability approach has advanced the human concern, but with limited success, merely introducing social investments and protection as a corrective, providing a safety net to the exclusionary effects of market-based development rather than addressing the structural constraints.

Despite these limitations, the capability approach has made major inroads into understanding the relationship between economic growth and human well-being. It has mobilized and strengthened activism for equality, ending poverty, and sustainability. Its application in development—human development—must evolve to meet the challenges of the times and bring in emerging new ideas. A case in point is *Doughnut Economics* proposed by Raworth (2018a)—a coauthor of HDRs in the late 1990s—that incorporates the central contemporary challenge of environmental sustainability. She writes:

Doughnut Economics is very much in the tradition of human development, building on Sen's capabilities. Where it differs from human development of the 1990s as we knew is that it starts with a recognition that humanity is deeply embedded within the web of life and dependent upon earth's life supporting systems. And so there is not a development vs environment trade-off (as often posed in the 1990s)—rather, there are two necessary conditions for human well being, both the inner and outer rings of the Doughnut. (Raworth 2018b)

Raworth's Doughnut diagram provides a visualization of the dual conditions, social and ecological, that underpin collective human well-being. The

social foundation of human rights and the ecological ceiling of planetary boundaries create the inner and outer boundaries of the Doughnut. Raworth (2018a) describes the space between those two rings as ‘the space in which we can meet the needs of all within the means of the planet’ (p. 15).

Human development is not a theory, nor a set of policy prescriptions. It is a broad and open framework that accommodates a variety of heterodox approaches and is flexible enough to incorporate new concepts necessary to address new social challenges. As Sen points out in reflecting on the evolution of human development over the years, ‘Mahbub ul Haq would have been happy to see that the school of work that he initiated is not resting on its laurels, nor remaining frozen in predetermined paths, but is continuing to use the open-minded approach to which he attached such importance’ (Sen 2003, p. xii). Thus, the real impact of the human development and capability approach has to be seen in the way it has given rise to new analytical concepts to address evolving development challenges as an alternative to mainstream thinking.

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# Part IV

**Finance, Labour, Technology and  
Ecology in Economic Development**



# 14

## Development Finance: Theory and Practice

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### 1 Introduction

Starting with Adam Smith's seminar work (1773), economists always understood the importance of shifting available resources to more efficient productive investments and innovations. However, *development finance*, as a subset of

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This chapter was initially written by Jan Kregel and the late Professor Cardim de Carvalho. The chapter was subsequently reviewed and revised by Lavinia Barros de Castro and Rogério Studart, who, as much as possible, attempted to maintain its original insights. We all consider this chapter to be a small tribute to Professor Cardim de Carvalho, for too many was an important intellectual reference, an outstanding scholar and an irreplaceable friend. We will all miss him.

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economics, is a much more recent scholarly topic and policy matter. This article critically analyses the two main theoretical frameworks (and its practices) of development finance, since the postwar: the “financial repression” and the “financial liberalization” periods. The article also refers to the policy debate and practice in the field after the 2008-09 North Atlantic financial crisis.

It was born out of the challenge to promote the rapid economic transformation (development) of newly independent nations, or to reconstruct former industrial economies destroyed, physically and economically by the two great wars of the first part of the twentieth century. For that, governments and multilateral institutions, including United Nations economists, initially embraced a policy view that governments should have an important role in promoting finance for such transformational activities—a period that has been coined as “financial repression” by its later critics. These policies included building dedicated domestic and international finance institutions, in controlling international financial flows and in shaping credit conditions within national borders.

From the 1970s, the pendulum turned completely on both academic and policy fronts: the view became that government activism was to be blamed for the very problems that it had been set to overcome. That is financial repression not only would result in inefficient allocation of existing resources but had long-term consequences of deterring financial development and leading, more generally, to poor economic and social performance. Despite there has always been many critics, this perspective prevailed throughout the 1980s until 2000s. Only recently, after the 2008-09 North Atlantic financial crisis, the mainstream vision was severely questioned.

This chapter critically analyzes these two periods of development finance theory and practice in the postwar period. Section 2 provides a very succinct description of the previous view on growth and finance from eighteenth century to the immediate post-World War II years. Section 3 analyzes development finance theory and practice in the immediate postwar—or the “financial repression” period. Section 4 does the same for the period when “the pendulum turned” toward “financial liberalization”. Section 5 assesses the two periods, whereas the Section 6 discusses the evolution of the policy debate and practice in the field after the 2008–2009 North Atlantic financial crisis. The Sect. 7 summarizes our findings and concluding remarks.

## 2 Finance and Growth: The Early Roots of Development Finance

Ever since Adam Smith (1904 [1776], p. 325) postulated that “the greater part of men proposes and wish to better their condition” by an “augmentation of fortune”, the objective of economic development has been associated with

growth. At the center of his analysis was the impact of what he called the “division of labor”, what we would today call technical progress, in increasing output per man along with a growing labor force. The means of keeping available labor employed or financing the investment in new technology were not intensively discussed. This was to a large extent to do with Smith’s belief that incomes would be used either for present enjoyment or for future enjoyment, which meant that any income not spent would be available to finance provision for future consumption.

Ricardo extended Smith’s analysis by assuming that agriculture could be subject to diminishing returns, generating rents that accrued to landowners who had more interest in profligate hedonistic consumption, while capitalists would be led to investing their profits in more productive capital (Ricardo 1951 [1817]). Development (growth) would thus be promoted by shifting the distribution of income to profits which capitalists would use to finance investment and to raise incomes. The efficient allocation of saving, rather than the availability of saving to finance investment was, for him, the central concern for growth. Thus, financing growth remained a question of sufficient and efficient use of saving rather than a concern with the financial institutions that provided the finance for investment in new technology.

This would only change in the beginning of the twentieth century with Joseph Schumpeter and a number of business cycle theorists.<sup>1</sup> Schumpeter followed Smith in highlighting the importance of innovation for development but also emphasized the critical role that the modern banking system played in the process. The essence of modern banking was in the creation of purchasing power by providing entrepreneurs with the means of payment which allowed them to invest in new innovations. Since this power was unlimited, it meant that savings were not the source of investment finance and thus could no longer limit the expansion of investment and innovation. Banks were considered fundamental not only for growth, insofar as they finance innovations, but also for the diffusion of new technologies and techniques among entrepreneurs. For Schumpeter, the banks became what he called the “ephors” of capitalist development (Schumpeter 1934 [1912], p. 74).

In the second half of the 1930s, influenced by Keynes’ seminal works, and his concepts of “finance and funding”, the role of modern banks and other financial institutions and markets became even more clear.<sup>2</sup> As Keynes (Keynes

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<sup>1</sup> Actually, Walter Bagehot, in 1837, had already argued that the financial system had played a critical role in igniting industrialization in England, facilitating the mobilization of capital, and that better mobilization of savings could improve resource allocation and boost technological innovation. See Bagehot (1873).

<sup>2</sup> “The entrepreneur when he decides to invest has to be satisfied on two points: firstly, that he can obtain sufficient short-term **finance** during the period of producing the investment; and secondly, that he can

1937) once observed, assuming that the inducement to invest exists, in the form of expectations that are favorable to a given investment project, the entrepreneur only needs access to liquidity, provided by banks, to realize the investment. However, to assure that their *balance sheets* will be liquid, that is, that expected asset returns will be enough to service outstanding liabilities, what she also needed was a market that would allow for a matching of the maturities of her liabilities and fixed assets—that is, “funding”. Here one deals with financial constraints *sensu stricto*, that is with flows of monetary revenues and payments and the institutions through which they flow.

Most of these analyses applied to the reality of industrial economies. For other nations, in the nineteenth-century debate, the issue of growth finance was, in practice, dominated by the existing international division of labor. Imports of European manufactured goods by non-industrial nations were financed by British finance. And the resulting debt was serviced by their production and exports of primary product exports. Though this commodities-based growth was not a universal success experience, overall the results appeared to support the application of comparative advantage in primary commodities in these countries and the financing of their investment in building an industrial base from open international capital markets.

After World War I (1914–1918), some economists noted the peculiar problems faced by the creation of new economic and political entities born in the Baltics—that is, what we would call “developing economies” nowadays. New countries that had once been integrated in the division of labor of large empires suddenly found themselves isolated by political boundaries. The question was how they could be made self-sustaining in the new geopolitical environment. In Latin America, deprived of their external markets for imports and exports, import-substitution industrialization became a natural path for many “developing nations”. For former European colonies in Asia and Africa, however, this alternative was not available.

The international labor division suffered a second severe shock due to the 1929 crisis, and, a third one, due to the impacts of World War II.<sup>3</sup> For the European colonies in Asia and Africa, independence after the War was to expand the problems associated to development of new nations born out of preexisting empires. Many of them were drawn to the experience of the

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eventually **fund** his short-term obligations by a long-term issue on satisfactory conditions” (Keynes 1937, p. 664, emphasis added).

<sup>3</sup> For a discussion of the forces responsible for the expanding international flows of trade, labor and capital in the years 1820–1913 and the impacts of the World Wars (emphasizing the consequences of the replacement of the United Kingdom by the United States in the working of the international economy), see Kenwood and Lougheed (1999).

Soviet-style planning and industrialization. In this context, the Cold War imparted urgency to the need to introduce market-friendly development strategies and theories to support the developing countries that kept capitalist of mixed economic systems. As the discussion of development strategies intermingled with Cold War politics, major powers provided financial support to enroll political allies, as much as to ensure successful economic expansion.

Therefore, the concepts of development and development finance, as we understand them today, are “children of the post-World War II period”, even though since the 1940s several seminal papers on development were already been written.<sup>4</sup> In this context, United Nations Reports, including those prepared by the regional commissions, played an active role in promoting development as a central subject, reflecting the centrality of this issue for the new world organization.<sup>5</sup> *Economic development* as a specialized academic discipline, dealing with the development of underdevelopment or “backward” countries firmly emerged in the 1950s.

### 3 The Immediate Postwar: Theory and Policy Approaches

In the immediate postwar era, the goal of global development agenda was to rebuild nations destroyed in World War II, and thus to promote significant investments in physical infrastructure and/or in rebuilding industries of former industrial nations. For that purpose, the support for controlling capital flows to, and credit conditions in, nations in need of reconstruction and to accelerate growth became the mainstream approach to development finance. In turn, the International Bank for Reconstruction and Development (founded in 1944) and several other development banks (DB) were created, prominently the *Kreditanstalt für Wiederaufbau* (KfW) in Germany in 1947; the Development Bank of Japan (DBJ) in 1951; the Brazilian Development Bank (BNDES) in 1952; and the Korea Development Bank (KDB) in 1954.<sup>6</sup>

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<sup>4</sup> For a survey of the Pioneers (made by the authors themselves), see Bauer et al. (1984).

<sup>5</sup> See, for example, the following UN reports: Prebisch (1949), Clark (1949), Witt (1951) and Kriz (1952).

<sup>6</sup> The definition of Development Banks varies among authors. According to Aghion (1999, p. 85), the oldest government-sponsored institution created to promote development is Société Général pour Favoriser L'Industrie National (Netherlands, 1822). By almost the same time, many public commercial banks were created in Europe that also pursued development goals. This was the case, for example, of T. C Ziraat Bankast (Turkey, 1863), that operated with “Homeland Funds” for supporting farmers. In the case of Banco de La Republica Oriental del Uruguay (1896) and Banco de La Nación (Argentina, 1891), although they were commercial banks, they also played very important roles for financing agriculture and,

It was the beginning of the era of “financial repression”. Different approaches were, however, taken, according to the views on the best development path to follow. The structuralist approach was influential in parts of the world—particularly in Latin America.

### 3.1 Development Finance in Structuralism and in the “Big-Push” Hypothesis

By 1950s, most economists rejected the application of comparative advantage in supporting development by means of the sale of primary commodity exports. Denying the classical economics theories on comparative advantage, in particular, the Economic Commission for Latin America and the Caribbean (ECLAC)’s economists argued that development would not come as a natural consequence of specializing in primary exports. On the contrary, industrialization was the only path to overcome underdevelopment—and it would rather be an effort that should be led by the State. The promotion of import substitution (IS) was the available solution. However, the dynamics of IS also led to recurrent and cyclical balance of payment crises. Also, higher inflation in Latin American countries was a tendency due to structural problems. They also emphasized that the absence of a developed financial system was a critical problem to industrialization. The lack of domestic savings and, as so, the dependence on external savings, exacerbated the external vulnerabilities of Latin American (LA) economies (see Tavares e Serra 1972).

This view was anchored in Prebisch-Singer’s structuralist hypothesis of a secular tendency of declining terms of trade of agricultural products.<sup>7</sup> Other arguments were added to support IS industrialization, as pointed out by Bielschowsky (1988): (1) the existence of a structural imbalance in the balance of payments, resulting from the export of products with low income elasticity and imports of high income elasticity; (2) the infant industry argument; (3) the high unemployment resulting from a combination of factors—such as high population growth, use of capital-intensive techniques, low growth of international demand for primary products and insufficient growth in alternative sectors that could, potentially, absorb labor; (4) the vulnerability

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as so, promoting national and regional development. Concerning the promotion of industry, many public financial institutions were created in the beginning of the twentieth century: Soci t  National de Credit a L’Industrie (Belgium, 1919), Industrial Mortgage Bank in Finland (1928), Industrial Mortgage Institute in Hungary (1928), Istituto per la Ricostruzione Industriale (Italy, 1933). In Latin America, the first strict development banks were Mexico’s Nacional Financiera (1934), Chile’s Corporaci n de Fomento de la Producci n Chile (CORFO) (1939), and Colombia’s Instituto de Fomento Industrial (1940).

<sup>7</sup> See, in particular, Prebisch (1949).

to cycles, as a consequence of specialization in primary export activities; (5) the inadequacy of the imported techniques from developed countries, in face of the endowment of resources available in “peripheral” economies; and (6) the indivisibility of capital.

In the developed economies, given the dominance of Keynesian macroeconomic theories of fine-tuning effective demand in the postwar period, many early theorists highlighted the importance of an adequate growth in domestic incomes to support the creation a domestic manufacturing sector to complement the existing dependence on primary production. These theories were predicated on the idea that surplus labor in agricultural production could be transferred to employment in manufacturing with higher productivity and higher incomes that could provide demand for the increased manufacturing output. In this approach, this was achieved by means of a “big push” or a balance growth relying on domestic savings.<sup>8</sup> This position was countered by economists who argued that incomes in developing countries were so near subsistence that the multiplier would be zero and produce meager resources for investment. Thus, the solution to be found was in channeling foreign savings from developed to developing countries.

From this point of view, the problem of how to finance the development process was generally treated in strictly macroeconomic terms, synthesized by the Harrod-Domar growth model. This model assumes that there are a “warranted growth rate”, in which growth is expressed as a ratio between the propensity to save (considered a structural variable) and the capital-product ratio, and a “natural growth rate”, which depends on exogenous factors, such as population growth rate and technological progress. In other words, growth depended on how large a share of current output could be reserved for capital accumulation and the productivity of that capital and how many income units could be obtained by putting in operation one unit of capital.

So, in the immediate postwar period, economic development theory was indeed dominated by the emerging Keynesian revolution based on the role of demand in determining output and employment of the existing productive capacity.<sup>9</sup> But it was not the emerging Keynesian model of “fine-tuning” monetary and fiscal policy that attracted the attention of authorities and economists in developing countries but its application to dynamic growth as represented by the work of Harrod and Domar. The secret of accelerating

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<sup>8</sup> See for instance the seminal paper by Rosenstein-Rodan (1943) and (1961).

<sup>9</sup> In the H-D model, there is no endogenous mechanism of adjustment between guaranteed and natural growth rates, because the product capital ratio is considered exogenous and constant. Thus, growth can be “locked” at a low level for a long period of time—hence H-D is usually considered a Keynesian model (Hermann 2002, p. 44).



growth was in successfully increasing the saving propensity of an economy (assuming that they would be entirely converted into productive investment) and increasing the productivity of capital.

It was, of course, known that *development* was actually a rather more complex process than growth—one that involved not only economic expansion but also changes in the economic structure—industrialization being the most important element—as well as social, political and cultural factors, which created their own difficulties.<sup>10</sup> Economic growth, however, was a necessary condition for development to happen.

### 3.2 Capital Flows, Domestic Saving and Financial Development

The Keynesian problem of developed economies could perhaps be confined to a more extensive use of existing productive facilities. For developing economies, it was necessary to create *and* to occupy new productive facilities that allowed the betterment of the quality of life of their populations. Given the low potential for increased productivity in primary production, emphasis was placed on industrialization, since it was believed that capital invested in industrial sectors would be subject to more rapid technical progress and gains in productivity.

The Harrod-Domar model defined the problem of development finance in *real* terms: it was necessary to reserve an increasing share of real output for capital accumulation rather than squandering it on consumption. *Financial matters, markets and institutions in this context constituted a purely instrumental concern.* The central policymakers' problem was how to increase investable real savings in economies where capital accumulation had been, at best, incipient.

Increasing the productivity of capital involved additional problems. Advanced capital goods had to be imported and one could not pay for imports with domestic savings, real or monetary. To finance development required, therefore, that the means to pay for imports were also provided. And there are only few ways in which foreign currency could be obtained: borrowing in foreign currency, expanding net exports, foreign direct investment (FDI) and development aid.

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<sup>10</sup>The question of income and regional inequality, for example, was particularly important in the ECLAC's theory causing "stagnation" (Furtado 1966). For the "Dependency Theory", see Mantega (2005).

Borrowing in international financial markets was mostly beyond access by developing countries. And expectations as to the success of rapidly expanding net exports strategy differed widely among developing countries. For primary exporting nations, long experience had shown international markets for raw materials and agricultural goods to be very unstable, prone to periodic collapses and unstable cycles of the global economy. Moreover, it was increasingly believed that long-term trends played against producers of such goods—as formalized by the Prebisch-Singer hypothesis.

This pessimistic view was not shared by some developing countries, most notably in East Asia where governments designed industrial development plans to develop products capable of penetrating international markets. Export of manufactures was central to the East Asian model of development, first in Japan and Korea, and then in the so-called Asian Tigers or Newly Industrializing Countries (NICs). Imports needed were thus financed through export earnings, and increased saving ratios followed the increasing export incomes.

As regards FDI, foreign investors tended to prefer sectors where revenues were themselves in foreign currency, such as the extractive industries and other primary goods to export. Alternatively, FDI could be directed to support industrialization by inviting or allowing foreign industrial firms to install manufacturing plants in the country—a strategy deemed important for acquiring physical capital but also human capital and technologies. Again, the attitudes of recipient countries were not homogeneous on this matter. In some countries the authorities wanted to keep the control of industrial plants in domestic hands, fearing that foreign firms could be much more resistant to local government's directives and pressures.

A final source of foreign currency was foreign aid, a non-negligible channel to access foreign currency in the first decades after the war. In fact, while the Cold War lasted, foreign aid from developed countries and loans from multinational institutions such as the World Bank became very important sources of resources to support industrialization, directly or through the financing of specific projects, particularly with respect to infrastructure construction.

In any case, more than domestic savings, it was access to foreign currency that constituted the main constraint on economic growth in the first period of postwar development—not only in developing countries but also in Europe during reconstruction. The external constraint, however, in most cases, could be relieved but not really be safely removed. Important uncertainties remained even at the best of times, since external conditions could, and frequently did, change rapidly and without warning. For this reason, most developing countries maintained controls on capital outflows.

Most generally, such controls took the form of restrictions on residents' attempts to make financial investments abroad. Under stress conditions, restrictions on profit remittances and capital repatriation by foreign investors were also applied. Another common instrument was the adoption of multiple exchange rate systems, despite the continued objections of the International Monetary Fund (IMF) to such schemes. These systems allowed the authorities to offer rewarding exchange rates to favored initiatives while maintaining punishing conditions on exchange markets for deals that were believed to hinder somehow the country's development.<sup>11</sup>

In summary, the mainstream view that prevailed was that primarily the *savings propensity* that mattered to determine whether or not it was possible to sustain a process of economic growth. The higher the savings propensity, the higher the rate of growth that could be achieved and the quicker the transition would be completed. Of course, there were dissidents.

A remarkable one was Gerschenkron (1962). In his work, backwardness was at the root of his model of late comer's economic development. Denying the Rostowian (Rostow 1959) idea that there are equivalent stages of economic growth in all countries, he argued that elements of modernity and backwardness could coexist—as they did (see Fishlow 2001). State intervention could compensate the lack of capital, skilled labor, entrepreneurship and other disadvantageous initial conditions through new institutional arrangements, and by creating appropriate alternatives for fostering development. In particular, he stressed that the creation of universal banks had played an essential role in the development of Germany.

It was also during that time that some new ideas on development finance were introduced by the work of Gurley and Shaw (1955, 1960). The authors emphasized the need to develop financial markets in order to accelerate economic growth. Basically, the idea was that through financial intermediation techniques, it would be possible to increase levels of savings and investment and allocate scarce capital resources more efficiently, among alternative opportunities. Complementing the theoretical research, for example, Goldsmith (1969) explored the empirical relationship between growth and finance, creating standards for measuring the efficiency of a financial system. Later on, Shaw (1973) and McKinnon (1973) became pioneers of the so-called financial repression hypothesis. This is the topic of the next section. Before that it is important to step back to discuss how development finance policy evolved in the immediate postwar period.

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<sup>11</sup> For example, exchange rates could be sold cheaper than market rates, by the government, for a specific type of imports according to national priorities.

### 3.3 Financial Repression as a Policy Practice

In the post-World War II period, most developing countries exhibited a similar structure of primitive financial markets comprising a small number of banking institutions. Government institutions coexisted with private foreign banks, mostly devoted to finance exports and servicing the needs of the local subsidiaries of foreign firms. In the case of Latin America, one or more domestic banks operated, providing demand deposits and savings products to small savers, with little impact on credit supply to private investors, who had to rely heavily on retained profits or informal sources of credit. In Asia, government banks played a more strategic role in supporting investment and growth. Common to most developing countries' experiences was the absence of relevant capital markets. Stock Exchanges were present in many cases, but their role in supporting investment was negligible. Debt securities markets were mostly focused on dealing with public debt.

The financial structure of developing countries was less of a fatal barrier to growth acceleration than one could perhaps expect. Generally, policymakers expected that the leadership in the development process would be taken by either the State or foreign firms. In the case of the latter, access to local financial markets was supposed to be largely irrelevant to their investment decisions, even though foreign firms were not expected to neglect subsidies and other financial or tax incentives when they were offered. Foreign investment was expected to remove both the need for foreign currency but also to increase domestic capital accumulation counting on their headquarters' financial resources.

The other pillar of development strategies in the period was the State, expected to play in fact multiple roles. The State was supposed to provide the appropriate institutional framework to favor industrial investment by both domestic and foreign investors. From the modernization of the legal system to deal with questions like labor relations, competition rules, bankruptcy procedures, to the definition of the right set of incentives, fiscal and financial, to investment, to the direct participation in the economic process, the demands on the State were heavy. Directly related to the problem of financing development, two important roles were reserved to the State, the importance of which varied from country to country. The first was a direct investor. The second as a provider of credit, directly and indirectly.

As a direct investor, many governments created and operated businesses in sectors considered to be strategic to support the development of an industrial sector.<sup>12</sup> This was the case mainly of initiatives in the power and transport

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<sup>12</sup>As Amsden (2001, p. 21) observed: "In the immediate postwar years, to not intervene would have seemed strange ... and government share in gross investment attained high levels". For a comparison of

infrastructure sectors. Oil companies, generation and in some cases distribution of electric power, and construction and operation of roads, ports and airports were sectors where the presence of the State as owner was pervasive. Financial resources for these investments were provided by the Treasury, by operational revenues and, in many cases, by foreign aid and multilateral development banks' financing, without requiring any involvement on the part of domestic financial institutions or markets.

The other financial channel for the participation of the government was through the banking system. Participation could be direct, through the creation of state-owned commercial banks and, most importantly, perhaps, development banks. But the State could also act through providing resources to private domestic banks, usually accompanied by provisions guaranteeing that credit was to be directed at the sectors considered strategic for the development process.

Financing productive or infrastructure investment was not the priority of state-owned commercial banks. Funded mostly by demand deposits and other short-term liabilities, such banks could do little for investors in durable capital goods without compromising the safety of their own balance sheets. Some banks were allowed to do that, and the State had to step in to support them every time their liquidity was under threat.

More decisively involved in the industrialization movement, that was the core of the development process, at the time, were development banks.<sup>13</sup> Such institutions were designed in many different ways, but the ones that played a central role were those created to correct for a crucial structural problem in the financial system: the inexistence of long-term credit for plant and equipment construction and purchase. Loans for these purposes were too risky on account of their long duration. Many times, it also require large volumes of capital. In the absence of bond markets and given the obvious impossibility that such financing was assumed by commercial banks, private or public, development banks were designed to fill the gap in domestic financial systems.

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the share of public investments in gross domestic capital formation in selected LAC and Asian countries, see Amsden (*ibid.* *idem.*, p. 23).

<sup>13</sup> For instance, the shares of Development Banks in total manufacturing investment in 1970 were 11.0% in Brazil (BNDES), 7.6% in India (all Development Banks), 44.7% in Korea (Korean Development Bank) and 35.5% in Mexico (NAFINSA) (Amsden 2001, Table 6.4, p. 131). In Chile, CORFO created and played an important role in the main Chilean public companies, including the production and distribution of electricity, steel, sugarcane processing, aircraft, oil extraction, telecommunications, forestry and paper and pulp sector. In Colombia, the Industrial Development Institute was responsible for a large part of the financing of machinery and equipment, while in Mexico Nafinsa infrastructure represented 68% of its portfolio in the period 1963–1970 (Moreno-Brid et al. 2018, p. 115).

In most cases, funding for the development banks themselves was public. They could be a budgetary source or “off-budget” and related to “nontax revenues” (Amsden 2001, p. 133), derived from foreign sources, deposits in government-owned banks, post office savings accounts, pension funds and so on.<sup>14</sup>

The other side of the deep involvement of the State in shaping the provision of finance for long-term investments was what critics of the strategy used to call *financial repression*. It was of paramount importance that credit was directed to strategic sectors instead of being “wasted” in low-impact initiatives, even if they were more profitable to private investors and the financial institutions themselves. Therefore, the role reserved to the “market” in the allocation of credit was relatively restricted. In the same vein, interest rates had to be kept compatible with the needs of investors, both in terms of levels and in terms of other contractual characteristics, such as duration, collaterals, grace periods and so on. In the case of interest rates, the proper measurement of implicit subsidies was complicated by the fact that, in the absence of the State intervention, those segments of financial markets would probably not exist at all.

Critics, however, were not moved by such arguments. This is our next topic.

## 4 The Pendulum Turns: Financial Liberalization

In the policy debate, financial liberalization became the agenda in the 1970s, and, as mentioned earlier, the so-called Shaw-McKinnon model provided its main theoretical justification. This model (like the H-D model) also establishes a direct causal relationship from saving to economic growth, and its most important difference in relation to the H-D’s model is the treatment given to the propensity to save, which is no longer seen as structural but as a variable that can be influenced by policies (Hermann 2002).

According to McKinnon (1973), in order to leverage industrialization developing countries had often placed artificially low interest rates, leading to economic inefficiencies and overinvestment in some sectors and underinvest-

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<sup>14</sup>In Mexico, in 1961, 57.7% of total resources to the national development system came from foreign loans. The Industrial Finance Corporation of Thailand borrowed from the World Bank and the Korea Development Bank by issuing industrial finance debentures (brought mainly by other state banks), and by inducing foreign capital, and attracting savings deposits (Amsden 2001). Other than Development Banks, States could also provide loans indirectly through many channels. The provision of liquidity support guarantees for private banks involved in funding development projects could obviate the risks to which such banks were exposed. Monetary policy instruments, such as differentiated reserve ratios for banks that destined resources to favored projects or sectors, were commonly used in Latin America.

ment in others. More importantly, low interest rates caused lower than potential savings, thus inhibiting economic growth in the long run. Because financial institutions are essential to the efficient allocation of capital, the argument goes, free competitive markets are needed to ensure that resources go to those who value them the most.

In sum, for Mckinnon (1973), to foster growth, financial liberalization was both a necessary and a sufficient policy. Government should eliminate interest rates ceilings, reserve requirements on banking deposits and quantitative and qualitative controls on credit. Last, but not least, the Government should reduce the supply of public credit at subsidized rates. Development banks, especially, were seen as institutions locked by rent-seeking behavior and inefficiency—that should no longer exist or should be reduced in scope and scale.

Even though Gurley and Shaw (wrongly) used the case of South Korean financial reforms as evidence for their hypotheses,<sup>15</sup> the policy transition from financial repression to financial liberalization truly occurred in Latin America in the 1980s during its debt crisis and in Asia in the early 1990s. Understanding this transition requires considering the troubled macroeconomic scenario in the beginning of the 1980s to all developing economies, especially for Latin America.

The two oil shocks of the 1970s hit Latin American countries very hard, even if with different intensity. Oil producers initially benefited by the steep rise in petroleum prices. Importers, as, notably, Brazil, in contrast, suffered heavy losses. Attempts at a *fuite en avant* by heavily expanding investments in import-substitution industries to overcome the large deficits in its trade balance were financed by heavy foreign indebtedness. This ultimately led the country to the debt crisis of 1981–1982. By the late 1970s, even oil producers like Venezuela, Mexico and Argentina found themselves burdened with heavy external debts they were unable to service.

The debt crisis took a long time to resolve. Rescue packages were negotiated with lenders under the leadership of the International Monetary Fund. Among the conditionalities imposed in exchange for debt consolidation and restructuring figured, first and foremost, domestic financial liberalization and capital account liberalization. A similar process would take place ten years

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<sup>15</sup>In fact, Korean government did adhere to the idea of interest rate reform. However, the financial reforms were only half done and the government never adopted a liberal financial orientation. On the contrary, first, all the banks were nationalized and the Korean financial system remained under strict government control at least until the beginning of the 1980s. Also, demand deposits were left out of the reform, and increases in lending rates were selective, excluding such sectors as export, agriculture and various categories of loans. See Woo (1991) and Castro (2006).



later, during the Asian balance-of-payments crises, when the IMF imposed similar conditionalities on the countries seeking its financial help.

## 4.1 Domestic Financial Liberalization

Multilateral institutions such as the IMF and The World Bank had long manifested their inconformity with the financial repression policies and exchange controls adopted by developing countries. Until the 1980s, however, their power to change them was relatively limited. Asian countries seemed protected against IMF's influence by their export revenues. But even for Latin America, rescue packages before the 1980s debt crisis rarely included *structural* conditionalities. Macroeconomic policy demands, such as fiscal restraint, tight monetary policy and exchange rate depreciation, destined to reduce current account deficits, constituted the core of the Fund's conditionalities—and even those policies were many times rejected by borrowing countries. The hardships of the 1980s debt crisis, however, eliminated most of the borrowers' bargaining power and structural conditionalities had to be accepted.

In fact, another important element for the policy debate was the evaluation of the Latin American “Inward-Oriented” development strategy against the Asian “Outward Oriented”—an interpretation made by the World Bank and the IMF as well.<sup>16</sup> Within this dichotomy, again Korea was a main reference. According to this view, Korea from the 1960s (as well as other Southeast Asian countries), “relied extensively on private markets” (Friedman and Friedman 1980) and “free trade regimes”. Brazil, on the other hand, despite having also promoted exports since 1968, would have basically followed the strategy of Import Substitution—which would explain its failure in the 1980s and the persistence of inflation (e.g. Krueger, 1984, and Lal, 1983). It is interesting to note that Friedman and Friedman (1980) recognized that there was some sort of interventionism in Asia, but the greater growth in Asian countries should not be credited to the State, but, on the contrary, despite the State (*ibid.*, p. 57).

Of course, many authors did not share the same view. Several seminal books on the Asian miracle have been written defending that in the region the model was “State-led”. The State not only guided the economy (designing the long-run development strategy) but implemented foreign trade policies as

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<sup>16</sup>The World Bank (1987, p. 78) defines “Outward Oriented Model” as a situation where trade and industrial policies do not discriminate between the domestic market and exports, or between domestic or external purchases of goods and services. In contrast, an “inward-oriented” strategy is one in which there is a bias that favors local industry rather than exports. See also Bradford (1990, p. 34).



well as industrial policy. Several fiscal, monetary and exchange rate's instruments were used, and the role played by public and development banks was large, in many experiences. Bértola and Ocampo (2012) defends that the term "State-led industrialization" should be used also for Latin American experiences, rather than "import substitution", since this was only one of the elements of the development model, and not necessarily the most important one in the region. Others included State intervention in general, including in the financial sector.<sup>17</sup>

Apart from the debate, the fact is that structural conditionalities gave the IMF, and similar multilateral institutions, the power to reshape the economies of crises countries according to the former's views of how a market economy should ideally operate. The narrow focus on macroeconomic policies that could substitute current account surpluses for the deficits those economies suffered was abandoned. That allowed entities such as the IMF to demand not only *external* liberalization, trade and financial, but also *domestic* financial liberalization and deregulation, areas which were *not* under the Fund's jurisdiction set by the Bretton Woods Treaty.

It is important to also consider domestic demands for financial liberalization. The prosperity brought about by continued economic growth led to demands for financial diversification among investors, borrowers and financial institutions. Growing sections of the population sought new products to channel their financial savings, including investing them abroad.<sup>18</sup> Governments tended to substitute money creation, typical of previous decades, from the placement of debt securities. Financial institutions developed new classes of financial products and services to cater to the increasing demand for financial assets, including hedging instruments. Hence, demands for "financial liberalization" also came from influential social groups, especially at the top of the income distribution scale. In most cases, government authorities showed little disposition to oppose them.

Typically, domestic liberalization began with the flexibilization, and ultimately the elimination, of interest rate controls. Rate ceilings were abandoned on contracts offered to restricted segments of borrowers. Gradually, flexibilization of interest rates were extended to all contracts, leaving those that affected larger segments of the population, such as savings deposits, for last. Government authorities, including central banks, gave up the powers they

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<sup>17</sup> For the "state-led" case studies literature, that defends the large role played by the State in promoting development, see Johnson (1982) on the Japanese experience; Amsden (1989) on Korea's; Wade (1990) on Taiwan's; and Evans (1995) for a broader view, Castro (1994) on Brazil's. See also World Bank (1993).

<sup>18</sup> In some cases, even though it was still illegal in many cases, as in the case of Argentina, transference of financial resources by residents took place through black markets for foreign assets.

had to set those rates (except, of course, monetary policy rates, in the case of monetary authorities), letting market forces to determine them.

The next step was the removal of credit controls. Demands that private banks had to lend with priority to favored sectors or segments (such as small and medium businesses) tended to be the first to go. Compulsory credit allocation by private institutions was frequently substituted by incentives to favor some sectors or segments (such as access to rediscount windows at reduced interest rates or reductions in compulsory reserves if the resources released were lent to those classes of borrowers).

Direct credit allocation did not disappear altogether, but it tended to be confined to public banks. Public banks shrank considerably because of privatization programs, the third central element of financial liberalization processes. Of the two most important classes of state-owned banks, commercial and development banks, the former were the first to go, even though some important institutions survived. According to Yeyati et al. (2007, p. 2), from 1987 to 2003 more than 250 banks were privatized. Many that survived changed their role to focus on “market failures”, as defined by Stiglitz (1994), especially to support small and medium enterprises (subject to informational asymmetries) or financing innovation (subject to positive externalities), reducing their sizes in terms of total assets/gross domestic product (GDP). Surviving institutions were usually protected by political prestige that overwhelmed the liberalizing impetus of government authorities and pressures by multilateral institutions. Most of state-owned commercial banks, however, were privatized, sold to other domestic banks or to foreign institutions that took the chance of expanding their reach in those domestic markets.

Another central aspect of the transformation of domestic banking systems was the permission, long demanded by the Bretton Woods Institutions, for foreign banks to operate without restrictions in those markets. Both the Fund and the World Bank produced a long string of studies attempting to demonstrate that foreign banks were managed much more efficiently than domestic banks and were much more innovative in risk management and operated with lower costs to the benefit of customers. Again, permission to the free, or almost free, entry of foreign banks into domestic markets of developing countries was not the result of intellectual persuasion but of demands of the Fund to accept it as conditionalities by borrowing countries during balance-of-payments crises.

One important aspect of domestic financial liberalization was the change in the nature of prudential and other financial regulations. Under the irresistible influence of para-official groups such as the Basel Committee for Banking Supervision, regulators in developing countries generally shifted their actions

from *policing* banking markets to *giving incentives* to the adoption of advanced techniques of risk measurement and management. The apogee of such regulatory strategy was reached under what became known as Basel II, regulatory framework that basically transferred to banks themselves the responsibility to ensure the safety of the banking system, almost not addressing the problem of systemic risk. As one would expect, the 2007–2008 crisis also showed this strategy to be fatally flawed and it was largely reviewed with the publication of Basel III. Generally, developing countries moved in the direction of Basel II much more slowly than regulators in advanced economies so that when the time came to reverse strategy there was less terrain to cover back. But in many cases, this picture resulted less from a persuasion that regulators should keep in their hands the responsibility for the systemic safety of their economies than by the inability of banks operating locally to implement the risk measurement and management methods favored by the Basel Committee.

## 4.2 Capital Account Liberalization

In parallel with the process of *domestic* financial liberalization, most developing countries also pursued the liberalization of the capital account of their balance of payments. The path to liberalization was similar to the one witnessed in the domestic process. The combination of external demands and pressures, (particularly from the IMF, but also from governments in advanced countries, notably the Treasury Department of the United States) with domestic demands (from higher-income groups desirous of seeking investment opportunities abroad) led to the removal of most or all of the controls on external financial flows created during the previous period or even before that.

Two types of pro-liberalization of capital flows argument were put forward. The first dealt with economic efficiency: removal of controls on capital inflows and outflows would lead to a superior allocation of capital resources around the world. This should supposedly favor developing countries, where the scarcity of capital should lead to higher returns. Investors around the world would benefit of such better returns. Developing countries should also benefit from them, since expected capital inflows would contribute to increasing the availability of investable resources, accelerating capital accumulation and growth. The general argument, derived directly from neoclassical theories of portfolio allocation, did not establish any preference, by recipient countries, for direct investment or loans and other financial flows. The increase in the supply of capital was supposed to be positive by and in itself.

The other line of argument referred to what was proposed to be the fundamental freedom of wealth owners to dispose of their wealth in whatever (legal) way they desire. In many countries, the idea prevailed that in emergency situations governments could be led to impose restrictions on the free flow of private capital resources. However, but those restrictions should not survive after the solution to those emergencies. If one could prove that one's financial wealth was obtained by legal means, the person had the *right* to choose where to invest it, whether domestically or abroad. The argument was, in most cases, fervently supported by financial institutions looking for new business opportunities in the aftermath of domestic liberalization.<sup>19</sup>

The wide variety of capital controls adopted in the postwar period makes it very difficult to outline a *typical* process of capital account liberalization. In some cases, there was a *big bang*, where controls were removed at practically one sweep. In other cases, the removal of controls took place gradually. In some important cases, such as in China and India, the process is still incomplete, even though governments in both countries voice plans to pursue some additional liberalization in an undefined future.

During the liberalization period, the support for capital account liberalization tended to become extreme. In particular, multilateral and international institutions, from the Organisation of Economic Co-operation and development (OECD) to the IMF, pushed strongly for the adoption of rapid and drastic removal of capital controls. The International Monetary Fund's role in the 1980s and 1990s was particularly important, given the power it had to impose liberalization conditionalities on countries seeking help against the balance-of-payments crises they experienced in the period. The apogee of the Fund's liberalization pressures was reached in 1997, a few months after the Asian crisis broke off, under Michel Camdessus' tenure as its Managing Director. In that year, the Fund was proposing an amendment to its Articles of Agreement to make capital controls incompatible with IMF rules.

The almost universal condemnation of the Fund's heavy-handed methods to force liberalization on crisis countries cuts short the process, but it took years, as we see in the next section, for the Fund to finally change its position in reference to capital controls. In any case, one should note that once some degree of liberalization has been reached it becomes very difficult to reverse the process, no matter how wrong the development can be shown to have been. Many interests tend to coalesce around newly created financial invest-

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<sup>19</sup>One should again keep in mind that, for complex reasons that cannot be exploited here, many of the financial liberalization processes one witnessed in developing countries by the end of the twentieth century coincided with the substitution of authoritarian political regimes by more liberal ones, conferring some credibility to the argument of liberalizers.

ment opportunities, from private individuals to financial institutions and even government entities, that are usually able to resist successfully to the reintroduction of controls of practically any kind or to any extent.

## 5 Financial Repression Versus Financial Liberalization

Given the multiple factors that affect economic performance, one needs to be cautious about the impacts of financial liberalization. Since financial liberalization was seen by their defendants as a necessary, and sufficient, condition to achieve higher levels of growth, it may be worth to look at how those countries that adopted performed, and how these results compared with previous periods.

### 5.1 The Years of “Financial Repression”

Attributing growth to one single factor should always be avoided. However, economists would in general agree that because several industrial and infrastructure projects required large commitments of capital for long periods, the transformation of primary economies into industrial economies (or the transformation of destroyed economies, by the World Wars, into modern economies) may not have occurred without the liquidity transformation promoted by the development of the financial system.

Analyzing the period of “financial repression” is harder than recent history because of the lack of good quality data. Besides it all, there is little doubt that the objectives set by government authorities in the period of financial repression were largely achieved, although the most extravagant expectations may have been disappointing. Manufacturing industries were created in a large number of Latin American and Asian countries, and growth performance in countries that adopted financial repression was high during the period 1950–1973, comparing Asian and Latin American (LA) countries with the United States and 12 Western countries, as Table 14.1 (taken from Maddison 2006) shows.

Economic growth was fast, if volatile, in Latin America and Asia during this period. Making the transition to advanced status remained, nonetheless, elusive for most developing countries. However, many of the features associated with that State’s objectives were reached: urbanization, improved access to literacy, higher education levels, better indices of public health, besides

increased income. Income and wealth distribution remained problematic, especially in Latin America. It all happened while balance-of-payments constraints remained tough for a large number of developing countries, as illustrated by the repeated foreign debt crises, including the mother of all crises for Latin American countries, in the early 1980s.

Latin American development proved to be more vulnerable to external shocks than Asian experiences, as, in fact, one would expect. The emphasis on manufacture exports pursued by most Asian countries solved two problems at the same time: it found a dynamic aggregate demand source that at the same time generated the foreign currency revenues those countries needed to finance the imports rapid industrialization required. Avoiding the accumulation of foreign debt allowed such countries to resist the contagion of the external shocks that hit, for example, Latin American countries in the 1980s. On the one hand, balance-of-payments crises in Asia resulted from imbalances created after the financial liberalization period, in the late 1990s. Latin American countries, on the other hand, suffered the balance-of-payments crises of both periods.

But even the crises that hit the more vulnerable Latin American countries were not sufficient to prevent their rapid growth and transformation between the end of the war and the 1970s. The era of financial liberalization officially

**Table 14.1** Rate of growth of world GDP (annual average compound growth rates)

	1913–1950	1950–1973	1973–2001
12 Western European countries <sup>a</sup>	<b>1.16</b>	<b>4.65</b>	<b>2.08</b>
Total Western European countries <sup>b</sup>	1.19	4.79	2.21
Total Eastern Europe countries	0.86	4.86	1.01
15 Former USSR–Ex-URSS countries <sup>c</sup>	2.15	4.84	–0.42
<b>United States</b>	<b>2.84</b>	<b>3.93</b>	<b>2.94</b>
Other Western Offshoots countries <sup>d</sup>	2.76	4.75	2.99
Total Latin American countries	<b>3.42</b>	<b>5.38</b>	<b>2.89</b>
<b>Japan</b>	<b>2.21</b>	<b>9.29</b>	<b>2.71</b>
Total Asian—excl. Japan	<b>0.82</b>	<b>5.17</b>	<b>5.41</b>
Total Africa	2.57	4.43	2.89
<b>World</b>	<b>1.82</b>	<b>4.90</b>	<b>3.05</b>

Source: Maddison (2006), Table 8b, selected data, p. 640

<sup>a</sup>Austria, Belgium, Denmark, Finland, France, Germany, Italy, Netherlands, Norway, Sweden, Switzerland, United Kingdom

<sup>b</sup>12 listed countries, Portugal, Spain, Other 13 small Western Europe

<sup>c</sup>Armenia, Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Russian Federation, Tajikistan, Turkmenistan, Ukraine, Uzbekistan

<sup>d</sup>Australia, New Zealand, Canada

began in the Southern Cone countries in the late 1970s, before becoming a broad-based process in the region after the debt crisis of the 1980s.

Statistical information about the growth performance of developing countries, and its determinants, are even today deficient in a large number of cases. In the period covered by financial repression, this limitation was even more serious in terms of both coverage and accuracy. Accurate and meaningful financial data are particularly hard to find. The operation of banking and capital markets, as already discussed, was not considered to be an essential condition for promoting development. All attention was focused on changes in production methods and institutional structures.

According to Amsden (2001), the “hot” industries supported by development banks increased from a low share to a significant one in total manufacturing output and exports—which could be taken as evidence that development planning met its major goals. Chemicals, machinery or basic metals (target sectors to Brazilian, Indian, Indonesian, Korean, Malaysian, Mexican and Turkish development banks) performed the strongest in postwar years (see also UNIDO 1986).

However successful “financial repression” itself might have been, its critics certainly succeeded in having it considered the source of fatal distortions in developing economies (see La Porta, Lopes-de-Silane and Shleifer, 2002). Without prejudging whether the maintenance of controls of interest rates, credit, exchange rates and capital flows would be feasible or not beyond the 1980s and 1990s, it is hard to deny that the harsh condemnation those policies suffered was probably misplaced. One possible reason it that critics were largely successful in relating those policies to authoritarian political regimes in Latin America and Asia. The paradox is that it was precisely the success of those policies (that allowed the prosperity and improvement of quality of life) that fed many of the demands for political and economic liberalization. These demands were voiced by emerging social groups, in those two regions.

## 5.2 Financial Liberalization

As already mentioned, empirical evaluations of the liberalization era are controversial. Therefore, examining separately the effects of each form of “liberalization” is necessary, but not a simple task. In fact, even using advanced econometric techniques and introducing several controls and instruments’ variables do not provide conclusive or general results. For example, discussing trade and capital flows liberalization and globalization, MacMillan and Rodrik (2011, p. 27) observe that developing countries (in general) have become



more integrated with the world economy since the early 1990s, reducing tariffs and receiving more foreign direct flows. However, the productivity growth performances vary among countries. In Latin America and Africa, for example, the structural changes have been **growth reducing** during the period 1990–2005, but in Asia the opposite is correct.

According to Maddison (2006), during the period 1913–1950, comparing 41 East Asian countries with 44 from Latin America, per capita growth in Latin America was higher (1.43% per year) than in Asia (−0.07%). Since the 1950s, however, Asian performance has been superior, in general.<sup>20</sup> Table 14.2 shows the real GDP per capita growth in selected Asian and Latin American (LA) countries in the long run.

Although it is very hard to find general conclusions comparing several countries, Table 14.2 shows that real per capita growth in Latin America under “financial repression” (1950–1973) was higher than during any other following period for Argentina, Brazil, Mexico and Venezuela. Chile is the most important exception, since exactly the opposite happened. Finally, Uruguay and Peru seem to have found a source of economic dynamics only in recent years (2007–2016).

In Asia, Japan is the most impressive case, where per capita growth during the period 1950–1973 was higher than in any other country. However, the country has been experiencing a low performance since the beginning of the 1990s. Taiwan and Hong Kong also had higher growth during the “repression” period, than in any other, but the differences are not remarkable as the case of Japan. China and India are special cases, not explored here, but even Singapore, South Korea and Malaysia were examples of the previous model of “financial repression” that later on adopted some degree of financial liberalization. The three of them had a slightly better performance during the “financial liberalization era” than in the previous period (Table 14.2). So, the performance varies among regions and countries, making it even harder to conclude on evidence.

To make an assessment even more challenging, for many Latin American countries the financial liberalization agenda has been tightly connected to the attempt to bring long-lasting high inflation under control—which was not a problem in Asia, distorting comparisons from the two regions.<sup>21</sup> The debate was also influenced by an ideological reaction against political authoritarianism that took place in LA and the widespread revulsion against political corruption (Carvalho 2009, p. 7). Finally, the use of the term “financing” is not

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<sup>20</sup> See Maddison (2006 p. 196 and p. 216).

<sup>21</sup> To a discussion on fiscal revenue provided by financial repression, see Giovanni and Melo (1990).



**Table 14.2** Real GDP per capita growth—selected countries (annual average compound growth rates)

Latin American selected countries (1)	1913–1950	1950–1973	1973–1998	1998–2007	2007–2016
<b>Argentina</b>	0.65	1.92	0.71	1.50	1.13
<b>Brazil</b>	2.03	4.32	1.72	1.62	1.04
<b>Chile</b>	0.53	1.37	2.47	2.73	2.26
<b>Colombia</b>	2.55	2.14	1.97	1.73	2.88
<b>Mexico</b>	1.32	3.57	1.53	2.05	0.80
<b>Peru</b>	2.19	2.59	−0.29	2.77	4.39
<b>Uruguay</b>	0.80	0.79	2.31	0.64	3.99
<b>Venezuela</b>	4.30	2.90	−0.28	0.98	−0.94

Asian selected countries (2)	1913–1950 <sup>a</sup>	1950–1973 <sup>a</sup>	1973–1998	1998–2007	2007–2016
<b>China</b>	−0.62	2.86	4.68	7.39	6.20
<b>Hong Kong</b>	n.a.	5.19	4.43	3.18	2.26
<b>India</b>	−0.22	1.40	2.90	5.31	5.83
<b>Indonesia</b>	−0.20	2.57	3.37	1.22	4.63
<b>Japan</b>	0.89	8.05	2.52	0.89	0.62
<b>Malaysia</b>	1.50	2.18	4.49	1.83	3.12
<b>Singapore</b>	1.50	4.40	5.24	2.90	2.61
<b>South Korea</b>	−0.40	5.84	6.62	4.22	2.74
<b>Taiwan</b>	0.61	6.65	6.39	4.39	2.70
<b>Thailand</b>	−0.06	3.67	4.85	3.07	2.73

Source: Maddison Project Database, version 2018. For methodology see Bolt et al. (2018). Refers to Real GDP per capita in 2011 US\$, 2011 benchmark (suitable for cross-country growth comparisons). Growth rates based on this data

<sup>a</sup>For periods 1913–1950 and 1950–1973 in selected Asian countries, the source is Maddison (2006), p. 216, instead of Maddison Project Database, 2018 (data non available). Refers to GDP per capita growth rates

precise among different authors; it can include (or not) a fiscal dimension, a balance-of-payments (or foreign currency) dimension and the financial dimension properly (Carvalho 2009).

Having said that, the argument that growing financial integration (or “financial opening”) would increase investment and growth did not materialize. Aizenman et al. (2007)<sup>22</sup> found that the inflows of foreign savings were compensated by outflows of domestic savings, with little or even negative impact on financing ratios. Countries with high self-financing ratios (as many in Asia) grew faster than those that presented low self-financing ratio, as in many Latin American and Africa countries. Lautier, Mareaub and others (2012) argue that that domestic investment rates drive FDI flows—and not the opposite, as it is generally assumed. Finally, Griffith-Jones and Karwowski

<sup>22</sup>All references in this paragraph are quoted in Wacyenberge and Bargawi (2016, pp. 6 and 7).

(2013) illustrate that financial sector deepening has not promoted credit allocation to productive sectors in sub-Saharan Africa.

When it comes to the effects of liberalization of domestic financial sector, the empirical analyses abound and cover many different developing countries and different periods. In most of the cases, the relations assumed by the model on several variables (e.g., the relation between growth and savings, savings and the demand for new financial assets, real interest rate and the supply of credit, supply of credit and growth) showed little explanatory power.<sup>23</sup> As regards to saving, in particular, some countries increased it after financial reforms, but in most of the cases it declined, following the reforms.

More importantly, many countries that pursued financial liberalization domestically suffered the cost of increased financial fragility and became more susceptible to financial and exchange rate crisis—that actually occurred at some point (Carvalho 2009, p. 10).<sup>24</sup> However, financial repression theory, at least originally, simply did not discuss the stability of liberalized financial systems. It took many years for a revision of the model (Hermann 2002, p. 25). This topic however could not be avoided after the increasing number of financial crisis that took place since the 1990s—as discussed later.

## 6 Development Finance: Theory and Practice After Financial Crises

The Asian crisis of 1997 broke the dominant consensus that capital account liberalization was a *sine qua non* condition to achieve economic growth acceleration in developing countries. Ten years later, the 2008 financial crash extended the skepticism to domestic financial liberalization as well. These crises led to significant reviews on theory and practice of development finance.

Modern, revisionist versions of the Shaw and McKinnon (S-M) model emphasize financial regulation (to control risks) and a liberalization agenda made step by step to avoid increasing financial vulnerability. According to Hermann (2002, pp. 22–24), the three stages defended by the World Bank, McKinnon himself and others are now: (1) achieving macroeconomic adjustment (by fiscal and monetary adjustments, including reducing the role of minimum reserve requirements, credit controls and others); (2) promoting

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<sup>23</sup> Most of the studies show that the results of financial liberalization were ambiguous. For a survey on many econometric works, see Hermann (2002 and 2010) and Gemech and Struthers (2003).

<sup>24</sup> For discussing the losses versus benefits of financial liberalization, see Carvalho (2009) quote: Demigüç-Kunt and Detragiache (2001), Kaminsky and Schmukler (2003), Gruben, Koo and Moore (1998), Yeyati, Micco and Panizza (2007) and Wyplosz (2001).

financial liberalization (liberalizing capital and exchange rate markets); and, finally, (3) liberalizing financial markets.

This last step occurs by suppressing (also gradually) interest rate ceilings, improving supervision and restructuring the banking system (including patrimonial adjustments, the privatization of public banks, introducing competition in the banking sector by allowing the entrance of foreign banks and, at the end, liberalizing capital accounts). Capital accounts should be the last phase of the process, in order to avoid external fragility during the process.

So, it could be said that after so many crises, the S-M model moved from a shock to a gradualist approach and introduced prudential controls to manage risks at each step. In what concerns public banks, even after the model's revision, they continued to be seen by mainstream – until the 2008 crisis– as a political tool aimed at maximizing the politicians' personal objectives (La Porta, Lopez de Silanes and Shleifer, 2002). Not surprisingly, in countries where liberalization pressures were stronger, development banks were privatized or shut down – as mentioned earlier.

In Latin America, some development banks survived like CORFO (Chile), Nafinsa (Mexico, with limited functions), the network of development banks of Colombia and, most notably (given its relative size), the National Economic and Social Development Bank of Brazil (BNDES).<sup>25</sup> Some state-owned commercial banks also survived in Argentina, Uruguay, Brazil and so on. Generally speaking, development banks survived better than state commercial banks.

Other relevant development institutions that remained relevant were the KfW, the German bank and the Korean Development Bank (KDB). Since the 1960s KfW started to change its role from reconstructing Germany to other challenges facing the economy but sustained its importance and its size (Moslener et al. 2018). In Korea, since the end of 1961, KDB has been authorized to borrow from abroad and secure loans based on these resources for Korean firms—so that they were free of exchange rate risk, political risk and even external interest rate fluctuations. Over the years, the government's guar-

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<sup>25</sup>In the case of National Economic and Social Development Bank of Brazil (BNDES), as in the case of Banco do Brasil, political resistance to its privatization was too strong for liberalization proponents to prevail. Instead, under more conservative governments, BNDES had its mission changed from directly supporting investment to supporting domestic capital markets and privatization processes, becoming more like an investment bank than a traditional development institution. When those more liberal governments were replaced, however, BNDES returned to its previous role and was expanded in size by government loans (as part of the anticyclical policy used after the 2008 financial crisis), at least until recently when it was hit by widespread economic and political crises that have shaken the Brazilian scene. In any case, in Brazil, where a large network of subnational development banks had been created during the first decades after the war, practically only BNDES, Caixa Econômica Federal, Banco do Brasil (the three major public banks) and a few other institutions of local significance were spared closure or privatization, although smaller institutions have been (re)created at the end of the 1990s, in the form of state agencies.

antee of resources taken abroad would be extended to other commercial banks, as well as to special banks (remembering that all banks were public in Korea until the end of the 1970s), inducing a rapid increase in foreign currency indebtedness. Since the 1990s, also, KDB has been acting more like an investment bank. By the beginning of the 2000, Korea announced that KDB would be privatized, but this intention changed after the 2008–2009 crisis, where the North Atlantic financial crisis highlighted the importance of the countercyclical role of development banks.

Many new development banks were also created after the 2008–2009 crisis, including in developed countries, like France and Ireland. Other institutions reviewed and enlarged their role. This was particularly the case with China Development Bank (CDB). Created in 1994, CDB's growth, in fact, became exponential. In 2007, total assets amounted to US \$396 billion; in 2015 they achieved nothing less than US \$1849 billion, transforming CDB into the largest National Development Bank of the world and also the largest financial issuer in the Chinese debt capital market, followed by the Ministry of Treasury (Musacchio et al. 2016).<sup>26</sup> Not only national banks were created but also two large multilateral banks emerged: the Asian Infrastructure Investment Bank (AIIB) and the Brazil, Russia, India, China and South Africa (BRICS)'s New Development Bank (NDB).

While the IMF had been at the center of the pressure imposed on developing economies to liberalize domestic financial system and capital flows, the financial crash showed that financial liberalization in developed countries could also have catastrophic results. For decades, institutions such as the World Bank had pressured developing countries to fully open their domestic banking and financial markets to foreign institutions on the assumption that those institutions were much safer and more efficient than those controlled by public and private interests in their domestic markets. Entities such as the Basel Committee, supported by the IMF, tried to sell their market-friendly regulatory strategies to developing countries, despite the fact that such countries were never allowed to participate in the formulation of those same strategies.

The fact that the largest banks in the United States and Western Europe barely survived the financial crash (and many of the ones who had to count on bailouts organized by their respective governments) led the authorities in many governments of developing countries to rethink their acceptance of free

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<sup>26</sup>In the second half of the 1990s, the China Development Bank (CDB) was very dramatic, due to the Asian crisis. Delinquency rates reached 42.7% in 1997. Since 2005, according to the Bank statistics, default rates are (and remain) below 1%. See: Xu (2018).

market principles in relation to finance. Rejection and reversal of liberal strategies typical of the preceding period, however, was only partial and tentative. In contrast with the financial repression period, this time the failure of the free financial market strategy seems to have taken most developing countries by surprise. In many cases, those countries had long dismantled the instruments and the institutions they had to intervene in the economy.

Particularly in Latin America, it was not just the instruments that were lost, but the very frame of mind within which one could address the question of development strategies and policies. In such a context, the fact that in some countries some measure of control over financial institutions and markets did not translate into alternative patterns of development or the resumption of planning. Instead, policies tended to be defined by short-term problems and perspectives with no definition of long-term goals and development trajectories. It is unclear as yet whether the developing world will be capable of using the newly reacquired possibility of directing relating credit and other financial policies to industrial and other development policies that allow them to resume the growth path from which they became stranded when financial repression gave way to financial liberalization.

Right after the crisis, Basel rules started to be reviewed to incorporate systemic risk again into the financial regulation framework. For that, Basel III included capital requirements for liquidity risk, leverage ratio (not risk-weighted), additional capital cushions (Absorption and Countercyclical) for all banks, as well as additional capital requirements for national systemic Banks and international systemic banks, among many other new requirements, especially concerning derivatives.

By the beginning of 2010, it seemed that a new consensus had emerged: “irrespective of policy orientation, the failure of private financial markets to deliver adequate long-term finance forces governments to rely on development banking institutions” (Chadrsekhar 2016, p. 24, quoted in Griffith-Jones et al. 2018, p. x). The IMF Managing Director, Christine Lagarde, also recognized it: “We need a financial system that serves society” (Lagarde 2015, quoted *ibid.*). The World Bank, which historically was very critical to National Development Banks, published a report (Luna-Martinez et Vicente 2012, and Luna-Martinez et al. 2017), defending the role of national and multilateral development banks not only in the crisis but as an important financial actor in developing as well as developed countries.

Other influential economists followed the same line, proposing the creation of new entities, such as infrastructure banks (Aghion et al. 2013, p. 25, quoted in Griffith-Jones et al. 2018, p. x), and admitting that “National development banks ... can play a vital role in providing access to financial

services”, as agreed in the Addis Ababa Action Agenda of the third Financing for Development in 2015 (also quoted in Griffith-Jones et al. 2018). This movement was, somehow, reversed, and the old debate about the role of development banks started it over. More recently, development banks have again been accused to support politically connected industrialists, to crowd out private sources of capital, to undermine monetary efficiency and other old criticism, using basically the same arguments of the “financial repression theory”. In Latin America, perhaps the best example of such criticism is the case of BNDES.<sup>27</sup>

A reversal of financial liberalization, in fact, could only be partial anyway, given the structural changes in developing economies during the period between the 1980s and the 2008 financial crisis. In many countries, in Asia and Latin America, domestic capital market development grew in size and differentiated the range of services and products in offer. The banking sector witnessed a similar trajectory. The types and extent of controls over interest rates and the allocation of credit became, as a result, very limited.

Countries where the State was left with no financial institution directly under its, direct or indirect, control, simply could not reinstate anything looking like the financial repression instruments utilized in the past. Access to private credit markets is still largely insufficient to satisfy investors’ needs, particularly to finance long-term investments in key sectors such as, for example, infrastructure construction. Nevertheless, private financial institutions have been increasingly able to fulfill private demands for short- and intermediate-period loans. In some cases, the provision of domestic hedge instruments has also reduced the dependence of local producers and traders on foreign institutions. Even the State has benefited in many cases from this evolution, by the possibility of issuing and placing public debt denominated and payable in local currency in domestic markets, notably institutional investors.

In addition to confirming the views of those critical to financial liberalization, what the crisis indicated more clearly was that public banks could be very useful for countercyclical policies.<sup>28</sup> But also that the role of all public institutions, particularly DBs, should not be limited to responding to crisis, but to be instruments of long-term transformations, in order to guide the development process.

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<sup>27</sup> For critics, see Musacchio et al. (2016), Frischtak et al. (2017), Torres and Zeidan (2016), Lazzarini et al. (2015). For a positive view on the role played by BNDES in promoting development, see Studart and Ramos (2018), Waeyenberge and Bargawi (2016), Rezende (2015), Mazzucato and Wray (2015).

<sup>28</sup> For evidence, see Griffith-Jones and Gottschalk (2012), Luna-Martinez and Vicente (2012), Brei and Schclarek (2013, 2015).

## 7 Concluding Remarks

Finance and financial systems are powerful tools to promote growth, transformational changes and thus development. But if anyone doubted Hyman Minsky's financial fragility hypothesis (Minsky 1982), the 2008–2009 crisis made it clear that private financial system is highly pro-cyclical and unstable.<sup>29</sup> Our findings indicate that the period of intense government interventionism on capital flows and domestic credit market, coined as financial repression by its critics, delivered important results for those nations attempting to grow faster and develop. “Financial liberalization” for those developing nations that embraced them led to lower and more unstable growth in many countries, with positive results in some others. In all cases, however, financial crises became more frequent after the spread of financial liberalization agendas.

Not surprisingly, recent developments suggest that the legacy of the financial liberalization may be more ambiguous than their radical supporters and opponents may think. The cases where financial liberalization was allowed to reach its most extreme forms, in general, showed themselves to be more vulnerable to foreign and domestic shocks than the ones where that trend was slowed down and stopped short of full liberalization. Moreover, growth rates in most cases were *not* improved by liberalization, although the loss of dynamism in many of those economies remains a complex, and multicausal phenomenon.

To keep the degree of control exercised during the first decades after the war is probably impossible after financial globalization, social differentiation and institutional change in developing countries. In addition to confirming the views of those critical to financial liberalization, what the crisis proved more clearly was that public banks could be very useful for countercyclical policies. But also that the role of all public institutions, particularly development banks, should not be limited to responding to crisis, but to be instruments of long-term transformations.

These conclusions are of critical importance now. Developing nations continue to face the challenges of poverty and inequality—a problem that has also become critical for even developed ones. Infrastructure gaps are a reality almost everywhere; urban mobility is even more challenging, facing the tendency of growing cities and the new demands from an aging society. Shorter technology life cycles are imposing new instruments for financing innovation

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<sup>29</sup>However, this was not a new finding: Micco and Panizza (2006), using data for 119 countries for the period 1995–2002, had already showed that government-owned banks are less sensitive to business cycle fluctuations than private banks.



and requires, as it always did, some government support, to face their greater risks. In addition, the whole human community is already facing the consequences of environmental degradation and climate change. Addressing those issues is no more just a moral imperative, but a question of survival, and it will require impressive volumes of dedicated finance and investments in transformation of our social and economic infrastructures, our energy sources and uses and our production techniques and efficiency. Most likely, we will need new financial architectures, both domestically and internationally, to provide adequate financing conditions to achieve those goals. These will most likely be the future challenges for those thinking and proposing policies associated with the issue of development finance.

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# 15

## Critical Reappraisal of the Aid-Debt-Growth Debate: Retrospect and Prospects for Low-Income Countries

Machiko Nissanke

### 1 Introduction

The success of the Marshall plan in facilitating the reconstruction of war-ravaged economies in Western Europe in the immediate post-war years provided newly independent economies of the ‘South’ with a great hope that foreign aid could accelerate the pace of their economic development.<sup>1</sup> This had given rise to an inquiry into the roles of foreign aid for economic development with use of growth models—the beginning of a distinctive area of inquiry, *macroeconomics of foreign aid*. Simple growth models were then used to illustrate how aid could fill critical ‘resource gaps’ in aggregate. Since development aid is disbursed in debt contracts as well as in grants, conditions for sovereign debt sustainability were also taken up with use of growth-cum-debt models as a subsidiary question in the early literature of macroeconomics of aid.

These inquiries were motivated by gaining understanding into how aid *could* contribute to economic growth in a positive light, reflecting optimistic projections held by proponents of development aid at the time. Yet, such a sanguine position could not be left unchallenged. Opponents of aid were

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<sup>1</sup> Foreign aid can be through *humanitarian* assistance provided at times of natural- and man-made disasters as well as through *development* aid. This chapter covers the debates concerning *development aid* only.

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quick in pointing to various channels through which aid could negatively affect a trajectory of economic growth and development. The aid-growth nexus soon became one of the thorniest issues in development economics, hotly contested by both proponents and opponents. At the same time, the highly politically charged nature of the debate had enticed researchers to search for empirical evidences. Alongside post-implementation evaluations of aid-funded projects and other donor interventions, carried out at micro levels in localised contexts, researchers turned to evidences in aggregate through regression analyses of macroeconomic effects of aid on growth.

Upon the outbreak of the sovereign debt crises in early 1980s, however, the issue of sovereign debt sustainability acquired a new dimension, leading to debates on how to deal with the 'debt overhang' condition that requires an outright debt forgiveness rather than cosmetic debt-restructuring efforts at the margin. As the donor community was gaining an upper hand over the heavily indebted countries, there was a radical change in aid-delivery mechanisms from project aid towards policy-based programme aid—structural adjustment programmes (SAPs)—with a string of *policy* conditionalities attached. Attributing the cause of the debt crises entirely to economic mismanagement by indebted countries, the donor community justified imposing intrusive policy conditionality on the grounds that donors should actively influence the policy and conduct of recipient governments through 'aid' leverage. Ex-ante conditionality, whereby aid and debt restructuring were delivered conditional upon the promises of implementation of stabilisation-cum-structural reforms, had become a main feature in the donor-recipient relationships amidst the severe debt crises.

However, despite the decade-long experimentation with the SAPs and a series of the high-level 'debt-restructuring' initiatives, there was little sign of an economic recovery of heavily indebted poor countries (HIPC) by the mid-1990s. This sparked off a new round of the 'aid effectiveness debate', but this time from a very narrow perspective: a reappraisal of the 'design', not the 'nature', of policy conditionality. In fact, the issue of the efficacy of policy conditionality had dominated the aid effectiveness debate among the traditional donor community for over a decade from the mid-1990s.

Meanwhile, the landscape of development aid has been fast changing since the dawn of the twenty-first century. Whilst the aid effectiveness debate of an inhibiting and paternalistic nature went on within the traditional donor community, the international conditions for hitherto aid-dependent countries have undergone radical changes on several fronts. First, commodity prices, on which most of the aid-dependent countries are heavily reliant for their fiscal and export revenues, experienced a 'super' commodity boom, lasting for more

than a decade since 2002, driven largely by heightened demand for natural resources from emerging economies in Asia such as China and India. Second, the protracted debt crisis of HIPC's was drawn to close with debt cancellation under the Multilateral Debt Relief Initiative (MDRI) in 2005.

Further, China and other emerging economies in the 'South' have increasingly engaged with aid-dependent countries by forging a new kind of development partnership through expanding aid-cum-investment on the basis of South-South cooperation. They offer 'development cooperation' without *policy* conditionality attached, on the basis of a 'coalition' engagement, taking either a collaborative state-business approach through aid-trade-investment as a package as in China's mode of operandi or private sector engagements through foreign direct investment (FDI) and acquisitions in the case of India and others. They have taken an initiative in establishing their own development banks.

Under the emerging conditions, the influence and leverage of traditional 'donors' on developing countries' governments have diminished significantly. In fact, private capital flows as well as remittances have surpassed aid flows as external financial sources for many low-income countries (LICs). At the same time, foundations set up by philanthropists and charitable organisations have increased their contribution for the provision of development aid as well as influence in aid agenda setting. With an easier access to worldwide information flows and communication channels through social media and other means, non-governmental organisations (NGOs) and civil societies in 'donor' and 'recipient' countries alike are now better empowered to make both recipient and donor governments more accountable to their respective stakeholders. At the same time, several LICs that were encouraged to raise funds in international capital markets at the backdrop of the commodity boom and the 'Africa Rising' narratives since 2007 started sliding back again into a new round of sovereign debt distress.

Against this background, the chapter traces the evolution of the academic and policy debates on the 'aid-debt-growth' nexus and evaluates the extent to which these debates conducted in macroeconomic terms reveal dynamic interactions in the aid-debt-growth triad and their effects on economic development.<sup>2</sup> Our discussions on 'debt and development' are confined to official debt incurred by LICs through concessional windows of the international financial institutions (IFIs), other multilateral and regional development

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<sup>2</sup> Though the debates on effects of aid on development cover wide-ranging issues beyond aggregate relationships, this chapter is limited to dealing with macroeconomic aspects only.



banks as well as bilateral governments as part of their aid package.<sup>3</sup> Hence, the sovereign debt problems and debt crises experienced by middle-income, emerging economies vis-à-vis private creditors would be referred to only in passing for a comparison purpose.<sup>4</sup> Throughout the chapter, we endeavour to bring ‘aid’ and ‘debt’ literature together to highlight the importance of an integrated treatment of developmental effects of aid and debt in low-income countries (LICs).

This chapter is structured as follows. Section 2 discusses contributions of earlier literatures to identify the roles of foreign aid and sovereign debt and the question of debt sustainability in the context of aggregate growth models. In Sect. 3, we evaluate how the debt crises of poor countries in the 1980s and 1990s were dealt with and how the aid effectiveness debates were initiated and evolved at the helm of the IFIs, in which empirical evidences carried out on the aid-growth nexus were selectively used in the highly charged policy debates. In Sect. 4 we take a stock of macroeconomic empirical studies on the aid-growth nexus to date and then evaluate the constructs of the Debt Sustainability Framework (DSF) in use for LICs. Section 5 discusses alternative approaches and ways forward for making aid and debt work for development. Section 6 offers concluding remarks.

## 2 Aid and Debt in Early Aggregate Growth Models

In the earlier literatures of the 1950s and 1960s, the role of aid in furthering development is discussed with the use of aggregate growth models such as the *gap* model and the *growth-cum-debt* model. In both models, official aid provided in either grants or concessional loans is to address capital shortage, which was at the time seen as the most binding bottleneck for economic growth to take off in the ‘South’. Based on the Harrod-Domar growth model that postulates economic growth to be determined by an Incremental Capital-Output-Ratio (ICOR) and a fixed domestic savings rate, one of critical roles of aid is defined as filling the gap between the low domestic saving rate and the *desired* investment rate to achieve the growth rate targeted in LICs. Thus,

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<sup>3</sup> UN, the IFIs and other agencies use their own definitions to classify countries into different categories. As countries’ income levels and characteristics evolve over time, their classifications change accordingly. This chapter uses generic terms of low-income countries, which have been historically recipients of foreign aid provided through grants and concessional windows.

<sup>4</sup> See Chaps. 20 and 23 of this Handbook as well as Ocampo (2017, Chapter 5) for the debt crises leading to restructuring and workouts experienced by emerging countries.



aid flows, along with external finance, are thought of primarily as filling the domestic investment-saving gap, arising from their limited domestic saving capacity for accelerating growth and development.

## 2.1 The Gap Models as an Analytical Tool of a Macroeconomic Disequilibrium Adjustment Process upon Shocks

While foreign and domestic capital are treated as homogeneous in the original gap model, the two-gap model developed by Chenery and his associates introduced the external trade gap as a qualitatively separate impediment, since foreign exchange availability to meet demand for imported goods essential for capital formation is recognised as a separate binding constraint on growth.<sup>5</sup> By further distinguishing public saving from private saving, three-gap models advanced by Bacha (1990) add a third fiscal constraint with a view to examining the fiscal dimension of the debt crisis and the trade-off between growth and inflation because of the need for attaining fiscal equilibrium with a weak tax base and in the absence of developed financial markets in LICs. In these models, external finance availability (i.e., foreign flows netted out external debt service, private income transfers and changes in foreign exchange reserves) ultimately determines the level of investment, hence the growth rate.

The three gaps identified as a separate binding constraint in the model, in reality, interact with each other endogenously and engender an economy's adjustment path in response to various shocks. For example, ex-ante adjustments would take place with respect to all the relevant variables and parameters in order to ensure an ex-post National Income Accounting identity between the foreign exchange gap and the domestic saving-investment gaps of private and public sectors. As Maizels (1968) notes, on the contrary to assumptions implied in the original gap models, the parameters should not be considered as fixed,<sup>6</sup> and ex-ante domestic resource gap and ex-ante foreign exchange gap are not truly independent.

In absence of an injection of fresh resources, necessary ex-ante adjustments are neither spontaneous nor painless, whether achieved through market mechanisms or government policies. As Chenery and Strout (1966) emphasise, there is no automatic mechanism to equate the gaps, and the process of closing the gaps is, in essence, a disequilibrium adjustment process. In general,

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<sup>5</sup> See Chenery and Strout (1966).

<sup>6</sup> The assumption of the fixed relationships between parameters is a widely recognised drawback of the earlier aggregate growth models such as the Harrod-Domar model.

the burden of adjustment could fall on one of the variables critical for the prospect of reaching self-sustained growth.<sup>7</sup> Taylor (1988, 1991) shows that while in theory there are several mechanisms by which the gaps between the three gaps can be closed in the wake of widened foreign resource shortfall, in all his 18 case study countries the growth rate is the endogenous adjustment variable. These studies illustrate how the gap models used as a macroeconomic analysis of the disequilibrium adjustment process could help evaluate the role of aid in facilitating macroeconomic adjustments.

High costs associated with disequilibrium adjustment processes are related to structural rigidities stemming from underdevelopment. In the case of primary commodity-dependent economies, the absence of resilience and dynamism is most acutely felt in their limited capacity to generate foreign exchange revenues in a sustained manner. Accumulated external debt could impose an additional burden on their circumscribed capacity, as foreign exchange gaps would widen over time. Adjustment efforts can easily be undermined and continuously impeded by exogenous shocks as the terms of trade shocks. An application of the three-gap model to Sub-Saharan Africa (SSA) economies demonstrates that there is in practice no comfortable adjustment on their own, which would accommodate an external disequilibrium such as the region's 40–50% deterioration in the terms of trade during the 1980s, as discussed below.

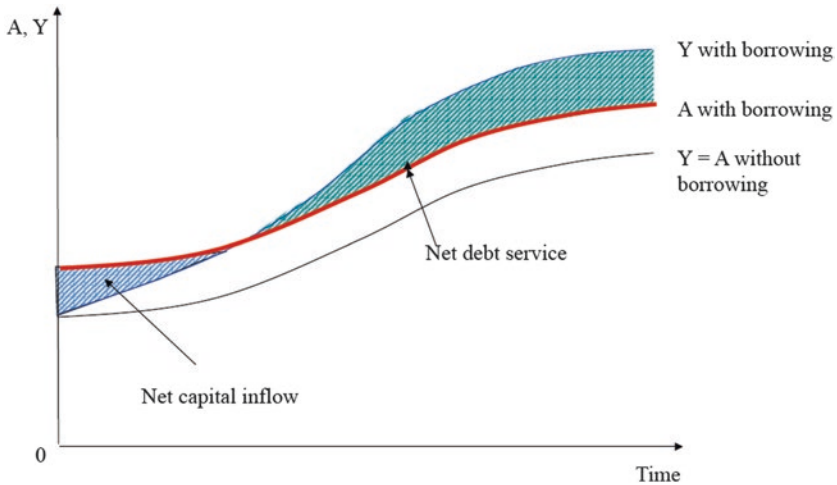
When the supply of external finance to a country facing large external shocks is limited, overly inadequate to narrow the gaps, or offered in inappropriate terms or inapt conditions attached, adjustment costs get extremely high in terms of foregone growth. Private capital is unlikely made available at the time of large macroeconomic imbalances. Hence, timely, highly concessional aid flows are indispensable for sustaining growth and development of LICs facing frequent large external shocks.

## 2.2 Debt Sustainability in the Growth-Cum-Debt Models

The cost difference between debt incurred through concessional windows and one sourced from private capital markets or financial institutions is substantial, as discussed in Sect. 5. In all cases except aid in grants, unsustainable debt poses a threat to development. Thus, the issue of *debt sustainability* was examined in the early literature on the growth-cum-debt model and its derivative—

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<sup>7</sup>Chenery and Strout (1966) provide a definition of self-sustaining growth as growth at a given rate with capital inflow limited to a specified ratio to gross national product (GNP), which can be sustained without concessional aid.



**Fig. 15.1** Growth-cum-debt model: Impact of productive loans on income and absorption over time

the debt cycle model.<sup>8</sup> The growth-cum-debt model shows the possibility of using international borrowing to enhance income over time in the first two stages of the debt cycle. This is illustrated in Fig. 15.1, wherein the lower curve shows the time path of income  $Y$  and absorption  $A$ , for a country under capital account autarky, where  $Y$  has to be equal to  $A$  throughout. In contrast, international borrowing is seen to enhance income over time, by permitting the level of absorption  $A$  to exceed income  $Y$  by the amount of capital inflow in the first period. The country eventually has to cease to borrow and start servicing the debt, forcing it to restrict absorption to a level lower than income. The model assumes that so long as capital inflows finance additional productive investment in the first period,  $Y$  grows faster than under the autarky condition, whilst maintaining absorption at a higher level than under the capital autarky throughout.

Such an optimistic scenario of the growth path is realisable under restrictive conditions only. The earlier debt literature is, however, positive about the possibility of a country remaining in a capital-importing status with a positive resource transfer for a considerably long period before growth takes off. Avramovic (1964), however, warns that progression through the virtuous cycle of debt and growth is not automatic and emphasises the need to fulfil sustainability conditions. The conditions for the successful realisation of the income-enhancing debt strategy discussed in the growth-cum-debt models

<sup>8</sup> See Avramovic (1964) for the debt cycle model.

are<sup>9</sup> the following: (i) external debt is used for growth-enhancing productive investment; (ii) the growth rate targeted exceeds a stable world interest rate; (iii) the marginal domestic savings rate should exceed the investment ratio required by the target growth rate, so that debt will eventually begin to decline; and (iv) the marginal product of capital invested should exceed the cost of borrowing.

The second and the fourth conditions underscore the need for a concessional debt facility for LICs. It confirms that the optimistic growth scenario depicted by the growth-cum-debt model was attributable to the environments of stable and low interests and fixed exchange rates under the Bretton Woods System of the late 1950s and the 1960s. The growth-cum-debt strategy entails a high risk if a debt contract allows interest rates or other contractual terms to fluctuate widely over its life span, as is the case mostly with private debt. Thus, the degree of concessionality in debt contracts has a justification in the light of debt sustainability condition for poorer countries, whose initial take-off requires a longer time and mobilisation of all available resources to sustain development. Development projects entail a long gestation period before financial pay-offs are generated. A debt contract should be drawn to take these into consideration with a flexible repayment schedule and a sufficient grace period.

As to the first and third conditions, there has been a long-running debate on the effects of aid on saving and investment. It has been argued that (i) aid is essentially a substitute for domestic savings, in particular public savings through reduced tax efforts and (ii) a large proportion of foreign aid is used to increase consumption rather than investment. Potential negative effects of aid on domestic saving and investment, including domestic resource mobilisation efforts, are indeed one of the most critical questions raised in macroeconomics of aid. Hence, the earlier studies on the aid-growth nexus, pioneered by Papanek (1972), focused on aggregate relationships between aid, saving and investment.<sup>10</sup> Their results showed that aid tends to increase total saving, but aid is also leaked into consumption. However, as explicit in the gap models, when aid is to reduce adjustment costs to external shocks, one rationale behind the non-investment uses of aid is to smooth consumption over time, which is also welfare improving.<sup>11</sup> As Deaton (1989) observes, 'Saving is not

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<sup>9</sup>While the first two conditions are discussed in the growth-cum-debt models of the 1960s, the two other conditions are derived in the models developed in the 1980s such as models by McDonald (1982) and Hernandez-Cata (1988).

<sup>10</sup>Hansen and Tarp (2000) classify empirical studies on aggregate impacts of aid to mid-1990s as the *first-* and *second-generation* work, distinguishing those associated with the 'aid effectiveness debate' since the mid-1990s discussed in Sect. 3.2.

<sup>11</sup>In fact, as shown in Sect. 3, the inter-temporal borrowing model illustrates that increased consumption due to aid flows would be a natural outcome of inter-temporal utility maximisation.

$$\dot{D} = iD + G$$

where  $D$  is the country's net foreign debt outstanding,

$i$  is the average nominal interest rate,

$G$  stands for the resource gap (+) or surplus (-). (Note this definition means that a positive resource gap represents a net capital importing position).

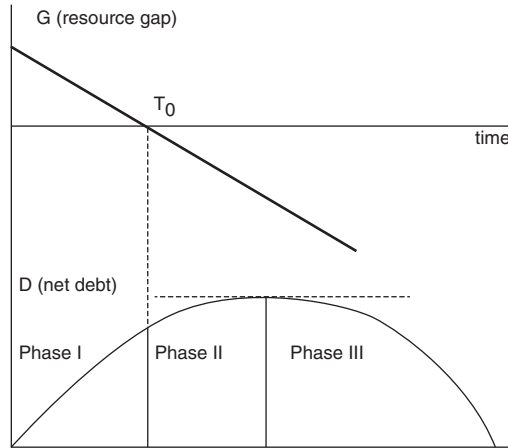


Fig. 15.2 Debt cycle model

only about accumulation, but about consumption smoothing in the face of volatile incomes' (p. 91).<sup>12</sup>

In contrast to debt sustainability conditions specified in relation to the investment-saving gap in the earlier literature, upon the onset of sovereign debt crises in the 1980s, attention was shifted first to an evaluation of a country's *liquidity position in external accounts*. As the capacity of servicing *external* debt fast dwindled, the main policy concerns were switched from the question of *liquidity* to that of *solvency*. The solvency condition was first formulated in the context of the debt cycle model, shown in Fig. 15.2, in which a country moves from a net debtor position, following the 'growth-cum-debt strategy', to a net creditor position (i.e., from Phase I to Phase III).

The solvency condition is derived as the condition under which a country can remain in a net borrowing position of Phase I without experiencing an insolvency issue by keeping its 'debt-to-export' ratio steady. It stipulates that for a country to remain solvent, the growth rate of exports must exceed the interest rate on its outstanding debt, so that resource gaps are sustained indefi-

<sup>12</sup>The focus of *second-generation* empirical studies moved onto the aid-investment link from the effects of aid on saving.

nately without pushing the country into over-indebtedness.<sup>13</sup> In reality, this solvency condition is less likely to be met in a consistent and stable manner by LICs dependent on primary commodity exports, even if debt is incurred in concessional terms with very low, predictable interest payment schedules such as International Development Association (IDA) loans, as the history of the debt crisis of the HIPCs confirms.

### **3 Management of Debt Crisis and Aid Effectiveness Debate in the 1980s and 1990s**

#### **3.1 Debt Crisis Unfolded: Origin, Management and Consequences**

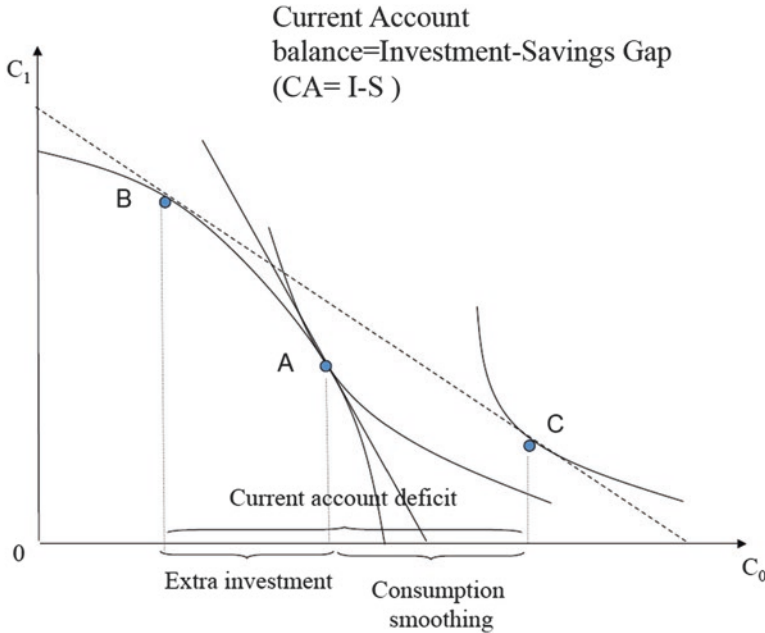
The solvency condition above underscores the importance of the assumption that all key variables in the model follow a smooth time path. In reality, all variables determining the resource gaps and debt dynamics of poor countries follow a highly volatile profile. In particular, in the case of primary commodity-exporting countries, the time path of export earnings is largely driven exogenously, exhibiting a huge fluctuation.<sup>14</sup> The beginning of the protracted sovereign debt crises of HIPCs is indeed closely associated with the collapse of real commodity prices amidst the sharp recession of the world economy following contractionary macroeconomic adjustments to major industrial economies. The majority of the HIPCs are commodity-dependent developing countries (CDDCs), so is the case with middle-income countries in Latin America, which experienced the debt crisis with private creditors, triggered by Mexico's declaration of its debt moratorium in 1982.

Drawing a parallel between the depth of the crisis faced by these countries in the 1980s and that in the Great Depression of the 1930s, Maizels (1992) demonstrated the severity of the 'commodity' crisis then and exposed how the beginning of the debt crisis coincided exactly with that of the 'conveniently forgotten' commodity crisis. The collapse of commodity prices in the 1980s amounted to a loss of real purchasing power of 40–60% for these LICs—a deeper crisis than that faced by the US and the world economy during the Great Depression in the 1930s. Unfortunately, his in-depth analysis of commodity issues and his call for formulating correct international policy responses to the debt crisis in relation to commodity crisis, which would have

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<sup>13</sup>How this solvency condition is derived is found in Nissanke and Ferrarini (2004).

<sup>14</sup>Analyses of time-series data affecting HIPCs' debt dynamics of the 1980s and 1990s are in Nissanke and Ferrarini (2004).



**Fig. 15.3** Model of inter-temporal borrowing

led to an early resolution of the protracted debt overhang condition in HIPCs, were ignored by the IFIs.

Instead, the debt crisis was squarely blamed on debtor countries' 'reckless' borrowing behaviour. Easterly (1999), for example, offers an explanation of the origin of the debt crisis of the HIPCs with the use of the inter-temporal borrowing/lending model (see Appendix). In the model, shown in Fig. 15.3, a country's inter-temporal allocation depends on the two parameters as reflected in the position and shape of indifference curves: the elasticity of inter-temporal substitution and the subjective discount rate. The former measures the sensitivity of the inter-temporal consumption allocation to an interest rate change, whilst the latter indicates the country's preference placed in future consumption against current enjoyment.

With reference to the model and interpreting the two parameters as the society's choice variable, he argues that in HIPCs a set of 'wrong' economic policies has given rise to the low elasticity of inter-temporal substitution and high discount rate. In particular, governments are seen as having a higher discount rate than private agents, due to the uncertainty of tenure and lower concern for future generations. Consequently, governments in HIPCs are said to exhibit a tendency to run down a country's net assets resulting from the combination of asset decumulation and liability accumulation, reflecting pol-

itician's preferences. Hence, in his view, firstly, a country gets into a heavily indebted position out of its own choice. Secondly, these two key behavioural parameters are assumed to be unchanged after debt relief, unless a country actually implements 'policy reforms' packaged by the donor community.

While Easterly's account of 'predatory' governments and leaders may fit some cases among HIPCs, generalisation is always perilous. We question his one-sided interpretation of the origin of the debt crisis in HIPCs in both conceptual and empirical aspects. At the conceptual level, his treatment of the behavioural parameters as a reflection of their *permanent* preference order, which could be changed only by adopting donors' reform packages, can be seriously challenged. Economic development processes should involve many structural changes, including a shift in behavioural parameters. A question can be raised as to why donor-inspired reforms instigated by policy conditionality have not been conducive to the transformation of economic structures of LICs-HIPCs to date.

In contrast to Easterly's 'predatory story', we suggest that structural characteristics of low-income economies, such as the low saving rate and the high discount rate, should be recognised as a manifestation of their stage of development rather than that of subjective preference. The high discount rate of LICs' governments and the resultant condition of liability accumulation reflect their pressing needs to address developmental bottlenecks through investment in economic and social infrastructures. If high discount rates 'today' manifest these developmental imperatives facing governments in responding to demand from domestic stakeholders to address bottlenecks urgently, *temporary* liability accumulation should be viewed as a precondition for asset accumulation over time.

Nevertheless, a rather one-sided interpretation of the origin of the debt crisis such as Easterly's is used to render intellectual support to the official position taken by the IFIs and the donor community in the crisis management. Their recommended solution to the debt crisis was an adoption of policies of liberalisation and deregulation and keeping the size of governments to a minimum in exchange for aid and debt restructuring under the SAPs. The remaining role of governments in economic management judged as legitimate was strictly confined to maintaining macroeconomic balances through short-run stabilisation policies as designed by the International Monetary Fund (IMF).

What is also disturbing is that *incorrect* stabilisation policies were applied, which did aggravate further the debt crisis in HIPCs/CDDCs. The IMF's 'stabilisation' programmes were *pro-cyclical* to exogenous shocks stemming from commodity price swings, rather than *counter-cyclical* as should be. As the



application of the stabilisation policies that ignored the ongoing commodity crisis further depressed the economies, the dwindling capacity to undertake public investment on the part of governments burdened with high debt resulted in their inability to promote and crowd-in private investment. Thus, the stocks of productive assets were fast depleted for individuals as well as for economies at large.

Upon the onset of the debt crisis, a number of HIPCs started experiencing severe liquidity crisis for debt payments. At first, creditors judged this condition as a temporary problem and kept financing reluctantly by rescheduling debt through Paris and London Club negotiations. This was an act of *defensive* lending so that their existing claims were paid on a regular basis and they hoped the SAPs with policy conditionality would arrest the crisis situation. However, despite the acceptance of SAPs by debtor countries to gain access to official aid, their debt crisis continued to deepen, giving rise to serious questions: (i) the appropriateness of the SAPs as a solution to the debt crisis and (ii) whether the debtor countries had been facing a solvency crisis rather than a liquidity crisis.

The *solvency constraint* for sovereign debt dynamics is 'debt in any period cannot exceed the present discounted value of the borrowing country's stock of wealth, or future income stream', as defined by Eaton (1993). He suggests that 'all sovereign borrowers are probably solvent in the sense that the discounted present value of their national resources exceeds the value of their national debt' (op. cit. p. 141). However, as Krugman (1988) notes, in the case of sovereign debt, not all of the future income stream can be made available to servicing debt and that some fraction of national income represents the maximum resource transfer, which in turn reflects both rational calculations of the default cost and internal political considerations.

With reference to the debt crisis vis-à-vis private creditors as in Latin America, Krugman (ibid.) points to a bargaining problem between creditors aiming at maximising resource transfer and debtors trying to minimise it. The problem is compounded by the free rider problem, as the collective interest of creditors as a whole differs from that of any individual lender. It becomes hard for creditors to draw a clear line between liquidity and insolvency crises. The former condition, that is, the difficulty in attracting voluntary new borrowings to effect repayment of existing debt, arises because of an individual lender's doubts about the solvency of debtors, as a result of her/his low expectation about their ability to pay. Under such a condition, risk of the coordination failure looms large.<sup>15</sup>

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<sup>15</sup> See Sachs (1989) for an analysis on how a coordination failure takes place among creditors.

Indeed, debt stocks of developing countries kept increasing despite repeated debt restructurings through interest amortisation and progressive substitution of non-concessional debt for concessional debt, while the debt payment capacity of LICs declined and resulted in a severe debt overhang by late 1980s. 'Debt overhang' is defined as the condition where outstanding debt is so large that investment will be inefficiently low without sizable debt or debt service reduction. Claessens and Diwan (1989) identify two effects of the *debt overhang* condition: the *liquidity* effects and *incentive* effects. The former refers to the condition in which, given the burden of large external debt with extreme scarce liquidity around, both capital formation and consumption reach a minimum level after years of austerity and low growth. The latter refers to the depressed level of both public and private investment for future growth, as a larger share of the future income stream is to be directed for resource transfer abroad. The two effects combined could push highly indebted countries into a downward spiral, which would further diminish the debtor's willingness, commitment and capacity for debt payment. This is not the best outcome for creditors either, as both creditors and debtors lose. In short, debt acts as a tax on debtors' resources that deters profitable investment opportunities.

This logic of the debt overhang condition is illustrated in a debt *Laffer curve* shown in Fig. 15.4 (Cline 1995; Krugman 1988).

The concave curve traces a value of expected repayment as a function of debt outstanding: as outstanding debt increases beyond the threshold level, the expected repayment begins to fall due to the two effects above. Then, a

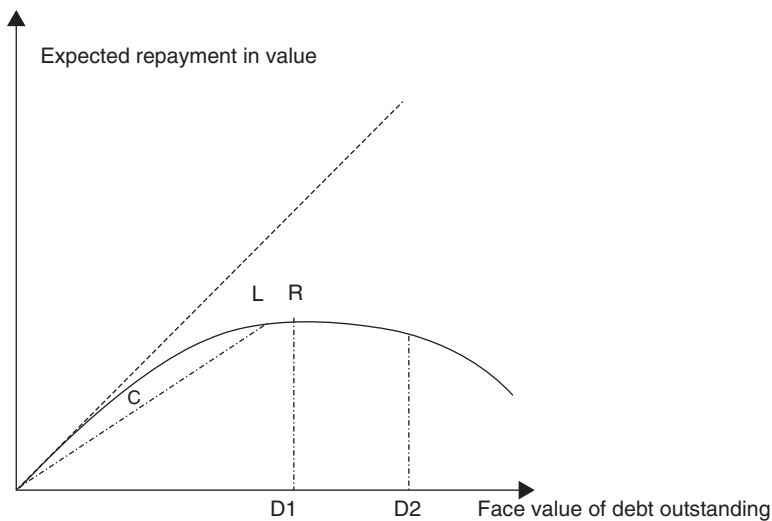


Fig. 15.4 Debt overhang condition shown in a debt Laffer curve

debt relief through debt service or stock reduction becomes a rational choice for both creditors and debtors, when a debtor is said to be on the 'wrong side' of the Laffer curve. For example, a reduction of debt as a result of debt forgiveness is shown in a shift from  $D_2$  to  $D_1$  in Fig. 15.4. In contrast, at the lower end of outstanding debt, financing through new money would relieve a country's liquidity problem for some time. Thus, a bargaining position tilts further in favour of debt forgiveness as debt stocks increase beyond the threshold, where the debt overhang condition begins to hit. A further right position on the Laffer curve, a major debt stock reduction becomes only a viable solution. The more dominant the disincentive effect of debt overhang, the stronger the case for debt forgiveness in creditors' own interests. As a logical consequence of this analysis, an eventuality of debt forgiveness as opposed to continuing refinancing should be accepted as a realistic option (Krugman 1988).

Given the recognition of such a logic, a 'resolution' of Latin America's debt crisis vis-à-vis private creditors was sought through various market-based mechanisms, including those embedded in the Brady Plan of 1989. This led to the resumption of private lending on a large scale to countries in the region as part of private lenders' constant search for quick high returns through short-term cross-border capital flows. It resulted in a series of the subsequent financial crises of emerging market economies in Latin America and Asia in the 1990s.

For LICs, however, the persistent reluctance on the part of the IFIs and major donor countries belonging to the Paris Club to acknowledge the depressed commodity prices as one of the main causes for the debt crisis and the resultant failure to address them effectively in a timely fashion at the *global* level have been extremely costly in terms of forgone development opportunities in the HIPCs/CDDCs. Instead of global actions, a solution was continuously sought only through pressing HIPCs for more reform measures. Presented as a real and durable exit option, the donor community launched the HIPC Initiatives in 1996 and enhanced its scope and depth in 1999. Under the HIPC Initiatives, the *process* conditionality was instituted as part of formulating the poverty reduction strategy papers (PRSP), which were supposed to be a recipient-driven process. The debt sustainability analysis was integrated into the PRSP process and the HIPC debt-relief negotiations. The 'Comprehensive Development Framework', introduced in 1999 in place of SAPs, was publicised as the beginning of the 'new aid architecture' with its emphasis on the importance of ownership and partnership in the aid relationships.

Yet, none of the debt-relief mechanisms employed since the outbreak of the debt crisis, including the HIPC Initiatives, paid sufficient attention to address-

ing the problem arising from the commodity export dependence with the loss of their purchasing power in international economic transactions and with it, the capacity to service external debt. Naturally, debt cannot be sustainable if debt servicing is accompanied by declining income growth and eventually by a reduction in consumption to an unacceptable level. The resolution of the protracted debt crisis of the HIPCs had to wait for a comprehensive debt cancellation embedded in the MDRI in 2005 after many unsuccessful attempts of debt restructuring for nearly 25 years since the onset of the crises.<sup>16</sup>

The debt crisis management by the donor community in this manner has resulted in further aggravating the commodity-dependence trap inherited historically from the colonial era. Economic policies recommended by the IFI, in the semblance of both Washington and post-Washington consensuses, have not been effective in facilitating the process of structural transformation and diversification of their economies through rigorous productive and social investment. The low-equilibrium trap of high debt and low growth was particularly evident in sub-Saharan Africa—the region that accounted for the majority of the HIPCs, where we found a story of *vicious* circle in the growth-investment-debt nexus, that is, the causality running from high debt via lower investment to lower growth as well as from lower growth via lower investment to higher debt and debt burden. This is exactly opposite to the *virtuous* circle of debt-induced growth emphasised in the earlier literature on the debt-cum-growth model discussed in Sect. 2.2.

Governments burdened with high debt were left with little capacity and dwindling resources to implement domestic development-oriented policies and to undertake sustained public investment. The fiscal retrenchment at the height of the debt crisis in the 1980s was so deep that the provision of essential public goods such as basic education and health expenditure was also axed and it was assumed that these services could be provided on a fee-paying basis. This has often resulted in a fragile state with a seriously depleted and impaired institutional capability to deliver public services and to build physical and social infrastructure. Under these conditions, the scope and quality of public social services and infrastructure provision progressively deteriorated in those years.<sup>17</sup> The debt crisis management that resulted in poor public goods provi-

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<sup>16</sup> See Nissanke (2010a, b). For a brief history of various high-profile initiatives of debt restructuring and forgiveness for the HIPCs, see Nissanke and Ferrarini (2004).

<sup>17</sup> In parallel, the donor community had steadily reduced aid to economic infrastructure projects relative to overall aid as well as social infrastructures in SSA in the 1980s and 1990s. For the main reasons behind this trend that has resulted in a significant infrastructure deficit in the region, see Nissanke and Shimomura (2013).

sion and the fragile fiscal condition had more or less stalled the development progress of the HIPC's over the full two decades of 1980s and 1990s.<sup>18</sup>

### 3.2 Parallel Debate on Aid Effectiveness

The outbreak of the sovereign debt crises in the early 1980s brought about an increased use of aid as leverage for donor-inspired policy and institutional reforms. SAPs became a favoured conduit for both multilateral and bilateral aid, with a string of 'policy' conditionalities instituted. This meant that aid and debt restructuring could be delivered conditional upon the *promises* of implementation of stabilisation-cum-structural reforms. This mode of administering aid and debt restructuring is termed as an 'application of ex-ante conditionality' in the subsequent debates reviewed later. As Kanbur (2005) notes, 'conditionality' itself is nothing more than the rules and procedures according to which a donor transfers resources to a recipient. What is debated is the *nature* of conditionality, in particular that of 'policy' conditionality.

By the mid-1990s, however, despite adding an array of conditionalities, the donor community had to face the uneasy reality—ex-ante policy conditionality was not effective in 'tying the recipient governments' to the reform agenda of donors (e.g., Killick 1996, 1997; Collier 1998; Collier and Dollar 2004). This sparked off a new round in the aid effectiveness debate against the background of declining public support for foreign aid in donor countries (World Bank 1998). The poor record of compliance and enforcement of ex-ante policy conditionality was recognised in various evaluation reports on World Bank's adjustment loans (World Bank 2005).

Thus, the efficacy of policy conditionality has been a central question in this debate among the traditional donor community from the mid-1990s to the mid-2000s, in which the problem was examined from a narrow perspective of the 'moral hazard' problem, that is, the one arising from granting aid without a firm commitment by recipient countries to reform programmes. Policy conditionality thus practiced was claimed to be at fault on incorrect rationales given to adjustment lending, for it was ineffective in dealing with this issue. It was argued that this resulted in poor compliance and enforcement of conditionality and hence in little 'growth dividends' from aid. Collier (1998) argues, for example, that none of the three rationales for programme lending—as an incentive for reform, financing the 'cost of adjustment', and 'defensive lending' to service external debt—are soundly based.

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<sup>18</sup> See Nissanke and Kuleshov (2013) for a discussion on the negative feedback mechanism of commodity dependence as a persistent macroeconomic condition.

With recognition of the difficulty in overcoming the moral hazard problem ex-ante from donors' perspective, it was proposed to overhaul the aid allocation rule, so that aid is allocated on an ex-post policy performance basis. It was claimed that while aid allocation was 'incentives based' on promises for policy change under the previous regime, ex-post conditionality is claimed to be 'selectivity based' on retrospective assessments of performance. That is, instead of using conditionality to induce policy change, aid should be used to target financial flows on those governments which have already established good policy environments, and that aid allocation should be selective, policy performance-based ex post (World Bank 1998). The case for ex-post conditionality was also promoted on the belief that creating star performers by engineering aid allocation would induce non-reforming governments to change their policies through the pressures of emulation and would result in enhanced overall aid effectiveness.

It is worth noting that the justification for this shift in the aid allocation rule was initially made on the basis of the results from a single cross-country regression analysis conducted at the World Bank (Burnside and Dollar 1997/2000). It claimed that aid has a positive impact on growth only with 'good' fiscal, monetary and trade policies. Later, using the Country Policy and Institutional Assessment (CPIA) matrix constructed at the World Bank and presented as a more 'comprehensive ranking index' for policy and institutional environments, Collier and Dollar (2001, 2002, 2004) reiterate that aid and policy can interact in such a positive manner for economic growth that 'aid enhances the growth effect of policy and good policy increases the growth effect of aid' (Collier and Dollar 2001, p. 1788). Collier and Dollar extend their analysis to arrive at a 'poverty-efficient' aid allocation, in which aid is given to countries with 'good' policy, while allowing for the differences in the incidence of poverty. Their simple results were used as a rationale for the claim that aid is effective only in policy environments that the donor community deemed as 'good'. The selectivity rule had a strong appeal for the donor community as an effective instrument to overcome its moral hazard problems.

However, this approach to aid allocation process, hailed as a cornerstone of the 'new aid architecture', has been challenged in several critical aspects since. First, the empirical studies used to underpin the arguments for shifting to ex-post conditionality have been criticised on the technical grounds. The weakness of their theoretical arguments and the validity of their empirical exercises have been exposed by subsequent empirical work undertaken by others (e.g., Dalgaard and Hansen 2001; Dalgaard et al. 2004; Guillaumont and Chauver 2001; Hansen and Tarp 2000, 2001; Morrissey 2004; Rajan and Subramanian 2005).

The use of the CPIA Index in the performance-based aid allocation and the debt sustainability analysis (DSA) is equally challenged (Kanbur 2005; Guillaumont 2009; Guillaumont et al. 2010; Nissanke 2010a). Besides the subjective nature of the assessment exercise,<sup>19</sup> many indicators in the CPIA reflect outcomes influenced by exogenous events. For example, the ability of governments to pursue aggregate demand and fiscal policy, consistent with price stability and achieving external and internal balances, is undermined in the face of large external shocks typically facing fragile LICs. The aptitude of governments in providing public goods depends also on their revenue-raising capacity, which, in turn, is affected by exogenous events. Second, while many of the criteria used are not necessarily controversial in their own terms (e.g., those listed under policies for social inclusion/equity), the quality of institutions and the implemental capacity for socioeconomic policies, evaluated in the CPIA, are often a reflection of structural characteristics of LICs, which would evolve as development proceeds. Hence, they should be treated as a manifestation of their developmental stage rather than that of societal subjective preferences or simple choice parameters of recipient governments.

Thus, the CPIA-based aid allocation is at best an 'eclectic mix' of outcome-based selectivity and policy conditionality applied on the basis of the policies implemented that donors deem appropriate. It is promoted as 'programmatic policy-based lending offering a particularly promising way to reconcile the debate between the traditional *ex ante* approach and the aspirations of a results-based approach to conditionality' (World Bank 2005, p. 20). In reality, the mechanical 'programmatic' application of the selectivity rule is problematic, since the relationships between the quality of policies and institutions, on the one hand, and developmental outcomes, on the other, are tenuous in the short run than implicitly assumed therein. It takes considerable time for changes in policies and institutions to produce tangible results in development indicators, including poverty indicators. In fact, the performance-based system as practiced could heavily penalise fragile low-income countries, since their performances are more likely to be influenced by external factors such as terms of trade shocks or climate-related conditions.

Overall, both the intellectual and empirical bases behind the performance-based selectivity approach are dubious and thin. The methodological approaches used in the cross-country regression studies for justifying the official position of the World Bank are so fundamentally flawed that the evaluation

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<sup>19</sup>The CPIA is a set of *subjective* scores assigned by World Bank staff. Furthermore, the CPIA scores overlap largely with those included in the extended policy conditionality list under the Washington and post-Washington Consensus.



of the quality of research undertaken at the World Bank by independent mainstream academics, as known under the Deaton Report (Deaton et al. 2006), singled out these studies as one of the Bank's most problematic research publications. Warning against the practice of using selectively the empirical evidence to support an advocacy position, the Deaton Report assesses that 'much of this line of research appears to have such deep flaws that, at present, the result cannot be regarded as remotely reliable, much as one might want to believe' (53).

Furthermore, the aid effectiveness debate conducted led to unproductive aid relationships, which are explicitly examined in the principal-agent model, wherein recipients are agents implementing the conditions desired by donors, that is, the principals (Killick 1996, 1997). Conditionality is viewed then as the means of using leverage accorded by 'aid giving' to promote donor objectives. In analysing the inherent tensions and conflicts between the objectives and interests of donors and recipients in these relationships, it is assumed that donors have altruistic preferences (e.g., caring about the voiceless poor in recipient countries), whereas recipient governments are typically constrained in pursuing such objectives by domestic political economy considerations or viewed as non-ingenuous in their commitments to developmental objectives such as poverty reduction or growth objectives. It is admitted that in the aid relations characterised by asymmetric powers, conditions are likely to be drafted and imposed by donors and then accepted, often unwillingly, by recipients.

Indeed, it is this *coercive* nature of policy conditionality that largely shaped the aid relationships throughout the 1980s and 1990s. Criticisms against this practice were raised at the time. White and Morrissey (1997), applying the same principal-agent model, suggest (i) it should not be assumed that recipients are necessarily unwilling to reform; (ii) where recipients are willing, conditionality can be counter-productive; and (iii) if recipients are unwilling, donors can exert leverage, only when donors are actually ready to cut aid to make the threat to withhold aid credible. They conclude that conditionality is neither an effective mechanism to induce reform on unwilling governments, nor an appropriate mechanism for genuine reformers. They also suggest that the switch to ex-post conditionality could reduce such conflicts, only if it is solely based on performance measures that are truly independent of external shocks or unavoidable implementation problems that are beyond the control of recipient governments.

Nevertheless, the cohesive way of imposing policy conditionality by the aid community has long prevailed well into the twenty-first century. The nature of policy conditionality has remained largely intact throughout. Both the



CPIA-based aid allocation rule and debt sustainability framework do not satisfy the conditions required for making aid really effective and debt truly sustainable as well as for improving donor-recipient relationships. While concepts such as ownership and partnership or dialogue have been promoted as an important dimension for success in producing the desired development outcomes through aid delivery,<sup>20</sup> the coercive nature of policy conditionality is an imposition of one particular development model by the traditional donor community on recipient countries as a uniquely appropriate, universal model to adopt. There was clearly a critical gap between the rhetoric and practice in aid relationships that evolved. Equally, there is a need to move away from the stalemate debate on 'aid effectiveness' as narrowly defined, as it is framed through the lenses of traditional aid donors, which are in turn subjugated by the perspectives of developed nations on the development models in general and the role of aid in socioeconomic development in particular.

## **4 Empirical Evidences of Macroeconomic Effects of Aid and Assessments of Debt Sustainability Analyses in Use**

### **4.1 Macroeconomic Effects of Aid: Recent Empirical Evidences**

As discussed earlier, the case for the ex-post conditionality over the ex-ante regime in aid allocation rested almost entirely on cross-country regression analyses of the aid-policy-growth trajectory carried out under the auspice of the World Bank in their push for enhancing 'aid effectiveness' on their own terms. Though their technical and analytical weaknesses were immediately exposed by others working independently, the results derived from these studies were very influential in the donor policy circle and often uncritically used for determining aid allocation. Given this history, and the fact that aid remains one of the most contentious issues in both 'donor' and 'recipient' countries, research efforts have been continuously expended in search for macroeconomic evidences to provide a definite answer to the questions on whether 'aid contributes to growth and development'. Though there is a widely shared position that it is difficult to establish a causal link of aid by running aggregate

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<sup>20</sup>The importance of ownership and partnership was underscored both in the Paris Declaration and in the Accra Agenda for Action Plan, adopted at the high-level Forum of Aid Effectiveness in 2005 and 2008.

growth regressions, a cross-country growth regression approach has been dominant for settling the question of macroeconomic effects of aid to date.

Especially, despite abundant evidences suggesting largely positive rates of return from aid on economic development at the micro and meso levels, macroeconomic evidences on the aid-growth nexus have historically produced mixed results. This ‘micro-macro’ paradox, noted first by Mosley (1987), has again become a focal point in the recent controversy ever since Rajan and Subramanian (2008: RS08) reached a strong conclusion from their analyses that ‘it is difficult to discern any systematic effects of aid on growth’. Their conclusion has not been left unchallenged given the high stakes attached to political implications drawn from academic debates on the developmental impacts of aid. The new round of empirical studies has taken off by extending analyses into several directions.<sup>21</sup>

First, Arndt et al. (2010) re-run the regressions reported in RS08 by revisiting technical issues. With improved model specification and up-to-date statistical procedures, their results affirm statistically significant positive impacts of aid on growth, which let them to conclude that there is no firm basis to reject the prior that foreign aid exerts long-run positive effects on growth. Arndt et al. (2015a) extend their work by lengthening the estimation period to 1970–2007 as well as broadening the scope of examination into effects of aid on other developmental outcomes, all measured in aggregate. They suggest that although aid’s effectiveness is context specific and heterogeneous, aid has, on the whole, promoted development, by contributing to building human and physical capital, reducing poverty and supporting structural change and growth.

Second, in order to verify the plausibility of the estimated size of macroeconomic effects reported in recent regression studies, Arndt et al. (2015b) run simulations of a dynamic growth model to calculate aggregate rate of returns to aid over 30 years in the light of the long-run nature of aid effects and the different dynamics of effects, depending on whether aid is used for physical capital investment, consumption smoothing, human capital upgrading or productivity enhancements. Their results show that the average internal rate of return of aid, including productivity enhancement and human capital accumulation effects, is about 11%, which is highly comparable to many estimates obtained by the recent aid-growth empirics. As a follow-up, Dalgaard

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<sup>21</sup> The group of researchers at UNU-WIDER spearheaded recent efforts in verifying the opposing claims on the macroeconomic impacts of aid. Following the classification made by Hansen and Tarp (2000), Arndt et al. (2010) refer to those studies published up to 2008, inclusive of RS08, as the *fourth-generation* work, and most recent ones since 2008 as the *fifth-generation* work, distinguishing from the *third-generation* work associated with the aid effectiveness debate reviewed above.

and Hansen (2017) produce estimates that the aggregate return on aid-financed investment is around 20%, which are similar to estimates of project returns obtained at micro levels.

Third, beyond the growth impacts of aid, other aspects of aggregate aid effects such as fiscal or monetary effects are revisited. On fiscal effects, Morrissey (2015) reviews empirical evidences regarding effects of aid on fiscal behaviour, covering the questions of aid fungibility as well as how aid affects government spending (its composition and level) and taxation. He concludes that: (i) there is only limited evidence that aid is fungible and no evidence that this reduces the effectiveness of aid; (ii) aid reduces domestic borrowing and increases tax base and revenue collection efficiency due to conditionality of tying aid to tax reforms; (iii) aid increases government spending in total and in the sectors favoured by donors; and (iv) aid given in budget support enhances fiscal effectiveness of aid by reducing transaction costs and improving fiscal management.

Further, in the light of persistent concerns that aid can act as a substitute for efforts in raising domestic tax revenue, Mosley (2015) updates his earlier analysis on how aid can affect fiscal performance as part of long-term effects of aid on the quality of domestic institutions. Examining the political process, in which aid can incentivise political elites for the creation of tax revenue and diversification of tax base, he concludes that aid effects on taxation depend on how the political economy of aid is played and aid effectiveness is deemed high if aid succeeds in long-term reforms of state building. This finding is important, as we argued elsewhere, for a nation-state to function; it is critical to eschew the 'low tax trap' and create a positive feedback loop between high-quality, inclusive public goods and services on the one hand and efficient, fair taxation systems on the other under an implicit social contract between governments and stakeholders.<sup>22</sup>

Turning to monetary effects of aid, the Dutch Disease Effects feature prominently in the debate. Rajan and Subramanian (2008) invoke this channel to explain little macroeconomic benefits from aid, claiming that a large increase in aid flows leads to an appreciation of the real exchange rates of recipient countries and undermines their competitiveness and any potential beneficial impacts on growth. However, it is also increasingly recognised that the Dutch Disease is by no means inevitable. Its symptoms are commonly observed because economies tend to run into short-term absorptive capacity bottlenecks at a time of boom-induced 'euphoria' or of a sudden influx of

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<sup>22</sup> See Nissanke (2019).

foreign exchanges.<sup>23</sup> An intelligent execution of macroeconomic policies through pertinent fiscal and monetary policies, coupled with the effective management of exchange rates and international reserves, can limit short-run overshooting and attenuate the Dutch Disease effects. In the medium-to-long run, the policy of ‘time-phasing’ is key to creating a mechanism whereby a sudden increase of aid can be absorbed into the domestic economy gradually and then utilised effectively over an extended period commensurate with its progressively incremented *absorptive* capacity.

In this context, Berg et al. (2015) examine the central bank’s policy options in responding to aid surges under an alternative exchange rate regime. They show that: (i) the combination of different exchange rate regimes with sterilisation and reserve accumulation policies shapes the macroeconomic effects of aid and (ii) there are trade-offs between reducing the real appreciation and medium-term growth. Addison and Balamoune-Lutz (2017) confirm this in their case study that the Dutch Disease conditions can be addressed by supply-side improvements, to which aid can make significant contribution.

Given these results as well through their comprehensive review of the fifth-generation work on aid-growth regression studies, the UNU-WIDER team concludes that (i) there is a convergence of macroeconomic evidences against oft-made claims that aid is detrimental or irrelevant to economic development<sup>24</sup> and (ii) there is no support for a continued assertion of a ‘micro-macro paradox’ in aid’s contribution to development.<sup>25</sup>

## 4.2 A Critical Review of the IFI’s Debt Sustainability Framework as Crisis Prevention Measures

Given the troubled history of dealing with the HIPC’s debt crisis retrospectively through *ex-post* crisis management, the IFIs proposed the Debt Sustainability Framework (DSF) for LICs in 2004 as a basis for debt management *ex ante* to prevent the re-emergence of debt distress and crises through informed borrowing and lending decisions. As a ‘forward-looking’ analysis with its focus on the future path of debt-burden indicators over a 20-year period, it is designed as a tool to make sovereign borrowing/leaning decisions

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<sup>23</sup> See Nissanke (2010c) for discussions on Dutch Disease effects and macroeconomic management to attenuate the effects in the context of commodity booms. Therein references to a large body of literature on the subject are found.

<sup>24</sup> For example, see Boone (1994) or Moyo (2009).

<sup>25</sup> See Arndt et al. (2015a, b) and Addison et al. (2017) for up-to-date reference lists of empirical studies on the aid-growth relationships.

in light of potential debt vulnerabilities (IMF-IDA 2004). With a few rounds of technical revisions since the inception, the debt sustainability analyses (DSAs) applied to LICs, embedded in the DSF, have occupied a central place in LICs' sovereign borrowing/lending decisions. DSAs are regularly carried out as part of IMF Article IV consultations in all member LICs. However, the analytical construct of the DSF requires a closer scrutiny as an effective system of crisis prevention in relation to its two building blocks: (i) the analytical and empirical basis on which the debt-burden thresholds are determined and (ii) the methodological issues involved in conducting a DSA for each country.

The first issue arises from the method used to assess a country's external debt distress risk against 'policy-dependent' debt-burden thresholds. The thresholds are established on the belief that the debt-carrying capacity of LICs is dependent on the CPIA Index. For the reasons noted in Sect. 3.2, a serious concern can be raised over the legitimacy of the use of the CPIA for determining debt thresholds. In a nutshell, the practice of interpreting the CPIA as an 'input', 'choice variable' on the part of LICs, hence as 'efforts and actions' under their own control, can be questioned. Despite this, using a traffic light system for classifying a country's debt distress risk, aid allocated in the IDA-DSF is reduced by 10% for 'yellow-light' countries and 20% for red-light ones, penalising countries with a lower CPIA rating upfront. Further, the empirical models for establishing CPIA-centred debt-burden thresholds should be challenged on a number of methodological and technical grounds.<sup>26</sup> In fact, the empirical studies used for this purpose<sup>27</sup> share many methodological flaws with those reviewed in Sect. 3.2. As a result, the CPIA-centred DSF chastens structurally handicapped LICs. Such a system is not conducive to delivering aid to those countries where the transformation of economic structures and increasing their resilience to exogenous shocks are most needed.

There are alternative approaches to determine a country's debt distress thresholds. For example, an overwhelming case can be made for using key indicators of measuring structural handicaps on grounds of equity, effectiveness and transparency. Structural handicaps facing LICs do stem from their economic vulnerability and low human capital, which cannot be regarded as their 'choice' and 'will'. The Economic Vulnerability Index (EVI) and the Human Asset Index (HAI) can be a good candidate for representing structural vulnerability for country performance rating and a country's 'needs' respectively.<sup>28</sup>

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<sup>26</sup> See Nissanke (2010a).

<sup>27</sup> See Kraay and Nehru (2006).

<sup>28</sup> See Guillaumont (2009) and Guillaumont et al. (2010) for these alternative performance indicators.

Further, the practice of a mechanical application of the traffic light system for determining the grant-loan mix in the DSF should be reconsidered. First of all, in deciding on the 'grant-loan' mix, a country's overall debt-carrying capacity should be primarily assessed against its performance in public finance and debt management, not the mixed score such as the CPIA. Moreover, grants cannot always be a better aid modality compared with debt contracts. On the one hand, for donor governments, if aid is available only in grants, the size of Official Development Assistance (ODA) would be limited by their budget constraints. In contrast, increasing aid through loans entails them lower real costs, as they can utilise efficient inter-temporal management of their resources, including recycling principal repayments and any interest payments on the loans made earlier.

Although there was a tendency to favour grants over loans in the subsequent debate to the UN Monterrey Conference on Financing for Development in 2002, an appropriate grant-loan mix should be decided depending on what aid is used for. Infrastructure projects, which alleviate absorptive capacity constraints and supply bottlenecks, can in principle generate high growth dividends and social returns within a reasonable time horizon of debt contracts. For financing these types of projects, concessional loans can be a superior instrument to grants. Generally, the use of properly structured, incentive-compatible loan contracts offered on generous concessional terms is preferable to outright grants in financing productive investment, provided that projects are carefully selected, well designed and managed. What is needed is to address LICs' high vulnerability to exogenous shocks with an efficiently structured *counter-cyclical*, contingent facility and to provide valuable technical assistance for managing debt-financed projects to generate tangible growth dividends, enhanced cash flows and tax revenues so that debt-servicing capacity is built over time.

On the other hand, grants can well be more appropriate for financing social infrastructures such as education and health or economic infrastructure such as rural roads or water supply to the poor. Investment in education and health, for example, would take a longer time to generate growth dividends. It is also hard to project cash flows over time from such investments. Investment in human capital brings about both high social and private returns. While the society at large directly benefits from increased skill levels and knowledge assets of its workforce, individuals garner their returns in the prospect of higher living standards. However, private returns are widely dispersed, requiring an efficient tax system to recuperate. The latter itself takes a longer time to create. All these point to great care in deciding which aid instruments are appropriate on a case-by-case basis.

Turning to the DSA applied to an individual country under the DSF, it entails constructing baseline and alternative scenarios of external public debt

burdens and conducting stress tests, covering uniformly a 20-year period for LICs. The results of the DSA are then presented as a basis of sovereign borrowing/lending decisions in relation to the CPIA-based debt thresholds set for each country. After going through several revisions, the DSAs are now supposed to use more sophisticated simulation techniques to trace dynamic paths of debt-burden indicators interacting with key variables in a country-specific context. Lately, the IMF also constructed a Dynamic Stochastic General Equilibrium (DSGE) model for the DSAs, to capture the benefits of debt-financed public investment scaling up. The DSGE model constructed is said to incorporate a number of characteristics of a typical LIC.<sup>29</sup> It is also envisaged to include both public external and domestic debt accumulation in one unified model and analyses of fiscal policy reactions necessary to ensure debt sustainability and associated macroeconomic adjustments.<sup>30</sup>

Within the confinement dictated by the models' construct with a set of built-in assumptions, the DSGE models can help enhance technical aspects of forecasting a debt profile and enrich discussions on policy options and future actions. It certainly has the potential to provide with a useful tool kit for informed decisions on opting for different financing mechanisms, since the model is supposed to allow for financing schemes that mix concessional, external commercial and domestic debt, while taking into account the impact of public investment on growth as well as constraints on the speed and magnitude of fiscal adjustments. However, we should be also mindful of pitfalls associated with *mechanical* use of calibration/simulation results from the DSGE models for making important policy decisions.

Based on initial calibrations of the DSGE model to a data set of the average SSA-LIC under alternative policy scenarios, Buffie et al. (2012) conclude that well-executed high-yielding public investment programmes can substantially raise output and consumption and be self-financing in the long run. However, it also warns that: (i) even if the long run looks good, LICs can face transitional repayment problems without additional concessional financing; (ii) extra domestic borrowing or external commercial borrowing required to ride through emerging resource gaps in the transition period would be costly and risky, leading to formidable macroeconomic adjustment problems; and hence (iii) in the absence of concessional financing available at times of fiscal strains over an extended period, such a situation could lead to an unsustainable public debt dynamics. With these results, their simulation exercises tilt against

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<sup>29</sup> See Berg et al. (2012) and Buffie et al. (2012).

<sup>30</sup> DSAs for LICs are now supposed to cover total debt, inclusive domestic and external private debt, as LICs have started issuing domestic debt instruments as well as accessing international capital markets on non-concessional terms.



front-loaded investment programmes under weak structural conditions common in LICs on the ground of deteriorating debt sustainability.

Yet, strong demand for scaling up public investment *today* comes from the imperatives to address structural bottlenecks to facilitate the process of transformation of socioeconomic structures and laid down a foundation for inclusive, broad-based development. If investment can succeed in bringing about a major shift in economic structures, large externalities and high social returns within a reasonable time span, predictions made on historical data may not be so informative.<sup>31</sup> Indeed, the technically improved DSAs do not provide a *decisive* verdict in settling policymakers' dilemma over the scale and pace of acceleration of public investment against the fear of making debt unsustainable.

Rather, more subtle policy inferences can be drawn from the calibration results. First, the results, especially those from stress tests, point to the importance of the availability of concessional financing at the time of repayment difficulties. It shows that debt can be made sustainable if an appropriate facility to deal with debt distress situations is in place. The crux of the matter is whether LICs can obtain additional aid in the event of adverse shocks. Second, since debt sustainability of productive investment surge is critically dependent on structural conditions, discussions should be focused on how to increase the efficiency of public investment, the absorptive capacity and the revenue-raising capacity. Finally, the analyses clearly point to the danger of too much reliance on non-concessional borrowing for public investment surge.

More generally, irrespective of the application of a refined macroeconomic model or/and sophisticated forecasting techniques applied,<sup>32</sup> the accuracies in forward-looking projections over a 20-year horizon are seriously in doubt in a world governed by high uncertainty. This is because the future is unknown inherently, particularly so because we live in a highly uncertain, globally integrated world, which can expose LICs more frequently to larger exogenous shocks. An interpretation of calibrated results of debt sustainability in a distant future should be made with this in mind, exercising a good judgement backed up by detailed country-specific knowledge. In this regard, targeting debt sustainability through its projections over a medium-to-long time horizon can be illusionary.

In fact, Wyplosz (2007) regards any analysis of debt sustainability as a 'mission impossible', suggesting that the concept of debt sustainability is so elusive

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<sup>31</sup> The conclusions drawn from the IMF study are contingent upon the assumptions of the key parameters as well as the construct of the model itself. Further, they are based on the results from the calibration to the historical data series of average figures in SSA over the past 10–20 years.

<sup>32</sup> Data requirements for applying a sophisticated model or forecasting technique are overwhelming for many LICs, where the reliability of macroeconomic data is often doubted, and high-frequency data required for forecasting are unavailable.



for policy purpose. He argues instead for having a policy of ‘*debt distress avoidance*’ at times of shocks.<sup>33</sup> In this alternative approach, the policy target is to avoid debt-burden indicators, following an explosive path over time upon shocks by using the *debt-stabilising primary balance* as the prime instrument.<sup>34</sup> That is, the debt path is a target, while the primary account is the instrument in terms of macroeconomic policy analyses, wherein the focus of policymakers should be on stabilising the level of primary balances in order to keep current debt stable. This computational approach provides a forum for a more meaningful dialogue over policy options to effect adjustment paths upon shocks between borrowers and lenders. It also indicates that temporary shocks could be dealt with policies that spread adjustment costs over time. There is no need to raise serious concerns over the initial jump in debt levels resulting from shocks, if sovereign borrowers are allowed sufficient time to adjust with appropriate *counter-cyclical* financial facility.<sup>35</sup>

Crucially, our discussions point to the need for a fresh aid facility to deal with shocks facing LICs. If upon shocks *counter-cyclical contingent* financing is available to make adjustments as palatable as possible, the debt level can be kept under control. Its aim is to allow them to avoid a sharp contraction in aggregate demand in desperate efforts to produce a primary balance surplus in a short time framework. This critical role of aid is indeed the one that is emphasised by the gap model literature, where the model is viewed as an analytical tool for guiding *disequilibrium macroeconomic adjustments*, as discussed in Sect. 2.1. If sufficient liquidity is available immediately upon shocks through contingent aid facility, sovereign borrowers could continue focusing their efforts on achieving development objectives.

## 5 Ways Forward for Making Aid and Debt Work for Development in Low-Income Countries

An increasing sophistication of models and techniques in the DSA by itself cannot be a substitute for engaging with the concept of debt sustainability at a deeper level. There is a need for going beyond monitoring debt dynamics along with macroeconomic variables in *net terms or aggregate ratios*. Debt

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<sup>33</sup> See Wyplosz (2007).

<sup>34</sup> The concept of debt-stabilising primary balance was earlier explored in Buiter (1985) and Blanchard et al. (1990).

<sup>35</sup> See Chap. 23 by Ocampo of this Handbook and Ocampo (2017) for further discussions.

finance for LICs should be viewed as one of the key vehicles for overcoming their structural handicaps over time, that is, to address developmental bottlenecks through investment in economic, social and soft infrastructures, since productive investment is the necessary condition for generating a virtuous circle in the debt-growth nexus. Debt sustainability should imply that liability accumulation *today* would lead to productive asset creation *tomorrow*.

In this context, two first-order conditions for making debt work for development should be reinstated as key to ensuring debt sustainability in policy and academic discussions. We take a position that indebtedness on its own is not a problem: (i) if a comprehensive system of sensible public resource and debt management is in place at a country level<sup>36</sup> and (ii) a *global* aid facility is made available promptly at times of debt distress upon exogenous shocks. Once these conditions are met, well-executed, high-yielding public investment programmes can be self-financing in the long run. In practice, in order to ensure such positive developmental outcomes, a holistic approach to managing debt-financed projects is necessary. This entails that: (i) the selection of projects is sound, followed up by effective management throughout project cycles to ensure sustainable service delivery and developmental dividends; (ii) appropriate financial instruments are chosen and packaged; and (iii) a clearly agreed procedure backed up with global facilities is laid out at the onset of debt contracts on how to deal with downside risks and debt distress conditions, which would allow an orderly debt restructuring and workout process.

## 5.1 Debt-Financed Project Management and the Role of Aid in Institutional Spillovers and Development

For ensuring positive outcomes predicted by the earlier debt-cum-growth model reviewed in Sect. 2.2, debt management at a country level should be embedded in a well-run system of public finance management with transparency and accountability to all parties. Prudent and responsible management of public resources and sovereign debt should be evaluated in relation to fundamental developmental issues such as how (i) to enhance a country's absorptive capacity and debt-carrying capacity; (ii) to increase efficiency of public investment over time at both macro and micro levels; and (iii) to increase growth and development *dividends* from publicly financed investment projects. In this sense, *debt sustainability* and *development sustainability* are closely interlinked.

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<sup>36</sup> See Chap. 5 by FitzGerald for detailed discussions on public finance management, including the question of the optimal size of the public sector and public debt in an open-economy context.

One of the challenges is how to raise the rate and efficiency of debt-financed investments. If debt finance is provided in appropriate terms and the project selected is growth enhancing, the risk of unsustainable debt burden becomes much less. It is imperative to examine, from this angle, the conditions under which different outcomes result by exploring various debt-investment-growth dynamics, where investment, in particular public investment, acts as the critical link in the two-way causation in growth-debt dynamics. Above all, publicly funded investment projects should be selected and managed with reference to a country's structural transformation agenda upfront.<sup>37</sup> Potential investment projects should be evaluated not just in terms of narrowly specified technical criteria, for example, merely choosing self-financing projects from projected income flows against costs, inclusive recurrent maintenance and operation costs. Importantly, projects with large positive externalities and high *social* returns should be given priority so as to maximise growth and development dividends.

A close monitoring of project implementation and operation, including monitoring income/revenue flows with scheduled debt service payments at *micro* levels, should be a part of prudent public finance management. Responsible debt management at *macro* levels involves auditing and monitoring performances across projects in aggregate as well as monitoring macro indicators of fiscal and debt sustainability. Therein, simulation exercises with use of models and forecasting tools, as in the DSA-DSF, can provide an indicative guide for the latter purpose and act as a useful informational base for sovereign debt management.

Debt-financed projects demand a significant enhancement of the capacity of local institutions in selecting and implementing public investments, involving active 'learning-by-doing' processes at every stage of project cycles. Infrastructure projects entail building not only physical infrastructure (hardware) but also institutions for sustainable service delivery (software) to reap development dividends. Hence, beyond providing concessional finance, aid is a crucial conduit, through providing technical assistance, for transfer and accumulation of intangible assets such as knowledge, technical and management know-how for sectoral development. In addition to sector-specific benefits, aid-inspired learning-by-doing processes could be propagated through inter-project transfer of knowledge and know-how and hence can produce institutional capacity and development *economy wide* through institutional spillovers.<sup>38</sup>

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<sup>37</sup> See Nissanke (2019) for our definition of structural transformation of low-income countries.

<sup>38</sup> See Nissanke (2010a) and Nissanke and Shimomura (2013) for discussions on institutional spillovers from project aid.

Thus, aid can be instrumental for stimulating institutional development and an important channel for exchanges of ideas and experiences and building of competence and capacity in organisations critical for sustainable public service delivery and economic development at large. Such potential beneficial effects of aid on the development process are critically contingent upon the nature of the ‘donor-recipient relationships’. If the relationships are characterised by mutual trust and confidence, aid acting as a conduit for close interactions of numerous stakeholders can help in developing dynamic institutions, adaptable to changing local conditions with flexibility and resilience. For this to happen, donors should become involved as a developmental partner and create an environment conducive to *mutual* learning on grounds.

Yet, in discussing capacity building or institutional development, donors’ focus is often narrowly on how to effect transfer of not only technology and know-how but a whole set of institutions in the belief that there is only one universally accepted set of institutions which is good for development. Seen through lenses of ‘donors’, the question of capacity building and institutional development is equated with emulation to the ‘best practice’ found in donor countries. They often fail to pay due attention to existing local institutions and endogenously evolving changes of institutions as development proceeds in recipient countries.

In contrast, we suggest that the driving force for achieving the development mission should come from recipients’ endeavours, utilising and strengthening *endogenous* institutions, both formal and informal, embedded in sociopolitical systems of recipient countries.<sup>39</sup> Close cooperation and collaboration between donors and recipients should be conducive to the ‘endogenously driven’ process of development of local institutions. We suggest aid can be a *handmaiden* and *catalyst* for building local institutions in managing aid-funded projects and public resources, if local institutions can be developed through nurturing productive aid relationships on the basis of true cooperation and mutual learning processes in policy formation and project execution on grounds.

## 5.2 Use of Appropriate Financial Instruments and Packages and Establishment of Global Facility for Dealing with Debt Distress

Making an appropriate choice of debt instruments for project financing is critical for ensuring sustainability. Up to recent times, LICs had no access to

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<sup>39</sup> See Nissanke and Shimomura (2013) for discussions on how the concept of endogenous institutions and institutional change (Greif 2006 and Aoki 2001, 2007) can be used for understanding aid’s contribution to institutional development.

private capital markets for development finance. However, the resolution of the HIPC debt crisis through the MDRI coincided with emerging narratives of 'Africa Rising' at the backdrop of the 'commodity boom' of 2002–2012 and has enticed these countries to raise funds in international bond markets for project financing with IFI's tacit endorsements.<sup>40</sup> A dozen of LICs and low-middle-income countries (LMICs) started issuing sovereign bonds in domestic and international markets.<sup>41</sup> However, not only do international bonds carry considerable currency risk, but these instruments are much more expensive than concessional borrowing in all aspects. Accordingly, debt management has become more complicated with the need to address the question on debt structures and compositions in terms of maturities, currency denominations and others. Although the cost did not look prohibitively high under the prevailed global environments of historically low interest rates in those years, there was a risk of steeply escalating costs, as soon as interests started edging up and investors' risk appetites began shifting abruptly, which led to a debt distress or crisis situation in many emerging market economies as well as African LICs and LMICs. Many countries have been forced to issue new bonds just for refinancing purposes, so that they could somehow service debt previously incurred. Today, another round of debt crisis is looming for many African countries.<sup>42</sup>

Generally, debt instruments offered in bonds or loans on non-concessional terms carry much elevated costs of servicing with higher interest payments and shorter maturities attached. A comparison across the loan facilities for LICs reveals a huge difference in terms between highly concessional loans offered by Multilateral Development Banks (MDBs) and Regional Development Banks (RDBs) and expensive commercial instruments. The maturity of commercial debt is much shorter, typically 8–10 years, compared with those under concessional windows. For example, the standard IDA loans to LICs are payable over 40 years with a 10-year grace period with grant ele-

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<sup>40</sup>The non-concessional borrowing policy (NCBP) was enacted in 2006 by the IFIs in fear of 'free riding' on the part of non-traditional sovereign lenders such as China. Yet, there were not much concerns openly voiced when LICs and LMICs turned to international capital markets for sovereign bond issues.

<sup>41</sup>Ghana, Senegal and Zambia—low-middle-income countries (LMICs)—issued bonds for financing infrastructure in the energy and transport sectors since 2007 and several others, including LICs such as Mozambique, Tanzania and Rwanda, have followed suit.

<sup>42</sup>According to an estimate available in October 2018, the African government's external debt payments doubled just in two years from an average of 5.9% of their revenue in 2015 to 11.8% in 2017 ([https://jubileedebt.org.uk/wp/wp-content/uploads/2018/09/Briefing\\_09.18.pdf](https://jubileedebt.org.uk/wp/wp-content/uploads/2018/09/Briefing_09.18.pdf)). It is estimated that by the end of 2017 African governments' total external debt was US \$417 billion, of which 32% was owed to private creditors, 24% to China and 35% to multilateral institutions and other countries, including Paris Club members. It is worth noting that as of December 2017, 55% and 17% of their external interest payments were made to private creditors and to China respectively.

ments of 62% at 6% discount rates, while blend term credit to LMICs is payable over 25 years with a 5-year grace period with grant elements of 35%.<sup>43</sup>

Further, among debt instruments, bonds can be more expensive for financing infrastructure projects compared with loan contracts structured for a specific project. Bond contracts can entail additional 'carry costs' and lack often flexibility. The history of sovereign debt-restructuring processes with private investors and creditors is littered with difficult and costly negotiations. Internationally accepted, orderly workout mechanisms of sovereign bonds are yet to establish.<sup>44</sup> Hence, as abundantly demonstrated by the recent Euro Zone crises, restructuring sovereign bonds with private creditors can be a very lengthy and costly exercise for LMICs and LICs at times of payment difficulties.

However, resources available for concessional lending are limited and likely to be constrained. Even without much reduction, traditional official sources are inadequate for LICs' development needs. Hence, a temptation is strong for resorting to less-concessional debt instruments when demand for public investment scaling up is so high. With a view to leveraging in private capital for development finance, in particular in the name of achieving the Sustainable Development Goals (SDGs) by 2030, MDBs and RDBs spearheaded by the World Bank as well as the Organisation for Economic Co-operation and Development (OECD) have been popularising Public-Private Partnership (PPP) and blended finance schemes.<sup>45</sup> Whenever such a scheme is considered, however, it is indispensable to conduct a critical evaluation of how risks and returns are portioned between public institutions and private investors and whether they are appropriately packaged as development finance instruments for public goods provision. For example, risks may not be negligible for LICs, as terms attached to PPP are known to be costly, if LICs' interests are not guarded properly. Private investors would not come on board unless they are promised high private returns as equity holders or creditors, while there is often a proviso which allows them to walk away from deals at times of distress, leaving public finance in tatters.

Clearly, there is a marked 'missing middle' in the spectrum of financial products available as development finance for LICs from concessional windows and commercial sources. Meanwhile, loan packages offered by emerging

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<sup>43</sup> Lending terms of the African Development Fund are a 50-/10-year maturity and grace period with no interest payments, making concessionality at 66%, whilst African Development Bank (AfDB's) facility offered to blend/gap countries involves a package with a 30-/8-year maturity/grace periods and interest rates of 1%, making concessionality at 41%.

<sup>44</sup> See Chap. 23 by Ocampo, and Ocampo (2017).

<sup>45</sup> See OECD DAC (2018) on its position on blended finance. Chapter 24 by Kaul provides further discussions.

countries like China for infrastructure and other projects appear to play a vital role of filling this 'missing middle'.<sup>46</sup> This may partly explain the popularity of loans offered by emerging 'development partners', in addition to quicker disbursement and no 'policy' conditionality attached. The crux of the matter is again more to do with questions such as whether financial deals from emerging partners are carefully considered in interests of LICs, in prior to taking up, in their appropriateness for financing the project in question and whether investment thus financed would produce high growth and development dividends on time to honour repayment schedules.

In this context, a consideration should be given to introduce more flexibility in debt contracts. For example, MDBs and RDBs could consider offering a variety of financial instruments and products with a varied degree of concessionality, probably more differentiated and individually packaged for different usages in all aspects of lending terms in a country-specific context. Most development banks are handicapped with the limited resource envelope for playing a leading role in the provision of concessional finance, if it continues to be mainly sourced from grant contribution by partner countries, especially in the face of the challenge of financing the SDGs. Introducing more flexibility and innovation, such as providing loans in differentiated products, in particular, adjusting the grace/maturity periods at the margin, accelerating the amortisation period or charging slightly higher subsidised interest rates in some portions of their facilities, would eventually enhance their resource base by increasing reflows from repayment of principals on outstanding credits.

Importantly, development aid mission is to accelerate LICs' development process, increase their resilience and reduce vulnerability to shocks. Concessional loan provision is one of the mediums to achieve this prime objective. LICs are by nature indebted to development banks and partner countries before they attain a graduation from aid-dependence status. In transition, LICs are bound to face debt distress from time to time, as they are hit by exogenous shocks. Hence, for making debt really sustainable, an appropriate *global counter-cyclical* facility to deal with adjustments to shocks is indispensable, so that liquidity crisis is attended in a timely manner. In this context, a strong case can be made for establishing an *innovative* contingent facility to

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<sup>46</sup>Though detailed information is often lacking, Chinese preferential loans are said to charge on average an interest rate of 3.6%, with a grace period of 4 years and a maturity of 14 years, which amounts to a grant element of less than 25% and hence not classified as official aid according to the OECD-DAC definition. However, the degree of concessional elements is known to be not uniform, with some variations observed across projects.



deal with exogenous shocks and prevent debt distress turning into a crisis.<sup>47</sup> As discussed in Sect. 4.2, one of the fundamental weaknesses of the current DSF is a missing facility for debt distress management. It systematically avoids addressing the critical question of how to deal effectively with downside risks facing LICs. Insofar as vulnerability to shocks represents a key factor for debt distress, any debt sustainability framework that does not effectively translate vulnerability assessments into appropriate policy responses in terms of liquidity provision is bound to fail in providing a lasting solution.

The protracted debt crisis in HIPCs was associated with the absence of an effective and flexible facility of *contingency financing* to deal with external shocks facing HIPCs on an ex-ante basis. Throughout the 1980s and 1990s, official creditors had instead kept applying debt-relief mechanisms ex post with *policy* conditionality attached in response to recurrent liquidity crises and the ensued ‘debt overhang’ condition. Given this history, it is best to structure aid and debt contracts ex ante with an *automatic* debt-relief mechanism incorporated already in original sovereign debt contracts. There are several proposals on table. One of them is the Counter-Cyclical Loan (CCL) facility advanced by Cohen et al. (2008). It involves a reduction of the grace period of a typical concessional loan from ten to five years, while keeping the remaining grace periods as an asset that the country can draw upon, when a negative shock takes place.

The second proposal entails a contingency facility—a *state-contingent* debt-relief facility in which contingency is explicitly indexed to a verifiable *state of nature* (i.e., ‘good’ or ‘bad’ events occurring in future) rather than to the debtor’s capacity to pay such as gross domestic product (GDP) growth, to eschew the ‘incentive’ problem.<sup>48</sup> This proposal is based on the analysis contained in Krugman (1988), suggesting that the trade-off between debt forgiveness and financing in a typical negotiation can be improved by indexing repayment to the ‘state of nature’, which can be verifiable. In any inter-temporal resource transactions in a world characterised by high uncertainty, a state-contingent contract is known to be incentive compatible, as it specifies contractual obligations contingent on the ‘nature of states’ and deals effectively with uncertainty associated with exogenous shocks and systemic risks. This facility is also designed to address explicitly the potential moral hazard problem by distin-

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<sup>47</sup>A series of global facilities established at IMF are not well designed to meet the need facing LICs/CDDCs and they have become highly conditional upon accepting pro-cyclical demand management over time. See Maizels (1992) and Nissanke and Kuleshov (2013) for a history of these facilities for CDDCs. Ocampo (2017) also offers a useful history of the IMF’s facilities.

<sup>48</sup>Detailed discussions of the second proposal are found in Nissanke and Kuleshov (2013).



guishing between the consequences of a borrower's own efforts and events beyond her/his control. This is important because standard sovereign debt contracts do not make a distinction between 'ability' and 'willingness' to pay.<sup>49</sup>

In a state-contingent sovereign debt contract, official lending institutions are assigned to bear obligations associated with globally generated systemic risk including commodity price risk, while sovereign borrowers take responsibility for outcomes of their own actions. Hence, *state-contingent* debt contracts would allow sovereign borrowers *automatic* access to contingency financing when they are hit by adverse unforeseen events outside their control, by bypassing protracted time-consuming negotiations. Such a contingency facility can make governments more accountable to domestic stakeholders for their decisions on policies and subsequent courses of action, since the outcomes of their efforts are made transparent by netting out external shocks and events.

The two proposals outlined herein are a facility with a *pre-qualified automatic line of assistance* at times of debt distress by introducing flexibility of adjustments to the grace periods and/or subsidised interest rates into standard loan contracts issued by development banks or partner countries. Such a contingent debt contract can also incorporate a clause of accelerating repayment schedules at times of positive shocks such as commodity booms. In this way, the facility itself can be made self-financing to a certain extent. These schemes are designed to deal with the problem stemming from illiquidity facing LICs at times of external shocks. Giving assurance that liquidity is made available immediately upon shocks can create incentives for sovereign borrowers to make efforts for attaining better performance than under the CPIA-centred performance-based aid allocation and DSF reviewed in Sect. 4.2. It would also provide space and time for more orderly sovereign debt restructuring without experiencing pressures from immediate liquidity crises, even if shocks are of a rather prolonged nature. Sovereign borrowers are encouraged to focus on achieving development objectives. If a shock proves *ex post* to be more permanent, in order to sustain development spending and support investment, supplementary development aid should be made available to LICs with structural handicaps in addition to the contingent credit line (Griffith-Jones and Ocampo 2008).

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<sup>49</sup> See Bulow and Rogoff (1989).

## 6 Concluding Remarks

By tracing the evolution of the academic and policy debates on the 'aid-debt-growth' nexus concerning low-income developing countries, our review has shown the following: (i) how theoretical and empirical inquiries into the aid-debt-growth nexus at a highly aggregate level have shaped the policy discourses and (ii) how research outputs have been selectively used to rationalise or even justify donors' positions or political agendas that prevailed at times with some profound implications for development outcomes of 'recipient' countries. Our review also highlights the merit and importance of bringing together the parallel debates and the two strands of literature on the questions of 'aid effectiveness' and 'debt sustainability', which have been hitherto evolved separately and almost in isolation, in an integrated and systematic manner. This is necessary for us to gain a deeper understanding into how dynamics have been played out in the aid-debt-growth triad.

Further, our review has shown that despite abundant micro-level evidences that aid's contribution to development is highly context specific, an answer to the question on whether 'aid works' has been continuously sought through an investigation of macroeconomic relationships embedded in the aid-growth debate, not uncommonly with cross-country regression analyses. Though many of the technical challenges involved in running such regressions are competently addressed by a series of recent work reviewed in Sect. 4.1, it is not expedient to keep running growth regressions with an intention to settle decisively the question of macroeconomic effects. First, while aid is treated as a single entity in cross-country regression studies, aid is delivered in a host of different forms and modalities. Second, as Bourguignon and Sundberg (2006) note, in cross-country regressions, the complex causality chain linking aid to outcomes such as growth is treated as the *black box*.

In opening the 'black box' and investigating the causality chain, however, it is important to depart radically from the static and instrumental view of development processes, which dominated the donor-driven aid effectiveness debate of the past. The debate was based on the premise that there are universally applicable 'right' policies and institutions and that donors should condition aid transfer and debt relief on the adoption of the monolithic development model deemed 'appropriate' by donors. From this position, it was argued that aid should be used, through either ex-ante or ex-post policy conditionality, as leverage for donor-inspired policy and institutional reforms. However, the principal-agent framework used in the past debate is flawed as it is built on the view that donors are the principals while recipient governments are merely the agents of donors.

The donor-recipient relationships were impaired by the two-decade-long experiments with *policy* conditionality based on such a position. Instead of providing assistance for enhancing recipients' efforts in building an institutional foundation with the necessary technical capacity for developing their own home-grown strategies and policies, donors were seen to police over whether recipient governments adhere to economic policies and institutional governance recommended by donors. This has often contributed to creating rather an unproductive environment for building mutual trusts and respect necessary for healthy aid relationships. In place of policy conditionality, conditionality should be exercised in relation to LIC recipients conforming to universally accepted codes of conduct and norms to basic human rights embedded in the UN convention; transparency and accountability to domestic stakeholders in policymaking and governance; and efforts of governments to achieve the targets agreed upon collectively by the international community such as those embedded in the SDGs.

We all should be humble to recognise that development is an iterative process where positive ('right') outcomes are the result of the gradual and often unpredictable development of local institutions and sociopolitical configurations. Once seen from this alternative perspective, development management becomes more *process* oriented, rather than *output* oriented, and successful development depends on long-term processes of institutional development. Through providing development aid in different forms of cooperation (financial resources, technical assistance, etc.), donors can be an important partner in such processes, and aid effectiveness then hinges upon whether aid can make a lasting contribution to such national development processes. What is required in any aid relationships, whether it is North-South or South-South, is mutual respect so that the two parties could fully engage in learning from each others' development experiences, taking into account their different historical and cultural backgrounds. Such relationships where all parties participate as an equal partner, not as a 'donor' or 'recipient', could encourage and stimulate the process of policy learning and experimentation as well as institutional experimentation and innovation, which could lay a foundation for sustainable development.

Further, it is important to draw invaluable lessons from the historical experiences to understand under which conditions debt cannot be growth enhancing, and what should be done to avoid the repeat of the protracted debt crisis that trapped many LICs in a low equilibrium of low growth with high debt. Key to preventing this is the rate and efficiency of investment where loans are deployed, as investment is the decisive link in debt-growth dynamics. Therefore, a critical analysis of *what* and *how* debt is used for should be a part

of debt sustainability analyses. Debt contracted by LICs can be made sustainable if concessional loans are effectively and responsibly deployed for investment in projects with high social returns with a view to overcoming their structural handicaps. It is up to lenders and borrowers to make sure that concessional loans and debt instruments are used to facilitate the process of transformation of their economic structures, which can also consolidate their debt-servicing capacity over time.

In this context, we emphasised the imperatives of designing more efficient debt contracts so as to align better the incentives for sovereign borrowers and lenders as development partners. An 'unconditional' contingent-financing facility available upon verification of large exogenous shocks to LIC borrowers should be considered as one of the conditions for making aid and debt work for development. In sovereign aid-debt contracts, systemic risks generated globally outside the control of borrowers should be portioned to lenders, so that borrowers can focus their efforts on maximising developmental dividends from productive investment. Thus, a coherently structured *incentive-compatible* aid-debt contract would help borrowers and lenders to forge a true partnership in the development *process* of LICs.

We should decisively move away from the *austerity-dominated* management of debt crisis to the *investment-centred* management for preventing debt crises from emerging in the first place. Equally, it is high time to engage with the real question: *how* we can collectively make aid and debt work for development instead of the highly politically charged debate on *whether* aid works. The latter way of inquiry no longer fits the purpose of facing up to new challenges confronting us all in a highly globalised, interconnected world. Refugee and migration crises from man-made and natural disasters have been unfolding in an unprecedented scale, severely testing the prevailing architecture governing humanitarian and developmental aid. The boundary between humanitarian and development aid has become blurred amid long-running refugee crises in many parts of the world. The provision of global public goods such as addressing ecological crises triggered by climate changes, and recurrent global economic crises stemming from fast cross-border capital flows as well as reducing poverty and strengthening security globally call for international cooperation, coordination and concerted action.<sup>50</sup> These issues highlight the undiminishing role of aid as *development cooperation* in increasing LICs' resilience through structural transformation and alleviating hardships of the vulnerable. With all these emerging conditions and the collective commitments made to achieve the SDGs, the 'aid' architecture should be reconfig-

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<sup>50</sup> See Chap. 24 by Inge Kaul on issues related to global public goods provision.

ured and reformed to adapt to new challenges of securing sustainability in triple dimensions—ecological, economic/financial and social—as embedded in the SDGs through our collective action.

## Appendix on Inter-temporal Borrowing/Lending Model

The inter-temporal borrowing/lending model is a neoclassical model of inter-temporal utility maximisation with a two-period budget constraint with the given levels of income,  $y_0$  and  $y_1$ , and a two-period utility function  $U(C_0, C_1)$ . In Fig. 15.3, an inter-temporal production possibility frontier (PPF) represents a trade-off between outputs in the two periods. Point  $A$  represents autarky position, where a country has no access to international borrowing and both producers and consumers face the domestic interest rate  $r$ , which exceeds the world interest rate,  $r^*$ . The slope of the budget line at point  $A$  is  $-(1 + r)$ , whereas that of the budget line at points  $B$  and  $C$  is  $-(1 + r^*)$ . With opening up to international borrowing, two effects emerge: (i) the country can divert resources to more future production at  $B$ , as it responds to the lower interest rate,  $r^*$  and (ii) the country enjoys higher current consumption at  $C$ , as the higher utility indifference curve through point  $C$  than the one through point  $A$  indicates.

As Obstfeld and Rogoff (1996) show, the model links the current account concept and the domestic investment-saving gap and illustrates the role of international borrowing and lending to fill the gap. Accessing the international capital market allows a country to undertake the extra investment (shown by the horizontal distance between points  $A$  and  $B$ ) as well as to enjoy the extra first period of consumption (shown by the horizontal distance between points  $A$  and  $C$ ). The sum of the two horizontal distances (the distance between  $B$  and  $C$ ) is the first-period current account deficit that reflects its resource gap. At the same time, whilst a move from  $A$  to  $C$  reflects trade gains due to a smoothing of the time path of consumption, the further trade gains are realised by the change in the economy's production point from  $A$  to  $B$ .

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# 16

## Labour Institutions and Development Under Globalization

Servaas Storm and Jeronim Capaldo

### 1 'Luxuries' That Developing Countries Cannot Afford ...

Labour market regulation is a high-profile and controversial area of public policy in developed and developing countries alike: its impacts on economic growth, employment and income inequality have been the topic of heated policy discussions and much research in recent decades.<sup>1</sup> Labour market regulation is usually thought of as a set of legal interventions or collective (bargaining) organizations that structure and coordinate processes of wage determination and employment generation—examples include rules for labour unions and collective bargaining, legislation on minimum wages and employment protection, and unemployment insurance. Such regulations make up an important part of the institutional framework within which real-life labour markets are embedded—and they are therefore often called

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<sup>1</sup> Recent surveys of the literature include Freeman (2010), Lee and McCann (2011), Campos and Nugent (2012), Betcherman (2014), Berg (2015), Deakin (2016) and Brancaccio et al. (2018). Broecke et al. (2017) review 95 studies for 14 emerging countries and present a meta-analysis based on 56 of the studies (see Table 16.1).

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‘labour market institutions’. Today’s developing countries introduced labour market institutions that were often patterned after their colonizers’ laws and traditions (Botero et al. 2004; Campos and Nugent 2012; Deakin 2016). While such ‘progressive’ or ‘protective’ institutions generally enjoy public (political) support and are perceived as welfare improving by most voters, in economic analysis they have traditionally been portrayed as ‘luxuries’ developing countries cannot afford. Mainstream economists, often employed by the World Bank or the International Monetary Fund (IMF), have been among their most outspoken critics. Laws governing (minimum) wages, job protection and working conditions or facilitating collective wage bargaining, they argue, prematurely raise developing countries’ labour costs which, in turn, will reduce the international cost competitiveness of their firms, hurt (net) exports and hence destroy the very formal sector jobs these laws are designed to protect (Besley and Burgess 2004).

This suggests that there exists a trade-off, as argued by Okun (1975), between the quality and the quantity of jobs available to workers operating in competitive labour markets: in the absence of compensatory productivity gains, policy efforts to protect workers lead to higher unit labour costs, discouraging investment, reducing export competitiveness and ultimately leading to lower economic activity and employment. In this view, labour rights and labour protection are more likely to create additional unemployment and informal sector underemployment, particularly of unskilled workers or labour force entrants, than lead to higher wages and better working conditions. According to the World Bank’s *Doing Business Report* “laws created to help workers often hurt them” (World Bank 2008). The working draft of the World Bank’s 2019 *World Development Report* again advocates for cutting minimum wages, facilitating dismissals and removing other labour regulations in order to favour employment and economic development. The working draft says that less ‘burdensome’ regulations are needed so that firms can hire workers at lower cost as well as rearrange their workforce to accommodate changing technologies. In a more extreme statement, Nobel Prize-winning economist James McGill Buchanan (1996) wrote in *The Wall Street Journal*: “Just as no physicist would claim that water runs uphill, no self-respecting economist would claim that increases in the minimum wage increase employment”.<sup>2</sup>

This one-sided take of labour market institutions, which has become codified in textbook treatments since Samuelson (1947), underpins what Albert

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<sup>2</sup> For an important intellectual biography of Buchanan, who not only advised the Pinochet dictatorship in Chile but also worked to build a radical-right social movement in the US, funded by the Koch brothers and a network of fellow wealthy donors, see MacLean (2017).

Hirschman (1991) called ‘the rhetoric of reaction’: three standard tropes used by critics of social reform to defend the status quo. The first standard trope, as Andrew Schrank (2014) explains, is that protective labour market institutions are ‘futile’ because they do not solve the problem they are designed to improve, as they will push workers into precarious, informal employment. The second one is that the impacts of labour institutions are ‘perverse’ because their introduction achieves just the opposite of what it is intended to achieve; the third trope is ‘jeopardy’ whereby labour market regulation destroys ‘good’ formal sector jobs. Policymakers in the developing world had better prioritize job creation—so the mainstream argument goes—and should not go against the proverbial ‘magic of the market’.

The ‘rhetoric of reaction’ has been challenged on both theoretical and empirical grounds and there have been signs that the debate on labour market regulation and economic development may turn. Theoretically, it has been argued that labour market institutions are not generally instruments for ‘rent-seeking’ (by ‘insiders’ trying to influence the distribution of incomes in their favour at the expense of ‘outsiders’), but address (labour) market imperfections in a second-best world (Lee and McCann 2011). These institutions can reduce transactions costs, generate ‘efficiency effects’ and raise productivity (Freeman 2010; Storm and Naastepad 2009). They may also function as second-best instruments of risk sharing and insurance, protecting workers against unemployment and income loss (Agell 2002; Lee and McCann 2011; Berg 2015)—a role that has become more prominent for developing and emerging countries facing greater external risks as they become more globalized (Rodrik 1998; Akyüz 2015). At the firm level, labour regulation increases job stability, reduces search costs and lowers labour turnover rates (for high-skilled workers), and it can improve labour productivity and innovation through employer-worker cooperation, efficiency-wage effects, the build-up of firm-specific human capital and Marx-biased labour-saving technical progress (Storm and Naastepad 2009). Labour regulations thus generate benefits, not just for (high-skilled) workers but also for firms and in terms of overall economic growth.

Empirically, there is a growing body of econometric work on the impact of labour market institutions on economic development which suggests (and quite clearly so) that their impacts on growth are much smaller than one would infer from the heat of the debates (Campos and Nugent 2012; Betcherman 2014). Richard Freeman summed up the evidence, stating that more rigid labour regulations “reduce the dispersion of earnings and income inequality”, while their “effects on other aggregate outcomes, such as employment and unemployment are inconclusive” (Freeman 2010). The ILO (2015,

p. 110) concludes in its *2015 World Employment and Social Outlook* that “there is a fairly wide ‘plateau’ on which labour regulations will have neutral effects on employment performance, allowing considerable scope for country preferences and choices”. The *2013 World Development Report on Jobs* (World Bank 2013) reaches a similar conclusion: the efficiency-enhancing and undermining effects of labour rules generally cancel out, and hence most of their effects are redistributive. But swinging back to the vision of a decade earlier, the 2019 edition of the same report seems to fully embrace the ‘rhetoric of reaction again’. On the other hand, even the IMF (2016, p. 115) seems to be changing its view in response to the new evidence, concluding in its *World Economic Outlook* of 2016 that: “The analysis shows that reforms that ease dismissal regulations with respect to regular workers do not have, on average, statistically significant effects on employment and other macroeconomic variables”.<sup>3</sup> These new findings do not just constitute a challenge to the ‘rhetoric of reaction’ but also open up a menu of public policy choices to improve distribution, and perhaps productivity and competitiveness, in the developing world (Berg 2015; ILO 2016/17).

This chapter takes stock of the large and growing literature on the economic effects of labour market institutions in developing countries under globalization. Section 2 reviews the literature, critically assessing the theoretical concepts and summarizing the key empirical findings. Section 3 goes into the relative strengths and weaknesses of the indicators of ‘labour market institutions’ used in the extant literature—do these indicators, which quantitatively ‘reduce’ a complex (institutional and legislative) reality to a single-dimensional metric, really measure what they are supposed to measure? Our next step, in Sect. 4, is to try and interpret the stylized facts coming out of the discussions in Sects. 2 and 3, in terms of a simple macroeconomic growth model of a balance-of-payments (BoP) constrained, late-industrializing country facing the risks and challenges of globalization. We use the model to highlight the channels through which reforms of labour market institutions may hinder, or advance, economic development, assuming (realistically) that the growth of late industrializers is limited, in a structural sense, by the need to finance necessary imports through either earning from exports or financial inflows (cf. Thirlwall 1979; McCombie and Thirlwall 2004; Blecker 2010). Section 5 presents a political analysis of the economy of ways in which late-industrializing states may use regulatory obligations to improve income distribution, and

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<sup>3</sup> Likewise, the OECD (2016, p. 126) writes in its *OECD Employment Outlook*, that “Most empirical studies investigating medium/long-term effects of flexibility-enhancing Employment Protection Legislation reforms suggest that they have, at worst, no or a limited positive effect on employment in the long run”.

perhaps productivity and international competitiveness. The argument here (loosely) follows Streeck's (2004) notion of "beneficial social or regulatory constraints", which force capitalists (in Schumpeterian fashion) to innovate so as to benefit from these constraints, and by doing so, these firms improve the economy's dynamic efficiency (Ocampo 2005). Put differently, labour market regulation, already desirable in its own right, must be seen as complementary to and supportive of (active) industrial policy. We end by drawing our conclusions in Sect. 6.

## 2 Literature Review: Theoretical Concepts and Empirical Results

The economic literature on the developmental impacts of labour regulation is overwhelmingly empirical. In this econometric literature, the mechanisms through which labour regulation is assumed to produce specific economic effects are rarely made explicit—the implicit theoretical prior is that interventions in the form of employment protection legislation (EPL) or unemployment insurance distort the functioning of the labour market, leading to lower employment or lower growth or both. Minimum wages are an exception, however, following debates of the early twentieth century on the impact of wage-setting policies and, later, on efficiency wages (Leibenstein 1957; Stiglitz 1976; Dasgupta and Ray 1986). But even for minimum wages, theoretical contributions focusing on developing economies are rare. In one such contribution, Basu and Felkey (2008) show that *higher* wages can be associated with *lower* unemployment even in competitive labour markets and that, absent a minimum wage, the economy may converge to a low-wage and high-unemployment equilibrium. Basu and Felkey's argument did not, however, upset the consensus that the distortionary nature of labour regulation must raise unemployment and lower growth. Given this theoretical prior, greater equity, brought about by higher (minimum) wages, would require sacrificing higher employment, defeating its purpose. In a widely cited paper, Lazear (1990) argues that mandatory severance payments are likely to lead to an equilibrium outcome with lower employment because they drive up unit labour costs without affecting (marginal) productivity. As a result, optimal labour demand is lower than it would be, an unsurprising result given the implicit assumption of Say's law. This logic surfaces in influential papers on the effects of labour regulation in India by Besley and Burgess (2004) and Aghion et al. (2008), who find that Indian states which amended labour laws

in a pro-worker direction experienced lower output, employment, investment and productivity in registered manufacturing (but higher output in unregistered manufacturing),<sup>4</sup> and in Latin America by Heckman and Pagès (2004) who report adverse impacts of regulation on employment and inequality. Espousing the same view, the first World Bank's *Doing Business Report* (World Bank 2003) states that increases in dismissal costs are responsible for double-digit increases of unemployment in countries as diverse as India, Peru and Zimbabwe.

Recently, however, a more realistic view seems to have emerged. According to the latest World Bank's *Doing Business Report* (2017), "by setting the right incentives and deterrents for both employers and employees, labour regulation could contribute to labour mobility and productivity growth". While the report still cites labour flexibility as a factor facilitating job creation, recent contributions point to two channels through which labour regulation can affect output and employment: productivity growth and innovation. In the framework of neoclassical growth theory, these are two sides of the same coin. On the negative side, some authors argue that EPL will lead to lower aggregate productivity because firms, unable to adjust labour demand freely, will refrain from investments and the process of creative destruction will be hampered (Samaniego 2006; Martin and Scarpetta 2012; Caballero et al. 2013). An alternative negative view focuses on younger firms, innovation and foreign direct investment (FDI). By burdening these firms more than others, labour regulation obstructs their signature contribution to growth—innovation and attraction of FDI (Pierre and Scarpetta 2007). On the positive side, while still assuming that productivity growth depends mostly on supply-side factors, others argue that EPL leads to higher productivity because it encourages better cooperation between workers and employers, better work commitment and the process of skills acquisition (Akerlof and Yellen 1986; Soskice 1997; Pierre and Scarpetta 2006, 2007; Acharya et al. 2010). Also on the positive side, although with a somewhat unclear argument, the 2018 *Doing Business Report* anticipates that gender equality laws will lead to higher productivity by encouraging more women to enter the labour market (World Bank 2017). In sum, theoretical frameworks that analyse the economic effects of labour regulation in developing countries are largely undeveloped, and most contributions refer to a textbook version of a (neoclassical) general equilibrium model in the spirit of Samuelson (1947) to come up with the finding that 'water runs

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<sup>4</sup>These studies on India have been criticized for faulty coding (of strength of EPL), incorrect interpretation of labour laws and 'attribution bias', that is incorrectly attributing lower productivity in a given state to EPL. Acharya et al. (2010), D'Souza (2010) and Sofi and Sharma (2015) provide a critique and more realistic findings for India.



downhill', as Buchanan (1996) insisted. In Sect. 4 we propose a framework that better reflects key features of late-industrializing economies.

The empirical literature on the impacts of labour regulation in developing countries is much richer. Probably also owing to the absence of a clear theoretical framework, empirical studies have gone in many different directions, testing the effect of regulation on many different variables. After an initial wave of empirical research, inspired by Besley and Burgess (2004) and Heckman and Pagès (2004), which mostly reported negative impacts of labour regulation on growth, employment and productivity, later studies are increasingly converging on several empirically robust 'stylized facts'.

The first stylized fact is that the observed growth and employment effects of (higher) minimum wages and (stricter) employment protection are mostly inconclusive, while these measures lower the dispersion of earnings and income inequality (Betcherman 2014; Deakin 2016; Broecke et al. 2017). While some sector-level studies tend to maintain that regulation harms employment creation (e.g. Amin 2009), there is growing evidence that the aggregate impacts of higher minimum wages are insignificant. A recent World Bank study (Kuddo et al. 2015, p. 11) concludes that "although the range of estimates from the literature varies considerably, the emerging trend is that the effects of minimum wages on employment are usually small or insignificant (and in some cases positive)".<sup>5</sup> Evidence, especially for China, is building up for a positive minimum wage-employment relationship in a monopsonistic labour market (Huang et al. 2014 for China; Bhorat et al. 2017 for sub-Saharan Africa). This latter evidence is reinforced by macroeconomic analyses that point to positive feedback of labour market institutions on investment and aggregate demand (Storm and Naastepad 2012; Storm and Isaacs 2016; Strauss et al. 2017; United Nations Industrial Development Organization (UNIDO) 2017). But effects on growth and employment are generally small or insignificant compared to those on income distribution (Freeman 2010; Betcherman 2014), as is confirmed as well by recent meta-analyses of this literature (Nataraj et al. 2014; Broecke et al. 2017). This is illustrated in Table 16.1 which summarizes findings relating to the effects of higher minimum wages on employment and informality in 14 emerging and developing countries.

A second finding is that employment protection laws often encourage employers to invest in productivity-enhancing technologies. Such laws are found to be positively associated with innovation as measured by patenting

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<sup>5</sup> Likewise, a review of about 70 studies for high-income countries by Belman and Wolfson (2014, p. 21) finds that employment effects of higher minimum wages are close to zero and too small to be observable in aggregate employment or unemployment statistics.



activity or number of start-ups in higher technology industries such as software and biopharma (Acharya et al. 2010). Third, labour market standards are found to have a ‘technology-forcing’ or ‘cleansing’ effect, as tougher rules favour stronger enterprises and lead to the displacement of weaker, less productive ones (Mayneris et al. 2014; Huang et al. 2014; Mau and Xuy 2017). Likewise, there is strong firm-level evidence that regulation supporting ‘worker voice’ within the firm induces productivity as well as employment gains through their impacts on worker motivation and commitment (Deakin 2016). Finally, a fourth stylized fact is that stricter regulation may lead to higher informality although this effect is small according to most studies (Nataraj et al. 2014; Broecke et al. 2017; see also Table 16.1).

From an empirical perspective, a critical issue is the way labour regulation is measured. Most forms of labour regulation are ‘ordinal’ in nature which means they can be ordered (in terms of ‘low’, ‘medium’ and ‘high’ or on a scale (say) from 1 to 6, with a higher score indicating stricter, more worker-protective, laws). But the indicators of labour market regulation, for example, the restrictiveness of legal employment protection as reflected in various EPL indices, are used in empirical analyses as ‘interval’ or ‘ratio’ variables—meaning that the difference between two values is meaningful.<sup>6</sup> Defining these ordinal measures is not a straightforward exercise in the first place: the (rank) correlations between different labour market indicators are found to be very moderate (Aleksynska and Cazes 2014), which is not a good sign (since these indices are intended to measure exactly the same phenomenon). But interpreting the obtained ordinal measures as representing interval (or even ratio) scales and using these to calculate means, standard deviations and standard errors involves not just a quantum leap of logic—requiring quite a few pinches of salt—but is methodologically faulty. An additional complication is that labour market regulation is not a scalar, but a multidimensional variable and that the various features of very diverse labour institutions (such as minimum wages, EPL, unionization and more) have to be condensed to a single-dimensional metric (e.g. by means of factor analysis). In the next section we examine the indices that are used for this purpose more closely.

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<sup>6</sup>To illustrate: the labour market rigidity (LAMRIG) index developed by Campos and Nugent (2012) is argued to capture the rigidity of employment protection legislation. The LAMRIG index takes a value of 1.45 for Argentina, 2.25 for Brazil, and 1.42 for China during 2005–2009. Because the index is used as an interval variable, the strength of employment protection to Argentinean workers was almost exactly similar to the strength of job protection given to Chinese workers. Job protection in Brazil was more than 1.5 times more rigid than employment protection for workers in Argentina and China.

Table 16.1 The effect of minimum wages on employment in the 14 largest emerging economies

	Effect of an increase in minimum wage on:						Number of studies	Mean
	Minimum/average wage (2013)	Employment rate, 15+ (2013)	Informal employment	Employment	Formality	Employment		
Argentina	0.59	56%	50% (2009)	Mixed	Little research	1	-0.011	
Brazil	0.45	59%	42% (2009)	Mostly negative (small)	Mostly negative or zero/mixed	14	-0.025	
Chile	0.45	56%	36% (1995–1999)	Mostly negative		5	-0.051	
China	0.33	69%	33% (2010)	Mixed		9	-0.100	
Colombia	0.60	63%	60% (2010)	Mostly negative	Mixed	1	-0.048	
India	0.40	50%	84% (2009)	Mixed				
Indonesia	0.69	63%	73% (2009)	Mixed	Mixed	8	-0.010	
Mexico	0.28	57%	54% (2009)	Mixed		3	-0.175	
Philippines	0.87	59%	44% (2008)	Negative				
Poland	0.40	50%	5% (2010)	Negative		5	-0.091	
Russia	0.18	65%	12% (2010)	Zero (or small)	Mixed/negative	1	+0.001	
South Africa	0.30	43%	33% (2010)	Zero/mixed	Mixed/positive	6	-0.009	
Thailand	0.65	71%	42% (2010)	Mixed		1	-0.182	
Turkey	0.38	46%	31% (2010)	Mixed	Little research	3	+0.040	
<i>All countries</i>						56	-0.052	

Source: Broecke, Forti and Vandeweyer (2017). These authors conclude that “moderate increases in a minimum wage (...) are unlikely to lead significant employment losses” and that “minimum wage studies for Mexico, Colombia and Poland most often report negative effects of the minimum wage on employment, while positive effects are most often found in studies for China, Indonesia and South Africa” (Broecke et al. 2017, p. 383)

### 3 Indicators of Labour Market Regulation: Methodological Pitfalls and Snags

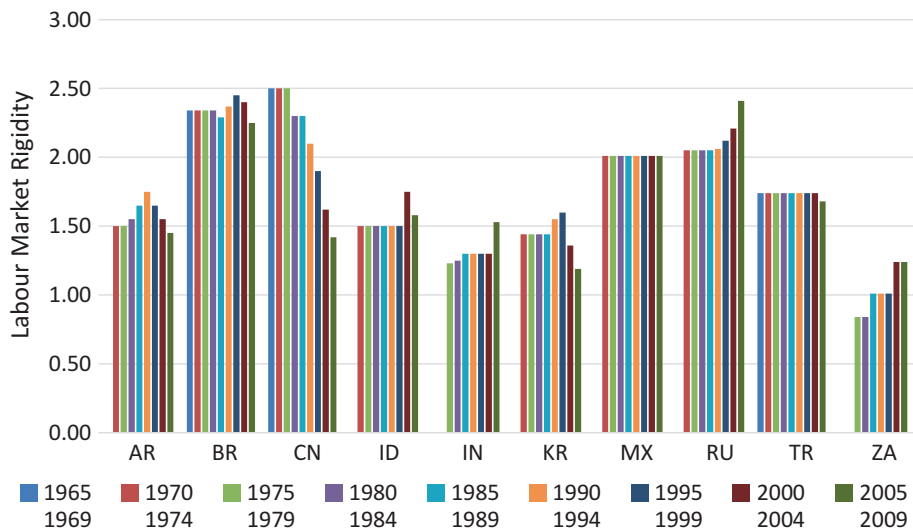
A consistent research programme attempting to quantify aggregate regulation of economic activity began in the mid-1990s with a series of papers by La Porta et al. (1997, 1998, 2000). A decade later, Botero et al. (2004) applied this idea to labour regulation. Botero et al. (2004) quantify labour regulation in 85 countries using a two-step procedure. First, they make a list of regulatory features relevant to the labour market. Second, they assign to each country scores indicating the degree to which each feature is reflected in its laws. For example, for the feature ‘prohibition of part-time employment’ a country receives a score of 1 if part-time employment is not allowed and a score of zero in other cases. The scores are then combined to create indexes for employment laws, collective bargaining laws and social security laws. Using their indicator, Botero et al. (2004) find that lower regulation is associated with higher income, higher employment, lower informality and other desirable outcomes.

This type of index could be useful to assess the way regulation evolves over time in a country because of the ‘ordinal’ nature of the scores. Since the scores are assigned somewhat arbitrarily, it is hard to argue that their differences can be useful in cross-country comparisons. For example, while the variable ‘conditions of the employment in the constitution’ is given values of 0 or 1 depending on whether employment conditions appear or not in a country’s constitution, it is given values of 0.33 or 0.67 in intermediate cases. Clearly, these numbers could be replaced by many others in the same relative positions, but this would affect any averages and any processing, including any econometric analysis.

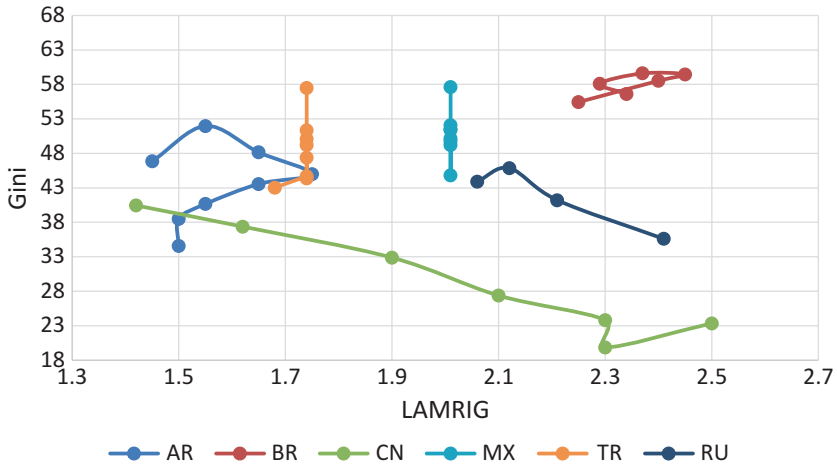
There are also several other problems with this ‘leximetric’ approach to assessing labour regulation. Firstly, for the index to be meaningful, the list of features would have to be complete, including all factors that affect the performance of the labour market. This, however, requires a prior specification of a theory of the impact of regulation on labour market performance. While no theory is made explicit by Botero and colleagues, they seem to take the view of regulation as a burden stifling the good performance of the labour market. Therefore, they do not consider effects of regulation that may benefit the economy, such as measures of job or income security. Secondly, in many countries, only a fraction of labour regulation is enforced, suggesting that a narrow focus on *formal rules* may be misplaced (Aleksynska and Eberlein 2016; Schrank 2014). Thirdly, arbitrariness is involved when combining scores reflecting different regulatory areas into overall indexes.

Despite these problems, the empirical research on labour regulation indexes has developed over the years, with contributions that have tried to generalize or correct Botero et al.'s (2004) initial results. Campos and Nugent (2012) extend the index (the acronym they use is LAMRIG) to 140 countries, including many developing countries, and present data for the period 1960–2010. For emerging economies, their data paint a mixed picture with clear trends towards deregulation in Argentina, Brazil, China and Korea; a clear trend towards strengthening regulation in South Africa; and less clear dynamics elsewhere (Fig. 16.1).

Using panel methods, Campos and Nugent (2012) analyse econometrically the relationship between their index of labour market rigidity (LAMRIG) and several economic and social variables, including gross domestic product (GDP) growth, unemployment and the Gini index, but also dummies representing the occurrence of economic crises as well as trade or financial liberalization. On the one hand, Campos and Nugent conclude that lower labour market rigidity does not systematically affect economic growth, but it does raise income inequality. The latter finding is illustrated in Fig. 16.2, using data for Argentina, Brazil, China, Mexico, Russia and Turkey. Figure 16.2 combines LAMRIG indices with Gini coefficients, averaged over the same five periods. A negative relationship between (greater) labour market rigidity and (lower) inequality emerges for three of the six emerging economies (China,



**Fig. 16.1** LAMRIG: Emerging economies. (Notes: AR Argentina, BR Brazil, CN China, ID Indonesia, IN India, KR South Korea, MX Mexico, RU Russia, TR Turkey, ZA South Africa) Source: Authors' calculation based on data from Campos and Nugent 2012



**Fig. 16.2** LAMRIG and Gini: Emerging economies. (Notes: AR Argentina, BR Brazil, CN China, MX Mexico, RU Russia, TR Turkey)

Source: Authors' calculation based on data from Campos and Nugent (2012) for the LAMRIG indicator, and on UNU-WIDER's World Income Inequality Database for the Gini coefficients. Annual observations are averaged over the same five-year periods used in the LAMRIG database

Russia and, partially, Argentina) for which data are available. In the remaining three countries, the relationship is either positive or unclear. Campos and Nugent further observe that trade liberalization, unlike financial liberalization, is often followed in time by an increase in the LAMRIG indicator; this could suggest that (formal sector) workers (in import-competing industries) react to the process of opening up of the economy by demanding stronger job protection. However, the possible links between these liberalizations and inequality levels are not analysed explicitly.

Refraining from many arbitrary calculations, Rama and Artecona (2000) and Forteza and Rama (2006) build indexes summarizing the ratification of international conventions on non-discrimination in employment. With a similar approach, Kucera's (2002) index summarizes the rules governing collective bargaining, while Aleksynska and Schindler (2011) put together a more comprehensive database of regulation comprising EPL, unemployment insurance and minimum wage for 91 countries starting from 1980. More complex, and arbitrary, calculations are involved in Heckman and Pagès' (2004) Job Security Index in which labour regulation determines the cost of worker dismissal and, therefore, the value of dismissing a worker at a given point in time. The index is defined as the discounted value of dismissing a worker. Deakin, Lele and Siems (2007) and Adams et al. (2015) make an attempt to offer a general index based on the view that labour regulation is

necessary to allocate authority and risk. Their Centre for Business Research (CBR)-labour regulation index (LRI) index, applied to 60 countries, to the years from 1990 onwards, points to moderately increasing labour protection in all regions, especially for alternative employment contracts (other than full-time contracts) except in Europe. Furthermore, using panel econometrics they argue that the impact of labour regulation on the economy is not negative.

Some of the most influential indexes have been built and published by institutions. The most widely debated index has probably been the World Bank Employing Workers Index, a component of its 'Ease of Doing Business' indicator. Extensive criticism (see Berg and Cazes 2008; Lee et al. 2008) and an independent evaluation (World Bank 2011) pointed out that the index was biased by a view of labour regulation as a cost to business and a drag on efficiency, which overlooked any positive effects that regulation might have on the economy. As a result, the index was excluded from the larger 'Doing Business' indicator, but Aleksynska and Cazes (2014) have shown that it survives in at least three frequently cited indexes: the World Economic Forum's Labour Market Efficiency Index; the Fraser Institute Labour Market Regulations Index; and the Government Efficiency Index of the International Institute for Management Development. Finally, the OECD's (2004) 'strength of employment protection legislation' (EPL) indicator is a comprehensive data set of regulation covering Organisation for Economic Co-operation and Development (OECD) countries from the 1990s. Its construction has evolved over time, moving from relying on government surveys to surveys of businesses (which, however, are more prone to consider regulation a burden) and, eventually, to primary sources.

## 4 A Balance-of-Payments Constrained Growth Model Analysis

In order to identify the potential impacts of labour market regulation on economic development, we use a modified version of Thirlwall's (1979) model of balance-of-payments constrained growth, which focuses on a 'small' developing country open to trade and foreign capital.<sup>7</sup> In this model, long-term growth is constrained by export growth, because developing countries cannot permanently run (and finance) a trade deficit. We emphasize that the

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<sup>7</sup>As usual, when discussing international trade and finance, a 'small' country here indicates one whose economy is not large enough to influence the international price of traded goods and services, the exchange rate and other international macro prices.

model is used as a mnemonic device, capturing and illustrating essential aspects rather than constituting a universal description of economic reality. Let us further assume that the late-industrializing country under consideration produces one (composite) good which is an imperfect substitute for the goods produced by the rest of the world.

The export growth ( $x$ ) of this country is a function of the growth of world income ( $y_w$ ), the growth of relative prices ( $p - p_w$ ) and the relative change in the exchange rate ( $er$ ). This gives:

$$x = \vartheta(\tau) y_w - \eta (p - p_w - er) \quad (16.1)$$

where  $p$  is domestic inflation,  $p_w$  is global inflation and  $er > 0$  means that the country's exchange rate is depreciating. The elasticity  $\eta$  measures the impact of relative prices ( $p - p_w - er$ ) on export demand, while  $\vartheta(\tau)$  is the world-income elasticity of demand for a country's exports. The parameter  $\tau$  can be interpreted as the technological intensity of the export item which ranges from 'low-tech' to 'medium-tech' and 'high-tech'. The world-income elasticity of export demand is higher for higher technology exports, as illustrated by the econometric estimates of  $\vartheta(\tau)$  for selected Latin American countries (1962–2014) by Neto and Porcile (2017) which appear in Table 16.2. We therefore assume that  $\vartheta$  depends positively on the level of technological diversification of the economy, or  $d\vartheta/d\tau > 0$ . It is the role of macroeconomic, trade and industrial policies to build up domestic technological capabilities, facilitate learning and promote more diversified and upgraded production structures to bring about a more technology-intensive export structure (Ocampo et al. 2009; Storm 2015; Wade 2018). We argue here that labour market institutions can help in bringing about such technology-deepening of a country's exports.

**Table 16.2** Income elasticity of export demand: 1962–2014, selected countries

	Primary products	Resource-based manufactures	Low-technology manufactures	Medium-technology manufactures	High-technology manufactures
Argentina	0.66	0.69	0.79	0.82	0.93
Brazil	0.62	0.87	1.74	2.23	4.14
Chile	1.05	1.10	1.51	2.26	3.85
Colombia	1.00	1.58	1.57	3.24	4.24
Mexico	0.77	1.12	2.26	2.83	6.91
Uruguay	0.76	0.84	0.62	1.26	2.18

Source: Neto and Porcile (2017), Table 1. The data are from the United Nations Commodity Trade Statistics Database. The trade data are classified according to technological intensity using Lall's (2000) classification

Import growth ( $m$ ) is a function of the growth of domestic income ( $y$ ), the growth of relative prices ( $p - p_w$ ) and the relative change in the exchange rate ( $er$ ). This gives:

$$m = \mu y + \gamma (p - p_w - er) \quad (16.2)$$

where  $\mu$  is the domestic income elasticity of demand for imports and  $\gamma$  is the elasticity of import demand with respect to the relative prices ( $p - p_w - er$ ). To bring unit labour costs into the picture, we assume (following Fagerberg 1988) that prices are determined by unit labour costs with a constant markup. Unlike other analyses (e.g. Fagerberg 1988), we include other costs of production such as energy cost and costs of materials and intermediate inputs. This means that the price level  $P = \theta (ULC + \zeta)$ , where  $\theta$  equals 1 plus the markup,  $ULC$  is the level of unit labour cost and  $\zeta$  is non-labour costs per unit of production. When we express this price equation in growth rates, while assuming that both  $\theta$  and  $\zeta$  are constant, we get the following expression for domestic wage-cost-push inflation:

$$p = \Xi ulc, \quad 0 < \Xi < 1 \quad (16.3)$$

$ulc$  stands for the growth of the country's unit labour costs. Coefficient  $\Xi$  is the share of marked up labour costs  $ULC \cdot \theta$  in the price level  $P$ , which for developing economies like India and Brazil takes values between less than 0.1 and 0.25 in (export) manufacturing. What this means is that (say) a 5 percentage point increase in unit labour cost growth leads to an increase in inflation of around 1 percentage point (Storm and Naastepad 2012). For reasons of exposition (and without loss of generality), we further assume that unit labour costs in the rest of the world do not change; this means that  $p_w = p_w$  and  $ulc_w = 0$ . Using these two assumptions, Eqs. (16.1) and (16.2) can be simplified as follows:

$$x = \vartheta(\tau) y_w - \eta (\Xi ulc - er) \quad (16.4)$$

$$m = \mu y + \gamma (\Xi ulc - er) \quad (16.5)$$

The model is closed by assuming that the balance-of-payments (BoP) identity holds in domestic currency terms:

$$P X + K = P_w M ER \quad (16.6)$$



where  $P$  is the domestic price level,  $X$  is the volume of exports,  $K$  is the net capital inflow into the economy,  $P_w$  is the world market price,  $M$  is the volume of imports and  $ER$  is the nominal exchange rate. When we express Eq. (16.6) in growth rates and use Eq. (16.3) and assume that  $p_w = \Xi_w ulc_w = 0$ , we get:

$$\Theta x + (1 - \Theta)\kappa + \Xi ulc \equiv m + er \quad (16.7)$$

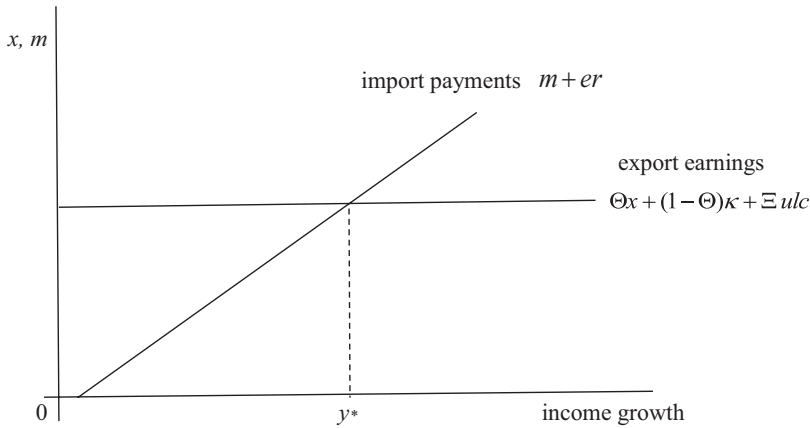
Equation (16.7) states that the weighed growth of exports and the weighted growth of net capital inflow ( $\kappa$ ) must equal the growth of imports plus the rate of change in relative prices.  $\Theta$  is the initial share of export earnings in the total inflow of foreign exchange, defined as the ratio  $[PX / (PX + K)]$ . For most developing countries,  $K$  is relatively small and hence  $\Theta$  will likely have a value close to unity. The BoP restriction states that export earnings (in domestic currency terms) must match payments for imports (in domestic currency terms). Substituting (16.4) and (16.5) into Eq. (16.7), we solve for the (BoP-constrained) growth rate of domestic income  $y^*$ :

$$y^* = \frac{\Theta \vartheta(\tau)y_w + (1 - \Theta)\kappa + [1 - \Theta\eta - \gamma](\Xi ulc - er)}{\mu} \quad (16.8)$$

We note that the growth of unit labour cost is, by definition, equal to the difference between (nominal) wage growth (indicated by  $w$ ) and labour productivity growth (denoted by  $\lambda$ ). Using this definition, we rewrite Eq. (16.8) as follows:

$$y^* = \frac{\Theta \vartheta(\tau)y_w + (1 - \Theta)\kappa + [1 - \Theta\eta - \gamma][\Xi(w - \lambda) - er]}{\mu} \quad (16.9)$$

Domestic income growth  $y^*$  is thus determined by the growth of world income  $y_w$ , the rate of change of relative unit labour costs (or ‘relative unit-labour-cost competitiveness’) and the growth of net capital inflow  $\kappa$ , as in the models of BoP-constrained growth developed by Thirlwall (1979) and McCombie and Thirlwall (2004). In what follows, we assume that net capital inflow  $\kappa$  is constant, the exchange rate does not depreciate or appreciate ( $er = 0$ ) and  $\mu$  does not change. Figure 16.3 graphically illustrates how the BoP-constrained growth rate  $y^*$  gets determined by the BoP restriction of Eq. (16.7). It can be verified that an exogenous increase in world-income growth will push up the horizontal ‘exports’ curve, thereby raising  $y^*$ , while a currency



**Fig. 16.3** The balance-of-payments (BoP) constraint and economic growth

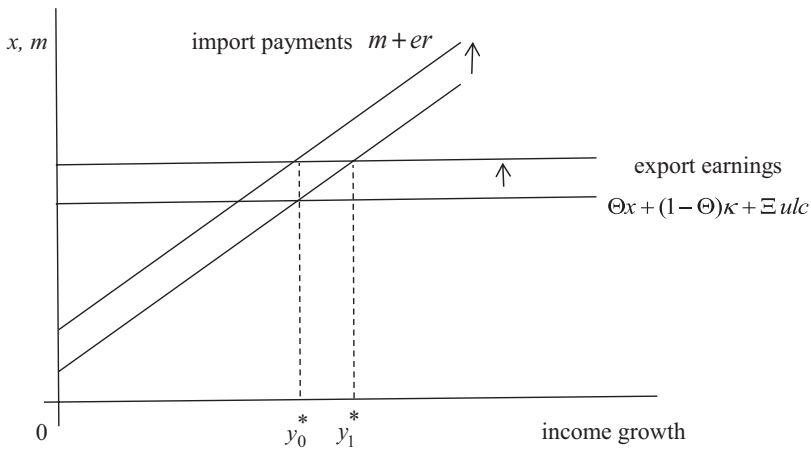
depreciation (i.e. an increase in  $er$ ) will push up the ‘imports’ curve, which would lower  $y^*$  (keeping all other factors constant).

However, our focus is on the impact of labour market institutions on growth in this open-economy setting, and we follow Betcherman (2014) by concentrating on the growth impacts of minimum wages and employment protection legislation (EPL). Let us first consider the impact of (higher) minimum wages—a notoriously controversial intervention, as is shown by the recent heated debate on the issue in South Africa (Storm and Isaacs 2016). Empirical research finds that not only formal sector wages rise with higher minimum wages but often informal sector wages rise as well (Betcherman 2014; Nataraj et al. 2014). This would mean, in terms of Eq. (16.9), that the growth rate of nominal wages ( $w$ ) increases. As a first approximation, the impact of higher  $w$  on growth is:

$$\frac{dy^*}{dw} = \frac{[1 - \Theta\eta - \gamma]\Xi}{\mu} \quad (16.10)$$

It can be seen that  $(dy^*/dw)$  is negative, if the Marshall-Lerner condition is strictly satisfied:  $\Theta\eta + \gamma > 1$  (cf. Fagerberg 1988).

This cannot be taken for granted, however. Findings from empirical research are mixed and, if anything can be concluded, it is that the hypothesis that the Marshall-Lerner condition does not hold has not been rejected so far (Fagerberg 1988; Rose 1991; Bahmani et al. 2013). This means that our working hypothesis should be that  $\Theta\eta + \gamma \approx 1$ , in which case, higher minimum wages do not hurt the (long run) BoP-constrained growth. Figure 16.4



**Fig. 16.4** Higher minimum wage growth and BoP-constrained growth

illustrates the comparative-statics. Higher  $w$  means higher  $ulc$  and higher (export) prices; this would shift the ‘export earnings’ curve upwards (keeping export volume unchanged). But faster growth of unit labour costs (higher  $ulc$ ) reduces the country’s cost competitiveness and therefore lowers the growth of export volume  $x$ , pushing down the ‘export earnings’ curve. But since the  $ULC$  elasticity of exports is smaller than unity—after all, we know that  $\eta \approx 1 - \gamma$  if we assume that  $\Theta = 1$ —the net outcome is an upward shift of the ‘export earnings’ curve as in Fig. 16.4. Higher export earnings loosen the BoP constraint (given by Eq. (16.7)) and would, in principle, allow the country to import more and step up growth from  $y_0^*$  to  $y_1^*$ . But the growth acceleration does not materialize. The reason is that the increase in  $ulc$  increases the import intensity of growth through the price elasticity of import demand in Eq. (16.2). The higher import intensity of growth is captured by the upward shift of the ‘import payments’ curve in Figure. Given  $\Theta\eta + \gamma \approx 1$ , the ultimate impact on  $y^*$  turns out to be negligible—and the country’s economic growth rate stays put at  $y_0^*$ .

If this is the case, it directly follows that (higher) minimum wages also do not reduce aggregate employment, which is exactly what Betcherman (2014), Kuddo et al. (2015) and Broecke et al. (2017) conclude based on reviews of the relevant empirical literature. At the same time, there is strong evidence that (higher) minimum wages compress wage distributions and reduce earnings inequality (for covered workers) and lower working poverty (see Betcherman 2014; ILO 2016/17)—and if  $(dy^*/dw) = 0$  indeed, all this can be achieved without depressing (structural) economic growth. It is in exactly this context that the position on labour regulations of the ILO (2015) has to be understood.

However, the conclusion that labour market institutions are not a ‘luxury’ which late-industrializing nations cannot afford does not only depend on the (empirical) fact that the Marshall-Lerner condition is not satisfied. Let us now assume that  $\Theta\eta + \gamma > 1$ , and hence, from Eq. (16.10), we obtain that  $(dy^*/dw) < 0$ . For one, it should be clear that the (negative) impact of higher wage growth on  $y^*$  (through higher unit labour cost growth) can only be small, even when  $\Theta\eta + \gamma > 1$  because *ULC* are just a fraction  $\Xi$  of the price ( $\Xi$  takes a value of only around 0.20). The negative impact on growth of higher *ulc* is therefore only around one-fifth of the impact of higher inflation. But there are other reasons to argue that any decline in  $y^*$  due to the deterioration in labour-cost competitiveness is only a partial effect—as two other growth impacts of higher minimum wages are still ignored. Let us consider these two growth effects successively.

The *first* effect on growth of higher minimum wages operates through its impacts on labour productivity growth. As we already explained earlier, higher minimum wages encourage employers to invest in labour-saving (productivity-enhancing) technologies and at the same time have a ‘technology-forcing’ or ‘cleansing’ effect, as the stronger enterprises can cope with the higher wages, whereas weaker, less productive, firms, unable to adjust, are forced to exit the market (Mayneris et al. 2014; Huang et al. 2014). We summarize the productivity-enhancing impact of higher (minimum) wages in a simple expression (linear in growth rates) as follows (see also Ocampo et al. 2009):

$$\lambda = \alpha + \beta w, \quad \text{where } 0 < \beta < 1 \quad (16.11)$$

Differentiating Eq. (16.9) with respect to  $w$ , taking (9) into account, gives us the growth impact of higher minimum wages which includes the increase in labour productivity growth which is—directly and indirectly—induced by the rise in  $w$ :

$$\frac{dy^*}{dw} = \frac{[1 - \Theta\eta - \gamma]\Xi(1 - \beta)}{\mu} \quad (16.12)$$

We already argued with reference to Eq. (16.10) that  $(dy^*/dw)$  is likely to be small (in absolute terms). Since  $0 < \beta < 1$ , it follows from Eq. (16.12) that the negative impact on growth of higher minimum wages becomes even smaller (in absolute terms). If we assume that  $\beta$  takes a value of 0.5, the growth-retarding impact of higher minimum wages, caused by a loss of international labour-cost competitiveness, is reduced by half—even when the Marshall-Lerner condition is met and the relative price elasticities  $\eta$  and  $\gamma$  are

large. The bottom line is that even in this case, there are solid analytical reasons to expect the impact of minimum wages on growth and employment to be non-significant (as appears to be the new consensus).

It is important to emphasize that Eq. (16.12) does not yet capture one further growth impact of higher minimum wages, namely the effect on growth which operates through industrial upgrading and diversification, or what we have called the ‘technology-forcing mechanism’ mentioned earlier. The introduction of a higher wage floor makes the survival of non-dynamic firms and low-productivity activities more difficult—the economy is forced to upgrade and diversify into higher productivity activities (Mayneris et al. 2014; Huang et al. 2014). This will also lead to greater export diversification, which shows up (as studies show) in a higher world-income elasticity of demand for this country’s exports  $\vartheta$ . We have assumed in Eq. (16.1) that  $\vartheta$  depends positively on the level of technological diversification of the economy ( $\tau$ ), or  $d\vartheta/d\tau > 0$  (see Table 16.2; Neto and Porcile 2017). Accordingly, and against the background sketched earlier, we assume that the world-income elasticity of export demand will be higher—in a structural sense—when wage growth is higher:

$$d\vartheta = \xi dw > 0 \quad (16.13)$$

Using Eqs. (16.12) and (16.13), when differentiating (16.9) with respect to  $w$ , we get:

$$\frac{dy^*}{dw} = \frac{\Theta y_w}{\mu} \xi + \frac{[1 - \vartheta(\tau)\eta - \gamma]\Xi(1 - \beta)}{\mu} \quad (16.14)$$

Equation (16.14) includes all three—structural—impacts of (higher) minimum wages on economic growth of a late-industrializing economy, operating through:

- a loss of international labour-cost competitiveness, which raises import growth and depresses export growth, *if and only if* the Marshall-Lerner condition is satisfied. BoP growth  $y^*$  declines in this case;
- more rapid labour productivity growth, induced by higher wage growth (Storm and Naastepad 2016), which ameliorates relative labour-cost competitiveness and raises  $y^*$  (keeping all other factors constant); and
- an upgraded, more diversified composition of exports, which results in a (one-time) increase in the world-income elasticity of export demand and permanently higher rate of growth  $y^*$ .

If the Marshall-Lerner condition is not satisfied (an entirely realistic possibility), the first two effects vanish and only the third—structural—growth impact remains. Using Eq. (16.14), (higher) minimum wages will in this case provide a spur to BoP-constrained growth  $y^*$ , since  $\frac{dy^*}{dw} = \frac{\Theta y_w}{\mu} \xi > 0$ ; this explains the positive growth and employment impacts of higher minimum wages in sub-Saharan Africa (Bhorat et al. 2017). Seen this way, we can understand why the growth impact of (higher) minimum wages is often negligible, small and sometimes positive.

The earlier analysis of the growth impacts of higher minimum wages, which operate through their impact on unit labour costs, is instructive for the analysis of the effects of labour institutions (including employment protection) in general. The reason is, as James Heckman (2007, p. 2), writes, that the

only valid index of the effect of institutions on the labour market is the cost of labour, or better, the dynamic schedule of labour costs. All institutions operate on this cost. Instead of creating a panoply of newer, more refined indices to represent the magnitude of various institutional forces, as characterizes the current empirical literature, it would be more constructive to quantify the effects of the *entire edifice* of labour institutions on demand and supply of labour through their effects on a single measure—the labour cost schedule. All institutions affect costs and alternative institutions within an economic environment raise or lower costs. Once the incentives of protective institutions are properly measured, they can be used to estimate economic responses.

We concur and, hence, when assessing the growth impacts of stronger employment protection legislation (operationalized in terms of an indicator  $epl$ ), we assume that higher  $epl$  leads to higher wage claims and higher nominal wages, or:

$$dw = \Omega \, depl > 0 \quad (16.15)$$

Accordingly, the impact of higher  $epl$  on the BoP-constrained growth rate  $y^*$  is similar to the impact of a higher minimum wage as in Eq. (16.14), or:

$$\frac{dy^*}{depl} = \frac{\Theta y_w}{\mu} \xi \, \Omega + \frac{[1 - \vartheta(\tau)\eta - \gamma] \Xi (1 - \beta)}{\mu} \Omega \quad (16.16)$$

There is no need repeating the argument underlying Eqs. (16.14) and (16.16). But it is worth pointing out that as increases in  $epl$  are unlikely to result in more than proportional increases in wage growth, coefficient  $\Omega$  is likely to be small—meaning that the growth impact of higher  $epl$  will be even

smaller than that of higher (minimum) wages. It is understandable therefore that the statistical association between measures of *epl* and growth is generally insignificant (e.g. Campos and Nugent 2012).

## 5 The Political Economy of Labour Market Deregulation

Most social arrangements (including labour regulations), which constrain the operation of supposedly ‘free’ markets and restrict the space for private business, are resisted as irrational impediments to the pursuit of overall economic improvement (Streeck 2004). Mainstream economics used to legitimize this view arguing that ‘excessive’ labour market regulation slows down economic development by redistributing income in favour of wages, which compromises capital accumulation, and by hurting international (unit labour) cost competitiveness, which damages (net) export growth. The tension between external competitiveness and labour emerges from the fact that real unit labour costs, which exporting firms have an interest in lowering, is also labour’s share of national value added, the ratio of real wages to labour productivity.<sup>8</sup> By containing nominal wage growth, cutting social security contributions or keeping real wage growth below productivity growth, all of which can be negotiated more easily when labour’s bargaining power is weakened by looser or more ‘flexible’ labour market regulation, policymakers can reduce real unit labour costs. In the mainstream vision, the loss of labour income will be more than compensated for by an increase in exports. Unfortunately, this compensatory effect has rarely materialized, while the weakening of domestic demand has choked relatively more employment-intensive sectors in many developing economies. The detri-

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<sup>8</sup>This is clearly visible starting from national accounts’ identity which states that the value of output equals the costs of production, or  $PX = WL + PAA + \pi PX$ , where  $P$  is the average price level,  $X$  is the total output,  $W$  is the nominal wage,  $L$  is hours worked,  $A$  is energy and raw material inputs,  $P_A$  is the price of energy and raw materials and  $\pi$  is the profit share. Dividing both sides by  $X$ , and rearranging,

gives the price-level equation underlying equation (3):  $P = \theta(ULC + \xi)$  where  $\theta = \frac{W}{X/L} = \frac{W}{\lambda}$ ,  $\xi = \frac{A}{X}PA$ , and  $\theta = \frac{1}{1-\pi}$ . The labour share in income is defined as  $\psi = \frac{WL}{PX} = \frac{W/P}{\lambda}$ , which is the ratio of the real

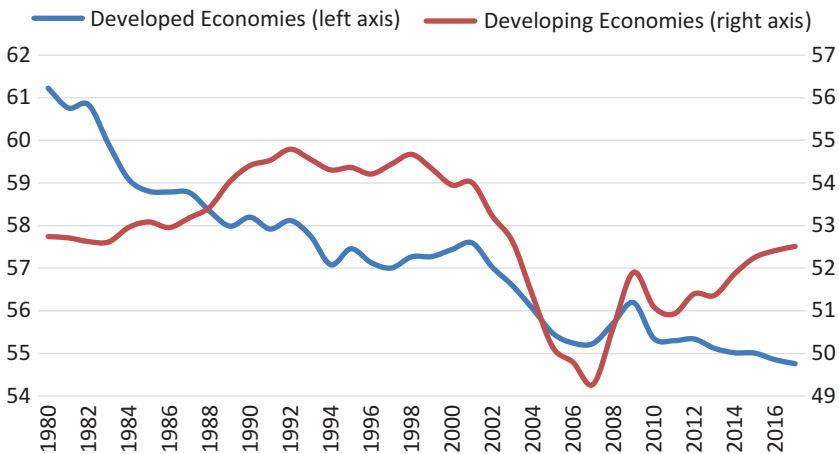
wage and labour productivity. What these derivations show is that exporting firms have two reasons to lower  $ULC$ . First, a reduction in  $ULC$  lowers their price and improves international competitiveness (and hence exports). Second, to the extent that firms do not lower their prices in response to lower  $ULC$ , they will enjoy a higher profit share; this can be inferred from the definition of the real profit share which is

$\pi = 1 - \left( \psi + \frac{\xi}{P} \right)$ , and assuming that all other factors remain unchanged.

mental effects of these policies have been particularly strong when they have been applied on a global scale (Capaldo and Izurieta 2013).

The mainstream arguments became consolidated in a hegemonic narrative that persuaded policymakers in developing countries, often through policy conditions attached to structural-adjustment programme lending, to refrain from introducing labour regulations in order not to stall their economies' development. This 'deregulatory' narrative has proven to be persistent in policymaking practice, as well as resistant to the empirical evidence (reviewed in Sects. 2 and 3) which disputes the claims that stronger labour regulation leads to lower growth, lower formal sector employment and a loss of international competitiveness. To this day, policy advice to late-industrializing nations coming from the World Bank and the IMF continues to be in deregulatory mode, often in clear disjunction with the findings of their own research departments.

As a result of these Washington-Consensus policies, labour shares in the world have largely fallen over the last 30 years (Fig. 16.5) in a vicious circle of deteriorating income distribution, declining domestic demand, a growing dependence on external demand and higher financial fragility. Econometric evidence by Onaran and Galanis (2014) shows that a decrease in the labour share leads to a decline in domestic demand in all G20 countries. This decline in domestic demand is not offset by higher net exports in the Euro Area, Japan, the UK, the US, Turkey and South Korea, and hence economic growth in these economies declines in response to a fall in the wage share. Onaran and Galanis (2014) provide further evidence that a *simultaneous decline* in the



**Fig. 16.5** Labour share (percentage of GDP): 1980–2017. (Notes: Labour share is calculated as ratio of the sum of compensation of employees and mixed income to GDP; developing countries do not include economies in transition)

Source: United Nations Global Policy Model



labour share in the G20 countries leads to a decline in global economic growth; hence, the actual global decline in the labour share reported in Fig. 16.5 has had significant negative effects on growth. Likewise, Capaldo and Izurieta (2018), using the United Nations Global Policy Model, find that a globally depressed labour share, resulting from a lowering of wages and worker protection in the wake of the liberalization of trade, leads to higher unemployment, higher inequality and higher risks of social and political instability. These findings make it clear that labour market regulation is likely to have beneficial effects on aggregate demand, economic growth and employment, by raising the labour share—and particularly so when this happens at the global level. The implications of all this for late-industrializing countries are profound, as is argued by Storm (2015), Stiglitz (2017) and the authors of UNIDO's (2018) *Industrial Development Report*. The need for a reconsideration of the developmental impacts of labour institutions remains as large as ever before—and this should be done at the global level as well (Capaldo and Izurieta 2013), so as to not fall victim to the fallacy of composition. While deregulation may look beneficial from the point of view of one single nation, it leads to a brutal “race to the bottom” in labour standards when implemented by all nations—and this ‘race’ has no winners in terms of growth and development (Nissanke 2015). Unfortunately, it is exactly what (multilateral) free trade arrangements do, as is argued and shown by Kohler and Storm (2016) in the context of the Comprehensive Economic and Trade Agreement between Canada and the European Union (EU) and by Capaldo and Izurieta (2018) for the Trans-Pacific Partnership (TPP), even when their proponents claim these are ‘gold-standard’.

In our opinion, and in line with what we have argued throughout the chapter, labour market regulation can be (designed to be) conducive to economic development and must be treated as a strategic ‘developmental’ policy tool complementary to industrial policy. As generations of development economists have pointed out, industrialization relies strongly on dynamic domestic demand (Storm 2015; UNIDO 2017; Wade 2018), which in turn is sustained by well-paying and stable employment and fair income distribution (Ocampo et al. 2009). In fact, the intrinsic value of labour laws goes beyond this instrumentalist view as they protect economic and social rights (including the right to strike and free, safe and fair working conditions) and often fundamental human rights (e.g. the freedom of association, and the prohibition of slavery, exploitation and forced and compulsory labour; see Fenwick and Novitz 2010). But our take here is narrower as we argue that labour market regulation (i.e. imposing institutional constraints on firms) can have positive impacts on (productivity) growth, employment, equality and competitive-

ness. Labour laws may constitute ‘beneficial constraints’, using Wolfgang Streeck’s (2004) felicitous term, which may raise the static as well as the dynamic efficiency of economic activity in three separate ways.

A first—Weberian—efficiency-enhancing mechanism operates through improving *legitimacy*. Since labour market institutions inject fairness into the employment contract (by limiting inequality and facilitating risk sharing), they create goodwill and political legitimacy among workers enhancing, perhaps as an unintended consequence, (labour) productivity. As Streeck (2004, p. 427) explains:

Social justice, as embodied for example in non-marketable civil, political and social rights, enhances what industrial sociologists used to call ‘morale’ and thereby, through a complex capillary system of causal connections, may make for higher productivity. Especially in advanced production systems, an important condition of the institutions that govern the employment relationship being efficient is that employees regard them as fair. Work flows better, errors are more easily detected and corrected, improvements are introduced more frequently and spontaneously, and conflicts are more easily settled in a general ‘climate’ of goodwill.

Labour laws and institutions modify the operation of markets in ways which, far from undermining capitalism, have made it more stable and efficient, while increasing its legitimacy. Economists have long known this to be true—as is evidenced by the large body of work on the importance of reciprocity and fairness in the employment relationship (Akerlof and Yellen 1986; Agell 2002; Basu and Felkey 2008; Fehr et al. 2009; Lee and McCann 2011). It is now accepted as well by the World Bank (2015, p. 247), which writes in the 2016 *Doing Business Report* that “under-regulation in the areas of working time and minimum wage protection can have harmful effects on productivity and exacerbate the effects of macroeconomic shocks”. In our model we included this mechanism in Eq. (16.11), which captures in a straightforward manner the productivity-enhancing impact of a higher (fairer) minimum wage or stricter employment protection legislation.

A second channel through which labour institutions such as minimum wages and employment protection may enhance labour productivity, competitiveness and industrial upgrading is a Schumpeterian one which operates through spurring *innovation*. Capitalist entrepreneurs must operate in a world in which other social and political actors create rules and institutions, which constrain their profit-seeking activities. Faced with these social restrictions, capitalist entrepreneurs try to exploit the competitive opportunities they offer, as Streeck (2004,

p. 428) writes, “turning constraints into opportunities”. Firms are creative opportunists that seek advantage in a world governed by many different logics with which they have to make do. In such a world, the more productive and entrepreneurial firms will turn the constraints due to labour market regulation into profitable economic opportunities, and in the process strengthen their competitiveness, forcing less inefficient firms out of the market. Tougher labour rules favour the stronger, more productive and dynamic firms, as these will change work practices and reorganize job boundaries, and in the process become stronger and displace established, but less productive, competitors. This ‘cleansing’ or ‘technology-forcing’ effect of labour market standards has been found to have been empirically important in countries such as Germany and Sweden (in line with the Rehn-Meidner model), but recent research confirms that it also operates in late-industrializing economies such as China (Mayneris et al. 2014; Huang et al. 2014) and India (D’Souza 2010; Acharya et al. 2010). Of course, firms are unlikely to pursue these opportunities if they expect regulation to be repealed, since this would take away the need to adapt. Firms always have the option to organize and invest in lobbying activities aimed at stopping or repealing labour regulations, but, as we argued in this chapter, this would push the economy onto a path of slower development.

A third and final way in which labour regulation can promote the dynamic efficiency of firms and industries is the Keynesian-Kaldorian channel (already signalled by us earlier). Labour regulation raises the labour share in income, which in turn leads to higher domestic demand. The expanded home market allows a greater ‘division of labour’ and more specialization, which allows firms to benefit from economies of scale and scope and from ‘learning by doing’. This way, a higher labour share can provide the foundation for realizing a self-reinforcing (‘cumulative’) demand-driven industrialization process in which faster growth creates more and better paid jobs, increasing demand, spurring investment and thereby enhancing (embodied) technical progress and allowing manufacturing to expand further (Storm and Naastepad 2016). Removing labour market regulations, as the World Bank is recommending anew in the *World Development Report 2019*, would asphyxiate this process of cumulative causation. Seen this way, strengthening labour market regulations is a strategy which will pay off in terms of economic development.

Labour market regulation can thus be used in ways supportive to industrial policy. Policymakers could deliberately impose labour standards designed to force firms to comply with technological norms that are not currently viewed as technologically feasible. Taking clues from Schumpeter but also Hirschman, we argue that technology must be conceived as a cumulative and path-dependent process of learning and discovery, in which managerial and technological capabilities are accumulated, allowing firms in late-industrializing

countries to master, adapt and upgrade existing technologies (Amsden 2001; Shapiro 2007). If the developmental quest is for ‘dynamic efficiency’—the ability of an economy to *reconfigure* itself by constantly creating new activities characterized by higher productivity, positive spillovers and increasing returns to scale (Ocampo 2005)—not the static Pareto optimality implied by neoclassical general equilibrium thinking, then labour market regulations, which are designed and implemented to be ‘technology-forcing’ along the lines we just described, can supplement the more standard instruments of industrial policy (see Chap. 9 by Xinshen Diao, Margaret McMillan and Dani Rodrik, Chap. 7 by Richard Nelson and Chap. 17 by Raphael Kaplinsky).

This analysis seems to point to a ‘puzzle of lobbying’. If labour regulations (which raise labour’s ‘voice’ in the workplace) are indeed as beneficial to capitalist development as we claim, why do capitalists so often lobby against them rather than in their favour? One reason, as we have already made clear, is that these constraints favour the stronger, more productive firms, but not the lagging firms, which (failing to upgrade) will mount (political) resistance to these rules. Firms also have no way of knowing if in the end the rules and standards will turn out beneficial for them or not—and for that reason they may prefer an unregulated status quo or a deregulatory option. Furthermore, labour market regulations redistribute power both in the bargaining process and on the work floor. Thus, the political resistance to labour market regulation is not a reliable predictor of its longer-run economic implications. Since this is the case, regulation can ‘force’ (or ‘socialize’) firms to prefer long-term over short-term profitability—as they have to put in efforts to turn themselves into ‘high-road’ producers.

This kind of ‘technology-forcing’ is easier, however, inside national economies more or less closed to foreign capital and external finance (Akyüz 2015; Bortz and Kaltenbrunner 2018). With financial openness, firms can block labour market regulations by threatening to relocate to other countries (Streeck 2004; Nissanke and Thorbecke 2010; Nissanke 2015)—a credible threat as our model illustrates. If firms opt out and relocate in response to (say) the introduction of stricter EPL, the growth of net capital inflow declines (and may even turn negative):

$$\frac{d\kappa}{d\text{epl}} < 0 \quad (16.17)$$

The impact of this is to depress the BoP-constrained rate of growth  $y^*$ :

$$\frac{dy^*}{d\text{epl}} = \frac{(1-\Theta)}{\mu} \frac{d\kappa}{d\text{epl}} < 0 \quad (16.18)$$

This way, in economies with liberalized capital accounts, firms (including foreign corporations) have a much stronger ‘voice’ and political leverage than in contexts in which cross-border capital flows are more regulated and restricted. The result is, as argued by Nissanke and Thorbecke (2010) and Nissanke (2015), that many developing countries’ governments have been reluctant to enact regulations to protect and enhance labour rights and working conditions, out of fear of driving away transnational corporations. It explains why the notion of ‘globalization’ is used, more often than not, as an excuse for reducing social and worker protection. As a result, actual globalization has resulted in a strong trend towards casualization or informalization of jobs and whole labour forces, and not just in late-industrializing countries, but also in the high-income countries (Nissanke 2015; Storm and Naastepad 2012). Consequently, in order to be able to induce ‘technology-forcing’ effects, labour market institutions need to be complemented by supportive regulation of cross-border capital flows. This is why Keynes (1933), with characteristic prescience, wrote in his essay on ‘National Self-Sufficiency’, “let goods be homespun whenever it is reasonably and conveniently possible, and, above all, let finance be primarily national”.

## 6 Conclusions

What we have learnt from our review of the theoretical and empirical literature is that the impacts of labour institutions on growth and (un)employment of the late industrialization countries are inconclusive. Contrary to the mainstream view, they are not necessarily negative and are, rather, contingent on the exact design of the regulation (including coverage and compliance) and the larger national and international political economy context. However, labour market interventions do reduce income inequality and the dispersion in earnings, and they do this without imposing an opportunity cost in terms of economic growth. In other words, Okun’s (1975) big trade-off between equality and efficiency does not exist. There are three key reasons why this is the case, each one highlighted in our model analysis: (1) higher wage growth does not depress real income growth in economies operating under a balance-of-payments constraint because the Marshall-Lerner condition is not satisfied; (2) the impact of higher wage growth on prices is limited because unit labour costs make up only a fraction of total production costs; and (3) higher wage growth is likely to induce higher labour productivity growth—through processes of ‘technology-forcing’ or ‘cleansing’, and this in turn reduces unit labour costs. These lessons should no longer be controversial: after decades

trying to establish statistically significant negative associations between growth and employment and between growth and labour market regulations, establishment economists have to recognize that the project has failed. New studies as well as meta-analyses of older research point to the inescapable conclusion that labour market regulation is not ‘futile’, ‘perverse’ or ‘jeopardous’ in terms of growth and employment and it is beneficial in terms of equality. There is a fairly wide range of circumstances within which labour regulations will have no effect on employment performance, allowing considerable scope for country preferences and choices (ILO 2015, 2016/17).

We have attempted to further discredit the rhetoric of CBR reaction by arguing that developing countries’ governments can use regulatory obligations as ‘beneficial constraints’ to raise firms’ productivity levels and their dynamic efficiency, thereby forcing them to become more internationally competitive, rather than driving these regulatory obligations down to the current productivity levels and static efficiency levels characteristic of their firms today (Wade 2018). This is a moot point. Can labour institutions be designed so as to serve as ‘beneficial constraints’, forcing firms to upgrade, diversify and become more productive? Can labour market regulation complement—and reinforce—industrial policy as tools of economic upgrading and diversification? These questions force us to think about the proper design of the interventions (e.g. Belser and Sobeck 2012; Storm 2015; Stiglitz 2017; UNIDO 2017) and (reform of) the larger political economy context—needed to bring about higher productivity growth, greater international competitiveness and faster economic growth. We hope this chapter convinces readers that treating labour market institutions as ‘luxuries’ developing countries cannot afford is not just wrong but also unrealistic. It is a standard trope which, when accepted, prevents us from creatively exploring feasible and empirically proven (though always context-contingent) ways to turn these interventions into productive, technology-forcing instruments, critical to any project of late industrialization—and especially so in our times of globalization.

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# 17

## Technology and Innovation for Sustainable Development

Raphael Kaplinsky

### 1 Technology and Innovation Enter the Development Discourse

Until the second half of the twentieth century, the majority of the world's population saw little increase in living standards (Fig. 17.1). This was not true for a selected group of economies in Western Europe, North America and Japan. The diffusion of industrialisation in these economies after the early nineteenth century resulted in historically unprecedented increases in living standards. After the second half of the twentieth century, per capita income growth, fuelled in large part by industrialisation, spread to many parts of the developing world.

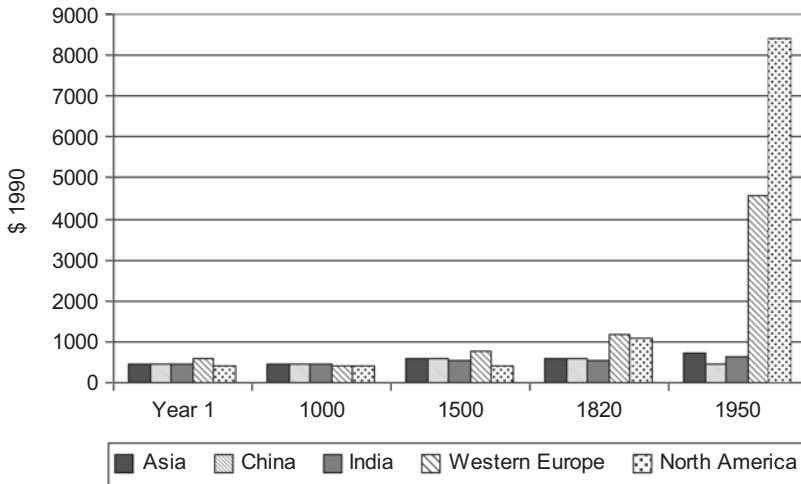
In understanding the drivers of this growth surge, a key distinction can be drawn between extensive and intensive patterns of accumulation. Extensive growth involves the replication of existing forms of production—new factories and farms mirroring existing factories and farms. Extensive growth has been an important driver in many economies. In a widely cited article, Krugman argued that both in the case of the former Soviet Union and in the newly emerging economies in Asia, such as Singapore and Korea, the extended growth surge until the mid-1990s was driven by high rates of savings and investment rather than through productivity growth (Krugman 1994).

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**Fig. 17.1** Per capita output in Asia, China, India, Western Europe and the US, year 1, 1000, 1500, 1820 and 1950

Source: Compiled from Maddison's Historical data Series. Online. <http://www.ggd.net/maddison/> [accessed September 2010]

China's sustained and very high levels of capital accumulation (savings exceeded 45 per cent of gross domestic product [GDP] for some decades) was a primary driver of its growth surge after 1980. In much of the developing world, extensive growth was the primary source of output increase (Forstner et al. 2001).

However, in the high-income economies and after the mid-1990s in the Newly Industrialising Asian economies of Hong Kong, Korea, Singapore and Taiwan, the driver of economic expansion has been intensive growth, that is, investments which involve *new forms of production* and *produce new types of products*. In the first half of the twentieth century, accretions in investment in physical capital and additional labour brought into production accounted for less than 25 per cent of US economic growth. The remainder—often referred to as the “Solow residual” and the “coefficient of our ignorance” (Abramovitz 1956)—was the product of technological change.

But the promotion of economic growth is not the only reason why technology is a central agenda in development studies. For technology also influences the pattern of growth. Growth is uneven, often punctuated by crises and often regressing into decline. Moreover, we live in a world of considerable and in many cases increasing inequalities, characterised by growing climate chaos and climate change. It is consequently clear that growth cannot be equated with development, and hence there is widespread recognition of the need to promote sustainable growth which achieves “Triple Bottom Line” outcomes, delivering economic, social and environmental development.

Hence, technology and innovation play central roles in determining both the pace and pattern of economic growth and the consequent development outcomes.

This recognition of the centrality of technology and innovation proved to be a major challenge to neoclassical theories of growth. These had assumed that technology and innovation were exogenous to economic growth (Romer 1994)—they were “given”, *deus ex machina*, surfacing as a coefficient of productivity in growth models. The recognition of the central role played by technological change (Abramovitz’s “coefficient of our ignorance”) led to increasing attention being given to the work of the Austrian economist, Schumpeter. Drawing on a tradition stretching back through Marx to Smith, Schumpeter and his followers helped to place technology and innovation at the centre of the growth and development debate. They argued that technology and innovation are produced phenomena, an outcome of social and political constellations and their origins and trajectories need to be understood if growth and development paths are to be understood and shaped.

## 2 Innovation, Rents and the Schumpeterian Motor Drive Capitalist Accumulation<sup>1</sup>

Schumpeter drew the distinction between invention and innovation, and in so doing, placed entrepreneurship at the centre of capitalist accumulation. *Invention*, for Schumpeter, was the new idea—a specific combination of process inputs and organisation, a tangible product or a different service. *Innovation* was the act of commercialising inventions, and this act of commercialisation was achieved through the function of *entrepreneurship*.

At the base of this distinction between invention and innovation lie the related phenomena of rents, barriers to entry and dynamism. The Schumpeterian framework begins with the recognition that competition is central to capitalism and, left unchallenged, erodes profit to a point at which it is equal to the rate of interest. The entrepreneurial act of innovation enables the capitalist to escape from this profit-eroding competition by exploiting an innovation rent. That is, the capitalist is able to take advantage of an invention which is not available to competitors and thereby reaps a super profit. In turn,

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<sup>1</sup>In this and subsequent sections of this chapter, I have been helpfully informed by Vernardakis’ survey of innovation theories (Vernardakis 2016).



these innovative rents are protected by barriers to the entry of competitors.<sup>2</sup> Once competitors are able to replicate these innovations, profits resume their downward spiral to the rate of interest.

There are two families of intellectual property rights (IPRs) which provide barriers to entry (WIPO 2017). The first are those which protect knowledge assets and include process know-how and legally codified barriers such as patents. The second form are those which protect reputational assets such as copyrights and trademarks. In general, the former involve a shorter time period for protection. Patents, for example, have a life of between 20 and 30 years, whereas copyrights last for the life of the creator plus 60–80 years, and trademarks and geographical indicators provide protection in perpetuity. But even though many barriers protecting reputational assets are long lived, they are subject to erosion through the competitive process as more effective trademarks are introduced and promoted by rivals.

Hence, argued Schumpeter, transient rents spur successive rounds of competitive innovation which is the primary driver of capitalist growth—we can refer to this as the “Schumpeterian motor of capitalist accumulation”. (This also helps to explain the demise of the former Soviet Union where the command economy which precludes competition was characterised by low rates of innovation.) Other things being equal,<sup>3</sup> the more competitive the economic environment, the greater the pressures to innovate and/or to construct and protect barriers to entry.

It is here that the historic significance of the recent phase of globalisation and its impact on innovation enters the story. On the one hand, the vast market open to entrepreneurs acts as a spur to innovation; those producers with economic rents (e.g. patents and brand names) are able to valorise these rents over a very large market. On the other hand, those producers without rents (e.g. unskilled and semi-skilled labour) are forced to compete in a greater pool of competition.

The centrality of rents to sustainable growth in a global context can be observed through the experience of the Economic Processing Zones in Central America during the early 1990s. A Dominican Republic assembler of jeans for the US market invested \$150,000 in new equipment in 1989. It began exporting 9000 jeans a week at a unit price of \$2.18, but in the space of 12 months,

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<sup>2</sup>Not all economic rents are innovation rents (Kaplinsky 2019). For example, resource rents arise from ownership or exclusive access to scarce natural resources. Another important type of rent provided by barriers to entry arises from monopolistic and oligopolistic control of input and output markets.

<sup>3</sup>This is only a simplified model. As shown later, whilst competition may indeed spur innovation, there are important respects in which it produces economically, social and environmentally sub-optimal outcomes.



the quantity and price of these exports fell progressively to 5000 and \$2.00 and then to 3000 and \$1.87 respectively (Kaplinsky 1993). This experience contrasts sharply with that of producers in other export processing zones, particularly those in Asia who enhanced incomes over time through growing insertion into global product markets.

What makes the difference between these positive and negative outcomes? The Dominican Republic garment producer cited earlier assembled imported components into final products through the use of unskilled labour. When this competitiveness built on unskilled labour was eroded through competitive devaluations in surrounding economies benefitting from the same trade preference in the US market, neither the firm nor the economy at large possessed any specific attributes which made it the preferred and profitable supplier to the US market.

A corollary of this firm- and country-specific experience is that under certain conditions (an open economy with no redistributive mechanisms), innovation can be severely unequalising (Kaplinsky 2019). Those participants in production who command rents (in this Dominican Republic case, foreign brand-name firms with control over logistics and final markets) benefit from the scale of global markets and from low wages in producing economies. Conversely, those participants without rents (in this case, firms and economies without innovative capabilities and unskilled labour) suffer as a result of intensified competition. In the extreme cases, these firms either go out of business or are forced to reduce wages and profits. Economies of course cannot go out of business, but they may become locked into spirals of immiserising growth—that is increased economic activity coupled with declining incomes.

Before we turn to the manner in which low-income economies have responded to the challenge of achieving intensive growth, it is necessary to briefly consider the trajectory of technological change and the factors which induce particular innovation paths.

### **3 What Shapes the Trajectory of Technological Change?**

#### **3.1 The Inducements to Technological Change**

In many respects technological imperatives pose limitations on the direction of innovation. Perpetual motion is impossible, there are physical limits to the extent to which silicon circuitry can be miniaturised and the barriers to growing sugar in a desert are almost certainly insuperable. Moreover, there are

frequently linked clusters of technological development, for example, in the synergies between digital information and communications technologies. In other cases, technologies emerge to solve bottlenecks. For example, hard metal alloys were of limited use until specialised tools were developed to machine them (Rosenberg 1981). Nevertheless, despite these examples of binding or near-binding technical determinants of technological change, as a general observation, technological development does not unfold in a Darwinian and technically determined direction. Technology is socially created and can evolve in multiple directions. This malleability clearly has very significant growth and developmental implications and it is therefore necessary to briefly consider the factors which shape the direction of technological progress.

The economics literature on the inducements to technological change tend to focus primarily on the price of factor inputs such as capital and labour (Hicks 1932; Ruttan 2001), or the anticipated price of inputs (Fellner 1961). Price also influences technological development through the cost of material inputs. Where these inputs are scarce or are costly (e.g. as a consequence of the monopolistic power of suppliers), technologies are developed which economise on their use.

A second set of factors influencing the trajectory of innovation is the character of final markets. High-income consumers demand high-quality products, and place a premium on differentiation and distinctiveness. They will also tend to be able and willing to pay more for products where the supply chains are focused on social and environmental objectives as well as the costs of production. Educated final consumers, or firms, which have the knowledge to utilise complex machinery and intermediate products, spur and allow innovators to introduce technologically sophisticated outputs.

The regulatory environment is a third factor which determines the direction of technological progress. Governments (or groups of governments such as the European Union) impose boundaries (“hard regulation”) on what is permissible in terms of production processes and product characteristics. Civil society organisations promote “soft regulations”, incorporating process and product standards. These standards are optional for producing firms, but they exploit the vulnerability of lead firms to reputational damage. In general these regulations and standards, hard and soft, seek to shape technologies so that they protect the environment and the consumers.

A fourth major set of factors which shapes the trajectory of innovation is the quest for power and dominance. At one end of the power spectrum lies the military imperative. Many of the key innovations which currently dominate the innovation highway were sponsored by the military, particularly the US Department of Defense (Mazzucato 2011). But the role of the power

imperative in shaping innovation is felt through the spectrum of innovation decision-making, including for example in the development of technologies which are designed to give the capitalist greater control over the labour process (Marx 1876; Braverman 1974).

Finally, not all technology is developed within capitalist market relations. Many technologies produce public goods where innovation rents cannot be easily appropriated. For example, not all knowledge can be patented or “owned”; this is particularly a problem with software which can often be easily “stolen” or replicated (Mason 2015). Some inputs are non-exhaustible (e.g. air) and cannot easily be appropriated. There may be substantial externalities arising from innovations in which the users/producers do not pay for the negative consequences of use or reap the full benefits of the innovations. In other cases, innovations may also be characterised by network effects. That is, they are only effective if they are introduced simultaneously by a large number of users, as in the case of mobile telephony and preventive medicines such as vaccinations. There are also a range of social innovations which are difficult to fund in a market economy, such as many elements of the welfare economy and artistic endeavours. In all of these cases, the Schumpeterian profit-oriented rent-seeking innovation motor delivers sub-optimal growth and development outcomes.

The central point which emerges from this literature on induced technological change is that notwithstanding the importance of some key technological imperatives, technology is malleable. The overall directions of technological development (e.g. carbon-based or renewable energy) and the specific techniques which are commercialised and introduced in the social sphere are shaped by the social, political, economic and environmental context in which they are developed. In turn, these technological paths contribute to the shaping of these inducing factors. For example, large-scale plants reinforce large-scale ownership; technologies allowing for effective control of the labour force reinforce private ownership of the means of production; and effective military technologies reinforce the power of elites which depend on the military.

### 3.2 Path Dependency in Technological Change

Mainstream economic theory on the inducements to technological change is built, as we have seen, on the Schumpeterian premise of rent-seeking innovative behaviour. That is, the entrepreneurial spark surfaces in applying knowledge to exploit new market opportunities and/or to introduce new ways of producing a good or service. Critical to this framework is the function

which knowledge plays in this innovative process and the asymmetry in the distribution of knowledge. In the “early Schumpeter”, this knowledge and the entrepreneurial spark were lodged in pioneering individuals; in “late Schumpeter”, knowledge is vested in firms, for example in the R&D departments of firms (Freeman et al. 1982). With regard to knowledge asymmetry, the entrepreneurial advantage lies in the command over a specific set of knowledge which is unique or available to only a limited number of competitors.

What follows from this is that whilst entrepreneurs are assumed to make rational choices (e.g. they do not develop relatively labour-intensive techniques in the context of high wages), they do so in the context of partial knowledge. Whilst they benefit from particular knowledge-specialisms, they will in turn be blind to knowledge which they do not have, and which others do possess. Their behaviour is thus characterised by what is termed “bounded rationality”.

Bounded rationality is one of the cornerstones of the modern discipline of evolutionary economics whose origins are to be found in the writings of Veblen in the late nineteenth century and more recently by Alchian (1950), Nelson and Winter (1982) and Dosi (1982). It helps to explain why technological progress takes particular directions. It centres on the recognition that modern technology is increasingly knowledge-intensive and that technological progress is embedded in firms and social processes. Once innovation is seen to be lodged in social processes, it follows that it will be path-dependant and subject to particular trajectories. The bounded rationality of the innovation process is subject to particular forms of organisation, and to the particular competences of individuals, groups and firms. These unfold cumulatively, with successes (and failures) building on success (and failures).

Generally, this cumulative and related stream of innovations provides sustained innovation rents which are protected from profit-erosion by a variety of barriers to entry such as knowledge-specialisms and IPRs. But there are also cases in which path dependency may be an obstacle to sustained rent generation. In recent years this has been highlighted by the literature on disruptive innovation.<sup>4</sup> Christenson observed that large firms which dominate industries are often extremely good at hearing the demands of their existing customers (Christenson 1997). But they may at the same time be very poor at hearing the needs of new customers and this weakness flows directly from their path

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<sup>4</sup>Another characterisation of the disadvantages arising from path dependency is the concept of core rigidities (Leonard-Barton 1992), in which firms are locked into static competitive advantages and fail to make the transition into dynamic competences.

dependency. Thus when a new technology arrives which fails to address these known needs, the major innovating firms are dismissive and hence lose the opportunity to exploit new and dynamic markets.<sup>5</sup>

As we see later, the path dependency of many transnational corporations (TNCs) often precludes them from “hearing” and responding to the needs of poor consumers, particularly those in low- and middle-income economies.

## 4 Technology and Innovation in the Era of Import Substituting Industrialisation

Outside of the Soviet Union and Latin America, most of what now constitutes the group of low- and middle-income economies began their concerted development programmes in the post–World War II period. India’s planning experience after the mid-1950s, modelled in part on the Soviet Union’s pre-war Industrialisation drive, played an important role in defining the terrain in which much development planning occurred in newly independent African, Asian and Pacific economies, as well as in Latin America and the Caribbean. At the centre of this policy agenda was import substituting industrialisation (ISI), embodying two primary policy instruments—protection against imports and industrial licencing. These ISI policies promoted both extensive and intensive growth: the focus in the discussion which follows lies on those policies designed to promote intensive growth, that is, the promotion of innovation and technological change.

### 4.1 The Transfer of Technology

In 1970 the Sussex Manifesto was published as a background document to the UN Advisory Committee Report for the Second Development Decade (Singer et al. 1970). This influential document focused on the global distribution of Science and Technology (the invention end of the innovation spectrum). It estimated that only 2 per cent of global S&T expenditure occurred in the developing world, and it called for a change in both the geographical

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<sup>5</sup> For example, IBM neglected the arrival of the 5<sup>1</sup>/<sub>4</sub> floppy disc since it was hopelessly inadequate for the needs of its customers who required vast quantities of data storage. Its problem was that it knew its existing corporate and military customer base too well, but it had no feel for a new generation of much less demanding individual customers.

distribution of global R&D and the development challenges which this R&D addressed.

The Sussex Manifesto reflected a world of extreme technological and innovative asymmetry. This meant that low-income economies seeking to promote growth (both intensive and extensive growth), operated in a world of technological dependence. Consequently, the developmental challenge at that time lay in optimising the process of technological transfer. In turn this led to attention been given to two related sets of issues—the mechanisms for technology transfer and the costs of technology transfer.

The central issue addressed in the discussion of mechanisms of technology transfer was the degree to which these transfers were packaged (Cooper 1970; UNCTAD 1972). At the one end of this spectrum was Foreign Direct Investment in the form of wholly incorporated subsidiaries. The foreign investor provided the financial capital and the fixed equipment required to produce its own-designed outputs; it organised the labour process and the supply chain (to the limited extent that local inputs were used) and in some cases also controlled marketing of the final product. At the other end of the transfer spectrum were fixed-sum arms-length purchases of know-how. These two ends of the spectrum reflected contrasting worlds of extreme technological dependence (wholly owned foreign direct investment [FDI]) and considerable technological capability (knowledge purchase). Along the spectrum were a range of transfer channels and mechanisms, including joint ventures, the flow of skilled people and technology licencing agreements involving regular payments and support. It is evident that, to differing extents, these mechanisms fused the three elements of the Schumpeterian motor—*invention* (purchases of know-how), *innovation* (applying knowledge in production) and *entrepreneurship* (commercial application, copying and diffusion).

The key policy response indicated in this set of analyses was the need to “unpackage” technology transfers (UNCTAD 1972; Lall 1990). It was widely considered that dependence was reinforced in comprehensive and tightly bundled transfers, and that the act of unpackaging and separating the various elements of transfers provided the capability to enhance learning and to choose the best elements of the package from different sources.

The second set of issues which were addressed in this early focus on technological dependence was the cost of transfer. In a context in which low-income economy governments were seeking to place limits on the profitability of FDI and technology acquisition, it became evident that many transfer packages contained a large element of transfer pricing (Vaitsos 1974). The apparently low rates of profit remission in many foreign investments frequently hid exorbitant payments for royalties and know-how, and for the overinvoicing of

imports and the underinvoicing of exports. Often they also involved restrictions on exports such that the technology-importing economy did not compete with the technology-supplying company. Again, as in the case of concerns to build indigenous capabilities, the indicated policy response was to decompose packaged transfers in order to inject competition into technology purchases, to curb transfer pricing and hence to reduce the costs of transfer.

## 4.2 The Choice of Technique

Given the technological dependence in the developing world, a key policy agenda in dependent low-income economies was thus to determine the optimal choice of technology. As observed earlier, in almost all cases there is no single “best” technique. Each technology offers the possibility of developing a range of specific techniques, and each of these techniques will use different combinations of production factors and inputs, and produce final products which might need similar consumer needs, but with different combinations of product attributes (e.g. with regards to quality and brand image).

The choice of technology was thus seen as a way of determining the optimum technique in the context of given price structures (Sen 1968). Curve AA in Fig. 17.2—the production function—represents the range of technologies available to produce a specified good. The vertical axis represents inputs of physical capital and the horizontal axis those of labour. The price line represents the relative cost of capital and labour. In the case of BC, capital is relatively cheap and labour expensive, while the price line DE represents cheap labour and more expensive capital. Technique A1 represents the optimal

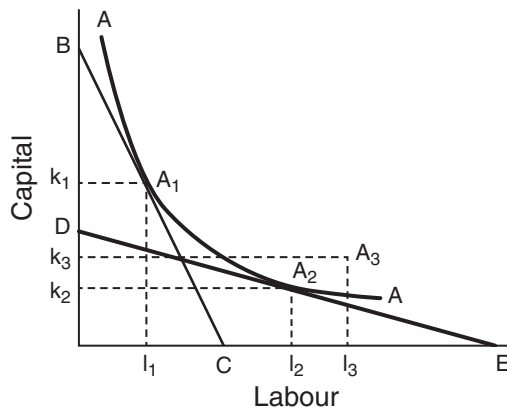


Fig. 17.2 The optimal choice of technique



choice in high-wage economies, and A2 represents the optimal choice in low-wage economies. Whilst Fig. 17.2 provided a structure for analysing the choice of production techniques, an analogous framework was utilised to assess the choice of product (Lancaster 1966; Stewart and James 1981). Here, instead of the vertical and horizontal axes representing factor inputs, they referred to product attributes (e.g. utility and brand image), and instead of the price line representing factor prices, it referred to the price of attaining these product attributes in the context of fixed budgets.

This idealised view of the choice of techniques was the subject of intensive empirical research and policy discussion during the 1970s and early 1980s, notably in a series of studies promoted by the ILO's World Employment Programme (Bhalla 1975). The first issue addressed was to investigate the neoclassical assumption that there was indeed a wide spectrum of efficient production techniques. In a widely cited contribution, Eckaus had asserted that the range of efficient techniques available was severely limited and in many cases restricted to one dominant technique. He defined efficiency in relation to the coefficients of production. "Efficient" labour-intensive techniques would have a higher productivity of capital and a lower productivity of labour than capital-intensive techniques. But, argued Eckaus, given the concentration of R&D in high-wage economies, capital-intensive techniques tended to have both higher labour and capital productivities than their labour-intensive counterparts. This meant that there were no sets of factor prices at which the labour-intensive choices would be optimal. Thus point A3 in Fig. 17.2 has a lower capital/labour ratio than either techniques A1 or A2. Whilst A2 and A3 produce the same level of output, A3 uses both more labour and more capital per unit of output to achieve this output. Thus, A3 is considered to be an economically inefficient technology and should never be chosen.

The upshot of these empirical studies was to largely affirm the substance of Eckaus' critique of neoclassical choice theory. At any one time, there were only a limited range of efficient techniques available to produce a given product. However, the degree of efficient choice depended on how specific the product was defined. For example, if transport was defined as a Mercedes Benz, not only was the choice limited to a single set of techniques but so too was the investor limited to a single company; but if transport was defined more loosely as getting people from one point to another, there was an extensive range of available efficient techniques. The interconnectedness of product and process choice was evidenced in a variety of empirical case studies (Bhalla 1975; Kaplinsky 1980; Langdon 1981).



### 4.3 The Rise of the Appropriate Technology Movement

Given the very marked concentration of technological development in high-income markets during the first three decades after World War II, it is not surprising that those technologies which emerged responded to the needs and objectives of entrepreneurs in the high-income economies in which they were developed. They provided the means for sustained productivity and economic growth. But much of this growth was at the cost of the environment and the social fabric in these high-income countries. The influential Club of Rome Limits to Growth Report in 1972 focused on this trajectory of innovation “to examine the complex of problems troubling men of all nations: poverty in the midst of plenty; degradation of the environment; loss of faith in institutions; uncontrolled urban spread; insecurity of employment; alienation of youth; rejection of traditional values; and inflation and other monetary disruptions” (Meadows et al. 1972: 10).

The degree of inappropriateness—economic, social and environmental—of this stream of post-war technological development in the high-income economies paled into insignificance by comparison with their inappropriateness for operating conditions in the developing world. There, large-scale and capital-intensive techniques were wholly unsuitable for economic environment; the techniques were predominantly labour saving and capital intensive; they depended on pervasive, reliable and high-quality infrastructure; the high-quality and costly output which they provided was largely unaffordable for low-income consumers; the scale of operation and the individualisation of consumption embodied in the final products were often inappropriate for the social relations in low-income economies; and the environmental consequences of production in the cost of weak regulatory regimes proved to be costly for the natural world.

In the early 1970s Schumacher’s book, *Small is Beautiful*, captured the pervasive sense of dissent at the trajectory of technological progress and focused on the inappropriateness of this stream of technological development, not just for the high-income economy in which he lived (the UK) but particularly for the developing world (Schumacher 1973). He argued that the environmentally destroying and capital-intensive techniques which resulted from innovative efforts were antipathetic to the interests of humankind as a whole but were particularly inappropriate for low-income countries since they were highly capital intensive and operated at a large scale. In response to this, Schumacher called for the development of “intermediate technologies” (£100 rather than £1 or £1000 per job created) operating at smaller scales—“Small-

scale operations, no matter how numerous, are always less likely to be harmful to the natural environment than large-scale ones, simply because their individual force is small in relation to the recuperative forces of nature” (op. cit., p 31).

Schumacher’s call for the development of Appropriate Technology (AT) influenced only a small audience, predominantly comprising non-governmental organisations (NGOs; notably the Intermediate Technology Development Group which he founded) and some bilateral aid agencies. Reflecting Schumacher’s own concerns (“as long as the land and the creatures upon it are looked upon as nothing but ‘factors of production’”), it was essentially an ethical response to the prevalence of poverty rather than being driven by the pursuit of growth through the development (and use) of more profitable and appropriate choices of technology. In some cases the response to the AT movement was actively hostile, particularly in low-income countries where the scientific and professional elite saw the AT movement as an attempt to consign poor countries to a state of perpetual underdevelopment, locked into the use of low productivity, undynamic and inefficient techniques (Emmanuel 1982; Eckaus 1955).

Thus, the development and diffusion of appropriate technologies—understood here as technologies which are appropriate for low-income countries in that they are labour intensive, simple to operate and repair, producing products for low-income consumers at small scales and with a minimally harmful impact on the environment—may have been at the centre of the development community’s concerns. But they were at the fringes of the attention of the key private- and public-sector actors allocating resources. Their diffusion was largely an “act of charity” rather than the result of the pursuit of profit and was facilitated through aid programmes and the efforts of NGOs. As shown later, the growth in global inequality in recent decades, allied to the stagnation of growth in many economies and the march of climate change has reinvigorated the drive for more appropriate technology, surfacing in the burgeoning discussion of inclusive innovation.

## **5 Technology and Innovation and the Transition to Outward-Facing Growth Strategies**

Innovation can be new to the world, new to the sector, new to the country, new to the region or new to the firm/farm. During the period of ISI, in which the transfer of technology and choice of technique were the dominant

development agendas, most new technologies were not only new to the firm/farm and locality but new to the country. The resultant investments were made in the context of trade protection and low rates of competition. Consequently, during these decades (approximately the 1950s to the early 1980s in much of the developing world), economic growth took the form of extensive growth. That is, whilst overall economy-wide productivity grew as a consequence of the importation of technology from abroad, learning and productivity growth arising from changes in imported technology, or from the introduction of new indigenously produced technologies, was non-existent or muted.

The transition from predominantly inward-oriented to an increasingly outward-oriented growth strategy had multiple roots. One key element was the emergence of problems within ISI growth trajectories. Limited markets, particularly in countries with low purchasing power and smaller populations, meant that excess capacity was rife and the capital output ratios of investments were high. Scarce capital was used poorly. A second problem arising from the mismatch between small domestic markets and large-scale imported technologies was the prevalence of monopolies (Merhav 1969). Industrial licencing seeking to limit excess capacity often exacerbated this problem. This dulled the competitive environment which, as we saw earlier, can in the right circumstances be a spur to innovation and intensive growth. Third, the prevalence of licences in heavily regulated ISI regimes resulted in the growth of unproductive activities as entrepreneurial energy was diverted from innovation to meeting the challenge of overcoming (often through bribery) the industrial policy bureaucracy (Krueger 1974).

These weaknesses in the ISI regime, emerging after two to three decades of structural transformation, were highlighted in the critique of India's industrial policy (Little et al. 1970; Bhagwati and Desai 1970; Krueger 1974). They were used to justify an onslaught on industrial policy and the role of the state in the developing world, surfacing in the Washington Consensus (Williamson 1990), aid-conditionality and trade policy reform. There was undoubted substance to much of this analytical critique. However, it only addressed one side of the equation, and the positive achievements of ISI were overlooked in the ideological fervour of the neo-liberal onslaught against the developmental state. As Chang has shown in his analysis of the origins of the industrial revolution in Europe and North America (Chang 2002), protective regimes provided the space for substantial capacity development in these economies and this, as shown later, was the platform on which the current surge of productive capabilities in much of the developing world was built.

But before turning to this growth of innovative capabilities in the developing world, it is necessary to analyse the external factors which contributed to the transition from inward- to the outward-facing development strategies forced on low- and middle-income economies by the neo-liberal policy agenda. One important factor was the drive for markets by TNCs and other firms based in the high-income economies. In reaction to the beggar-my-neighbour trade protectionism during the 1930s, the major northern economies began to construct a more open global trading regime. This allowed their firms to achieve economies of scale by extending their reach beyond their domestic markets—sometimes as exporters, sometimes as producers and sometimes by both investing abroad and exporting to these markets. Limited access to markets in low- and middle-income markets thus became an obstacle which had to be overcome if this global reach were to be extended, and this was a major factor driving the neo-liberal trade policy reform agenda.

A second external factor driving the onslaught against ISI growth regimes was the assault on the state in the US and the UK, and then in other northern economies. This had its roots in political struggles within the northern economies, but it had collateral effects undermining the legitimacy of industrial policy in low- and middle-income economies.

There was, however, a third factor underlying the transition to outward-facing growth strategies which had particular relevance for contemporary technology and innovation policies. This arose directly as a response to the drive to maximise Schumpeterian innovation in the high-income economies. The growing technological intensity in production led to the emergence of core competence business strategies (Hamel and Prahalad 1994). Here the firm focused its efforts in those parts of their activities in which they had distinctive competences, which were valuable in the market, and which were difficult to copy (i.e. they benefitted from barriers to entry). All other activities were outsourced to suppliers and downstream users. This led to a growth in the inter-firm division of labour, and a fracturing of activities into an increasingly complex value chain. Initially this outsourcing was to proximate firms in the domestic and regional economy, but with advances in logistics and communications technologies (notably containerisation and IT), these value chains increasingly became Global Value Chains (GVCs; Gereffi 1994; Kaplinsky and Morris 2001).

Here, we can see the synergy between the drive to Schumpeterian rents in northern firms and the rolling out of the neo-liberal Washington Consensus in low- and middle-income economies. No longer were northern firms interested in these economies solely as markets, these countries were now

increasingly attractive as low-cost production platforms.<sup>6</sup> Their attraction was not just because they possessed abundant and low-wage unskilled labour but also because environmental and social regulatory regimes in these developing economies were relatively unrestricted.

This combination of internal and external factors underwrote the transition to outward-oriented growth strategies. It is a complex story involving a mix of political and economic factors. But crucially, from the perspective of this discussion in this chapter, technology and innovation are a central part of the story. They not only help to explain the outward drive from the northern economies (the search for markets and low-cost suppliers by northern firms) but also the capacities of low- and middle-income economies to take advantage of the outsourcing strategies of lead firms in the northern economies. As we see later, not only did GVCs draw on capabilities in low- and middle-income economies built up during ISI, but they also played an important role in strengthening these capacities and in fostering the growth of productive capabilities in the low-income economies which had had limited experience with ISI.

## 6 The Changing Balance of Technological Asymmetries: The Growth of Capabilities in the Developing World

As we saw in Sect. 2 earlier, the first few decades after World War II were characterised by high levels of global technological asymmetries, with growth in much of the developing world being inward focused and extensive in nature. But as the decades unfolded, this picture began to change in important respects. Heavily inward-focused strategies were not only economically costly but were also unfeasible in the context of the aggressive ascendancy of the neo-liberal Washington Consensus policy agenda. However, despite its weaknesses, ISI had provided a platform in many developing economies from which they could take advantage of the opportunities opened up by restructuring in the high-income economies.

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<sup>6</sup>An important but largely overlooked part of this story was the growing concentration of the retail sector in the US from the mid-1960s and in Europe in later decades (Hamilton et al. 2004). These chains required large volumes of low-cost supplies but had no production capabilities of their own. They then actively sought indigenously owned suppliers in developing economies such as Hong Kong, Korea, Singapore and Taiwan, which had built their capabilities during the import substitution industrialisation (ISI) protectionist periods.

During the latter decades of the twentieth century, three sets of factors combined to alter the balance of knowledge and technological capabilities in the global economy and shape contemporary policy agendas promoting intensive growth in low- and middle-income economies.

## 6.1 Advances in Human Resources and Cumulative Learning

Many developing economies achieved their political Independence in a context of very low levels of human resource development. In extreme cases such as Zambia, there were only 100 indigenous graduates and 1000 secondary school leavers at Independence; in the Congo (now the Democratic Republic of the Congo), there were only 17 graduates at the time of Independence.<sup>7</sup> Although many Asian and Latin American economies had much deeper educational profiles than these African economies, the depth of their human resource development was relatively shallow by comparison with the industrialised economies, and it was disproportionately focused on humanities and social sciences rather than engineering and technical skills. This thin layer of human resource achievement was not limited to tertiary skills and in many cases literacy and numeracy levels were low.

However, after the surge in political Independence after World War II and in Latin America and other low-income economies which had not been colonised, many developing economies invested heavily in education and training. These investments were not just deeper in parts of Asia than in Africa and Latin America, but were built on a relatively long history of investment in human resource capabilities.

Hence, insofar as the ability to innovate was a function of the educational and training background of the population, the decades after World War II saw a substantial increase in the capacities of their populations to engage in productivity-enhancing activities. This was not confined to the high-level skills engaged in R&D but also in the workforce whose contribution to technological change through incremental technical change had a larger impact on productivity growth (Katz 1987; Kaplinsky 1978; Bell 2007; Bell and Figueiredo 2012). But, whilst human resource capacity has the potential to deliver productivity growth, this potential has to be realised. This, as shown later, requires purposive effort at the enterprise, farm, sectoral and national levels. Nevertheless, the generalised investments in human resources

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<sup>7</sup> Personal Communication, Richard Jolly (18/07/2017).

throughout the developing world in the second half of the twentieth century provided a critically important base for productivity growth.

## 6.2 A More Competitive Environment

As was shown in Sect. 2 earlier, the Schumpeterian motor which drives intensive economic growth is fuelled by the search for economic rents. When barriers to entry are high—in the extreme case in monopoly or highly concentrated markets—the incentives to use innovation as a source of economic rent are low. As the post-war decades advanced, the competitive environment altered in most developing economies as a consequence of three developments.

First, in much of the developing world, the deepening of capitalist social relations led to the rise of an entrepreneurial class. Initial investments in new technology—predominantly through technology imports—were followed by further rounds of investments. In some cases (e.g. India), these early investments were undertaken by state-owned enterprises that were generally protected from competition. But, increasingly, even in these economies, many investments were undertaken by private sector actors. Gradually, as economies industrialised and capitalist social relations deepened, Schumpeterian entrepreneurship came to the fore, seeking economic rents through innovation in new methods, new products and new forms of organisation.

A second factor promoting more competitive economic environments was the liberalisation of investment. During the 1960s and 1970s, in many developing economies, the scarcity of capital had led governments to ration investment through industrial licencing in order to avoid duplicating investments. This was a core component of Indian industrial policy and was widely copied in other developing economies, particularly in Africa. In part as a consequence of neo-liberal reforms imposed through the Washington Consensus, most of these controls on investment were swept away. Although this liberalisation did not achieve its textbook objectives of introducing competitive markets (for in many cases, concentration levels remained high), it is unquestionable that the liberalisation agenda did in many cases result in more competitive economic environments. Once again, this spurred the advance of Schumpeterian innovation.

Third, trade policy reform resulted in increasing competition from imports. In many cases—in fact, probably in most cases—import competition had the effect of wiping out, or severely harming, the development of domestic innovative capabilities. Yet, amongst this carnage and deindustrialisation, import liberalisation was not without its benefits. It provided access to newer, cheaper



and higher quality inputs. In some cases it also reduced the costs of wage goods (such as apparel and food) and enabled producers to limit wage growth. Participation in demanding external markets not only forced exporting firms to improve their offerings but was also an important source of technological learning. Whilst these trade-related benefits did not necessarily outweigh the growth-damaging costs of trade liberalisation, not all of the consequences were harmful to growth and entrepreneurial development.

The extent to which an intensifying competitive environment promoted Schumpeterian innovation varied across the developing world. Moreover, it also evolved over a number of decades and it is not always clear that competition spurred innovation or whether innovation driven by non-market forces was the inducement to innovation. Moreover, China is a major outlier in this story since its growth spurt was often driven by the state rather than by the market, and by the imperatives of global buyers, which has been the third major driver of capability development in the developing world.

### **6.3 Learning Through Participating in Global Value Chains (GVCs)**

After the mid-1970s, a number of developing countries, particularly China and other Asian economies, moved to higher growth trajectories on the back of rapid export growth. This is a story mis-told in mainstream economic analysis which tends to characterise export-led growth narrowly in terms of factor endowments and factor prices and trade-facilitation policies. In so doing, this explanation misses the importance of agency and the governance of trade. It is an analysis rooted in the abstractions of economic theory rather than the realities of political economy.

Historically, entry into foreign markets was governed by states that limited access by imposing quotas and tariffs on imports. After the mid-1950s, through the extension of the General Agreement on Trade and Tariffs (GATT) and then the World Trade Organization (WTO), the extent of government regulation of trade declined significantly. But this did not mean that market entry was unproblematic for developing-country exporters, since just as states withdrew from trade controls, private actors filled the gap. In order to understand how this occurred and what effects this had on the growth of innovative capabilities in developing economies, it is necessary to briefly explain the emergence and significance of Global Value Chains (GVCs).

As we observed earlier, GVCs emerged as a consequence of a process in which lead firms specialised in their core competences and then outsourced



other links in their value chains to upstream suppliers and downstream users. But this is a dangerous path to tread for the outsourcing firm, since a chain is only as strong as its weakest link. Unless innovation occurs across the chain as a whole, core competence strategies can fail despite advances within the lead firm. Therefore, concomitant with the fracturing of value chains, there has been a matching process of supply chain management and development whereby all links in the chain are required to engage in continuous processes of upgrading (Bessant et al. 2003). Sometimes this is directly implemented by the lead firm itself, but in other cases specialised business service providers assist supply chain development. In developing economies, supply chain development is also often facilitated by NGOs and aid agencies.

Standards which are pushed up and down the value chain are an important mechanism for achieving these objectives (Kaplinsky and Morris 2017). Critically, in the contemporary world, the standards which are driven through the chain are targeted to achieve Triple Bottom Line objectives. The lead firms governing the chain are required to respond not just to imperatives of economic efficiency but also to demands from civil society and governmental regulatory requirements to meet social and environmental objectives.

There is growing evidence that as these regulations and standards are driven through GVCs they have the impact of upgrading producer capabilities (Kaplinsky and Morris 2017). This is not only because the process of recording and checking production often improves managerial control over production but because lead global buyers use standards to ratchet up the performance they require of producers. However, since the pursuit of sustainable growth requires (as we saw in Sect. 2) the capacity to generate and appropriate innovation rents, supplier upgrading in GVCs is biased to protect the rents of the lead firms which govern the chain. These firms seek to ensure that upgrading is centred in areas of relatively low rents, allowing the chain governors to maintain their command over chain rents. For example, one of the consequences of GVC extension is that the classical innovation agenda of process and product innovation has to be augmented to include what is termed “functional upgrading”, that is, changing position in the chain such as assuming design and branding tasks or perhaps foregoing some previous specialisations in manufacturing and assembly. As a general rule, the design, branding, marketing and logistics links in GVCs offer higher rents than those in the physical transformation of inputs or the delivery of services. Thus, typically, lead firms in the industrialised countries concentrate their efforts in these knowledge-intensive links in the chain, outsourcing assembly and manufacture to suppliers in low- and middle-income economies where productive capabilities are well developed. Thus, insofar as the spread of GVCs has led to capability

**Table 17.1** Developing countries in global R&D

	c.1970	1990	2000
Share of global R&D (\$PPP) (%)	2.0	10.2	21.0
R&D as % GDP	NA	0.7	0.9
Coverage	Excluding centrally planned	Including centrally planned and NIC economies	

Source: 1970—Sussex Manifesto, 1970; 1990 and 2000—UIS Bulletin on Science and Technology Statistics, Issue No 1, 2004, cited in M. Bell (2007)

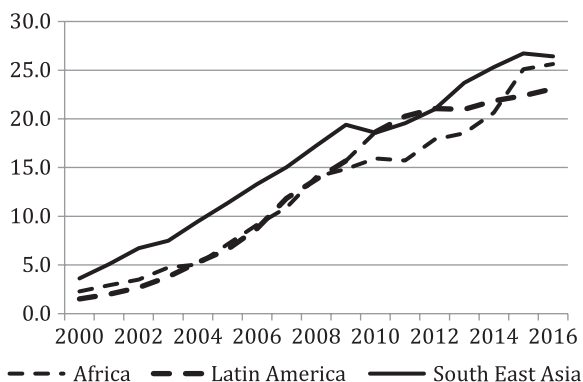
building in developing economies, this has often been concentrated in areas of low-economic rent and generally in processes which involve the physical transformation of inputs into outputs.

## 7 Capabilities Now Shape the Development Agenda

As we have observed earlier, the extreme technological dependence of developing economies on the industrialised countries in the mid-twentieth century has now given way to a much more dispersed spread of innovative capabilities in the global economy. Two exemplars illustrate this dispersion. The first is the changing geographical pattern of global R&D. This as seen later in the chapter is one driver of the innovation cycle, particularly in more industrialised economies. Table 17.1 reports the share in global R&D of economies classified as “developing” in 1970. It shows that this rose from 2 per cent in 1970 to 21 per cent in 2000. Although the computation has not been made for the years since 2000, given very significant investments in R&D by China, this “developing country” share will probably now approach 40 per cent of the global total. In 2012 China alone accounted for 20 per cent of global R&D,<sup>8</sup> although much of this was undertaken in TNC subsidiaries.

A second indicator of the growth of technological capabilities in developing economies is the share of China and other emerging economies in capital goods imports in Africa, Latin America and South East Asia. This shows a dramatic reorientation of importation patterns in a remarkably short period of time. Between 2000 and 2014, China’s share of imports in these regions rose from negligible levels to more than 25 per cent for Africa and South East Asia and more than 23 per cent for Latin America. Whilst China is clearly a special case, its growing share of global trade in capital goods is not unique.

<sup>8</sup>[https://www.iriweb.org/sites/default/files/2016GlobalR%26DFundingForecast\\_2.pdf](https://www.iriweb.org/sites/default/files/2016GlobalR%26DFundingForecast_2.pdf)



**Fig. 17.3** China's share in capital goods imports in Africa, South East Asia and Latin America, 2000–2016 (%)

Source: UN Comtrade database, <http://comtrade.un.org>, accessed 27/09/17. I am grateful to Richmond Atta-Ankomah for these calculations

For example, whilst India's share of sub-Saharan capital goods imports was only 4 per cent in 2012, its share of four-wheel tractor imports was 12 per cent, much higher than that of China (at 8 per cent) (Hanlin and Kaplinsky 2016). Other emerging economies such as Argentina, Brazil, Chile and South Africa have become significant exporters of technology in key sectors of specialisation (Fig. 17.3).<sup>9</sup>

The geographical dispersion of innovative effort and capabilities occurs in the context of considerable exclusion in the global economy—both within and between countries—and new ways of thinking about policies designed to promote sustainable development. These issues are considered in Sect. 8 later, but before we move to this agenda, it is necessary to analyse what is involved in capability building, since many of the policy errors which have held back more equitable and sustainable development have to a considerable extent arisen as a consequence of the misspecification of innovative capabilities.

Typically, innovation has been seen as a linear process, involving four main sets of activities—Research, Development, Production and Marketing. Within this, the overwhelming focus of attention has been on the Research, and sometimes the Development elements of this innovation cycle, and hence the preoccupation with R&D in the analysis of innovative capabilities, as reflected in Table 17.1 earlier. This bias was in part a consequence of the development of the Organisation for Economic Co-operation and Development (OECD) Frascati Manual in 1963 which privileged measures

<sup>9</sup>Mining equipment is one of South Africa's largest exports, constituting 8.5 per cent of total South African exports in 2005–2009. South Africa's share of global mining equipment trade was almost 1 per cent in 2011, compared to its share of global capital equipment exports of 0.22 per cent.

of R&D inputs in the analysis of innovative capabilities, in part, because these inputs of formalised knowledge were relatively easy to record and measure.

What is missing from this approach towards capabilities are the gamut of activities occurring within the domains of production and marketing (and indeed now in recycling). These include a wide range of activities, almost all of which are incremental in nature and difficult to record in a systematic way. The success of the Japanese auto producers in catching up with, and then overtaking, US and European competitors during the 1970s and 1980s was built around *kaizen* (continuous improvement) programmes, with workers being incentivised to offer suggestions for improvement at every level of production (Monden 1983; Hoffman and Kaplinsky 1988). This agenda of incremental changes was not new; it reflected the reality of productivity changes since the industrial revolution. But what it did do was to systematise and intensify the accretion of minor changes, and in so doing it both reflected the realities of capabilities throughout the innovation cycle (especially in production) and intensified these efforts. It was only after Japanese auto firms had mastered production organisation (and in the process “invented” just-in-time production) that their efforts were focused on pushing the frontiers of technology (Cusumano 1985).

The analyses of two influential innovation scholars in recent decades have highlighted this relatively mundane but ultimately critically important character of capabilities. Both Lall and Bell have helped to decompose these incremental and often plant-level activities into a number of subprocesses. For example, Lall (1993) distinguished between firm-based and national-level efforts to build capabilities. At the firm level, there is an important distinction between decisions and inputs affecting investment and those relating to production. With regard to investment, key determinants of productivity are pre-investment search, choice of technology and project implementation. In the latter category are process engineering, product engineering, industrial engineering and the creation of linkages with external actors. In terms of knowledge inputs, these range in sophistication from experienced-based, through search-based to research-based activities. It can be seen from this that investments in R&D play only a small role in Lall’s analysis of firm-level capabilities. With respect to national-level capabilities, Lall identifies the importance of human resources, incentives (such as prices and subsidies), factor markets and institutions.

Bell addresses capabilities through a similarly detailed and enterprise-focused lens (Bell 2007; Bell and Figueiredo 2012). He distinguishes between embodied and organisational technologies and focuses in particular on the importance of engineering capabilities as a core component of efficient

production and then productivity growth. These engineering activities predominantly draw on existing bodies of knowledge rather than new knowledge. These investments in engineering capabilities and in the activities which Lall identified are, when effective, sequential processes with long time horizons. For example, Bell and Figueiredo estimate that it took Malaysia more than 20 years to move from start-up to approaching the international frontiers in the assembly of electronic products; in Brazil it took 35–55 years to reach the international frontier in steel and pulp and paper.

From this we can draw the following conclusions about the nature of capability building and the contribution it makes to achieving intensive growth. First, it is clearly sectorally specific. It makes no sense to compare the apparel sector with the electronics sector. (However, although progress in the apparel sector may be relatively easy to achieve, it too requires time to build competitive capabilities). Second, in building the capabilities to reach the global frontier, minor incremental changes throughout the innovation cycle are critical; many of these changes are relatively mundane in nature and most draw on existing knowledge rather than new knowledge. This is true for all producers in every sector, but it is particularly pertinent for producers in low- and middle-income economies that are inserted into relatively low-rent links in the value chain. Third, it is easier to make productivity improvements in the catch-up phase of economic growth than when firms and countries approach the technological frontier. Fourth, the manner in which standards in GVCs are used to force through incremental improvements in process and products has become an important driver of innovation (“new to the firm” and “new to the economy”) through incremental capability building in the supply chain. But as with all technological developments, these GVC-linked capabilities are biased in nature, tending to be concentrated in production processes where global capabilities are relatively widespread and where rents are low.

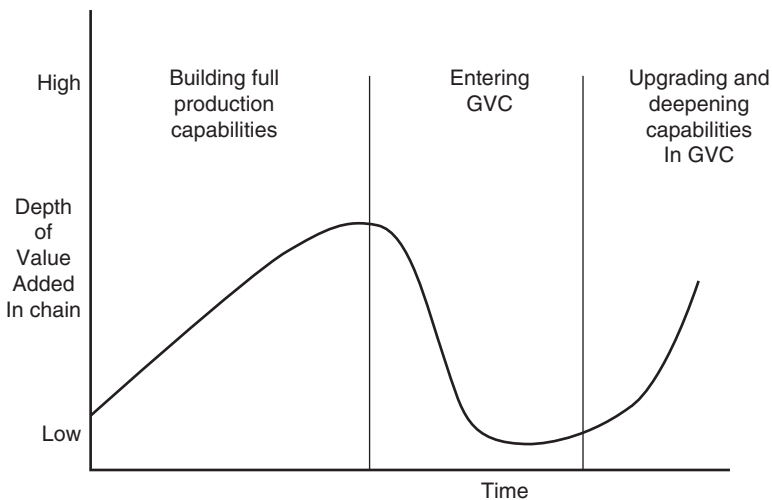
A fifth conclusion with respect to capability building follows from the increasing slicing-up of value chains into smaller and small sets of activities, each conducted by different firms in the chain, and often in different countries. This has meant that global production networks have become increasingly complex in nature, with global trade increasingly occurring in intermediate rather than final products.<sup>10</sup> For example, the iPhone 4 was exported from China at a fob price of \$179 but the value added in China was a mere \$6.50 (Xing and Detert 2010). As an illustration of where rents in

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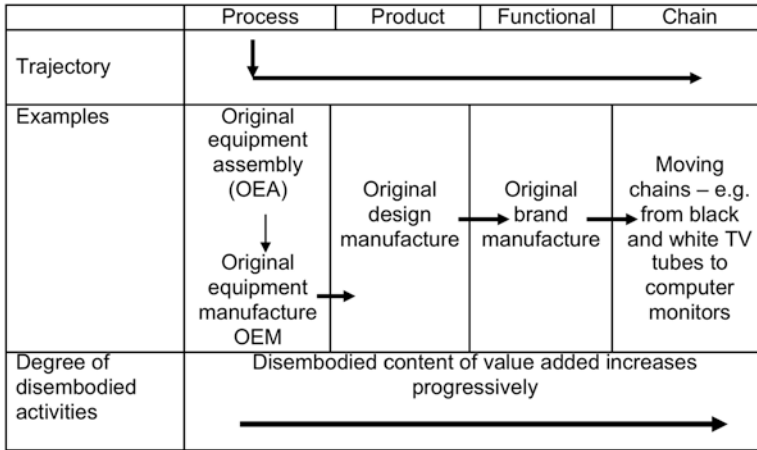
<sup>10</sup>This extensive trade in intermediates distorts global trade estimates. For example, the screen in a smart phone is counted twice in world trade—once as an export item from Korea to China and then again as incorporated in the mobile phone exported from China. UNCTAD estimates that this data distortion led to an overestimate of 28 per cent in the value of global Trade in 2010 (UNCTAD 2013).

GVCs are generated and appropriated, the same phones sold in the US for just under \$500, showing the concentration of rents in design and branding. Thus China was not exporting iPhones but labour incorporated in assembly. Its trade was in tasks, rather than products, and this is increasingly recognised as the defining character in contemporary global trade. This has important consequences for industrial policy, since for firms to be competitive in the global economy, they need to concentrate on narrow core competences. For the firm, and often for the economy, this may require a fundamental rethink of strategy, with the emphasis shifting from command over a sector and chain, to a thinning of contributions to a narrow command over specific and limited capabilities (Kaplinsky and Morris 2015; Lee 2014) (Fig. 17.4). This will involve “thinning-out” in the case of existing producers in the chain, and “thinning-in” in the case of new entrants to the chain.

Finally, in larger economies in developing economies which have already built significant capabilities and in firms with deeper visions which have mastered production capabilities, there is also a more ambitious innovation agenda which can be pursued, but with longer time horizons (Fig. 17.5). This reflects the four elements of innovative upgrading identified in the GVC framework (Humphrey and Schmitz 2001)—process upgrading, product upgrading, functional upgrading (changing position in the chain) and chain upgrading (shifting to new chains when barriers to entry erode rents in chains of past expertise).



**Fig. 17.4** Thinning rather than thickening: capability specialisation in global value chains



**Fig. 17.5** Systematic upgrading in global value chains  
 Source: Kaplinsky and Morris 2001

At the outset, the firm enters the value chain by assembling under contract for foreign lead firms, as in China’s role in the “manufacture” of the iPhone 4 cited earlier; this is referred to as “original equipment assembly” (OEA). Over time, growing competences in production allow the firm to also engage in manufacture, the physical transformation of materials in production—“original equipment manufacture” (OEM). Although this deepens its share of value added, the manufacturing is still undertaken to the design of the foreign lead buyer, and it is sold under its brand name. Both OEA and OEM are forms of process upgrading. Over time the firm develops the capacity to make improvements to the products—product upgrading. But the output is still sold under the brand name of the foreign lead buyer. However, following often large and protracted investments in innovative activities, the firm is able to develop its own brand name and to begin to appropriate both design and branding rents—the rent-intensive links in the GVC. At the same time, it may begin to outsource some of its existing activities (e.g. assembly) as the opportunities open up for obtaining these inputs at a lower cost from suppliers. This is the functional upgrading identified by the GVC framework. Finally, as rents in the whole chain are eroded by the growth of capabilities in competitive firms and economies, the innovating firm may vacate a sector and move to a new chain of activity. During the course of this innovative journey, the firm increasingly moves from a command over embodied activities in the chain (e.g. the physical transformation of inputs) into disembodied knowledge-intensive activities (e.g. design and branding).

It is clear that this process of capability building will take time and that this will vary across sectors. Moreover, although the trajectories identified in Fig. 17.5 are often sequential, in some cases firms may undertake different stages in a different sequence or in parallel. Most importantly, none of this is inevitable or free of effort. Innovation is a purposive activity, requiring considerable investments across a range of both firm- and national-level activities (including, but not confined to, investments in R&D). And, finally, since rents are contested across the chain, every actor will necessarily have to battle against other chain-actors (and particularly the lead chain governors) for the growing share of chain rents described in the trajectory set out in Fig. 17.5.

## **8 New Directions: Technology and Innovation Policies in the Early Decades of the Twenty-First Century?**

### **8.1 The Nature of the Policy Challenge**

In the preceding discussion we identified the role which technology and innovation play in delivering sustainable growth. In doing so, we have sought to reflect the changing global balance of capabilities necessary to achieve intensive growth, highlighting the central importance of incremental and organisational changes as well as those involving R&D and fixed capital investments. A central thread in this story is the role which innovation plays in generating rents and the steps which different firms'—and national—actors have to perform if these rents are protected and appropriated.

But what are the implications of these conclusions for technology and innovation policies appropriate in the contemporary world? Before turning to this issue, it is important to flag the challenges posed by the complex character of sustainable development. As we have seen, in the early ISI decades after World War II, economic growth in the developing world could be achieved through a combination of extensive investments (generally based on imported technologies) and with a limited measure of technological change required to adapt and improve these imported technologies. Then, as economies made the transition to outward-oriented growth, it became necessary to endogenise productivity growth into production—without this, global competition would force firms and economies into an immiserising growth path, that is, more activity with reduced incomes. The deeper the insertion into the global economy, the greater the requirement for innovative capabilities if sustainable income growth was to be achieved.



However, since the early post–World War II period, the challenge has not just been to bolt intensive growth on to patterns of extensive growth but in regard to the character and sustainability of growth. Whereas sustainability in the past almost entirely focused on economic sustainability (i.e. income growth), in the contemporary world there is the urgent need to also incorporate environmental and social sustainability into the objective function of private- and public-sector policymakers.

Because the Schumpeterian motor which drives capitalist accumulation is in itself incapable of addressing external diseconomies such as the despoliation of the environment in production and consumption, left unchallenged, its innovation trajectory cannot deliver environmentally sustainable growth. It is thus increasingly obvious that environmental sustainability is a major challenge confronting innovation and technology policies.

But environmental sustainability is not the only non-market challenge which needs to be addressed, since the current trajectory of innovation also has significant problems with regard to social sustainability. In essence the existing growth path in market economies is unequalising and excluding. Large, and growing, segments of the global economy are experiencing unemployment, the informalisation of employment and the degradation of work. Although this is also a growing problem in high-income economies, it is particularly acute in the developing world. In Africa and South and South East Asia, 70 per cent of non-agricultural employment is in the informal sector; in Latin America, the ratio is somewhat lower but nevertheless substantial, at 60 per cent (Charmes 2016). The advance of robotisation will probably exacerbate this crisis of employment throughout the global economy. But the problem does not only apply to exclusion of labour in production but also in patterns of income and wealth distribution. It has become clear that over the past two decades there has been a pervasive trend for intra-economy income distribution to unequalise (Piketty and Goldhammer 2014), and if China (which has made massive increases in per capita income) is excluded, similar trends are evidenced in global income and wealth distribution (Milanovic 2016). These trends in income are mirrored in the trajectory of product innovation, which has predominantly been geared to meeting the needs of higher income and individualised consumers, thereby excluding the needs of the mass of humankind. They are also natural outcomes of the extension of globalisation as lead firms search for the appropriation of economic rents (Kaplinsky 2005).

These developments reflect a crisis in the social sustainability of growth trajectories, and although this is not a narrow outcome of technological progress alone, clearly the innovation trajectory plays an important role in this

evolving picture. As we observed in earlier discussion, technology is a socially created phenomenon and co-evolves in complex ways with patterns of social organisation. The analysis of innovation is as much an exercise in understanding power and social relations as it is in identifying the economic and technical determinants of technological trajectories.

There is growing recognition of the societal challenges posed by Triple Bottom Line sustainability, surfacing in the discussion of sociotechnical regimes (Perez 2002), deep transitions (Schot and Steinmuller 2018) and inclusive innovation (Heeks et al. 2013; Chataway et al. 2014). The International Panel on Social Progress, seeking to mirror the activities of the International Panel on Climate Change, reflects a concerted effort by social scientists across the globe to analyse the root causes of unsustainable growth paths and to identify appropriate social, political and economic policy responses ([www.IPSP.org](http://www.IPSP.org)).

## 8.2 The Changing Face of Technology and Innovation Policies

Unsurprisingly, the evolution of technology and innovation policies since the mid-twentieth century chronicled earlier reflects the changing face of capitalist growth trajectories over this period.<sup>11</sup> Broadly speaking, three phases of growth trajectories can be identified over these seven decades. The first spanned the period from the end of the War until the late 1960s and early 1970s. In both the industrialised and developing world, this was an era in which supply struggled to catch up with the unmet demand for basic goods and the development of basic infrastructure. It was an era in which mass production (or the quest for mass production) dominated innovation trajectories through the exploitation of scale economies to produce largely undifferentiated goods.

By the end of the 1960s, these basic needs had been met in the high-income economies and a series of developments in both supply and demand led to the diffusion of a new form of industrial development. Piore and Sabel referred to this transition as the Second Industrial Divide (Piore and Sabel 1984), witnessing the transition from mass production to flexible specialisation; others characterised this as the transition to “Post Fordism” (Lipietz

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<sup>11</sup> As we observed above, a major reason for the failure of the European command economies was their weakness with regard to innovation. China’s experience in recent decades in which innovation has in part been pursued by state-owned enterprises is a special case and needs to be understood through a different analytic lens.

1987), “The New Competition” (Best 1990) and (focusing on changes in the organisation of production within firms) “Lean Production” (Womack and Jones 1996). The new paradigm reflected a combination of an atrophy in productivity within mass production and the emergence of increasingly segmented markets in economies with growing per capita incomes. Workers were no longer happy to endure the dehumanising Taylorist working conditions of mass production; consumers increasingly demanded better-quality, differentiated and new final products. This combination of supply and demand factors could no longer be met through mass production and at least in the high-income economies, the production paradigm transitioned to more flexible forms of production organisation reflected in part as we have seen in earlier sections, in the fracturing of production into increasingly finely differentiated GVCs.

The fracturing of the second phase of post-war growth became increasingly evident at the turn of the millennium. Productivity growth slowed down, and the imbalance between different fractions of capitalist classes (productive and finance capital) became more marked and led to the ongoing financial crisis and global recession after 2008. Moreover, as observed in Sect. 7 earlier, the global economy is experiencing interlocked crises of economic, environmental and social sustainability. An emerging literature has sought to document and analyse this contemporary transition in growth trajectories as the exhaustion of a socio-economic-technical paradigm, akin to the transition to mass production in the first half of the twentieth century (Perez 2002), or even more ambitiously to the onset of industrialisation itself (Schot and Kanger 2016).

It is in this historical context that the post–World War II evolution of technology and innovation policies can be understood (Schot and Steinmueller 2018). During this first phase ending approximately in the late 1970s, the growth in the knowledge intensity of production was associated with policies designed to enhance scientific inputs into innovation processes. This reflected the linear model of innovation and followed the classical Schumpeterian model—the invention phase (basic and applied research), followed by the innovation phase (development and commercialisation of research) and then subsequently the diffusion phase. Innovation policies in this era focused on enhancing scientific and engineering skills, incentivising R&D and investing in higher level education and research and technology organisations (RTOs). They reflected the supply pushed character of the dominant production paradigm during this period and resulted in part in the development of data-

gathering frameworks such as those embodied in the Frascati Manual (data on R&D) and the Oslo Manual (data on innovation).<sup>12</sup>

The second phase of post-World War II technology and innovation policies reflected the transition in the industrial paradigm to a more market-pulled growth trajectory, characterised by Piore and Sabel as the “Second Industrial Divide” (Piore and Sabel 1984). The requirement for flexible production also rendered linear innovation models both costly and inefficient. Interactions between users and technology suppliers were of growing significance in successful innovation (Von Hippel 1994) and it became increasingly clear that successful innovations were embedded in vibrant and effective national systems of innovation in which innovating firms thrived in interactive relationships with a diversity of institutions in both the private and public sectors (Nelson and Winter 1982; Freeman 1995; Lundvall 1992; Edquist 1997). Thus the innovation arena shifted from a supply pushed and sequential knowledge-intensive “Mode 1” framework to a more interactive, reflexive environment in which different components of the innovation cycle occur in parallel, and users were more involved in the innovation process; this is referred to as “Mode 2” innovation practice (Gibbons et al. 1994).

Now, a third phase is emerging. There is increasing recognition that the innovation system in contemporary societies is mis-focused. The growth paradigm is experiencing productivity slowdown of historic proportions (Gordon 2000); it is environmentally unsustainable and the social outcomes are resulting in political systems which heave with discontent. As we have seen in earlier discussion, although these outcomes are not driven by innovation paths, they co-evolve with the trajectory of innovation and both shape innovation paths and are in turn shaped by innovation paths. Hence the major challenge currently confronting sustainable innovation and technology policies is to transition to more inclusive systems of production and consumption. In turn this requires that attention be given to more inclusive processes of production (e.g. particularly greater labour absorption in developing economies) and to more inclusive patterns of product development (meeting the needs of the poorest segments of the global population, and new forms of delivery of social provision in both high- and low-income economies). In turn, these outcomes are only likely to be met effectively if currently excluded citizenry are included

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<sup>12</sup>I am grateful to Martin Bell for this insight, and also for the additional observation that the R&D-centred gathering of data in the Frascati-era innovation manuals was partly responsible for the misspecification of innovation policies in Africa and elsewhere. There, to this day, R&D-centred S&T policy concerns are geared to the strengthening of research and technology organisations (RTOs) at the cost of focusing on plant- and firm-level changes in production organisation and practice.

in innovation processes themselves (Chataway et al. 2014; Kraemer-Mbula and Sachs 2016).

Inclusive innovation is still in its infancy. If it is to thrive, its prospects will be shaped by a combination of supply and demand factors. On the supply side, new innovation actors are emerging. In addition to the “usual culprits” of large global northern-focused firms whose capabilities, trajectories and technologies are shaped by their operations in high-income markets, there are an increasing number of innovative “Schumpeterian” firms headquartered in low- and middle-income economies. Some of these are large and global,<sup>13</sup> but a substantial number are small and medium enterprises (SMEs) operating in low- and middle-income economies. Given the context of innovation in these lower income economies, it is often the case that the technologies which they market are more appropriate for operating conditions in other low- and middle-income economies than are the technologies emerging from innovation processes in high-income economies.<sup>14</sup> Other inclusive innovation actors include public-private partnerships (such as those associated with the Global Alliance on Vaccine Immunisation [GAVI]), as well as a wealth of community-based innovators (such as those operating in the Honeybee Network in India). On the demand side, many of the most dynamic global markets involve low- and middle-income consumers—as shown in Sect. 3.1 earlier, the nature of demand is an important inducement shaping the nature and trajectory of technological progress.

Three final observations frame this discussion of contemporary technology and innovation policies. First, although there has been a transition in the policy agenda and in policy instruments over these three periods, they are not exclusive. Policies designed to promote R&D in Phase 1 remain relevant in Phase 2 and in Phase 3; the difference lies in the primacy given to each of these instruments over time. Second, diversity is critical. Some sectors such as emerging nanotechnology have greater requirements for policy support in the basic and applied research ends of the innovation spectrum than do others. Similarly, particular types of economies have specific needs; for example, in Africa, policy support is most likely to be beneficial if it is provided to encourage processes of incremental change in production, the development of products which meet the needs of very poor consumers and techniques which are labour intensive and which are protective and restorative of the environment.

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<sup>13</sup> For example, the number of the 500 largest global firms headquartered in emerging economy markets grew from 21 in 2000 to 132 in 2014 (<http://fortune.com/fortune500/>).

<sup>14</sup> In East Africa, technologies imported from China and India are demonstrably more appropriate than those imported from northern economies. Amongst other attributes, they are cheaper to acquire, are more labour intensive and operate at smaller scales (Hanlin and Kaplinsky 2016).

And finally, the transition to more inclusive growth and innovation paths in the contemporary era is essential but is by no means inevitable. It is quite possible that social and political processes are such that technology and innovation paths continue to harm the environment, to underwrite exclusion in production and consumption and to be disproportionately focused on the development on weapons of mass destruction and repression. Nothing is pre-ordained. As in all previous eras, outcomes are a function of social and political action. Within this, our understanding of the drivers of technological progress and innovation has an important role to play. But its contribution will necessarily be shaped and limited by social and political contexts and developments.

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# 18

## Ecological Sustainability, Intergenerational Resource Transfer and Economic Development

Edward B. Barbier

### 1 Introduction

The purpose of this chapter is to explore the implications for sustainable economic development of two important global trends: the increasing link between ecological scarcity and poverty in developing countries and the growing calls to respect the “sustainability” and resilience of the Earth’s remaining ecosystems. Both of these concerns raise fundamental issues of *intergenerational equity*, which requires balancing the needs of the present and those of future generations, and *intragenerational equity*, which entails reducing the current income and wealth inequality gap between and within nations. These two trends also offer unique policy challenges.

For example, proponents of ecological sustainability increasingly argue that protection of ecosystems may be the best form of intergenerational resource transfer to support the livelihoods and well-being of future generations, yet because many of the world’s most important remaining ecosystems are in developing countries, the cost of such policies may be disproportionately burdensome for these economies. Similarly, strategies for ending ecological scarcity and poverty usually call for targeted policies both to improve rural livelihoods and to protect the fragile environments on which many poor people depend,

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yet this may require widespread changes in institutions, incentives and investments that are costly for many developing economies. Thus, both types of policies—protection of remaining global ecosystems and targeting the rural poor in marginal environments—may be required for developing economies.

The outline of the chapter is as follows. First, the chapter provides an overview of current economic thinking on sustainability, which is captured in the *capital approach* to sustainable economic development. In recent years, this approach has been extended to incorporate ecosystems—or *ecological capital*—as an important yet unique form of economic wealth. But ecosystems and their benefits have unique characteristics, are subject to irreversible conversion and are prone to collapse. Thus, there are concerns that sustainability must encompass limits on the exploitation or irrevocable loss of this essential ecological capital. As we shall see in later sections, this *strong sustainability* view is increasingly invoked in the growing scientific literature that suggests that there are “planetary boundaries” to the expansion of economic activity and populations.

There is mounting evidence of the global decline in ecosystems, which is briefly reviewed in this chapter. More importantly, the economic consequences of this decline are not distributed equally across all individuals. Poor people in the rural areas of developing countries are disproportionately affected by the increasing scarcity of ecosystems and their vital goods and services. This link between ecological scarcity and poverty in developing economies is therefore examined. Because of the rapid ecological decline globally, there are also growing calls to respect the “sustainability” and resilience of the Earth’s remaining ecosystems, including at the global level, recognizing planetary boundaries to protect the resilience of the Earth system and create “a safe operating space” for humanity. Next, the chapter explores the policy challenges posed by these two interrelated problems—ecological scarcity and poverty and ecological sustainability and planetary boundaries. Overcoming these challenges not only is an important strategy for economic development and poverty alleviation but also represents an important and necessary form of intergenerational resource transfer for global sustainability. Finally, the chapter explores options for dealing with global market failure through compensating developing countries for conserving ecosystems and biodiversity, through international payments for ecosystems services and through new international environmental agreements.

## 2 Economic Wealth, Ecological Capital and Sustainability

An important development in economics has been to establish the natural environment as a form of capital asset or natural capital (Barbier 2016). This suggests that the total wealth of an economy comprises three distinct assets: manufactured, or reproducible, capital (e.g., roads, buildings, machinery, factories, etc.); human capital, which are the skills, education and health embodied in the workforce; and natural capital, including land, forests, fossil fuels, minerals, fisheries and all other natural resources, regardless of whether or not they are exchanged on markets or owned.

Natural capital also consists of those ecosystems that through their natural functioning and habitats provide important goods and services to the economy or ecological capital (e.g., see Atkinson et al. 2012; Barbier 2011, 2013; Daily et al. 2000; Dasgupta 2008). For example, Daily et al. (2000, p. 395) state, “the world’s ecosystems are capital assets. If properly managed, they yield a flow of vital services, including the production of goods (such as seafood and timber), life support processes (such as pollination and water purification), and life-fulfilling conditions (such as beauty and serenity).”

Viewing economic wealth in this way leads to the *capital approach* to sustainability, which asserts that the value of the aggregate stock of all capital—reproducible, human and natural—must be maintained or enhanced over time to ensure that overall welfare does not decline (Barbier 2016). Moreover, the minimum condition for sustainability is ensuring that any depleted natural capital is compensated by increases in reproducible and human capital. If this condition is met, then the value of the aggregate stock—comprising human, reproducible and the remaining natural capital—will not decrease over time.

But satisfying this sustainability condition may be problematic if natural capital also includes ecosystems, which through their natural functioning and habitats provide valuable goods and services to the economy. Such ecological capital is a unique and important component of the entire natural capital endowment that supports, protects and is used by economic systems (Barbier 2011; Daily et al. 2000; Dasgupta 2008). Many ecosystem goods and services are essential for human welfare and may not be easily substituted by human and reproducible capital. Ecosystems are also prone to irreversible conversion and abrupt collapse, in which case the only satisfactory compensation rule for protecting the welfare of future generations is to keep such essential ecological capital intact.

In addition, there may be global limits on natural capital exploitation by economies. There is a growing scientific literature emphasizing that human populations and economic activity are rapidly approaching and even exceeding the limits of key sub-systems and processes of the global environment, which could lead to abrupt phase changes or “tipping points” in the Earth system (Lenton et al. 2008; Rockström et al. 2009; Steffen et al. 2015). This literature has identified “nine such processes for which we believe it is necessary to define planetary boundaries: climate change; rate of biodiversity loss (terrestrial and marine); interference with the nitrogen and phosphorus cycles; stratospheric ozone depletion; ocean acidification; global freshwater use; change in land use; chemical pollution; and atmospheric aerosol loading” (Rockström et al. 2009, p. 472). Such boundaries, in turn, suggest the need to demarcate a “safe operating space”, which places an absolute limit on how much economic activity can safely exploit critical global biophysical sub-systems or processes. In effect, these safe operating spaces are a special form of “depletable” environmental capital, for which important management rules need to be developed.

These concerns over ecological sustainability and planetary boundaries have implications for the *capital approach* to sustainability. For example, within this approach, there are contrasting *weak* versus *strong sustainability* views, which differ in the treatment of natural capital, especially ecosystems and other unique natural assets. As pointed out by Barbier and Markandya (2012, p. 42), “the main disagreement is whether natural capital has a unique or essential role in sustaining human welfare, and thus whether special ‘compensation rules’ are required to ensure that future generations are not made worse off by natural capital depletion today”. Weak sustainability assumes that there is no difference between natural and other forms of capital (e.g., human or reproducible), and thus as long as depleted natural capital is replaced with more value human or reproducible capital, then the total value of wealth available to current and future generations will increase. In contrast, strong sustainability argues that some natural capital is essential (e.g., unique environments, ecosystems, biodiversity and life-support functions), subject to irreversible loss and has uncertain value. Consequently, the sustainability goal of maintaining and enhancing the value of the aggregate capital stock requires preserving essential natural capital.

Unfortunately, the task of applying either weak or strong sustainability compensation rules to ecological capital is made more difficult, given that much of this capital is disappearing worldwide.

### 3 The Global Decline of Ecological Capital

An important indicator of the global decline in ecological capital was provided by the Millennium Ecosystem Assessment, which found that over 60 percent of the world's major ecosystem goods and services were degraded or used unsustainably (MA 2005). Some vital benefits to humankind fall in this category, including fresh water, capture fisheries, water purification and waste treatment, wild foods, genetic resources, bio-chemicals, wood fuel, pollination, spiritual, religious and aesthetic values, and the regulation of regional and local climate, erosion, pests and natural hazards. Almost all these degraded ecosystem goods and services are not marketed. Some goods, such as capture fisheries, fresh water, wild foods and wood fuel, are commercially marketed, but due to the poor management of biological resources and ecosystems that are the sources of these goods, the market prices do not reflect unsustainable use, overexploitation and excessive ecosystem damage or conversion.

One reason for the extensive habitat loss and degradation among terrestrial ecosystems globally is the ongoing conversion of forests and grasslands to agriculture, especially in tropical developing countries (Ceballos et al. 2017; Dinerstein et al. 2017). Agricultural land expansion is also responsible for the loss of many tropical savannahs and grasslands (Dixon et al. 2014). In the major developing regions of Africa, Asia and Latin America, demand for new land for crop production shows little sign of abating in the near future. Feeding a growing world population is expected to require an addition of 3–5 million hectares (ha) of new cropland each year from now until 2030, which could contribute to additional clearing of 150–300 million ha in total area of natural forests (Lambin and Meyfroidt 2011).

Important marine ecosystems have also experienced alarming rates of loss in recent decades. Due to coastal development, population growth, pollution and other human activities, 50 percent of salt marshes, 35 percent of mangroves, 30 percent of coral reefs and 29 percent of sea grasses have already been lost or degraded worldwide (Barbier et al. 2011; Doney et al. 2012). As much as 89 percent of oyster reefs may also have been lost globally (Beck et al. 2011). Overfishing has been a persistent and growing problem in marine environments, and loss of fisheries is also linked to declining water quality through the increasing occurrence of harmful algal blooms, off-shore pollution and oxygen depletion (hypoxia) (Worm et al. 2006). Finally, the disruptions in precipitation, temperature and hydrology accompanying climate change also impact marine fisheries and the key habitats that sustain them, such as wetlands, mangroves, coral and oyster reefs and sea grass beds (Doney et al. 2012; Sumaila et al. 2011).



Freshwater ecosystems are also under stress globally by a combination of interacting human-induced threats and global environmental change (Dudgeon et al. 2006; Vörösmarty et al. 2012). These systems, which comprise ponds, lakes, streams, rivers and wetlands, are the main sources of accessible water supply for humans on our planet. Other important human uses of freshwater ecosystems include inland capture fisheries, which contribute about 12 percent of all fish consumed by humans, irrigated agriculture, which supplies about 40 percent of the world's food crops, and hydropower, which provides nearly 20 percent of the world's electricity production (Johnson et al. 2001). The human-induced threats to freshwater ecosystems include modification of river systems and their associated wetlands, water withdrawals for flood control, agriculture or water supply, pollution and eutrophication, over-harvesting of inland fisheries and the introduction of invasive alien species; the significant environmental impacts are climate change, nitrogen deposition and shifts in precipitation and runoff patterns (Dudgeon et al. 2006; Vörösmarty et al. 2012). These threats pose a grave risk to human water security by increasing water scarcity, endanger freshwater biodiversity and in some cases are detrimental to both water security and biodiversity.

The state of global biological diversity also shows considerable decline, to the point that there is now concern about “biological annihilation” of terrestrial species (Dinerstein et al. 2017). The Living Planet Index (LPI), which measures trends in thousands of the world's vertebrate species population, shows a decline of 52 percent from 1970 to 2010 (WWF 2014). In effect, over the past 40 years, the number of mammals, birds, reptiles, amphibians and fish has been halved. For freshwater species, the decline has been even worse (76 percent). For tropical countries, the LPI shows a 56 percent fall in species, with Latin America experiencing the worst drop (83 percent). The main causes of the loss in species globally appear to be habitat loss and degradation, hunting and fishing and climate change.

In sum, every major indicator of the health and status of the world's most important ecosystems indicates that ecological capital is in serious decline. Moreover, the problem seems to have been worsening over recent decades.

## 4 Ecological Scarcity and Poverty in Developing Economies

For many developing economies, growing ecological scarcity is contributing to the economic vulnerability of the rural poor. Increasing ecological scarcity is disproportionately affecting the world's poor in rural areas, who depend



critically on many ecosystem goods and services for their livelihoods (Barbier 2010; MA 2005; TEEB 2010; Wunder 2008). As the world's rural poor continue to be concentrated in the less ecologically favored and remote areas of developing regions, their livelihoods become intricately linked with exploiting fragile environments and ecosystems (Barbier 2010, 2015; Barbier and Hochard 2018; CAWMA 2008; Dercon 2009; World Bank 2003, 2008). Such clustering of poor rural populations is likely to continue into the foreseeable future, given current global poverty trends that suggest that the poor are increasingly rural, dependent on agriculture and predominantly young (Castañeda et al. 2018).

There are two key vulnerable groups in the rural areas of developing countries: people living in less-favored agricultural areas and people living in rural low-elevation coastal zones (LECZ) (Barbier 2015; Barbier and Hochard 2018). Less-favored agricultural areas (LFAA) include agricultural lands that are constrained by difficult terrain, poor soil quality or limited rainfall (referred to as less-favored agricultural lands) and any favorable agricultural land with limited access to markets (i.e., five hours or more of travel to a market city with a population of at least 50,000). Low-elevation coastal zones (LECZ) refer to contiguous areas along coasts that have less than 10 meters (m) of elevation and are thus most vulnerable to sea-level rise and other coastal hazards, such as storm surges, coastal erosion and saltwater intrusion. In the absence of globally gridded data sets for income or consumption-based measures of poverty for populations on LFAA and in rural LECZ, infant mortality rate (IMR) serves as a useful proxy for overall poverty levels because they are highly correlated with important poverty-related metrics such as income, education levels and health status (Barbier 2015; de Sherbinin 2008; Fritzell et al. 2015; Sartorius and Sartorius 2014).

In 2010 there were approximately 1.6 billion people living in LFAA in developing countries or around 37 percent of the total rural population (see Table 18.1). Of this LFAA population, 586 million are in areas with at least 32 infant deaths per 1000 live births, which suggests an incidence of high IMR of about 37 percent. Most of the LFAA populations with high infant mortality live in low-income (216 million) and lower middle-income countries (315 million). In low-income countries, the incidence of high IMR in LFAA exceeds 90 percent, whereas it is around 53 percent in lower middle-income countries and only 7 percent in upper middle-income countries. This suggests that the extent and incidence of high infant mortality in LFAA are correlated with the overall level of economic development.

Sub-Saharan Africa (240 million) and South Asia (242 million) account for most of the world's LFAA population with high infant mortality (see

**Table 18.1** High infant mortality (HIM) among less-favored agricultural area (LFAA) populations, 2010

	LFAA population (millions)	Share (%) of rural population in LFAA	LFAA populations with HIM		2000–2010 Change (%) in LFAA	
			Millions	Share (%)	Population	HIM
<b>Developing country</b>	<b>1579.8</b>	<b>37.2%</b>	<b>586.2</b>	<b>37.1%</b>	<b>14.3%</b>	<b>–31.1%</b>
<i>By income:</i>						
Low income	239.0	33.3%	216.1	90.4%	34.1%	21.2%
Lower middle income	594.4	32.6%	314.7	52.9%	21.0%	–20.3%
Upper middle income	746.4	43.8%	55.4	7.4%	4.7%	–80.0%
<i>By region:</i>						
East Asia & Pacific	739.7	49.3%	77.7	10.5%	9.9%	–71.9%
Europe & Central Asia	98.5	54.5%	9.6	9.7%	1.4%	–80.4%
Latin America & Caribbean	111.7	33.2%	8.2	7.3%	15.2%	–76.6%
Middle East & North Africa	50.9	21.4%	9.2	18.1%	12.4%	–66.7%
South Asia	335.3	26.1%	242.1	72.2%	15.2%	–14.4%
Sub-Saharan Africa	243.8	34.3%	239.5	98.2%	35.8%	33.6%
<b>Developed country</b>	<b>168.7</b>	<b>40.6%</b>	<b>0.02</b>	<b>0.0%</b>	<b>–2.8%</b>	<b>–93.9%</b>
<b>World</b>	<b>1748.6</b>	<b>37.5%</b>	<b>586.2</b>	<b>33.5%</b>	<b>12.4%</b>	<b>–31.1%</b>

Source: Barbier and Hochard (2018)

Notes: Infant mortality rate (IMR) is the number of deaths within the first year of life per 1000 births, and high infant mortality (HIM) is > 32 deaths per 1000 live births. Low-income economies are those in which 2013 per capita income was \$1045 or less, lower middle-income economies are those in which 2013 per capita income was between \$1046 and \$4125 and upper-middle-income economies are those in which the 2013 per capita income was between \$4126 and \$12,745 as defined by World Development Indicators, available at <http://databank.worldbank.org/data/views/variableselection/selectvariables.aspx?source=world-development-indicators>

Table 18.1). Virtually all (98 percent) of the LFAA population in Sub-Saharan Africa and around 72 percent of the LFAA population in South Asia display high IMR. Moreover, approximately 115 million of the Sub-Saharan African LFAA population has extremely high infant mortality (IMR > 65 deaths), which is about 90 percent of the global total of 131 million.

As shown in Table 18.1, although LFAA populations have risen overall across developing countries, the total number of LFAA with high IMR declined by 31 percent from 2000 to 2010. Even larger declines occurred among upper middle-income countries (80 percent) and in the East Asia & Pacific (72 percent), Europe & Central Asia (80 percent) and Latin America & the Caribbean (77 percent) regions. However, in low-income countries, the LFAA population with high IMR rose by 21 percent between 2000 and 2010, and in Sub-Saharan Africa this population group increased by 34 percent.

As shown in Table 18.2, across all developing countries, high infant mortality among rural LECZ populations has fallen by one-third from 2000 to 2010. Even larger declines occurred in upper middle-income countries (96 percent), East Asia & Pacific (55 percent), Europe & Central Asia (100 percent), Latin America & Caribbean (79 percent) and the Middle East & North Africa (89 percent). However, rural LECZ populations with high IMR fell by only 19 percent in low-income economies between 2000 and 2010 and actually rose by 28 percent in Sub-Saharan Africa.

The tendency for the rural poor to be clustered in more marginal environments prone to degradation and low productivity is also supported by studies at the regional and country levels, although important differences exist within and between countries. Such a “poverty-environment nexus” appears to be prevalent in three of the poorest countries in South East Asia—Cambodia, Laos and Vietnam (Dasgupta et al. 2005; Minot and Baulch 2005). In Cambodia, the core poor in rural areas appear to be located in areas that are already heavily deforested, although poor populations tend also to be more concentrated in the lowlands rather than steeply sloped lands. In Laos, the poorest rural provinces in the North and Northeast also have the highest incidence of poverty, with poor households located mainly in forested areas and the highlands. In Vietnam, large poor populations confined to steep slopes exist in the provinces comprising the Northern and Central Highlands, but extensive rural poverty is also found along the North Central Coast and the Red River Delta.

Despite its robust growth and reduction of poverty overall, China has seen rural poverty persist and concentrate geographically in the relatively poor agricultural areas of the West and Southwest (Gustafsson and Zhong 2000; Jalan and Ravallion 2002; Kelly and Huo 2013; Olivia et al. 2011; Ravallion

**Table 18.2** High infant mortality (HIM) among rural low-elevation coastal zone (LECZ) populations, 2010

	Rural LECZ populations (millions)	Share (%) of total LECZ population	Rural LECZ populations with HIM		2000–2010 Change (%) in rural LECZ	
			Millions	Share (%)	Population	HIM
<b>Developing country</b>	<b>266.8</b>	<b>46.2%</b>	<b>84.5</b>	<b>31.7%</b>	<b>13.1%</b>	<b>–33.0%</b>
<i>By income:</i>						
Low income	66.2	70.8%	46.8	70.6%	14.3%	–19.3%
Lower middle income	132.0	52.3%	37.3	28.3%	17.4%	–36.2%
Upper middle income	68.5	29.6%	0.4	0.7%	4.7%	–95.5%
<i>By region:</i>						
East Asia & Pacific	132.9	42.4%	15.0	11.3%	7.9%	–54.6%
Europe & Central Asia	1.5	30.9%	0.0	0.0%	–0.8%	–100.0%
Latin America & Caribbean	8.3	25.1%	0.5	6.3%	11.0%	–78.8%
Middle East & North Africa	20.5	51.6%	0.4	2.2%	22.2%	–89.3%
South Asia	93.0	59.9%	58.2	62.6%	17.9%	–25.3%
Sub-Saharan Africa	10.6	33.8%	10.3	97.3%	29.9%	28.0%
<b>Developed country</b>	<b>16.4</b>	<b>13.5%</b>	<b>0.01</b>	<b>0.1%</b>	<b>4.4%</b>	<b>–52.8%</b>
<b>World</b>	<b>283.2</b>	<b>40.5%</b>	<b>84.5</b>	<b>29.8%</b>	<b>12.5%</b>	<b>–33.0%</b>

Source: Barbier and Hochard (2018)

Notes: Infant mortality rate (IMR) is the number of deaths within the first year of life per 1000 births and high infant mortality (HIM) is > 32 deaths per 1000 live births. Low-income economies are those in which 2013 per capita income was \$1045 or less, lower middle-income economies are those in which 2013 per capita income was between \$1046 and \$4125 and upper middle-income economies are those in which 2013 per capita income was between \$4126 and \$12,745 as defined by the World Development Indicators, available at <http://databank.worldbank.org/data/views/variableselection/selectvariables.aspx?source=world-development-indicators>

and Chen 2007). In general, households living in the lowlands and plains are less poverty prone than those living in hilly and mountainous regions, which contain less productive and more degradable land. As poverty declines in coastal and lowland areas, the rural poor are increasingly found in upland

areas. There are still more than 100 million rural poor in China living on less than \$1 per day, and most of them live in Western, inland China in mountainous areas with low rainfall or on marginal lands with low agricultural potential (Olivia et al. 2011). For example, the proportion of China's rural poor living in the mountains increased from less than one-third in 1988 to a majority in 1995 (Gustafsson and Zhong 2000).

A study of the spatial pattern of rural poverty in Bangladesh concludes that "the pockets of high poverty incidence generally coincide with the ecologically poor areas" (Kam et al. 2005, p. 564). Overall, four such areas could be considered poverty "hot spots" in Bangladesh: the low-lying depression area in the Northeast; the drought-prone upland area in the Northwest; several flood-prone subdistricts fringing major rivers; and several of the subdistricts in the Southeastern hilly regions. A similar poverty-mapping exercise in Sri Lanka reveals that regions with a lack of availability of water and poor-quality land are most associated with high rural poverty and food insecurity (Amarasinghe et al. 2005). Poverty mapping in Syria indicates that rural areas with shallow soils or unfavorable topography, such as steep slopes, generally display lower regional income levels (Szonyi et al. 2010). In Mexico, the rural poor are also concentrated in these particular regions, especially those with marginal lands (Bellon et al. 2005). Poverty is especially concentrated in mountainous regions in Central, Southern and Northwest Mexico. As the authors note, "these 'islands' of poverty exhibit specific circumstances such as the presence of indigenous populations, higher rainfall, steep slopes, erodible soils and lack of access to services", reflecting that these areas are both ecologically fragile and remote (Bellon et al. 2005, p. 489).

Much of Africa's population, and its rural poor, are located in ecologically fragile regions of landlocked, resource-scarce countries (Collier 2007; Fan and Chan-Kang 2004). But even in coastal African economies, the rural poor continue to be clustered in marginal environments. For example, in Kenya locations with poor-quality soil, a high percentage of steep land and variable rainfall have much higher poverty levels among populations compared to areas with more favorable land and environmental conditions (Okwi et al. 2007; Radeny and Bulte 2011). Throughout Uganda, crop income is positively associated with soil fertility (Yamano and Kijima 2010). In Rwanda, even resource-poor households with low-quality land that are located close to markets tend to have the lowest levels of income and consumption expenditures (Ansoms and McKay 2010).

According to Dercon (2006, p. 23), in Ethiopia, "the poor contain mainly households with poor endowments in terms of poor land, far from towns or with poor road infrastructure". Similarly, the Western, inland and mountain-

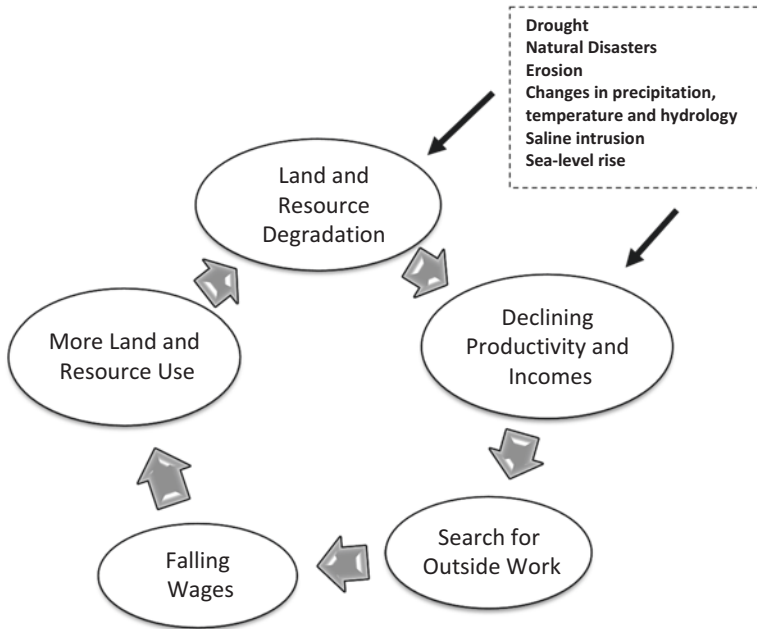
ous regions of China where the rural poor tend to be located are also remote regions that lack integration with major markets (Olivia et al. 2011). Remoteness is also a factor in the land-use poverty traps found in Amazonia, where isolated, subsistence-based shifting cultivation systems can lead to farmers failing to invest in perennial cash crops and forest fallows (Coomes et al. 2011). The poor in rural and remote semi-arid India also seem to be caught in an asset-poverty trap, especially among households from a lower caste, with smaller land holdings and less education (Naschold 2012).

In Tanzania, rural poverty appears closely related to access to regional urban centers and markets rather than distance to roads or to the capital, Dar es Salaam (Minot 2007). In Rwanda rural households in remote rural areas are isolated from major markets and lack public services and are among the poorest, attain low education levels and accumulate little farm capital (Ansoms and McKay 2010). In Uganda, distance to the nearest urban center and the poor quality of roads appear to negatively affect crop income (Yamano and Kijima 2010). Overall, the lack of integration of the rural poor in remote areas in regional and national markets is a major barrier preventing many smallholders to “break out of the semi-subsistence poverty trap that appears to ensnare much of rural Africa” (Barrett 2008, p. 300).

Consequently, in their review of the empirical evidence on poverty traps in developing countries, Kraay and McKenzie (2014, p. 143) conclude: “The evidence most consistent with poverty traps comes from poor households in remote rural regions”. Similarly, the World Bank (2008, p. 49) found that “the extreme poor in more marginal areas are especially vulnerable” and “one concern is the existence of geographical poverty traps”.

## 5 Poverty-Environment Traps

Disadvantaged regions, such as LFAA and rural LECZ, are particularly vulnerable to *poverty-environment traps*, which are characterized by over-reliance on marginal agricultural land and resource commons that can lead to stagnant, low incomes (Barbier 2010; Barbier and Hochard 2018). Figure 18.1 illustrates the elements of the poverty-environment trap that can occur in marginal areas and the threat posed by environmental risks. Because much of the available land and resource commons have low productive potential, they are prone to over-use and degradation. Geographical isolation substantially raises the costs of agricultural commerce and crop production in remote markets and discourages smallholder market participation and investment in



**Fig. 18.1** The poverty-environment trap in marginal areas

improved farming systems and land management (Ansoms and McKay 2010; Barrett 2008; Coxhead et al. 2002; González-Vega et al. 2004; Holden et al. 2004; Jansen et al. 2006; Narain et al. 2008; Shively and Fisher 2004). For coastal households, the exploitation of marine and coastal resources—that is, collection of products from local forests, such as mangroves, and small-scale fishing—seems to predominate (Barbier 2015; Béné 2009; Dasgupta et al. 2016a; Robinson 2016). Declining productivity and incomes induces poor households to allocate more labor for outside work to boost or supplement incomes. However, with large numbers of households seeking outside employment locally, the supply of labor for paid work could exceed demand, causing the market wage to decrease. If the wage rate falls below the reservation wage of households, they are forced to re-allocate household labor back to agricultural production and extracting natural resources from the surrounding environment.

The result is the self-perpetuating vicious cycle depicted in Fig. 18.1. Persistent and periodic environmental risks, such as drought, erosion, natural disasters, sea-level rise, saltwater intrusion and changes in precipitation, temperature and hydrology, may impact poor households in marginal areas directly through causing declining agricultural productivity and income or

indirectly through affecting land and natural resource use (see Fig. 18.1). The result impacts not only the livelihoods of households but also their ability to accumulate and maintain key agricultural and natural resource assets. Over the long term, households caught in this poverty-environment trap either remain destitute or must face the difficult choice of migration to other areas (Barbier 2010).

There are numerous examples of this type of poverty-environment trap in the literature. For example, Pascual and Barbier (2007) find that in the Yucatán, Mexico, poor households on LFAA tend to over-supply labor to shifting cultivation, which causes more deforestation and thus forces these households to search for outside work, which can be the first step in the process leading to the poverty-environment trap (see Fig. 18.1). Similarly, Coomes et al. (2011) identify a land-use poverty trap for shifting cultivators in the Amazon, whereby insufficient initial land holdings induce land-use patterns that trap households in low agricultural productivity as well as further forest conversion. Caviglia-Harris (2004) also documents the relationship between low-productivity agroforestry systems, forest clearing and poverty in Amazonia. In Rwanda, resource-poor households in LFAA are very dependent on subsistence production, and when they can find outside employment, they receive the lowest median pay per hour (Ansoms and McKay 2010). Similar poverty trap relationships have been found between declining productivity, outside employment and poverty for resource-poor households in LFAA in El Salvador, Ethiopia, Honduras, India, Malawi and the Philippines (Coxhead et al. 2002; Gonazález-Vega et al. 2004; Holden et al. 2004; Jansen et al. 2006; Narain et al. 2008; Shively and Fisher 2004).

The rural poor in coastal areas are especially vulnerable to natural disaster shocks, such as hurricanes, tsunamis, floods and other extreme coastal events (Badola and Hussain 2005; Barbier 2015; Carter et al. 2007; Das and Vincent 2009; Hallegatte et al. 2015; Laso Bayas et al. 2011; McSweeney 2005). Moreover, the lack of protection infrastructure in rural areas, such as storm shelters, seawalls and embankments, means that poor rural households often rely on “natural barriers”, such as mangroves, for protection (Badola and Hussain 2005; Barbier 2015; Das and Vincent 2009; Dasgupta et al. 2016b; Mahmud and Barbier 2016). The loss of these habitats leaves these households more exposed to natural disasters. In many developing regions, poor households also use coastal resources as insurance and coping strategies for avoiding the income and subsistence losses associated with such disasters (Carter et al. 2007; Mahmud and Barbier 2016; McSweeney 2005; Robinson 2016).



## 6 Ecological Sustainability, Resilience and Planetary Boundaries

Because of the rapid ecological decline globally, there are growing calls to respect the “sustainability” and resilience of the Earth’s remaining ecosystems (Ceballos et al. 2017; Dinerstein et al. 2017; Doney et al. 2012). One concern is that ecosystems are prone to collapse. The resilience or robustness of an ecosystem—its ability to absorb large shocks or sustained disturbances and still maintain internal integrity and functioning—may be an important attribute determining the extent to which landscape conversion and ecosystem degradation affect the risk of ecological collapse (Elmqvist et al. 2003; Folke et al. 2004; Levin and Lubchenco 2008; Scheffer et al. 2001). Thus, protecting ecosystems from regime shifts and collapse requires maintaining or enhancing the resilience of ecosystems, which may be a sizable component of the total economic wealth generated by these systems (Barbier 2011, 2016).

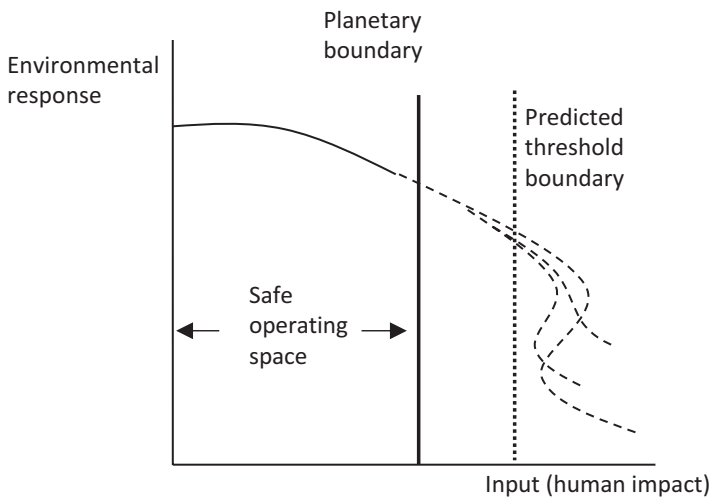
As noted previously, at the global level, some scientists have argued the case for imposing “planetary boundaries” on overall human economic activity (Lenton et al. 2008; Rockström et al. 2009; Steffen et al. 2015). These boundaries are primarily defined by limited biospheric *sinks* rather than finite resources—for example, running out of atmosphere to store carbon rather than running out of fossil fuels. The ultimate goal of planetary boundaries is to protect the resilience of the Earth system and create “a safe operating space for humanity” (Rockström et al. 2009). Depending on the planetary boundary, this measurable limit could be terrestrial net primary production, available freshwater for consumption, species richness, assimilative capacity for various pollutants, forest land area or the global carbon budget (Dinerstein et al. 2017; Gerton et al. 2013; Mace et al. 2014; Running 2012; Steffen et al. 2015).

The key rationale for establishing planetary boundaries on anthropogenic processes is to avoid “tipping points” or “thresholds” that could lead to irreversible changes in this system, with potentially catastrophic impacts for humanity. If unchecked, these processes could place human population growth and economic activity on an unsustainable trajectory that crosses critical thresholds and de-stabilizes the global environment. Establishing planetary boundaries therefore “aims to help guide human societies away from such a trajectory by defining a ‘safe operating space’ in which we can continue to develop and thrive” (Steffen et al. 2015, p. 737). In addition, the boundary defining the safe operating space should include a “buffer” that both accounts for “uncertainty in the precise position of the threshold” and “also allows society time to

react to early warning signs that it may be approaching a threshold and consequent abrupt or risky change” (Steffen et al. 2015, pp. 737–738). Figure 18.2 illustrates how setting a planetary boundary to designate the safe operating space is impacted by the uncertainty and lack of information over possible future threshold effects.

The concept of a planetary boundary that imposes an absolute limit on human activities that threaten critical Earth system resources and sinks is directly relevant to the *capital approach* to sustainability. Scientists who advocate the need for planetary boundaries to limit human impacts on critical global sinks and resources are aligning with the strong sustainability perspective, which argues that some natural capital may not be substituted and are inviolate. Based on this scientific view, some economists have begun examining how such planetary boundaries should be established, given the uncertainty over thresholds, abrupt and irreversible change and the magnitude of welfare impacts (Crépin and Folke 2014; Smith 2017).

But the main objective of planetary boundaries is to ensure intergenerational transfer of a critical and essential stock of biosphere sinks and resources, thus meeting the overall sustainability goal that per capita welfare does not decline over time (Barbier 2016).



**Fig. 18.2** Planetary boundaries and safe operating space. Past environmental responses (solid line curve) are unlikely to provide a good indication of future responses (dotted line curves), and there is uncertainty over irreversible threshold effects. To avoid unknown “tipping points” that lead irreversibly to these undesirable effects, the planetary boundary (vertical solid line) that defines the safe operating space for human activity should be set well before the predicted threshold (vertical dotted line)

## 7 Intergenerational Resource Transfers and Policy Strategies

The link between ecological scarcity and poverty in developing countries and the growing calls to respect “sustainability” and resilience of the Earth’s remaining ecosystems raise fundamental issues of both intergenerational and intragenerational equity. These two trends also offer unique policy challenges. Nonetheless, addressing both problems represents key *intergenerational resource transfers* that will be critical to ensuring the sustainability of global economic development.

As noted previously, calls to respect ecological sustainability and planetary boundaries are aimed at reducing catastrophic outcomes that are global, long run, largely irreversible (in human time scales) and uncertain. Proponents of this approach increasingly argue that protection of ecosystems may be the best form of intergenerational resource transfer to support the livelihoods and well-being of future generations. Yet because many of the world’s most important remaining ecosystems are in developing countries, the cost of such policies may be disproportionately burdensome for these economies. This cost burden must therefore be shared by the international community and wealthier countries.

The persistent problem posed by ecological scarcity for widespread rural poverty appears to be an intragenerational equity issue. However, recall that the global poor are mainly rural, dependent on agriculture and predominantly young (Castañeda et al. 2018). In addition, marginal environments in rural areas, such as rural low-elevation coastal zones (LECZ) and less-favored agricultural areas (LFAA), have high incidence of infant mortality (see Tables 18.1 and 18.2). In effect, the consequence of worsening ecological scarcity in rural areas is that it impacts the lives and the economic livelihoods of the next generation. Development strategies today that target the rural poor in these environments reduce the likelihood of poverty-environment traps and lessen the vulnerability to climate change, and other future environmental risks are therefore a form of intergenerational resource transfer.

Given the high incidence of rural LECZ and LFAA poverty among low-income countries, over the long term, fostering economic growth may be one of the most effective ways to reduce the poverty of these populations, while at the same time reducing their vulnerability to climate change and other environmental shocks (Hallegatte et al. 2015). However, it is likely that additional policy measures are needed to address the persistence of rural poverty in these disadvantaged areas.

There is some evidence that addressing the persistence of rural poverty in LECZ requires more *location-specific* targeting of policies, especially in areas where poverty, environmental risks and climate change impacts may be self-reinforcing (Barbier 2015; Cinner et al. 2012; Hallegatte et al. 2015). For example, actions that can be targeted to specific coastal communities and LECZ regions include improved information about weather events and early warning systems, evacuations from highly vulnerable areas, development of social safety nets and diversification within coastal livelihoods, such as agriculture and fishing. Additional actions include strengthening community groups responsible for managing coastal resources and ecosystems, improvements in coastal infrastructure and policies and investments to encourage the most vulnerable to migrate to non-coastal areas. Over the long term, actions targeted to specific coastal communities and LECZ include livelihood diversification out of fishing, agriculture and other coastal resource-based activities, investments in health and education and broader investments in local governance and institutions.

Reducing poverty and environmental vulnerability in LFAA will likely require a similar set of targeted investments and policies (Barbier 2010; Hallegatte et al. 2015), including improving the productivity of agriculture and resource-productive activities, especially with higher yielding and more climate-resistant practices, crop varieties and livestock breeds. Additional actions include overcoming the constraints on broader market participation, especially through fostering well-functioning and affordable local markets for credit, insurance and land; generating off-farm employment opportunities; and improving public services and infrastructure in remote locations, including roads, communications, marketing, education and health services and research and extension. These actions should be accompanied by policies that encourage local governance and participation in efforts to enhance environmental protection and management of resource commons.

Any policy strategy aimed at improving the livelihoods of the rural poor located in remote and fragile environments must be assessed against the alternative strategy of encouraging greater out-migration from these areas. As noted by Lall et al. (2006, p. 48), rural development is essentially an indirect way of deterring migration to cities; yet because of the costliness of rural investments, “policies in developing countries are increasingly more concerned with influencing the direction of rural to urban migration flows—e.g. to particular areas—with the implicit understanding that migration will occur anyway and thus should be accommodated at as low a cost as possible”. Thus, Hallegatte et al. (2015, p. 160) maintain that “migration can be an important

way of adapting to extreme weather events and climate change impacts, and thus of reducing impacts that lower welfare. ... Particularly in areas where in situ adaptation is difficult or extremely costly (such as in low-density coastal areas or remote areas with low productivity), migration can be critical.” But the authors also caution that “the poorest households have a lower capacity to migrate and may therefore be unable to use this option. ... In addition, the ability to migrate depends on household assets (including land tenure), the ability to sell assets, information and social capital, financial resources, and human capital” (Hallegatte et al. 2015, pp. 160–1).

This suggests that a viable strategy for disadvantaged regions and poor rural populations is likely to be a combination of policies that encourages out-migration for some households while investing in improving the livelihoods of those who remain in such areas. Both types of policies, along with the promotion of overall economic growth, will likely be required to help overcome poverty in LFAA and rural LECZ, especially given the vulnerability of these populations and their economic livelihoods to poverty-environment traps and the impacts of climate change and ecological scarcity.

Finally, a strategy that could protect key ecosystems and reduce poverty in marginal rural areas is to involve the poor in *payment for ecosystem services* and other measures that enhance the environments on which the poor depend. Payments for the conservation of standing forests or wildlife habitat are the most frequent type of compensation programs used currently in developing countries, and they have been mainly aimed at paying landowners for the opportunity costs of preserving natural landscapes that provide one or more diverse services: carbon sequestration, watershed protection, biodiversity benefits, wildlife protection and landscape beauty (Grieg-Gran et al. 2005; Wunder 2008). Wherever possible, the payment schemes should be designed to increase the participation of the poor, to reduce any negative impacts on nonparticipants while creating additional job opportunities for rural workers and to provide technical assistance, access to inputs, credit and other support to encourage poor smallholders to adopt the desired land-use practices. More effort must be devoted to designing projects and programs that include the direct participation of the landless and near landless. Alternatively, as in the case of China’s Sloping Land Conversion Program, the payments can assist the transition from marginal land cultivation to nonfarm employment (Kelly and Huo 2013).

In sum, overcoming declining ecological capital and protecting ecological scarcity should be considered fundamental challenges to economic development and global sustainability. It is time that that these challenges become the focus of more coherent development strategies to address them.

## 8 Paying for Global Ecosystem Conservation

However, declining ecological scarcity is also an example of market failure on a global scale. There are two aspects of this problem.

First, many large-scale ecosystems and habitats are global public goods that yield benefits that “spill over” beyond the borders of the regions or countries that contain them (Arriagada and Perrings 2011; Barbier 2000, 2011). For example, the biodiversity contained in tropical forests may produce widespread benefits in terms of new crop varieties, pharmaceuticals and potentially many other products from rich genetic material. Coastal wetlands may be breeding nurseries for fish that are ultimately caught in international waters. Many ecosystems store carbon that would otherwise be released into the atmosphere and accelerate global warming.

Second, much of the world’s biological rich, diverse and important ecosystems are in poorer developing countries, yet they are likely to “underinvest” in conservation that yields global benefits. As pointed out by Barbier (2000, p. 55): “A country may have a biologically rich natural asset that is, or may potentially be, producing benefits of global significance, but as there is no market of any other institution at the global level to enable the country to ‘capture’ this value, it is unlikely to consider these global benefits in its decision whether to conserve, exploit or develop the asset.” Consequently, unless the country receives compensation in some form from the rest of the world to conserve ecological capital that provides values of global significance, the country is unlikely to invest in additional conservation necessary to protect or maintain these global benefits.

The 1992 Convention on Biological Diversity (CBD) was one of the first international environmental agreements negotiated. In the same year, the Global Environmental Facility (GEF) for funding biodiversity conservation in developing countries was launched. Yet 25 years later, there still remains a huge financing gap: the international community spends \$4–10 billion each year on biodiversity conservation, yet the likely cost of global biodiversity protection is estimated to be \$100 billion annually (Barbier et al. 2018).

The wide gap between the global benefits that humankind receives from ecosystems and what we are willing to pay to maintain and conserve them is a critical symptom of how oblivious we are to the risks arising from the excessive ecological deterioration arising from the current pattern of economic development. Yet, there are many disincentives working against the creation of such schemes. Although progress has been made in establishing international payments for global ecosystem services, most notably a nascent financial mechanism to Reduce Emissions from Deforestation and Forest

Degradation (REDD+), several important concerns have arisen (Barbier 2012). Monitoring and verifying changes in deforestation rates in developing countries and their impacts on carbon emissions could increase substantially the transaction costs of implementing a REDD+ scheme on a global scale. In addition, a carbon market for avoided deforestation may not necessarily be the best way of protecting forests that yield other global ecosystem services. There is also concern over the high opportunity costs faced by many developing countries from losses in foregone agricultural and timber benefits. These issues need to be resolved if there is to be a successful REDD+ financial mechanism implemented on a global scale.

With regard to negotiating and implementing a more comprehensive international scheme to cover a wider range of ecosystems yielding global benefits, the best outcome that we can hope for currently is a scheme that is underwritten by only a handful of rich countries, and which is capable of providing a level of global ecosystem protection that is only slightly more than current efforts (Barbier 2012). Although they may be supported through multilateral and bilateral assistance, developing countries will continue to bear the direct and opportunity costs of ecosystem conservation for the foreseeable future. Clearly, this perpetuates the unsustainability problem, especially given rising global ecological scarcity. But to overcome the economic disincentives that are reinforcing such an outcome, the international community needs to think more creatively as to how to agree, design, implement and verify international mechanisms for payment of ecosystem services. We also need to develop more innovative ways of financing such schemes, other than the traditional methods of development assistance or transfers.

One possibility is to create a new Global Agreement on Biodiversity (GAB) modeled after the 2015 Paris Climate Change Accord (Dinerstein et al. 2017). But instead of focusing on just governments as parties to the agreement, corporations in industries that benefit from biodiversity should also formally join the GAB and contribute financially to it (Barbier et al. 2018). As parties to the GAB, governments would set over-arching conservation goals with countries pledging specific targets, policies and timelines. In addition, wealthier countries should assist conservation in poorer nations. However, major companies in key sectors, such as seafood, forestry, agriculture and insurance, also have a financial stake in averting the global biodiversity crisis. These sectors should agree on targets for increasing marine stocks, protecting forests, preserving habitats of wild pollinators and conserving coastal wetlands. Individual companies should pledge to meet these goals as well as provide financial and technological assistance for conservation in developing countries.



**Table 18.3** Examples of financial benefits and potential investments in global conservation by key industries

Industry	Annual revenues	Benefits from conservation	Conservation target	Potential investment
Seafood	\$252 billion	Increase in annual profits by \$53 billion	Increase marine biomass stocks	\$5–10 billion annually <sup>a</sup>
Forest products	\$300 billion	Attain sustainable forest management goal	Increase area of protected forests	\$15–30 billion annually <sup>b</sup>
Insurance	\$4300 billion	Reduce estimated global flood damage losses of \$52 billion annually	Increase area of protected coastal wetlands	\$5–10 billion annually <sup>c</sup>

Source: Barbier et al. (2018)

<sup>a</sup>Based on 10–20 percent of potential benefits from biodiversity conservation

<sup>b</sup>Based on 5–10 percent of annual revenues of \$300 billion, which are the global earnings of the 100 largest forest, package and paper companies (14)

<sup>c</sup>Based on 10–20 percent of potential benefits from biodiversity conservation

As shown in Table 18.3, the resulting increase in industry revenues and profits could provide \$25–50 billion annually for global conservation. For example, the seafood industry stands to gain \$53 billion annually from a \$5 billion to \$10 billion investment each year in a global agreement on biodiversity, while the insurance industry could see an additional \$52 billion with a similar investment. By spending \$15–30 billion annually, the forest products industry would attain its sustainable forest management goals. Agriculture also has an incentive to protect habitats of wild pollinators, who along with managed populations enhance global crop production by \$235–577 billion annually (Barbier et al. 2018; Potts et al. 2016).

Such a GAB would represent a “new wave” of international agreements that would engage government and industry, and hopefully other non-state actors, in a manner unparalleled in the history of global environmental conservation. For example, Esty and Boyd (2018) advocate that the Paris Climate Change Agreement should add a mechanism to allow corporations, cities and other non-state actors to formally join the accord. Already some corporations, local governments and other non-state entities have announced voluntary pledges and low-carbon strategies to comply with the Paris Agreement, but the private sector is not a formal participant, nor do corporations contribute to the accord’s climate financing.

It is time we rethink international environmental agreements to ensure that all stakeholders have a role to play and that those private actors that benefit financially from conservation join in efforts to pay for protection of the global environment. In addition, if such agreements incorporate mechanisms for fully compensating developing countries for the additional costs of conserving global environmental benefits, then this may be the best way of balancing



fundamental issues of *intergenerational equity* with *intragenerational equity* in the management of the world's increasingly scarce ecological resources and systems.

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# **Part V**

## **Globalisation and Development: International Policy Agenda**





# 19

## Globalization in Historical Perspective

Deepak Nayyar

Globalization is a multidimensional phenomenon that has profound implications for economies, polities, societies and cultures. In the economic sphere, it can be defined, simply, as an expansion of economic transactions across national boundaries, where international trade, international investment and international finance provide its cutting edge. More precisely, it can be defined as a process associated with increasing economic openness, growing economic interdependence and deepening economic integration among countries in the world economy. This process extends beyond trade flows, investment flows and financial flows, to flows of services, technology, knowledge, information, ideas and people across borders.

The last quarter of the twentieth century and the first decade of the twenty-first century witnessed a phenomenal acceleration in this process of globalization. There is a common presumption that this world is altogether new and represents a fundamental departure from the past. But such beliefs are wrong. Globalization is not new. In fact, there was a similar phase of globalization which began around 1870 and gathered momentum until 1914 when it came to an abrupt end. In fact, a comparison of these two epochs of globalization reveals striking parallels in many characteristics of the world economy. In some ways, the 2010s also resemble the 1910s. And there is much that we can

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This essay draws upon some earlier work of the author (Nayyar 2002, 2003, 2006, 2007, 2008, 2013 and 2017).

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learn from history, for there is the past in our present. Indeed, the past might also help us explore how the future might unfold.

For this purpose, we need a historical perspective that is longer than just one century. Globalization began life much earlier. The movement of goods, people, skills, ideas, knowledge, cultures and religions across the world, even before there were borders or nation states, goes back a long time. Some beginnings are discernible in the first millennium. During the second millennium, there were waves of globalization and de-globalization, which straddled continents and geographies, driven by trade and flag, war and peace or technology and politics. For people who lived in those times, at every juncture, the process seemed unstoppable. But history suggests that globalization has always been a fragile process. In fact, it has come to an abrupt or unexpected end many times in the past. The process has also been reversible, as globalization has sometimes been followed by de-globalization. The underlying reasons have been embedded in the consequences of the process of globalization, ranging from the spread of disease or pandemics to economic strains or political conflict between winners and losers whether countries or people. Of course, the backlash has taken different forms at different times. Thus, globalization has never been the end of either history or geography.

The object of this chapter is to analyse the implications and consequences of globalization for development situated in its historical perspective. Section 1 provides a long-term historical retrospective, to set the stage before the play begins. Section 2 sketches a picture of globalization during the late nineteenth and early twentieth centuries. Section 3 outlines the contours of the present era of globalization which began life circa 1980. Section 4 examines the parallels, similarities and differences between these two epochs of globalization. Section 5 discusses the unequal outcomes in development during the first epoch which brought it to an abrupt end. Section 6 considers outcomes in development during the second epoch to explore the underlying factors and highlight the emerging problems. Section 7 concludes with some observations about how the present, and the past, might influence the future of globalization.

## 1 Millennial Beginnings

The first millennium provides a prelude. The beginnings of globalization surfaced in the second millennium. For centuries, communication routes and trade paths, both land and sea, crisscrossed Eurasia linking East and West. Such routes traded not just in silk, which is folklore, but in a wide range of

goods. The traders were Arabs, Armenians, Chinese, Georgians, Greeks, Indians, Persians, Romans, Sogdians and Syrians. Moreover, the vast networks were about far more than merchandise trade, as knowledge, ideas, cultures, beliefs, languages and religions, associated with the movement of people across geographies, traversed the same paths to influence each other in ways that sometimes changed history. These ancient routes had no names. In fact, it was only in the late nineteenth century that a German geologist, Ferdinand von Richthofen, named the network of routes as *Die Seidenstassen* (The Silk Roads). The term is an entirely colonial construct.

There were three historical routes connecting Asia and Europe: the southern land route via Central Asia; a route to its north along the southern edge of Mongolia used much less; and a maritime route across the Indian Ocean.

There was no single overland route that ran directly from China to the Mediterranean. It was made up of segments, each of which was a loop in a chain, which was also not a single named entity. To begin with, Han rulers exchanged gifts—silk and horses—with the nomads of Central Asia. Large-scale commercial exchange came later. The Central Asians, as traders, took the silk west to the Oxus valley from where it went to India and Iran. It went from Iran to the eastern Mediterranean, through local traders, from where it went to Rome through their traders. Much else was traded besides silk from China. Silk, and other goods, moved from East to West, while Buddhism travelled from India through Central Asia to China and East Asia, with site after site of Buddhist shrines along the route. The routes were not subject to any centralized political control. Trade and commerce recognized that none had a monopoly on trade which flowed through many channels. In that sense, it was a precursor to what could be described as globalization.

Asia and Europe were also connected by sea. There were three segments in this maritime route: the Red Sea to the coasts of India; the Bay of Bengal to Southeast Asia; and Southeast Asia to South China. It all began with trade in spices, and the demand for spices took Indians to Southeast Asia. Religions—Hinduism, Buddhism, Christianity and Islam—also moved on these routes. It was Arabs and Indians who dominated the maritime trade in the first two segments, while the Chinese dominated the third segment.

There were three profound historical events during the second millennium (Findlay and O'Rourke 2007), which were conducive for globalization in a more substantive sense that connected different regions and peoples of the world. The first was *Pax Mongolica* in the early thirteenth century. The second was Voyages of Discovery circa 1500. The third was the Industrial Revolution in Britain in the late eighteenth century.

## 1.1 Pax Mongolica

The nomads of Central Asia, the Mongol tribes, were forged into an effective union by the genius of Temujin, who was proclaimed as Genghis Khan (universal ruler) in 1206. Under his leadership and until his death in 1227—followed by his descendants in the same tradition—the entire Eurasian landmass from China in the east to Iraq, Iran and Russia in the west, extending to Hungary and the Adriatic Sea by 1240, was conquered to establish *Pax Mongolica* (Findlay and O'Rourke 2007). Globalization has always required the infrastructure of law, order and security, provided by political hegemony. The Mongols were the hegemons in this era who unified the Eurasian landmass under their political control and encouraged trade flows between all regions across this vast geographical space. In fact, it was only the Mongol empire that welded the segments and loops of the Silk Roads into a single route. Once established, every region—Central Asia, South Asia, Southeast Asia, East Asia, the Islamic world and Europe—participated in this international trade.

The geographical unification drove economic interaction in a horizontally linked world system even if it was not hegemonic (Abu-Lughod 1989). But there was a flip side. Bacteria, germs and viruses, that were local to particular regions, also moved across long distances carried by people or animals. Plague germs were carried by Mongol troops, with their horses, from Central Asia to the Black Sea in 1347. These were transmitted by ships to ports around the Mediterranean and then across Europe. It is estimated that the plague—Black Death—killed more than 25 million out of a total population of 80 million in just three years from 1348 to 1351 (Cipolla 1994). Its impact on the Islamic world was perhaps worse (Dols 1977). This was among the most devastating catastrophes in human history. The global spread of disease was a corollary of the economic integration brought about by the Mongol Empire. It led to the formation of a common market not only for goods but also for microbes and germs (Le Roy Ladurie 1981). The mid-fourteenth century witnessed the disintegration of *Pax Mongolica*, when the internal conflict among Mongol states coincided with the loss of Persia and China. In the absence of imperial rule, trade routes were no longer safe, secure and open. The Silk Route, too, was closed down by the Ottoman Empire in the mid-fifteenth century. It would seem that, in this epoch, a nascent globalization sowed the seeds of its own destruction.

## 1.2 Voyages of Discovery

The voyages of discovery in the late fifteenth century, led by the Iberian states, were perhaps the next major turning point (Findlay and O'Rourke 2007; Nayyar 2013). The Europeans were trying to bypass the Arabs, who had monopolized the Asian maritime trade. Hence, there was a need to find a direct sea route to India, which could also lead further east. The first milestone was attained in 1488 when Bartolomeu Dias found the southern tip of Africa that was aptly named as the Cape of Good Hope. Christopher Columbus, a native of Genoa, peddled his idea of sailing west across the Atlantic to many European states, which was ultimately supported by the monarchs of Spain in Aragon and Castile. Columbus sailed from Cadiz in 1492, with just 90 men in three ships, to his momentous discovery, "even if he rarely knew where he was, let alone where he was going" (Morris 2010, p. 16). Vasco da Gama left Lisbon in 1497, with two ships and a support vessel, to reach Calicut on the Malabar Coast of India in May 1498. The voyages of Columbus to the Caribbean were followed by several Spanish expeditions. The exploratory flotilla led by Hernan Cortes, of 11 ships, 100 sailors and 500 soldiers, touched the Mexican coast in Yucatan and landed at Vera Cruz in April 1519. It is worth noting that pests and germs carried from Europe subsequently led to a demographic catastrophe in the Americas with the death of a large proportion of the indigenous Indian populations. Just two years later, the mighty Aztec Empire was destroyed. These voyages were brought to completion by Magellan's circumnavigation of the globe in 1521.

This sequence of discoveries led to the first phase of European colonial expansion in the early sixteenth century. It began with Spain and Portugal. The slave trade from Africa, the search for silver in the New World and the colonization of the Americas were a part of this process, which unleashed a somewhat different dynamic in the formation of the world economy. It was the age of mercantilism in Europe. The acquisition of colonies was associated with a mercantile expansion of trade. Old World trade and New World silver turned out to be powerful complements in stimulating trade flows, as Europe paid for its imports of textiles, spices, porcelains and silks from Asia by exports of silver obtained from the Americas. The New World provided Europe with a source of primary commodities such as sugar, tobacco, cotton and timber, apart from the windfall ecological gains through access to indigenous plants like maize and potatoes, just as these colonies provided export markets for manufactured goods from Europe (Maddison 2007). The slaves from Africa provided the labour for plantations, mines and agriculture, while the migrants

from Europe provided entrepreneurs in the New World. At the same time, profits from the slave trade generated resources. This period from 1500 to 1780 was clearly the second wave of globalization during the second millennium, in which Europe, Asia, the Americas and Africa were all part of the process.

The growing network of world trade laid the foundation for a specialization in production between continents—the benefits of which accrued in large part to Europe. It is no surprise that there was a struggle for hegemony in the emerging world economy. In the late sixteenth century, Portugal and Spain were displaced by Holland, a merchant oligarchy, as the Dutch rose to primacy in world trade. Their dominance continued into the eighteenth century before it was lost to the British. In this world, where ‘guns and sails’ were critical, power provided for plenty (Findlay and O’Rourke 2007). This power was obviously sustained by economy and technology. Geopolitics shaped possibilities. Economic primacy was about state power and naval power, which provided protection for economic interests in distant lands and merchant ships in distant waters.

Such competition for power unleashed political rivalries in Europe. The period after 1780 experienced a worldwide military conflict. This coincided in time with the French Revolution. Its declaration of human rights, combined with its motto of liberty, equality and fraternity, exercised a profound influence on political processes. The spread of these ideas threatened absolute monarchies and was a catalyst in movements to create republics and establish democracies in many countries. It also unleashed a wave of conflicts across the world. The Napoleonic Wars from 1803 to 1815 were a part of the process. Trade was severely disrupted. But that was not all. Independence for the United States in 1776, and for most countries in Latin America which began around 1810, deprived the European powers of most of their colonies in the New World. In 1807, Britain abolished the slave trade between its colonies and Africa, while the United States banned the transatlantic slave trade in 1807. Globalization, which had evolved over three centuries in this age of mercantilism, came to an end once again, essentially because of the political challenges and conflict it created.

### **1.3 Industrial Revolution**

It is ironic that this disruption coincided in time with the beginnings of the Industrial Revolution in Britain which laid the foundation for the third wave of globalization during the second millennium that surfaced a century later.

The mercantile expansion of trade during 1500–1780, supported by state power and naval power, led to an expansion of commerce and an increase in urbanization, which were conducive to social, political and institutional change that created the initial conditions for capitalist development in Western Europe. There was a wide range of factors underlying the occurrence of the Industrial Revolution in Britain, during the late eighteenth century.<sup>1</sup> Thus, single explanations are futile. High wages combined with cheap capital and cheap energy made it profitable to invent and use new technologies, while the substitution of coal for wood as a source of energy made an enormous difference. However, the search for new technologies was also driven by competition from Asian manufactures and shortages of wood that followed deforestation (Parthasarathi 2011). International trade and overseas expansion in the mercantilist era laid the foundations. But state action in the form of trade policies that protected domestic industry or patronage for science and technology performed a critical role (Bairoch 1993; Chang 2002).

The Industrial Revolution in Britain had far-reaching implications and consequences not only for Europe but also for Asia and the world economy (Nayyar 2013). Its beginnings, the steam engine, cheap iron and the spinning jenny with the cotton mill, turned out to be transformative (Allen 2009). The cotton mill pioneered the mechanization of industrial production. The steam engine produced energy through technology by using water and burning coal. The cheap iron came from coal that made it possible to substitute coke for charcoal in smelting. Taken together, these developments helped create an engineering industry that could produce machinery to unleash large productivity increases. The process was reinforced by improved technologies that reduced coal consumption for a more fuel-efficient steam engine. This led to an industrial and geographical spread in the use of new technologies. The revolutionary change in methods of manufacturing yielded sharp increases in output, productivity and income. Rapid industrialization transformed economic life.

## 2 Globalization in the Age of Empire

The nineteenth century witnessed the evolution of an international economic order that led to a profound change in the balance of economic and political power in the world. It was attributable to three developments (Nayyar 2013).

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<sup>1</sup> For a detailed discussion, see Pomeranz 2000, Findlay and O'Rourke 2007, Allen 2009, Morris 2010 and Nayyar 2013.



The first was the Industrial Revolution in Britain in the late eighteenth century which spread to Western Europe, even if it did slowly, during the first half of the nineteenth century. The second was the emergence of a newer, somewhat different, form of colonialism in the early nineteenth century, beginning in Asia and spreading to Africa, which culminated in the advent of British and European imperialism that gathered momentum through that century. The third was the revolution in transport and communication in the mid-nineteenth century, manifest in the railway, the steamship and the telegraph, which dismantled geographical barriers of distance and time to shrink the world. These three developments laid the foundations for the next wave of globalization, which began around 1870 and came to an end in 1914. This era witnessed a rapid expansion of trade, investment and finance across borders. Towards the end of this era, the United States began to replace Britain, and Europe, as the dynamic pole of globalization. This was abundantly clear by the early 1920s. It was, perhaps, a sign of times to come.

## 2.1 International Trade

There was a rapid expansion of international trade from 1870 to 1913. It is estimated that, during this period, growth in world trade at 3.9% per annum was much faster than growth in world output at 2.5% per annum (Maddison 1989). Consequently, the share of world trade in world output registered a significant increase. Between 1870 and 1913, the share of exports in GDP rose from 13.6% to 18.3% in Western Europe (Bairoch and Kozul-Wright 1996) and from 16% to 21.6% in Asia, Africa and Latin America (Nayyar 2013). Similarly, for 16 countries in Western Europe and North America, now in the OECD, the share of exports in GDP rose from 18.2% in 1900 to 21.2% in 1913 (Maddison 1989).

Some believe that this expansion in international trade was attributable to trade liberalization. It was in part but not entirely (Nayyar 2006). In fact, free trade was imposed on Asia, Africa and Latin America, as imperialism prised open markets through gunboat diplomacy or colonial dominance. In 1842, China signed a treaty with Britain, which opened its markets to trade and capped tariffs at 5%. In the 1840s, free trade was imposed on India by Britain and on Indonesia by the Netherlands. In 1858, Japan signed the Shimoda-Harris treaties, persuaded by the American gunboats of Commodore Perry, to switch from autarchy to free trade. Korea followed the same path through its market integration with Japan. (Williamson 2002; Nayyar 2006).



Latin America was the exception (Bertola and Ocampo 2012). The unequal treaties signed at the beginning of the nineteenth century before independence expired in the 1870s,<sup>2</sup> after which tariff levels in Latin America were among the highest in the world, which led to explosive growth with industrialization, whereas tariff levels in Asia were among the lowest in the world, which led to a dismal performance with de-industrialization (Clemens and Williamson 2002). In the late nineteenth and early twentieth centuries, India, China and Indonesia practised free trade as much as Britain and the Netherlands, where average tariff levels were close to negligible in the range 3–5% (Nayyar 2006). In contrast, tariff levels in Germany, Japan and France were significantly higher at around 12–14%, whereas tariff levels in the United States were very much higher at 33% (Bairoch 1993; Maddison 1989). Reality did not mirror the myth of free trade.

During 1870–1914, a large proportion of this international trade was constituted by inter-sectoral trade, in which primary commodities were exchanged for manufactured goods. The leading trading nation in this era, Britain, exported manufactures to, and imported primary commodities from, Asia, Africa and Latin America (Foreman-Peck 1983). Much the same was true for northwest Europe. North America exported primary commodities for some time but rapid industrialization there also turned the United States into a net exporter of manufactures by 1914 (Findlay and O'Rourke 2007). The international division of labour implicit in this pattern of trade, termed the 'Great Specialization' (Robertson 1938), was simply a corollary of the process of industrialization and de-industrialization.

## 2.2 International Investment

There was a similar expansion of international investment from 1870 to 1913. By 1914, total foreign investment in the world economy was \$44 billion, of which \$30 billion was portfolio investment while \$14 billion was direct investment (Dunning 1983). The stock of foreign direct investment in the world economy was the equivalent of 9% of world output in 1913 (UNCTAD 1994, p. 130). The stock of foreign capital, direct plus portfolio, in Asia, Africa and Latin America was the equivalent of 32% of the GDP of 15 selected countries in Asia and Latin America in 1900, which were the major destinations for investment from abroad (Nayyar 2006).

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<sup>2</sup>The unequal treaties with Britain were signed after independence.

Some evidence on the geographical and sectoral distribution of total international investment in the world economy, in 1913, is worth citing (UNCTAD 1994, p. 158). In terms of destination, it was distributed as follows: \$14 billion in Europe (32%), \$10.5 billion in the United States (24%), \$8.5 billion in Latin America (19%) and \$11 billion in Asia and Africa (25%). In terms of origin, it was far more concentrated: \$19 billion from the United Kingdom (43%), \$9 billion from France (21%), \$6 billion from Germany (13.5%), \$5.5 billion from Belgium (12.5%) and \$4.5 billion from the United States (10%). Thus, in 1914, 44% of foreign investment in the world was in Asia, Africa and Latin America, but 90% came from Europe. In 1913, the primary sector accounted for 55% of foreign investment in the world, transport, trade and distribution accounted for 30%, while manufacturing accounted for only 10% and much of that was concentrated in the United States or Europe (Dunning 1983).

This era also witnessed a significant integration of international financial markets to provide a channel for portfolio investment flows. The cross-national ownership of securities reached very high levels (Nayyar 2006). Around 1910, more than half the securities traded in London and Paris were foreign securities. There was also an established market for government bonds. In 1920, Moody's rated bonds issued by as many as 50 governments. International bank lending was substantial. It is no surprise that there was a relationship between interest rates, exchange rates and stock prices in the leading markets.

During 1870–1914, such capital flows were a means of transferring investible resources to *de jure* or *de facto* colonies and newly industrializing countries with the most attractive growth opportunities. The object of these flows was to find avenues for long-term investment in search of profit. Banks were the financial intermediaries between lenders (private individuals or financial institutions in Europe) and borrowers (firms or governments in newly industrializing countries or underdeveloped countries) while the financial instruments were bonds with very long maturities. The debt was mostly securitized, with sovereign guarantees provided by imperial powers in Europe or governments in borrowing countries. It would seem that Asia, Africa and Latin America were integrated into the world economy through international investment in mines and plantations, or in connectivity from the hinterland to ports, as sources of primary commodities, in an international division of labour shaped by imperialism and trade during the late nineteenth and early twentieth centuries.

## 2.3 International Migration

The migration of people is as old as humankind. And movements of people across borders and oceans are at least as old as nation states. There were, of course, invaders and conquerors. There were also adventurers and merchants. Migration, however, is different, for it is associated with the movement from countries where there is a labour surplus to countries where there is a labour shortage. Even such movements started centuries ago.

It began with slavery. European slave trade is often the focus because it is written about, in part because its consequences are embedded in a past that is discernible in the present. Of course, the market for, and trade in, slaves began life in ancient Greece and Rome. There was also an Islamic slave trade, which started earlier and lasted longer than its European counterpart but it is not written about as much. It began in the seventh century and ended in the late nineteenth century. Over this period, it is estimated that around 15 million people were transported from sub-Saharan Africa to the Muslim world, of which about 8 million were moved as slaves from 1500 to 1890 (Bairoch 1993). The European slave trade started in the mid-sixteenth century. The market for slaves developed along the African coastline from Senegal in the north to Angola in the south. This trade in slaves continued until the early nineteenth century when it was brought to an end. It is believed that, over two centuries, more than 15 million people were taken from Africa to the Americas and the Caribbean and, to a lesser extent, Europe, to work in households or on plantations (Nayyar 2002). The slave trade was the largest, enforced, mass migration in history. Slavery was ultimately abolished in the British Empire in 1833 and in the United States in 1865. The slave trade came to an end. But slavery did not. For example, slavery continued in Brazil and Cuba where it was abolished only in the late 1880s.

The abolition of slavery in the British Empire was followed by the movement of indentured labour which was yet another form of servitude. Starting around the mid-1830s, for a period of 50 years, about 50 million people left India and China to work as indentured labour in mines, plantations and construction in the Americas, the Caribbean, southern Africa, Southeast Asia and other distant lands (Tinker 1974; Lewis 1978). This was probably close to 10% of the total population of India and China circa 1880 (Nayyar 2002). The destinations were mostly British, Dutch, French and German colonies. But the United States was another important destination where indentured labour also came from Japan.

There was some movement of people from Europe during these periods of slavery and indentured labour. English convicts were deported to Australia. People from Portugal and Spain moved to Mexico, Central America and the Spanish Caribbean, while people from England, Holland and France moved to North America. Some were adventurers and refugees. Many of them, however, were migrants. Later, between 1870 and 1914, more than 50 million people left Europe, of whom two-thirds went to the United States while the remaining one-third went to Canada, Australia, New Zealand, South Africa and Argentina (Lewis 1978).<sup>3</sup> There was also some migration from Europe and Japan to Brazil. These people were essentially labour displaced from the agricultural sector who could not find industrial employment. The migration was, in effect, driven by the push of land-scarce Europe and the pull of land-abundant Americas as also other new lands with temperate climates that attracted white settlers (Nayyar 2008). Colonized Africa, that needed agricultural entrepreneurs, also attracted European settlers. This mass emigration from Europe amounted to one-eighth its population in 1900. For some countries, Britain, Italy, Spain and Portugal, such migration constituted as much as 20–40% of their population (Massey 1988; Stalker 1994).

The migration of people from India and China as indentured labour for mines and plantations, together with the movement of capital from European countries, sought to exploit natural resources or climatic conditions in Southeast Asia, southern Africa and the Caribbean. In this process, contrary to the dominant construct in orthodox trade theory, international movements of capital and labour were complements not substitutes (Nayyar 1998). It also shaped the international division of labour in the age of imperialism, which led to industrialization in some parts and de-industrialization in other parts of the world. The subsequent migration of people from Europe to the United States, Canada, Australia and New Zealand provided the foundations for the development of industrial capitalism in the new worlds. In either case, international migration was critical in the evolution of the world economy during the nineteenth century (Nayyar 2008, 2013).

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<sup>3</sup> In the late nineteenth century, there was also some European migration to the southern part of Latin America, including Uruguay, Chile and Brazil, but it was primarily to Argentina. Similarly, there was some Indian migration to the British colonies in Africa and Asia. Both these streams of migration created a sort of 'middle class' among migrants.

### 3 Globalization in Our Times

The essential attribute of globalization, then and now, is an increase in the degree of economic openness in most countries and a deeper economic integration with the world economy. The three most important manifestations of this phenomenon now, as much as then, are international trade, investment and finance. It is also associated with an increasing movement of people across borders despite draconian immigration laws and restrictive consular practices. This era of globalization began life a century later, circa 1975, gathered momentum for three decades but has slowed down, in some manifestations, since the global financial crisis surfaced in late 2008 and the Great Recession that followed in its aftermath.

#### 3.1 International Trade

The last quarter of the twentieth century and the first decade of the twenty-first century witnessed a phenomenal expansion in international trade flows. World exports, in current prices at market exchange rates, valued in US dollars, rose from just \$0.1 trillion in 1975 to \$2 trillion in 1980, \$3.5 trillion in 1990, \$6.5 trillion in 2000 and \$16.1 trillion in 2008, contracted sharply in the economic downturn, but recovered to reach \$16.5 trillion in 2015 (UN International Trade Statistics).

Such figures, in current prices, might exaggerate the growth. Thus, it is necessary to normalize the absolute numbers through a comparison with an appropriate macroeconomic variable. Table 19.1 presents this evidence on exports as a proportion of GDP during the period 1980–2015. It shows that growth in world trade was significantly faster than growth in world output until 2008, so that until then an increasing proportion of world output entered into world trade. The share of world exports in world GDP rose from one-sixth in 1980 to one-fourth in 2008 but was lower at around one-fifth in 2015. For industrialized countries, the export-GDP proportion rose from

**Table 19.1** Merchandise exports as a proportion of GDP: 1980–2015 (in percentages)

	1980	1990	2000	2008	2015
Industrialized countries	15.9	14.0	16.4	21.2	19.9
Developing countries	22.4	21.1	28.6	34.5	25.3
World	16.7	15.2	19.3	25.4	22.2

Source: United Nations, UNCTADStat

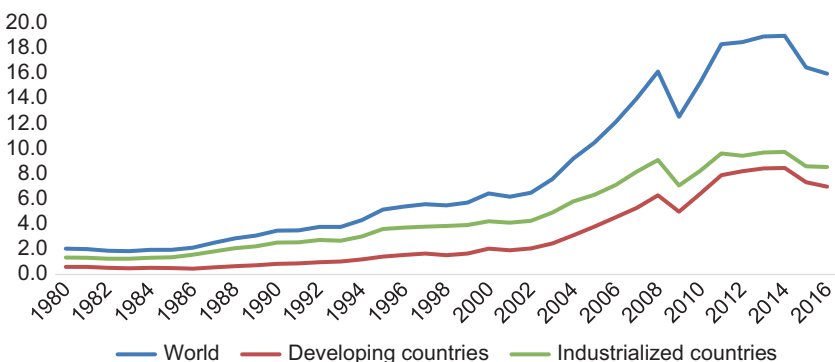
Note: The percentages have been calculated from data on exports and GDP in current prices at market exchange rates

16% in 1980 to 21% in 2008 but dropped to 20% in 2015, while for developing countries the export-GDP proportion rose from 22% in 1980 to 35% in 2008 but dropped sharply to 25% in 2015.

These trends suggest two implications worth highlighting. First, in a period of rapid economic growth (1980–2008), the trade elasticity of output was positive and significantly higher than unity, so that the expansion in world exports was much faster, but when the economic downturn led to a sharp slowdown in output growth, or even lower output for a short period (2009–2015), the contraction in world exports was proportionately much greater, as the trade elasticity of output was negative and significantly higher than unity. Second, between 2008 and 2015, the export-GDP ratio declined by just 1.3 percentage points in industrialized economies whereas it dropped by as much as 9.2 percentage points in developing countries, so that the brunt of the slowdown in international trade was borne by exports from developing countries.

Figure 19.1, based on time-series data, outlines the trends in merchandise exports, in current prices at market exchange rates, from the world, industrialized countries and developing countries during the period 1980–2016. It confirms the sharp contraction in 2009 and the dampening of export growth thereafter, for both industrialized and developing countries, such that exports barely recovered to their 2008 levels. The export-GDP ratio in developing countries dropped far more because GDP growth was largely sustained.

In this context, it is worth noting that trends in the dollar value of exports at current prices might be deceptive as there was a boom in commodity prices



**Fig. 19.1** Merchandise exports from the world, industrialized countries and developing countries: 1980–2016 (in US\$ trillion). (Note: The data on exports are in current prices and at market exchange rates)

Source: United Nations, UNCTADStat

in 2008 which were at a low in 2016. For this reason, the evidence in Table 19.1 normalizes the absolute values as a proportion of GDP. Even so, if we were to consider trends in merchandise exports at constant prices the contraction visible in Fig. 19.1 would be dampened. But there was more to international trade than primary commodities. The Great Recession in industrialized countries was a major setback to exports of manufactured goods from developing countries. And the decline in export-GDP ratios was real, providing a sharp contrast with 1990–2008.

### 3.2 International Investment

The story is almost the same for international investment flows. The stock of inward foreign direct investment in the world economy, valued in US dollars, rose from \$0.7 trillion in 1980 to \$2.2 trillion in 1990, \$15.4 trillion in 2008 and \$25.2 trillion in 2015. Consequently, as a proportion of world GDP, this inward stock was the equivalent of 5.7% in 1980, 9.6% in 1990, 22.4% in 2000, 24.2% in 2008 and 34% in 2015. The macroeconomic significance of this rising trend is deceptive because these stocks are cumulative and are being compared with flows. It is more appropriate to consider inward flows of foreign direct investment in the world economy, which increased from \$0.05 trillion in 1980 to \$0.2 trillion in 1990, \$1.4 trillion in 2000, \$1.5 trillion in 2008 and \$1.8 trillion in 2015. These absolute numbers rose steadily.

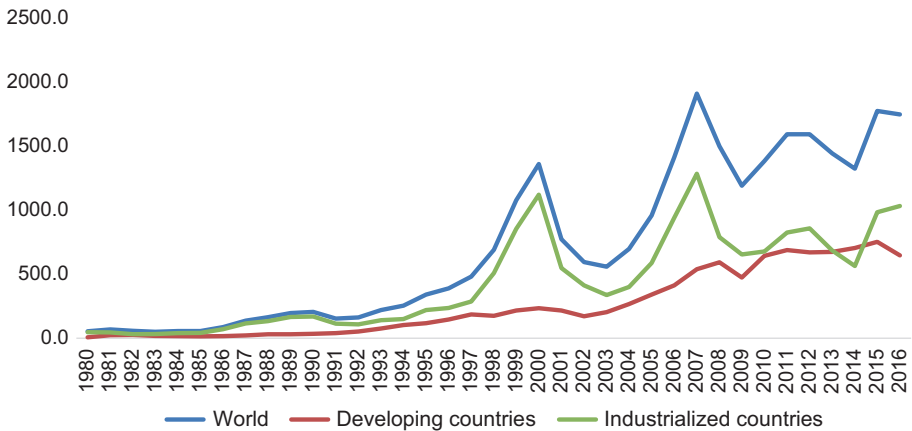
However, Table 19.2 shows that, as a proportion of gross capital formation in the world economy, these inflows rose from 2% in 1980 to 17% in 2000 but fell to around 9% in both 2008 and 2015. During 1980–2000, the significance of such inward flows as a source of financing investment rose rapidly, so that, in 2000, these inflows financed almost one-fifth of investment in industrialized countries and one-eighth of investment in developing countries, but these proportions dropped sharply to one-tenth, or less, in both

**Table 19.2** Inward flows of foreign direct investment as a proportion of gross capital formation: 1980–2015 (in percentages)

	1980	1990	2000	2008	2015
Industrialized countries	2.1	3.7	18.1	8.1	10.9
Developing countries	1.0	3.4	12.9	10.4	7.7
World	1.7	3.5	16.9	9.4	9.2

Source: United Nations, UNCTADStat

Note: The percentages have been calculated from data on inward foreign direct investment and gross capital formation in current prices at market exchange rates



**Fig. 19.2** Inward FDI flows to the world, industrialized countries and developing countries: 1980–2016 (in US\$ billion)

Source: UNCTAD foreign direct investment online database

2008 and 2015.<sup>4</sup> It would seem that the global economic crisis dampened international investment in relative if not absolute terms. Figure 19.2, based on time-series data, outlines trends in inflows of foreign direct investment in the world during 1980–2016. It shows the sharp slowdown after 2008 which was more pronounced in industrialized as compared with developing countries.

This era of globalization has witnessed an explosive growth in international finance. The movement of finance across national boundaries is enormous, so, in terms of magnitudes, trade and investment are now dwarfed by finance. There are four dimensions to this internationalization of financial markets: foreign exchange, bank lending, financial assets and government bonds.

In foreign exchange markets, daily trading was \$60 billion in 1983 and \$820 billion in 1992. It rose to \$1490 billion per day in 1998, \$3324 billion per day in 2007, \$3973 billion per day in 2010 and \$5357 billion per day in 2013 but was slightly lower at \$5067 billion per day in 2016.<sup>5</sup> Consequently, the ratio of worldwide transactions in foreign exchange to world exports jumped from 12.1 in 1983 and 80:1 in 1992 to a peak level of 100:1 in 1998.

<sup>4</sup>The absolute figures on the inward stock and inward flows of foreign direct investment cited in this paragraph are obtained from the UNCTAD foreign direct investment line database, while their significance as a proportion of output or investment is estimated from data on GDP and gross capital formation reported in UNCTADStat.

<sup>5</sup>These statistics on the average daily turnover in foreign exchange markets are based on the Bank of International Settlements, *Survey of Foreign Exchange Activity*, Basle, various issues. The surveys are triennial. For the purpose of comparison, the annual values of world exports have been converted into a daily figure.



However, this ratio was significantly lower in the range of 60:1–80:1 in subsequent years. Given the sharp slowdown in world exports after 2008, this suggests that the exponential growth in international foreign exchange transactions slumped if it just about kept pace with the slow growth in world exports.

The evidence available on bank lending, financial assets and government bonds is limited and incomplete. Even so, it is clear that, during 1980–2008, expansion of international banking lending was phenomenal, as it constituted an increasing proportion of gross capital formation in the world economy. The international market for financial assets—sales and purchases of bonds and equities transacted across borders—experienced a similar growth, and the value of these transactions as a proportion of GDP grew significantly, particularly in industrialized economies. Government debt also became tradable in the global market for financial assets, as the proportion of government debt held by foreigners rose everywhere. In this era, capital account liberalization has also induced portfolio investment flows, as mutual funds and pension funds searched worldwide for financial assets that would yield higher capital appreciation or higher returns on their investible resources, although much of their placement is in industrialized countries and emerging economies. The global economic crisis, which surfaced in late 2008, dampened all such transactions in its aftermath. And it has almost certainly slowed down this phenomenal expansion of international financial markets.

### 3.3 International Migration

In the three decades that followed World War II, there were two distinct streams of international migration in the world economy. First, people migrated from Europe to the United States, Canada, Australia and New Zealand. This movement was driven by the search for economic opportunities on the part of migrants and shaped by the nature of immigration laws in countries of destination. There was also some migration of people, with low skills, from Southern Europe to Western Europe, but this was relatively small. Second, people moved from developing countries in Asia, North Africa and the Caribbean to Western Europe where economic growth combined with full employment created labour shortages. This led to labour imports, mostly unskilled or semi-skilled workers, from erstwhile colonies, for employment in the manufacturing and services sectors. Historical ties and a common language were the factors that shaped these flows (Nayyar 2002).

In this epoch of globalization, from the late 1970s, international migration has been characterized by continuity and change. Migration from Europe to

the United States and Canada continued, but migration to Europe slowed down for a while. It was the end of rapid economic growth combined with full employment. And immigration laws became restrictive almost everywhere in Western Europe. However, migration to Europe revived in the mid-1980s, to gather momentum in the 1990s and 2000s. In fact, some new destinations emerged as latecomers to the European Union began to import labour. The sources were also different, as a significant proportion of the migrants came from Eastern Europe to begin with and then from the former USSR. This process was reinforced in the 2000s as the European Union enlarged its membership to include some countries from Eastern Europe (Nayyar 2013).

There were, in addition, two different streams of migration. First, there was a permanent emigration of people to the United States not only from Europe but also from the developing world. These were mostly people with professional qualifications or technical skills, although migrants from Latin America were largely people with low levels of skills or qualifications. This was made possible, in part, by a change in immigration laws in the United States, which meant that entry was related to skill levels rather than country of origin, thereby providing more access to people from developing countries. Second, there was temporary migration of people from labour-surplus developing countries, mostly unskilled workers and semi-skilled or skilled workers in manual or clerical occupations. Some went to the industrialized countries as guest workers. Some went to the high-income, labour-scarce, oil-exporting countries as temporary migrants.

It would seem that international migration during the period 1980–2015 was significant despite stringent immigration laws and restrictive consular practices.<sup>6</sup> The number of international migrants in the world, excluding the former USSR, rose from 99 million in 1980 to 221 million in 2015. Over this period, the share of developing countries in this stock of migrant population decreased from 52% to 46% while that of industrialized countries increased from 48% to 54%. Asia was home to two-thirds of the migrant population in developing countries, while more than 90% of the migrant population in industrialized countries lived in North America and Europe, divided between the two regions in almost equal proportions.

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<sup>6</sup>The database on international migration is slender on flows but better on stocks. But the flows cannot be inferred from changes in stocks over time because migration is a process that often stretches over time as significant proportions change their temporary status of different forms into becoming residents and then citizens. For a study of the trends, it is both necessary and appropriate to exclude the former USSR. Its inclusion distorts the picture, for comparisons over time, because its break-up into 15 independent countries, in 1991, instantly transformed internal migrants into international migrants. The evidence cited in the discussion that follows is from Nayyar (2013). The figures for 2015 are obtained from the same primary source, United Nations, Population Division, *Trends in International Migrant Stock*.

The proportion of international migrants in world population increased from 2.3% in 1980 to 3.1% in 2015. Over the same period, this proportion remained unchanged in developing countries at 1.6%, whereas it more than doubled in industrialized countries from 5.7% to 12.8%. In North America, the number of international migrants per 1000 in the population increased from 79 in 1980 to 154 in 2015. In Europe, the number of international migrants per 1000 in the population increased from 52 in 1980 to 105 in 2015.

The aggregate statistics do not reveal changes in the nature of international migration. In the contemporary world, it is possible to distinguish between five categories of cross-border movements of people, of which two are old and three are new.<sup>7</sup> The old categories are made up of emigrants and refugees. The new categories are guest workers, illegal immigrants and professionals. Guest workers are people who move to a country, on a temporary basis, for a specified purpose and a limited duration. Most of them are unskilled or semi-skilled workers. Illegal migrants are people who enter a country without a visa, take up employment on a tourist visa or simply stay on after their visa has expired. Most of them are at low levels in the spectrum of skills. Professionals are people with high levels of education, experience and qualifications, whose skills are in demand everywhere and who move from country to country, temporarily or permanently, as immigration laws or consular practices are not restrictive for them. Developing countries are the primary sources of guest workers and illegal immigrants in the industrialized world. Some countries in the developing world are also a significant source of professionals who move across borders.

Starting around 1980, globalization has led to an expansion and diversification in the movement of people across national boundaries. In fact, globalization has set in motion forces that are creating a demand for labour mobility and is, at the same time, developing institutions on the supply side to meet this demand (Nayyar 2008). The basic reason is simple. The factors which make it easier to move goods, services, capital, technology and information across borders, but for explicit immigration laws and implicit consular practices that are barriers to entry, also make it easier to move people across borders. Clearly, globalization has increased labour mobility in the three new categories. The professionals, at the top of the ladder of skills, are almost as mobile as capital. Indeed, it is possible to think of them as globalized people who are employable almost anywhere in the world. Similarly, where it is not

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<sup>7</sup>It needs to be said that these categories are not mutually exclusive or exhaustive. Nor do they define a once-and-for-all status. Yet, these categories serve an analytical purpose insofar as the distinctions are clear at the time that the cross-border movement of people first takes place. For a detailed discussion, see Nayyar (2008, 2013).

feasible to import goods or export capital as a substitute for labour imports, or is less profitable, the use of guest workers is bound to increase. And, despite the political reality of immigration laws, conditions and institutions being created by globalization will sustain, perhaps even increase illegal immigration, for markets are adept at circumventing regulations.

International migration is inevitably associated with remittances from migrants. The importance of this phenomenon is widely recognized (Nayyar 1994, 2008; Solimano 2008). Remittances in the world economy grew from \$43 billion in 1980 to \$135 billion in 2000 and \$588 billion in 2015.<sup>8</sup> In the same years, remittances to developing countries increased rapidly from \$20 billion to \$80 billion and \$ 416 billion, so that their share in global remittances rose from 47% to 60% and 71% (Nayyar 2013). For developing countries, remittances became the second largest source of external finance, less than foreign direct investment but more than official development assistance. Remittances appear to be a more stable source of external finance, which are not characterized by an instability or volatility of foreign capital inflows such as portfolio investment. It is worth noting that after the financial crisis in 2008, which led to a slowdown in growth in industrialized countries, remittances declined everywhere except Asia for a while but recovered thereafter.

There can be little doubt that the immigration into Western Europe from developing countries from the late 1940s to the mid-1970s, the golden age of capitalism, was an important source of economic growth. Similarly, the immigration of educated people with professional talents or technical qualifications into the United States, from developing countries and Europe since 1980, has been an important factor underlying productivity increase and economic dynamism. In addition, there are illegal immigrants in the industrialized countries, estimated to be in the range of 12 million *circa* 2000 (Nayyar 2008). These immigrants are sought out by employers for work which residents or citizens are unwilling to do, while governments turn a political blind eye to this reality for economic reasons. At the same time, the movement of guest workers from developing countries to oil-exporting countries in the Middle East, and to industrialized countries, particularly the United States and Western Europe, provides scarce labour to support economic growth in host countries and remittances to support economic development in home countries.

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<sup>8</sup>The evidence on remittance cited in this paragraph is from Nayyar (2013). The data for 2015 are obtained from UNCTADStat.

## 4 Globalization Then and Now: A Comparison

The world economy experienced a rapid internationalization of trade, investment and finance during the last quarter of the twentieth century, which continued apace for another decade but seems to have slowed down after the global economic crisis surfaced in 2008. There was a similar internationalization of trade, investment and finance, along with a phenomenal expansion in international migration, during the last quarter of the nineteenth century, which continued until 1914. It would seem that the long twentieth century has witnessed two eras of globalization, a comparison of which reveals striking parallels. The similarities are in the underlying factors, which made globalization possible then and now. The differences are in the form, the nature and the depth of globalization then and now.<sup>9</sup>

### 4.1 The Parallels

There were parallels in each of three dimensions—trade, investment and finance—that should be recognized and highlighted.

The expansion of international trade was rapid in both eras, as growth in trade outpaced growth in output, while the export-GDP ratio in the world economy rose at about the same pace. In fact, the integration of the world economy, through international trade, was about the same at the beginning and the end of the twentieth century, even if the export-GDP ratio was somewhat lower for industrialized countries and significantly higher for developing countries. It is worth noting that the average tariff rates on imports of manufactured goods in industrialized countries then, with the exception of Britain, were in the range of 20–40% (Bairoch 1993) but are less than 5% now. Tariffs were obviously much higher then but non-tariff barriers are much stronger now.

The significance of foreign direct investment in the world economy was also similar at the beginning and the end of the twentieth century. The stock of foreign direct investment in the world economy was the equivalent of 9% of world output in 1913 and in 1990, where it remained through the first half of the 1990s. This proportion rose rapidly and surpassed its 1913 level only in the late 1990s. The significance of foreign investment in the developing world is also comparable. In 1900, the stock of foreign investment in developing countries, direct and portfolio, was the equivalent of 32% of their GDP. In 2000, the stock of foreign direct investment in developing countries was the

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<sup>9</sup>The discussion that follows in this section draws upon earlier work of the author (Nayyar 2006).

equivalent of 23% of their GDP; the addition of portfolio investment, on which statistics are not available, is not likely to raise this proportion to its level a century earlier (Nayyar 2013).

There was a significant integration of international financial markets in the early twentieth century which is, in some respects, comparable with the late twentieth century. The only missing dimension then, as compared with now, was international transactions in foreign exchange which were determined entirely by trade flows and capital flows, given the regime of fixed exchange rates under the gold standard. The cross-national ownership of financial securities, including government bonds, was similar. In relative though not absolute terms, net international capital flows might have been larger at the beginning than at the end of the twentieth century. Britain ran an average current account surplus which was the equivalent of 5% of GDP and as much 8% of GDP in some years (Keynes 1919; Panic 1992). In contrast, the current account surplus of the United States to begin with, or Germany or Japan in subsequent years, did not exceed 3% of GDP. Of course, the United States has run a large current account deficit since the mid-1980s, which has also performed an important role in this phase of globalization insofar as the US dollar has become the equivalent of international money.

## 4.2 The Similarities

There are four similarities worth noting: the absence or the dismantling of barriers to international economic transactions; the development of enabling technologies; emerging forms of industrial organization; and political hegemony or dominance.

The four decades from 1870 to 1914 were, in a sense, the age of *laissez-faire*. There were almost no restrictions on economic transactions across borders. It was believed that a virtuous circle of rapid economic growth and international economic integration had created the core of a global economy (Keynes 1919). Two World Wars, interspersed by the Great Depression, disrupted this process. The barriers to, and regulations on, international economic transactions erected during this period were dismantled slowly. Trade liberalization came first in the 1960s. The liberalization of regimes for foreign investment came next in the 1970s. Financial liberalization—deregulation of domestic financial sectors and capital account liberalization—came last in the 1980s. Globalization in its next incarnation followed the sequence of deregulation.

Both eras of globalization coincided with a technological revolution in transport and communications which brought about an enormous reduction in the time needed, as also the cost incurred, in traversing geographical distances. The second half of the nineteenth century saw the advent of the steamship, the railway and the telegraph. The substitution of steam for sails, and of iron for wooden hulls in ships, slashed ocean freight. The spread of railways everywhere brought the hinterland of countries into the world economy. The arrival of the telegraph revolutionized communication and shrank the world. The second half of the twentieth century witnessed the advent of jet aircraft, computers and satellites. It was not long before technological developments in communications and transmission created information technology, which had an even more dramatic impact on reducing geographical barriers. The time needed is a tiny fraction of what it was earlier. The cost incurred has come down sharply. In the early twenty-first century, the advent of mobile phones, followed by smart phones, brought about another phenomenal transformation. Clearly, enabling technologies made the globalization of economic activities so much easier.

Emerging forms of industrial organization, in both eras, played a role in making globalization possible. In the late nineteenth century, mass production characterized by a rigid compartmentalization of functions and a high degree of mechanization, with the production of perfectly interchangeable parts and the introduction of moving assembly lines, realized massive scale economies and led to huge cost reductions. In the late twentieth century, the emerging flexible production systems, shaped by the nature of technical progress, the changing organizational characteristics and the growing externalization of services, forced firms constantly to choose between trade and investment in their drive to expand activities across borders. The fragmentation of production processes enabled firms to relocate production worldwide, giving birth to global value chains.

The politics of hegemony or dominance is conducive to the economics of globalization. The era from 1870 to 1914 coincided with what has been described as “the age of empire” (Hobsbawm 1987) when Britain more or less ruled the world. The era beginning 1980 coincided with the political dominance of the United States as a superpower strengthened further by the collapse of communism. Apart from dominance in the realm of politics, there is another similarity in the sphere of economics between *Pax Britannica* and *Pax Americana*. That is the existence of a reserve currency, which is the equivalent of international money, as a unit of account, a medium of exchange and a store of value. This role was performed by the pound sterling during in the



earlier era and is performed by the US dollar in the present era. Thus, globalization requires a dominant economic power with a national currency that is acceptable as international money.

### 4.3 The Differences

There are also important differences between the two eras of globalization in flows of trade, investment, finance and labour across borders.

There are differences in the composition of trade and channels of trade. During 1870–1914, an overwhelming proportion of international trade was constituted by inter-sectoral trade, where primary commodities were exchanged for manufactured goods. This trade was based largely on absolute advantage derived from natural resources or climatic conditions. Although these trade flows originated in large international trading companies, it was not intra-firm trade. During the present era, inter-industry trade in manufactures, based on differences in factor endowments, labour productivity or technological leads, and intra-industry trade in manufactures, based on scale economies and product differentiation, have constituted a large and rising proportion of international trade. An increasing proportion of such trade, based largely on comparative advantage, is also intra-firm trade. Global value chains are just one manifestation of this process.

Differences also exist in the geographical destination and sector distribution of investment flows. In 1914, long-term foreign investment in the world economy was divided almost equally between the industrialized and the underdeveloped worlds. In 2015, two-thirds of the stock of foreign direct investment were in industrialized countries while one-third was in developing countries, so the latter were less central to the process, even though the spatial web is far more extensive now as compared with then. However, in 2015, developing countries accounted for one-fifth of the stock of outward foreign direct investment in the world economy which was new. In 1914, the primary sector accounted for 55% of long-term foreign investment in the world, while the manufacturing sector accounted for just 10%. In 2015, the primary sector was far less significant, while manufacturing sector was much more important.

In financial flows, there are substantial differences in the destinations, objects and intermediaries. During 1870–1914, capital flows were a means of transferring investible resources to underdeveloped or newly industrializing countries with the most attractive growth opportunities but, a century later, these flows are destined mostly for industrialized countries. During 1870–1914, the object was to find avenues for long-term investment in search



of profit, whereas, a century later, these are mostly short-term capital movements, sensitive to exchange rates and interest rates, in search of capital gains. During 1870–1914, banks were the only intermediaries between lenders and borrowers in the form of bonds with long maturities but, a century later, institutional investors such as pension funds and mutual funds are more important than banks. The latter continue to act as intermediaries but now borrow short to lend long, thus resulting in a maturity mismatch. Consequently, financial instruments need to be much more sophisticated and diversified than earlier, because there is no effective securitization provided by nation states as there was a century earlier.

The fundamental difference between the two eras of globalization is in the sphere of labour flows. During 1870–1914, there were no restrictions on movement of people across national borders. Passports were not needed. Immigrants were granted citizenship with ease. Thus, as noted earlier, international labour migration was enormous. The present era of globalization, characterized by stringent immigration laws, has found substitutes for labour mobility by importing manufactured goods that embody scarce labour or exporting capital that employs scarce labour abroad to provide such goods. But this is a limited solution. It has not dispensed with the need, or demand, for labour imports. Thus, as noted earlier, international migration has continued as globalization has increased labour mobility in new forms—professionals, guest workers and illegal immigrants—by developing institutions on the supply side to meet this demand.

In sum, the era of globalization during 1870–1914 was characterized by an integration of markets through an exchange of goods that was facilitated by cross-border movements of capital and labour. The present era of globalization is characterized by an integration of production with linkages that are wider and deeper, except that the nature and form of cross-border labour movements is very different. This is reflected not only in the movement of goods, services, capital, technology, ideas and people, but also in the organization of economic activities across national boundaries. It is associated with a more complex—part horizontal and part vertical—division of labour between countries in the world economy.

## 5 Globalization, Convergence and Divergence: The Past

Ideologues believe that globalization led to rapid industrialization and economic convergence in the world economy during the late nineteenth and early twentieth centuries. This perspective extends beyond the ideologues. Some economic historians argue that the integration of markets through an exchange of goods led to commodity-price convergence in the world economy which, in turn, led to factor-price convergence (Williamson 1996), so that the process was associated with a convergence of growth and incomes among participating countries. However, this convergence hypothesis is not borne out by the experience of the world economy.<sup>10</sup> Available evidence suggests that, during 1870–1914, there was, indeed, a commodity-price convergence, but this was attributable to the transport revolution rather than trade liberalization. There was also some factor-price convergence in this era, which was confined to the Atlantic economies. Indeed, much of the convergence vanishes if we include Eastern Europe and evaporates altogether if we include the underdeveloped world.<sup>11</sup>

From 1870 to 1914, land-scarce Europe experienced a surge in wage-rental ratios, while land-abundant United States and Australia witnessed a sharp drop in wage-rental ratios. There was also some convergence in real wages. But this convergence was limited to a few countries in Europe such as Britain, Denmark, Ireland, Norway and Sweden. There was little in terms of catch-up for Italy, while Spain and Portugal witnessed a widening gap in wages. An econometric analysis of trends in the wage-rental ratio for seven Atlantic economies shows that commodity-price convergence could explain just about one-fourth the wage-rental convergence between the Old and New Worlds separated by the Atlantic Ocean (O'Rourke et al. 1996). The answer lies elsewhere. It has been estimated that, between 1870 and 1914, mass migration explains seven-tenths of the real wage convergence between these few Atlantic economies (Williamson 1996).

The story about growth, it turns out, does not quite conform to the fairy tale of acceleration and convergence. For one, growth did not accelerate. The average growth of 1.4% per annum between 1890 and 1913 was somewhat faster than that achieved in the previous two decades but it was not significantly different from that achieved in the subsequent three decades (Bairoch

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<sup>10</sup> For a more detailed discussion, as also evidence, on the convergence hypothesis, see Nayyar (2006).

<sup>11</sup> This is accepted even by Williamson (2002), who is the principal exponent of the hypothesis about such convergence in the late nineteenth century.

1989). For another, growth did not converge. Growth rates in the underdeveloped world were significantly lower than growth rates in the industrial world, so that there was a widening of the gap. In the underdeveloped countries, growth in GNP per capita per annum was  $-0.2\%$  during 1830–1870,  $0.2\%$  during 1870–1890 and  $0.6\%$  during 1890–1913,<sup>12</sup> whereas in the industrial countries the corresponding growth rates were  $0.6\%$ ,  $1\%$  and  $1.7\%$ , respectively (Bairoch 1993). It is clear that there was no convergence of growth, let alone incomes, across countries in this era of globalization. This era was characterized by uneven development.

In fact, this epoch of globalization, reinforced by the politics of imperialism, created huge asymmetries and inequalities in the world economy, which was divided into countries (mostly with temperate climates) that industrialized and countries (mostly with tropical climates) that did not industrialize. The geographical divides turned into economic divides. The industrialized countries prospered. But for countries in Asia and Africa the same integration into the world economy led to underdevelopment (Nayyar 2006). The rise of ‘The West’ was concentrated in Western Europe and North America. The decline and fall of ‘The Rest’ was concentrated in Asia, much of it attributable to China and India (Bairoch 1982; Nayyar 2013).

This process was associated with a growing divergence in levels of income. Between 1870 and 1913, as a percentage of GDP per capita in Western Europe and North America, GDP per capita in Asia, as also in Africa, dropped from one-fourth to one-sixth. The period from 1820 to 1950 witnessed the ‘Great Divergence’, as this proportion dropped from one-half to one-tenth for Asia and from one-third to one-seventh for Africa (Nayyar 2013). It also led to a major transformation in international division of labour, the ‘Great Specialization’, which meant that Western Europe, followed by the United States, produced manufactured goods while Asia, Africa and Latin America produced primary commodities. Between 1860 and 1913, the share of Asia, Africa and Latin America in world manufacturing production, attributable mostly to Asia, in particular China and India, collapsed from  $40\%$  in 1860 to  $7.5\%$  in 1913, while the share of Europe, North America and Japan rose from  $60\%$  in 1860 to  $92.5\%$  in 1913. In 1830, these shares were  $60\%$  and  $40\%$ , respectively (Nayyar 2013).

The much greater competitiveness of industry in Britain and Europe, attributable to scale economies that sharply reduced prices of manufactured

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<sup>12</sup>Latin America was the exception. During the period 1870–1913, as also 1913–1950, its growth rates were at par with the highest (in North America), so that its share of world GDP rose steadily from  $3.2\%$  in 1870 to  $4.5\%$  in 1913 and  $6.5\%$  in 1950 (Nayyar 2013).

goods, also led to the demise of traditional industries in Asia, particularly China and India, which reduced their skill levels and technological capabilities over time. This process was reinforced by the politics of imperialism that imposed free trade and the economics of the transport revolution that dismantled the natural protection provided by geography implicit in distance and time, to hasten the process of de-industrialization in Asia with a devastating impact on China and India.

During this phase of globalization, some of the most open economies which practised free trade and were among the largest recipients of foreign investment—India, China and Indonesia—experienced an economic decline that led to underdevelopment. The outcome was similar elsewhere in Asia and Africa (Williamson 2006). Export-oriented production in mines, plantations and cash-crop agriculture created enclaves within these economies which were integrated with the world economy in a vertical division of labour. But there were almost no backward linkages. Productivity levels outside export enclaves stagnated at low levels. They simply created dualistic economic structures where the benefits of globalization accrued mostly to the outside world and in small part to local elites (Nayyar 2006). The income gap widened rapidly.

Much of the gains from international integration in this era accrued to the imperial countries which exported capital and imported commodities. There were a few countries like the United States and Canada—new lands with temperate climates and white settlers—that also derived some benefits. In these countries, the preconditions for industrialization were already being created, so that foreign direct investment in manufacturing stimulated by rising tariff barriers, combined with technological and managerial flows, strengthened industrialization and development. But this did not happen everywhere. Development was uneven in the West. Most of Southern and Eastern Europe lagged behind. This meant divergence rather than convergence in incomes, industrialization and growth. At the same time, inequality rose in resource-rich, labour-scarce, industrializing countries of the New World.

The growing inequalities between and within countries, particularly in the industrial world, were perhaps a significant factor underlying the retreat from globalization after 1914. The following passage, written by John Maynard Keynes at the time, vividly highlights the benefits of globalization for some people and some countries, those included, but also recognizes how the economic and political conflicts associated with the process stopped what had seemed irreversible at the time.

“What an extraordinary episode in the economic progress of man that age was which came to an end in August 1914. The greater part of the population, it is

true, worked hard and lived at a low standard of comfort, yet were, to all appearances, reasonably contented with this lot. But escape was possible, for any man of capacity or character at all exceeding the average, into the middle and upper classes, for whom life offered, at a low cost and with the least trouble, conveniences, comforts, and amenities beyond the compass of the richest and most powerful monarchs of other ages. The inhabitant of London could order by telephone, sipping his morning tea in bed, the various products of the whole earth, in such quantity as he may see fit and reasonably expect their early delivery upon his doorstep; he could at the same moment and by the same means adventure his wealth in the natural resources and new enterprises of any quarter of the world, and share, without exertion or trouble, in their prospective fruits and advantages; or he could decide to couple the security of his fortunes with the good faith of the townspeople of any substantial municipality in any continent that fancy or information might recommend. He could secure forthwith, if he wished it, cheap and comfortable means of transit to any country or climate without any passport or other formality, could dispatch his servants to the neighbouring office of a bank for such supply of the precious metals as might seem convenient, and could then proceed to foreign quarters, without knowledge of their religion, language or customs, bearing coined wealth upon his person, and could consider himself greatly aggrieved and much surprised at least interference. But most important of all, he regarded this state of affairs as normal, certain, and permanent, except in the direction of further improvement, and any deviation from it as aberrant, scandalous and avoidable. The projects and politics of militarism and imperialism, of racial and cultural rivalries, of monopolies, restrictions and exclusions, which were to play the serpent to this paradise, were little more than amusement of his daily newspaper, and appeared to exercise almost no influence at all on the ordinary course of social and economic life, the internationalization of which was nearly complete in practice.” (Keynes 1919, pp. 9–10)

## 6 Globalization, Development and Inequality: The Present

The present era of globalization, which began life circa 1980, has brought about profound changes in the international context. There is a discernible shift in the balance of economic power away from industrialized countries towards developing countries (Nayyar 2013, 2017). During 1981–2014, the average annual GDP growth rate was 2.3% in industrialized countries as compared with 4.8% in developing countries, while average annual GDP per capita growth rates were 1.7% and 3.2%, respectively, as the population

growth in developing countries slowed down. The share of developing countries in world GDP, in current prices at market exchange rates, rose from 20% in 1980 to 39% in 2016, largely at the expense of industrialized countries. Consequently, for developing countries as a group, the divergence in per capita incomes in relation to industrialized countries came to an end. However, it would not be correct to describe this as convergence in any meaningful sense of the word. The difference is so large that, even in 2016, GDP per capita in current prices at market exchange rates for developing countries was just about 11% of that in industrialized countries. Yet, it is worth noting that GDP per capita, in current prices at market exchange rates, in developing countries as a proportion of that in the world economy increased from 29% in 1980 to 47% in 2016.<sup>13</sup>

The catch-up in industrialization was phenomenal. The share of developing countries in world manufacturing value added rose by almost 30 percentage points from 18% in 1980 to 48% in 2016. Similarly, the share of developing countries in world exports of manufactured goods rose from 12% in 1980 to 44% in 2016. Over the same period, the share of developing countries in world merchandise exports rose from 30% to 44% and in merchandise imports from 24% to 41%. All these changes gathered momentum after 2000. The story was similar in most other dimensions. However, these aggregates are deceptive. The catch-up was concentrated in Asia, one of three continents, while the significance of Latin America saw modest change and that of Africa experienced a stagnation or decline. There was a high degree of concentration among a few countries: China, India, Indonesia, Malaysia, South Korea, Taiwan, Thailand and Turkey in Asia and Argentina, Brazil, Chile and Mexico in Latin America. It is no surprise that this catch-up was associated with emerging divergences between countries in the developing world. The exclusion of least developed countries from this process was indeed striking.<sup>14</sup>

The present era of globalization has witnessed increasing inequality in every dimension.<sup>15</sup> Economic inequalities between countries in the industrialized world and the developing world persist, while inequalities between countries within the developing world have risen rapidly. There is an exclusion of regions within countries from growth and prosperity so regional disparities have

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<sup>13</sup>The figures for 1980 in this paragraph, and the next, are from (Nayyar 2013, 2017), while the figures for 2016 are calculated by the author from UN national accounts statistics and international trade statistics.

<sup>14</sup>For a detailed discussion, with an evaluation of evidence, on this issue, see Nayyar (2013, 2017).

<sup>15</sup>There is an extensive literature on this subject. See, for example, Milanovic (2011), Stiglitz (2012), Nayyar (2013), Piketty (2014), Atkinson (2015), Bourguignon (2015) Nayyar (2017) and Stiglitz (2017).

widened in most countries. Income distribution between people within countries has worsened almost everywhere in the world.

This era has witnessed a significant reduction in the incidence of poverty attributable, in part, to rapid economic growth in the developing world. Yet, absolute poverty persists. Between 1981 and 2011, the proportion of people in developing countries who lived below PPP\$1.25 per day dropped from 52% to 17%, while the proportion of people who lived below PPP\$2 per day also dropped from 70% to 36%. Progress was slower in reducing the number of poor people. The number of people who lived below PPP\$1.25 per day dropped from 1.9 billion to 1 billion, while the number of people who lived below PPP\$2 per day dropped from 3 billion to 2.2 billion.<sup>16</sup> This reduction in poverty is attributable in large part to China and India, where also progress has been much slower in terms of the higher poverty line. It would seem that catch-up, driven by rapid economic growth, helped reduce the incidence of absolute poverty in Asia, although not as much as it could have because of rising inequality, whereas absolute poverty persists at high levels in Africa, possibly because of much slower economic growth (Nayyar 2013, 2017).

The employment situation during this era of globalization is a cause for concern (Nayyar 2014). Unemployment in industrialized countries has remained at relatively high levels since the 1980s, in sharp contrast with full employment during the golden age of capitalism. The problem was accentuated by the financial crisis and the Great Recession that followed in its aftermath. Apart from a few exceptions, the recovery in employment is much less than the recovery in output. In developing countries, employment creation in the organized sector continues to lag behind growth in the labour force, so an increasing proportion of workers are dependent upon low productivity and casual employment in the informal sector. The global economic crisis accentuated the problem in countries that relied on industrialized countries as markets for their exports of labour-intensive manufactured goods. The quality of employment has worsened, while wage inequality has risen, almost everywhere in the world.

It is obviously not possible to attribute cause and effect simply to a coincidence in time. But it is possible to think of mechanisms through which globalization may have accentuated inequalities and constrained employment. Trade liberalization has led to a growing wage inequality between skilled and unskilled workers not only in industrialized countries but also in developing countries. Deregulation and privatization have meant that capital has gained

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<sup>16</sup>These are World Bank estimates reported in the PovCalNet Database. For a more detailed discussion, as also evidence, see Nayyar (2013, 2017).



at the expense of labour, almost everywhere, as profit shares have risen and wage shares have fallen. Structural reforms, which have brought flexibility to labour markets, have led to a contraction in employment or dampened employment creation. The mobility of capital and the immobility of labour have changed the nature of the employment relationship and have reduced the bargaining power of trade unions. The object of managing inflation has been transformed into a near obsession by the sensitivity to international financial markets, so governments have been forced to adopt deflationary macroeconomic policies which have squeezed both growth and employment. Financial liberalization has been associated with the emergence of a new rentier class, and the inevitable concentration in the ownership of financial assets has contributed to a worsening of income distribution.

It would seem that globalization has created two worlds that co-exist in space even if they are far apart in well-being. For some, in a world more interconnected than ever before, globalization has opened the door to many benefits through innovation, entrepreneurship and wealth creation. For many, the fundamental problems of poverty and unemployment persist, which existed earlier too but have been accentuated by globalization. There is inclusion of a few and exclusion of the many.

It is, perhaps, necessary to identify, in broad categories, the winners and the losers. If we think of economies, capital-exporters, technology-leaders, net lenders, those with a strong physical and social infrastructure and those endowed with structural flexibilities are the winners, whereas capital-importers, technology-followers, net borrowers, those with a weak physical and human infrastructure and those characterized by structural rigidities are the losers. If we think of people, asset-owners, profit-earners, rentiers, the educated and those with professional, managerial or technical skills are the winners, whereas asset-less, wage-earners, debtors, the uneducated, the immobile and the semi-skilled or unskilled are the losers. This classification, which paints a broad-brush picture of a more nuanced situation, does convey the simultaneous, yet asymmetrical, inclusion and exclusion that characterize the process of globalization.

Among countries, the benefits of prosperity created by globalization have accrued essentially to a small number of industrialized countries and developing countries. But development has been most uneven across geographical space. In industrialized countries, Southern Europe and the transition economies in Eastern Europe have fared worse and fallen behind. In developing countries, the benefits of globalization have been captured by a few emerging economies (Stiglitz 2017), mostly in Asia, that were latecomers to industrialization but created the initial conditions, combined with institutions and



policies, to benefit from economic openness. Even among this small group in Asia, some have done better than others, while China has been the star performer.

In all countries, most of the benefits have accrued to relatively small proportions of their populations. Hence, this era of globalization has witnessed a marked increase in economic inequality between people within countries and between the rich and the poor in the world. There has been an alarming increase in the share of the super-rich (top 1%) and the ultra-rich (top 0.1%), in national income everywhere in the world (Atkinson and Piketty 2010; Atkinson 2015). It is no surprise that inequality in wealth is even more pronounced as the distribution of assets has become far more unequal (Piketty 2014). These mounting inequalities are ethically unacceptable and politically unsustainable.

The consumption patterns and lifestyles of the rich associated with globalization have powerful demonstration effects as the electronic media spreads the consumerist message far and wide. It creates frustration and alienation among those excluded. The reaction of people who experience this exclusion differs. Some seek short cuts through crime, drugs or violence. Some seek refuge in cultural identities, national chauvinism or religious fundamentalism. Outcomes do not always take these extreme forms. But globalization is accentuating social tensions and provoking political reactions within countries.

## 7 Some Conclusions

The strains are beginning to surface. Globalization in our times is confronted with mounting economic problems and political challenges. These have begun to disrupt the smooth existence of globalization, so that the future is far from certain.

There are two problems in the economic sphere worth highlighting. First, this era of globalization has witnessed rapidly rising income inequalities among people, almost everywhere, while the distribution of assets has become even more unequal. The share of super-rich, the top 1%, in national income has increased at an alarming pace across countries almost without exception, while their share of assets is even larger. The prosperity created by globalization has been captured by so few excluding so many. It is no surprise that those excluded are voicing their discontent with globalization. Second, the global economic crisis in 2008, attributable to financial liberalization, and the Great Recession that followed in its aftermath, were the first setback to globalization in its present era. In response, most governments in the industrialized countries and emerging economies, with an attempt at coordination, adopted

counter-cyclical macroeconomic policies. This pre-empted protectionist responses and beggar-thy-neighbour policies. But it was not long before orthodox policies returned to focus on balancing budgets and managing inflation, even if this solution might turn out to be worse than the problem, as economic growth and employment creation slow down to accentuate the difficulties of those excluded. Such policy responses are, in fact, shaped by globalization, as governments are sensitive to perceptions in international financial markets and worry about credit-rating agencies. Both sets of economic problems have social and political consequences within countries.

There are two challenges in the realm of politics that should be recognized. First, the most common manifestation of a political backlash is resurgent nationalisms. Economies might have become global. But politics remains national. Citizens like governments to be responsive to their concerns, instead of catering to international financial markets or global economic obligations. And, in democracies, governments are accountable to their people. Recent election outcomes in several industrialized countries, and some emerging economies, highlight the political consequences of globalization. There is a rejection of mainstream political parties by people, as citizens elect governments led by nationalist-populist political parties or political leaders with manifestos that are anti-immigrant and anti-globalization (or in Europe anti-EU). It would seem that political parties on the right or far right are capturing the political space created by unequal outcomes associated with globalization. Their political mobilization is based on populism and nationalism which exploit fears about openness in immigration or trade as a threat to jobs. Second, the changing international context is a political challenge. Globalization has always required a hegemon to set the rules of the game and ensure conformity by the players. This role has been performed by the United States in the present era. However, the economic resurgence of Asia, particularly China, juxtaposed with the global economic crisis and its aftermath, both attributable partly to globalization, has eroded its economic dominance and political hegemony. And, the United States, almost in a withdrawal syndrome, seems to be relinquishing its political leadership role in the world. But there is no other country, yet, that could replace the United States as the hegemon.

It would seem that this era of globalization is under stress. The problems and challenges that have surfaced are largely attributable to its economic and political consequences. Learning from history suggests that earlier epochs of globalization, during the past millennium, came to an end because of their own consequences embedded in the process. It is clearly not the end of geography. The nation state is alive and well. It is not the end of history either.

Of course, history does not repeat itself. But it would be wise to learn from history.

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# 20

## Financial Globalization and Its Implications for Development

Ricardo Ffrench-Davis and Stephany Griffith-Jones

### 1 Introduction

Since the 1970s, a policy approach has become increasingly predominant that placed financial markets at the center of development aims. Together with financial liberalization, this has been a major factor in the fast rise of financial activity, nationally and internationally, with finance taking by far the leading place in economic globalization. Globalization has growingly become a finance-led process, with significant pro-cyclical implications for development.

There is increasing consensus that different aspects of a globalized economy have very different effects on growth, investment and jobs. While there is widespread agreement that trade has net positive effects on growth and jobs (though there are important issues about distribution of gains and losses, how trade liberalization is performed, and degree of contribution to growth), there is increasing evidence that, in contrast, capital account liberalization and unfettered capital flows—especially more short term and reversible

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ones—may have no or negative effect on growth, capital formation, jobs and income distribution.

Furthermore, the view has emerged that excessive liberalization of the capital account, without corresponding regulation of these flows when appropriate, may actually undermine—rather than support—trade growth. This was evidenced, for example, by the negative effects on the evolution of global trade caused by the financial crisis of 2007–2008, with the growth of trade well below its pre-crisis rate of increase still in 2016.

Therefore, those who support free trade may be particularly keen to regulate excessive, and especially short-term, potentially reversible capital flows, as for example one great supporter of free trade, Jagdish Bhagwati (Bhagwati 1998). At a national level, many economists concerned with maximizing growth and employment are fearful of the macroeconomic instability and harm that external capital flows and ensuing currency crises may pose, as well as the distortions, for example via overvalued exchange rates, that may undermine the growth and value-added of their exports (Ffrench-Davis and Griffith-Jones 1995, 2004).

In what follows, in Sect. 2, we look at the historical evolution of these ideas and the underlying empirical evidence. In Sect. 3, we examine recent debates around capital account liberalization and examine the 2012 “institutional view” of the International Monetary Fund (IMF), which under certain conditions favor capital account regulations, and their contradiction with World Trade Organization (WTO) and, especially bilateral trade deals. We therefore call for an aggiornamento of WTO and bilateral trade provisions. Then, focusing the analysis in emerging economies, Sect. 4 examines why financial capital flows tend to be naturally pro-cyclical, overshooting both in the boom and in the bust. Section 5 discusses the implications of structural heterogeneity (SH) and some of the asymmetries which result from this feature in combination with real macroeconomic instability; the implications are regressive and depress development, owing to their effects on capital formation, the quality of exports, employment rates and jobs. Section 6 presents the concluding remarks.

## 2 Historical Context

The view that capital flows had destabilizing effects in the 1920s and the 1930s shifted policy opinion in favor of managing the capital account in the 1940s. Capital account regulations (CARs) became widespread features of economic policy management, even in developed countries. The 1944 Bretton



Woods Agreement, that established the IMF and the World Bank, followed this view which then was the mainstream one. Countries were allowed to regulate capital flows according to their domestic policy priorities. Keynes and White, the creators of the Bretton Woods system, saw free capital flows as a large source of financial instability and of the collapse of the world economy in the 1930s; in the discussions that preceded the 1944 Bretton Woods Agreement, they strongly defended countries' rights to the full freedom to manage their capital accounts (Keynes 1942–1943). They thought that international capital movements should not be allowed to disrupt the policy autonomy of states to adopt the monetary policy stance consistent with their domestic priorities, in order to achieve, in particular, the key objective of full employment, so dear to Keynes (for an excellent analysis, see Ocampo 2017).

The change toward capital account liberalization since the mid-1970s, which started with the US was soon followed by other developed countries, which together with booming capital flows reversed the previous mainstream viewpoint, with capital account openness becoming the new orthodoxy. After developed countries liberalized capital accounts, the pressure on emerging and developing countries to liberalize their capital accounts became a central issue. International institutions, like the IMF, the World Bank and the Organisation for Economic Co-operation and Development (OECD) encouraged or pressured these countries to liberalize.

A number of currency and financial crises followed in the emerging economies. Indeed, those countries that liberalized their capital accounts soon became more prone to currency and financial crises. Thus, a large number of middle-income countries, especially in Latin America, opened their capital accounts in the late 1970s; this was followed by the major debt crisis they experienced in the 1980s, which led to their “lost decade to development” (see, e.g., Griffith-Jones and Sunkel 1989). Similar crises followed in other emerging economies, particularly after they liberalized capital accounts and their domestic financial markets; this happened most notably in the highly successful East Asian “tigers”, which suffered a major financial crisis in the late 1990s, subsequently transmitted to the rest of the developing world, particularly seriously when it spread to Russia, and briefly threatened to affect the US markets.

A major problem for developing countries was the particularly strong procyclical swings in external financing and the associated macroeconomic risks they generated (Prasad et al. 2003; Ocampo et al. 2007).

A rather more unexpected situation for *mainstream thinking* was when financial crises also occurred in the deepest financial markets in the world, the US and Europe (Krugman 2011, Rajan 2011). The 2007–2008 crisis was the worst



collapse of major global financial centers since the Great Depression, leading to a sharp fall in output, investment and employment in developed economies, particularly severe for peripheral European countries, especially Greece (Borio 2016). Outside the US and Europe, there was no global financial crisis as such, but a significant contagion of the recessive effects of the crisis in the US and Europe on emerging economies. The drop in economic activity brought a remarkable slowdown of the growth of world trade that had in previous decades become such an important engine of growth. Thus it was shown that unregulated liberalization of finance tended to undermine the expansion of trade.

These events showed that the problems were not restricted to emerging economies, but reflected deeper patterns of behavior of international capital markets.

The 2007–2008 financial crisis led to a significant review in thinking on effects of financial and capital account liberalization. As part of the recognition that financial stability requires strong prudential regulations, including regulations that focus on the macroeconomic dimensions of financial stability, managing capital flows has been accepted by some key relevant institutions (like the IMF) and leading economists (see e.g., Ocampo and Stiglitz 2008) as part of the family of ‘macro-prudential’ regulations: in particular, with respect to the case of emerging countries subject to strong boom–bust cycles in external financing, with sharply negative effects on growth, investment and employment. This has been reflected in a moderate reversal of the capital account liberalization trends that had spread since the mid-1970s, as well as in the IMF’s adoption of an ‘institutional view’ on capital account liberalization and management in 2012, which recognizes costs of capital account liberalization and benefits of capital account management or regulation (Ocampo 2017).

Financial cycles are a feature of financial markets, as underscored by Kindleberger (Kindleberger and Aliber 2011) and in Sect. 5 later. According to the IMF, financial market volatility has increased over time and has spread to transactions that were considered to be less volatile—particularly foreign direct investment (IMF 2012).

One important characteristic of global finance has been the very strong boom–bust cycle of cross-border finance among *developed* countries (Borio 2016). After 2007–2008, there was a collapse of cross-border finance, particularly sharp for peripheral European countries, with behavior patterns even more marked than those of emerging economies in previous decades. This showed that the problems were not restricted to these economies, but reflected deeper patterns of behavior of international capital markets. This begs the question whether capital account management should also be an option for

developed economies, which have in recent decades fully liberalized their capital accounts.

### 3 Debates Around Capital Account Liberalization

Advocates of capital market liberalization believed that, by overcoming the negative effects of “financial repression”, this would increase economic efficiency, reduce risk and strengthen macroeconomic discipline. Additionally, opening up the capital account would, according to this view, improve the allocation of savings, strengthen capital formation and, therefore, growth.

#### 3.1 Critique of Capital Account Liberalization

The crucial assumptions of this view are that it assumes well-functioning and *complete* capital markets (e.g., limited information imperfections, short-term as well as long-term segments and perfect forecasting of future events), and inter-temporal smoothing. However, these characteristics are generally absent in financial markets (Stiglitz 2008). Critics of capital account liberalization—and financial liberalization in general—have, therefore, pointed out that it could result in severe financial crises with high development costs. In Sect. 4, we go further, arguing why agents managing unregulated financial flows tend to be intrinsically pro-cyclical, and their actions tend to deter capital formation, the level and quality of exports and employment, and the inclusion of small and medium-sized enterprises (SMEs) and new entrepreneurs.

According to these alternative views—based on the actual behavior of markets—the pro-cyclical nature of capital flows and the volatility associated with open capital accounts may lead to *more* rather than less macroeconomic volatility. The uncertainties associated with volatile financing may reduce investment and its efficiency, thus diminishing economic growth, as well as employment. Similarly, the sort of discipline imposed by open capital accounts on macroeconomic authorities is not necessarily that one positive for long-term sustainable growth, as it may reduce the space for counter-cyclical macroeconomic policies and structural reforms needed for higher growth (Ocampo 2017; Ffrench-Davis 2010b; Ffrench-Davis and Griffith-Jones 2004).

Although the evidence that capital account liberalization was not associated with faster economic growth or higher levels of investment had important precedents (e.g., Rodrik 1998), the position that the effects of capital

account liberalization was problematic, was greatly strengthened by a major IMF study published in 2003 (Prasad et al. 2003). This showed that there is overwhelming empirical evidence that financial liberalization increases real macroeconomic instability in developing and in developed countries. Pro-cyclical capital flows have been at the heart of many of the crises in the emerging and developed world since the 1980s, either as causes or as mechanisms of propagation. Further evidence came from later studies which show that countries that have grown more are those which have relied less, not more, on capital flows for growth and have therefore run stronger current account balances (Jeanne et al. 2012).

The economic effects of capital account liberalization also have negative impacts on income distribution. There is, indeed, an empirical relationship between capital account openness and income inequality, which is associated with the fact that inequality frequently increases after capital account liberalization. Recent evidence in a 2017 IMF study (Furceri et al. 2017), using rigorous econometric analysis, shows that capital account liberalization increases inequality. The effect of external financial liberalization on inequality depends crucially on the mix of capital flows. Short-term debt flows may increase the chances of sudden stops and financial crises, harming growth on average while also raising inequality. Ocampo (2017) gives additional explanations of the link between capital account liberalization and inequality: the increasing mobility of capital weakens the bargaining position of labor, and international financial integration may constrain governments' redistributive policies.

### **3.2 IMF Returns to Its Roots, But WTO and Bilateral Trade Deals Lag Behind**

There has thus been a revival of views on the positive role that capital account management or regulations can have in the international system. This represents a partial return to the original Bretton Woods Agreements, abandoned in the era of capital account liberalization.

The G-20 adopted, during its 2011 Summit, a set of "coherent conclusions for the management of capital flows" (G-20 2011), but the most important multilateral effort to rethink the role of these regulations was by the IMF in 2011 and 2012, which was approved by the IMF Executive Board (IMF 2012). This was backed by significant research by IMF staff (see, in particular, Ostry et al. 2011, 2012). As a result, the IMF has recognized that capital flows

carry risks and that, under certain circumstances, capital flows should be regulated to moderate both surges and sudden stops in external financing.

The IMF thus recommends countries could use capital flow management measures alongside other macroeconomic policies: counter-cyclical monetary and fiscal policies, active foreign exchange management and macro-prudential domestic financial regulations. However, IMF emphasized that capital flows management should be used only after other instruments of macroeconomic policy management have been adopted and thus as a sort of “interventions of last resort” (Gallagher and Ocampo 2013).

The IMF continues to advocate for the liberalization of the capital account as a long-term objective, which is problematic, as said, since the existing literature overwhelmingly finds severe risks associated to full liberalization of the capital accounts, especially—but not only—in emerging and developing countries.

A more ambitious pro-development policy framework would recognize that capital account regulations (CARs) should be used by countries receiving such flows, on a permanent basis, as an integral component of a counter-cyclical macroeconomic policy package, preferably based on permanent regulations that are strengthened or weakened in a counter-cyclical way, and modified according to developments in global and local capital markets (Ocampo 2017).<sup>1</sup>

In the meetings leading up to the establishment of the IMF, both White and Keynes agreed that capital controls be targeted at “both ends” of a capital flow (Helleiner 1994). Furthermore, the industrialized nations are more often the source of such flows but generally ignore the negative spillover effects of their actions on other economies. In particular, the expansionary monetary policy by the US, for example after the 2007–2008 crisis, instead of channeling resources to the US economy flowed to emerging economies, creating problems there such as overvalued exchange rates.

Capital account liberalization was also harming developed countries during their efforts to recover their economies, as well as emerging ones. There is therefore a strong case for also regulating outflows from source countries to other economies, when these become *excessive*. This would be a complement to measures regulating capital flows in recipient countries, which are essential. Indeed, one important aim of regulating cross-border capital flows, in both recipient and source countries, is the reduction of systemic risk buildup in

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<sup>1</sup> This alternative framework, beyond the IMF position, is the result of an academic debate that took place while IMF Board discussions were going on. See a full collection of contributions to this debate in Gallagher et al. (2012), particularly on guidelines for the design of capital account regulations (CARs) as an essential part of the macroeconomic policy tool kit and not seen as measures of last resort.

both of them, thus reducing risk of future crises. Such measures of managing excessive capital outflows from developed countries, and especially from the US in times when these were excessive, could be a rare “win-win” opportunity, as they would benefit both the US and the emerging economies (Griffith-Jones and Gallagher 2012). It is encouraging that IMF authors (Ghosh et al. 2014) have shown the benefits of regulation of capital flows in both source and recipient countries, and argued for the value of coordination of both, to make them more cost effective.

All recipient countries should have the freedom to manage their capital account according to national priorities. The latter would require modifications of OECD recommendations and requirements, but more importantly of EU rules.

In any case, a major advance of the IMF institutional view was the recognition that there is no obligation to adopt capital account convertibility under the IMF Articles of Agreement. Countries have therefore full freedom to manage their capital account (Ocampo 2017).

A serious problem is that the policy space provided under the IMF Articles of Agreement, and its new decision is being eroded by trade and investment agreements. Increasingly, these agreements prohibit the use of capital account regulations, and those treaties that have exceptions for measures to manage balance-of-payments crises only allow these regulations to be temporary. The IMF has itself noted that its own recommendations and the freedom that countries have to adopt capital account regulations under its Articles of Agreement are often at odds with other international commitments, in particular trade and investment treaties that restrict the ability to regulate cross-border finance.

Indeed, many trade and investment treaties lack the appropriate safeguards (Gallagher and Stanley 2012). This is true if countries have made commitments on financial service liberalization within the WTO and OECD but, more importantly, is true of several regional and bilateral agreements. In particular, in treaties with the US, it is stated that all forms of capital must flow “freely and without delay” among trade and investment partners (Ffrench-Davis et al. 2015).

Such provisions should be revised to make them consistent with the IMF’s provisions under its Articles of Agreement. The key point here is that these provisions reflect largely, if not fully, the historical evidence, as well as the most rigorous academic empirical analysis on the costs of capital account liberalization and benefits of capital account management. Furthermore, the IMF is the main international institution dealing with issues, such as capital flows. Unfortunately, WTO—and especially bilateral trade and investment

agreements (most often with the US)—does not reflect the new agreed consensus among economists, based on empirical evidence. There is, therefore, an urgent need for an “aggiornamento” of the views reflected in WTO, especially in bilateral trade and investment deals. This will help increase favorable effects of capital flows on growth, investment and employment, as well as encourage trade flows, as discussed in detail earlier and later.

## 4 Why Financial Capital Flows Are Intrinsically Pro-cyclical

Financial flows have been, by far, the ones that have led economic globalization in the three recent decades, with a strong pro-cyclical performance (Korinek 2011; Ostry et al. 2016). While international trade of goods and services increased its volume at 6% per year (doubling the gross domestic product [GDP] rate) and foreign direct investment (FDI) at around 10%, financial flows were expanding those rates several times. In fact, it is estimated that international financial flows account for 40–70 times the value of world exports plus Greenfield FDI. A large amount of financial flows move several times during the course of a day, while exports take days or even weeks between its departure and arrival to their final destination.

It is often stated that diversification reduces risks and instability, which is in general true. However, the considerable diversification experienced by capital flows had been registered with an intense pro-cyclical volatility. For close to the four decades that followed the depression of the 1930s, financial flows were notably limited. Later, gradually, international bank lending as well as international bond markets re-emerged, while flows to stock markets, American Depository Receipts (ADRs), mutual and investment funds, derivative instruments proliferated, including toward emerging markets. To the growing foreign flows, there would be added flows from domestic institutional investors and other residents in these economies, which also became increasingly globalized. As a matter of fact, a great diversification of international financial flows took place, but one that has involved strong and recurrent volatility. Most of these flows tend to share concomitant contagion of boom-and-bust cyclical processes.

An outstanding feature of recent macroeconomic crises in East Asia and Latin America is that they have affected economies classified as “successful” by international financial institutions, financial agents and risk rating agencies. As a consequence, emerging economies have been “rewarded” with large flows

of private capital and diminishing spreads, in parallel with a buildup of increasing volumes of external liabilities during the boom periods.

The recipient countries have thus moved into areas of vulnerability: varying combinations of growing and liquid external liabilities; domestic credit booms; currency and maturity mismatches; substantial external deficits; appreciated exchange rates; high stock market price/earnings ratios; high prices for luxury real estate; and low rates of productive investment. At the same time, macroeconomic expectations have largely come to be dictated by the opinions of agents specializing in short-term segments of the financial market.

As said earlier, there is a substantive literature on sources of financial instability: information asymmetries between lenders and borrowers and a failure to properly assimilate the negative externalities generated by each agent (in the form of growing vulnerability) have created the basis for cycles of abundance and scarcity of external financing (Krugman 2000; Rodrik 1998). The tendency to equate opinions and expectations with “information” contributes to a herd mentality and to multiple equilibriums. And there have in fact been episodes of runaway contagion, first of excessive optimism and then of excessive pessimism, in the financial crises experienced over the last three decades, these imbalances often being encouraged by the risk rating agencies.

An obvious contagion of overoptimism among lenders tends to be characterized as risk “appetite” among the agents following the “leaders”, but what prevails is ignorance or underestimation of the underlying risks.<sup>2</sup> Meanwhile, as discussed later, the “leaders” tend not so much to have a particular appetite for risk as to believe on one-side bets assuming capital gains are assured. As regards borrowers, at times of overoptimism, the evidence is that most of them do not borrow with the intention of not repaying or in the hope of being bailed out or benefiting from a moratorium. What usually prevail are rather expectations of large benefits—from continued currency appreciation, for example. Borrowers also fall victim to financial euphoria during booms.

Beyond these factors, two further characteristics of financial creditors are of vital relevance for explaining why they tend to exhibit an intrinsically procyclical behavior. One is the particular nature of the leaders acting on the supply side. There are natural asymmetries in the behavior and goals of different economic agents. Agents oriented toward the financial markets are specialists in liquid investment, tend to operate within short time horizons, as are

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<sup>2</sup> Calvo and Mendoza (2000) examine how globalization can spur contagion by discouraging the collection of information, as it creates stronger incentives to imitate the portfolio of the market. This introduces an information asymmetry, now between market “leaders” and “followers”.



remunerated for short-term profits, and thus are extremely sensitive to changes in the variables affecting short-term returns.

The second characteristic is the gradual spread of information about investment opportunities in emerging economies among agents who are in a position to expand supply. Agents in the different financial market segments are gradually attracted to new international markets as they learn of profitable opportunities in emerging economies that they had hitherto overlooked or been unaware of. This explains, on the supply side, why capital flows have followed a rising path, in many of these countries, over periods of several years rather than there being sudden one-shot upward shifts in the supply of capital.

Feedback effects have been generated by the existence of installed capacity (potential GDP) that has been underused at the start of each of these processes and gradually brought back into operation during the upturn; this is something the authorities, markets and certain econometricians have often wrongly interpreted as a persistent structural increase in total factor productivity (TFP).<sup>3</sup> All this is self-reinforcing so that some variables—stock markets, exchange rates, risk ratings and real estate prices—can move in a particular direction, first recovering and then overshooting, so that they move away from sustainable equilibrium for prolonged periods, offering economic agents the “assurance” that financial markets will move in only one direction and stimulating capital flows that pursue capital gains (rent-seeking flows).

This being so, it is important to highlight the significance for public policy design of the distinction between two different types of volatility in financial capital flows: short-term or random-walk fluctuations and medium-term instability. The latter means that variables such as the exchange rate, stocks and shares as well as real estate prices can move persistently in a particular direction, giving the market the false assurance already mentioned of asset prices and returns moving in a single direction. This stimulates further continuing flows that at some point become increasingly detrimental to macroeconomic fundamentals, but that still offer successive short-term windfall gains. These agents naturally specialize in the search for capital gains rather than productivity gains, until asset prices and the real exchange rate reach what are clearly outlying levels. Then someone sounds the alarm and there is a rush to reverse flows, with a strong and costly pro-cyclical bias. Unlike fixed capital investment, which is to a large degree irreversible, this financial capital is wholly reversible.

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<sup>3</sup>A systematic distinction between potential GDP and actual GDP would allow this faulty interpretation to be avoided, being an essential component of a development-oriented macroeconomic policy.



Financial creditors' sensitivity to bad news will increase greatly at some point (and probably quite abruptly) once the country has entered "areas of vulnerability". Then lenders will take note of: (1) the volume of assets they hold in that market, (2) the degree to which that market depends on additional net flows that is linked to the current account deficit, (3) the level of exchange-rate appreciation, (4) share price/earnings ratios and (5) the stock of short-term and liquid foreign exchange liabilities of the country. It is therefore unsurprising that expectations become more and more likely to reverse, as valuations move further into these areas of vulnerability.

The deeper and longer-lasting an economy's incursion into areas of vulnerability, the greater the likelihood of crises and more severe are their effects. This highlights the crucial need to implement effective regulations to ensure that capital flows are not excessive, that they strengthen productive investment and are consistent with a sustainable macroeconomic environment.

Consequently, both the accumulation of external assets by suppliers of financial inflows, until this expansionary stage of the cycle is far advanced, and the sudden subsequent reversal of flows can be considered "rational" responses by individual agents, given their short-term horizons. This is because the question of whether the macroeconomic fundamentals are improving or worsening is not relevant to these investors as long as they continue to make financial investments motivated by expectations of short-term returns, and they believe they can pull out quickly before the situation deteriorates. What does matter to them is whether the indicators which are critical from their standpoint—real estate, bond and share prices and the exchange rate—can continue to yield short-term gains and, of course, whether markets are liquid enough for them to reverse their decisions timely if necessary. They will thus continue to originate net inflows until rising expectations of an imminent reversal emerge.

It needs to be stressed again that, for financial operators, the most relevant variables are not the long-term fundamentals of the country's economy but the short-term returns their loans or investment yields. This explains why their view of a particular country can change radically even though the domestic economic fundamentals, other than foreign currency liquidity and prices of financial assets, may remain unaltered.<sup>4</sup>

After the bust, once debtor markets have made a "sufficient" downward adjustment, the opposite process tends to arise and to be sustained for some years. In conclusion, economic agents specializing in financial investments, who might be notably efficient in their field, operate with short-term plan-

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<sup>4</sup> Since economic authorities must take care of the sustainability of macroeconomic balances, it appears "irrational" and perverse that these authorities might follow the advice of "rational" financial investors. Naturally, these pursue their own short-term aims, which often are inconsistent with the long-term aims of financial and macroeconomic stability that should be pursued by government economic authorities.

ning horizons because of their training and the rewards they can thereby obtain, and they have largely dictated macroeconomic developments, owing to the decisive influence they have had on policy design. This means that a “financieristic” attitude prevails over the “productivistic” one (Ffrench-Davis 2010b). This generates a conflict with the twofold objective of growth with equity, which requires better incentives to increase productivity rather than giving priority to financial rent-seeking or capital gains.

The heterogeneity characterizing the capital account in the recent era of financial globalization makes it essential to distinguish between the behavior and effects of its different components. Greenfield direct foreign investment and long-term loans associated with imports of capital goods are relatively stable over the cycle and are indissolubly linked to productive investment. By contrast, since financial flows have shown great pro-cyclical volatility, this very feature means that only a minor share of them have gone into the financing of productive investment; these flows usually end up financing purchases of existing assets and consumption, creating bubbles and crowding out national savings. Often, indeed, they have destabilized the macroeconomy instead of stabilizing it and have not contributed to productive capital formation. However, as pointed out earlier, this distinction between short-term and long-term investors has been somewhat eroded, as even foreign direct investment is associated with pro-cyclical behavior in some aspects.

To sum up, the interaction between two factors—the short-termist nature of leading financial agents and the fact that the recovery adjustment tends to be a process—explains why suppliers continue providing funds even when the real macroeconomic fundamentals are worsening. This implies that counter-cyclical regulation of inflows, rather than a last resource tool, should be in place before inflows are starting to generate some significant real macroeconomic disequilibria.

## 5 Recessive and Regressive Asymmetries Under Structural Heterogeneity and Financial Pro-cyclicity

Financial instability tends to be more severely costly, in terms of growth and for inclusion, in economies that exhibit *structural heterogeneity* (SH) and passive or pro-cyclical macroeconomic policies.<sup>5</sup> Here we consider three categories

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<sup>5</sup>The concept of *structural heterogeneity* has been developed by the Economic Commission for Latin America and the Caribbean (ECLAC), departing from the more standard concept of *dualism*. For instance, see Rodríguez (2007).

of SH. First, among firms, including the diversity of productivity, access to financing, markets and technology between different sizes of companies. Second, by SH in labor markets, we understand the diversity of the recessive effects on workers of different social status, skills and training. Third, by the diverse capacity for and speed for action or reaction or *asymmetric* response to the economic cycle by the agents typically operating in different domestic markets: consumers versus productive investors, productive investors that generate GDP versus rent-seeking financial investors.

The greater the macroeconomic instability, the greater the asymmetries of reactions and socioeconomic effects will be. This is highly significant in economies experiencing repeated boom-and-bust cycles, which traps average actual output below the productive capacity of labor and capital; this gap results from the extreme fluctuations in macroeconomic prices, such as the exchange rate, as well as liquidity squeezes in aggregate demand, the credit market and sharp swings in the external balance.

The combination of structural heterogeneity and instability leads to considerable public policy challenges; if they are not taken into consideration, both equality and growth usually remain elusive. The supposedly “neutral” policies of neoliberalism often have significant negative effects on both heterogeneity and instability: (1) regressive effects that harm small and medium-sized enterprises (SMEs), start-ups and less-skilled workers, and a drop (2) in the utilization rate of available potential GDP (GDP\*), the quality of exports and jobs and innovation, and (3) in the investment ratio that usually is closely linked to output gaps.

Consequently, when designing the domestic macroeconomic environment, two basic features should be borne in mind: that it should enable a closeness of economic activity to the full use of productive resources, with sustainable domestic and external balances, and that it should encourage the building of new productive capacities. Among other conditions, domestic demand needs to evolve in step with productive capacity, or potential GDP, and macroeconomic prices (particularly, the exchange-rate path) should be consistent with a sustainable external balance. This sounds quite obvious; however, it has not been the usual situation in emerging economies in times of open capital accounts and financial globalization.

This section stresses the implications, for capital formation and employment, of the presence of deep structural heterogeneity among diverse types of economic agents under real macroeconomic instability. In emerging economies, macroeconomic instability is closely linked with fluctuations in financial capital flows and commodity export prices.

Real macroeconomic instability implies that, during recessions, actual GDP may be well below potential GDP for long periods of time. However, actual GDP, at most, can exceed potential GDP for only short periods. Of course, during recovery, actual GDP tends to grow faster than potential GDP, until *full* employment is reached. The fact that, in conditions of instability, the economy does not fluctuate around potential GDP, but mostly below it, points to an *asymmetry* that has a significant effect on economic growth and its distribution. The gap between the two is a “recessive gap”, indicating underutilization of capital and labor.

As discussed in the following, as long as there is a recessive gap, downward pressure will prevail on capital formation and the quality of employment. Consequently, in order to promote growth and equity, economic output must remain close to the production frontier.<sup>6</sup> Three types of asymmetric responses and effects are examined, which are regressive and depress development under conditions of instability in the real economy and of structural heterogeneity, owing to their effects on capital formation, the quality of trade and its contribution to inclusive growth, and employment as well as job quality. The section concludes with a brief overview of counter-cyclical policy tools regulating capital flows, aggregate demand and the exchange rate.

## 5.1 Recessive Gap and Capital Formation

As numerous empirical studies have shown, the recessive gap between actual and potential GDP (a crucial macroeconomic imbalance) significantly reduces the investment ratio, a key variable for economic growth. The experience of Latin America reveals a strong negative correlation between the size of the recessive gap and the capital formation ratio (ECLAC 2010, chap. II).

Several factors are responsible for this negative link: (1) a recessive gap implies that available capacity is being underused, which lowers actual productivity (the standard measure of residual or *total factor productivity*); (2) if sales decline, it is not justified for entrepreneurs to expand capacity until their businesses are becoming closer to their existing capacity; (3) lower profits mean that businesses have less internally generated resources to finance new investments, while at the same time deterring investors from risking borrowed funds in irreversible investment; (4) the resulting deterioration in firms’ balance sheets usually coincide with a pro-cyclical reluctance by capital markets

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<sup>6</sup>For instance, for average Latin America, during most years since the early 1980s, there is evidence of significant recessive gaps during most time of over one-third of a century. See an estimate of the output gap (recessive gap) in ECLAC (2010, figure II.9).

to finance firms facing recession-induced liquidity squeezes; (5) the recessionary gap and its fluctuations tend to affect the quality of project evaluation and tends to discourage productive innovation partly associated to the acquisition of new machinery and equipment (Aizenman and Marion 1999); and (6) large recessionary fluctuations tend to depress public revenue, leading to cuts in public investment needed to complement private investment (Easterly and Servén 2003).

Thus, an array of compelling reasons, related to real macroeconomic imbalances, explain why a poor capital formation rate is closely linked to economic cycles. The negative pro-cyclical macroeconomic impact on capital formation tends to deter or defeat the efforts of a more structural nature to raise productivity and reduce structural heterogeneity through microeconomic and meso-economic reforms.

If recurrent recessionary gaps can be avoided, with a counter-cyclical policy that brings aggregate demand close to potential GDP and leads to a sustainable real exchange rate, potential investors could be encouraged to engage more fully. The dynamic effect will be much greater if economic actors have solid expectations about the ability of public policies to maintain the balance of the real economy, and if the authorities also undertake reforms to complement long-term capital markets, stimulate industrial innovation and improve labor force training.

As the recessionary gap gradually disappears, entrepreneurs who had mothballed potential projects will try to revive them. This requires time, given the array of factors needed to get an investment project off the ground. If the gap is closed for only a short time, however, as a result of imbalances that had been building up during economic recovery, many potential investors will not have time enough to develop their project before the next recession begins.

In this regard, the sustainability of the expansionary part of the cycle is crucial to promoting investment (Titelman and Perez Caldentey 2016). During economic recoveries, after a certain lag, gross capital formation gains momentum, but slows down again when the next recession occurs. Therefore, the longer the capacity of capital and labor is close to being fully utilized, the larger the increase in the investment ratio will tend to be. Consequently, real macroeconomic imbalances, such as increasing currency appreciation, with imports rising consistently faster than exports, high consumer debt or aggregate demand systematically outpacing production capacity, must not be allowed to develop during economic booms.

For instance, since the 1980s, it has become customary for the Latin American economies to begin to recover, peak at close to full capacity after some years and to slip into a new recession (Ocampo and Ros 2011). In the

last three and a half decades, the Latin American economies have spent brief time near full use of productive capacity. The 1980s were marked by a major recessionary gap; in 1994 the economy peaked, then falling in 1995; over the course of 1997–1998, it peaked again, followed by another contraction in late 1998; in 2003–2004 another boom began, which was stopped by the brief contagion of 2008–2009, with a return to growth in 2010–2012, and returning to a recessive gap in 2013–2017. A similar boom–bust kind of cycle, of economic activity linked to capital flows, took place in the periphery of the Eurozone (especially in Greece but also in Spain, Portugal, Ireland and Cyprus), before and after the Eurozone sovereign debt crisis, with equally or bigger problematic effects, as well as in other regions previously.

In summary, capital formation declines heavily in each recession and its recovery in boom periods tends to be gradual and lagged, depicting another deep asymmetry. The gap thus remains and depresses the sum of investment flows during the entire adjustment process, even if the marginal flow by the end of the cycle is similar to what it was at the beginning. Unfortunately, high rates of capacity underutilization have been the norm, owing to real macroeconomic instability, generated by volatile capital flows and export prices, as well as pro-cyclical macroeconomic policies, which have prevented strong gross fixed capital formation ratios from becoming the normal pattern.

## 5.2 Exchange-Rate Instability and Productive Development<sup>7</sup>

The exchange rate as the relative price that links the domestic and international economies plays a crucial role for the sustainability of macroeconomic balances and for resource allocation. It is a key variable in decisions concerning resource allocation and consumption of tradable and non-tradable goods. The real average and the stability of the exchange rate are both crucial; in conditions of structural heterogeneity and asymmetric responses, exchange-rate instability exacerbates heterogeneity and inequality.

Several emerging market economies have adopted a free-floating exchange rate. However, as the Latin American experience indicates, under this regime, the real exchange rate tends to exhibit an extremely pro-cyclical behavior, which reflects changes in the capital rather than the current account. This means that the exchange rate is determined by short-term capital flows either managed by experts in generating capital gains—not productivity gains—or

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<sup>7</sup> See, for example, Williamson (2008), Rodrik (2008), Eichengreen (2008), Ffrench-Davis (2010b) and Ocampo (2011).

driven by reversible terms-of-trade changes, a set-up that fails to take into consideration the sustainability of the current account. Only after a significant external imbalance has accumulated during the boom of inflows, comes a sharp correction. During the boom stage, the currency appreciation process tends to generate structural misallocation of resources. For example, it discourages adding value to exports of primary resources, as well as diversifying exports into new sectors and encourages an excessive consumption of imported goods, and a large deficit on current account, then followed by a sharp depreciation and a recessive gap (output gap).

The free-floating exchange-rate regimes may have prevented the sort of crises typical of fixed nominal rates. However, many of the countries' exchange rates become increasingly sensitive to pro-cyclical changes in the external funding supply or terms of trade, which had severe negative impacts on resource allocation and, particularly, on growth-enabling capital accumulation. Usually, during the transition from boom to bust, the current account adjusts and reserves remain, with no "shortage" of foreign currency, but the domestic economy adjusts with a regressive and depressive recession.

It is often argued that agents can ride out sharp exchange-rate fluctuations by means of derivatives markets, buying or selling futures. When these are available to exporters, and are not too expensive or available only for short periods, futures are an effective means of ensuring current production against price and interest rate fluctuations with respect to today's prices. However, futures prices are, in fact, often quite similar to spot prices. They are not effective at preventing the distorting medium-term allocation effects of instability on investment that, it must be stressed, is a fundamental variable in building productive capacity.

Consequently, another asymmetry often emerges. When cyclical booms start and domestic expectations improve, capital markets become more receptive to funding new projects. But, at the same time, the real exchange rate usually starts to strengthen and creates the expectation that appreciation will persist. This of course discourages investment in the production of tradables and in boosting their value-added. This has not stopped governments from welcoming exchange-rate appreciation on occasions, insofar as inflation targeting takes precedence over growth, employment, exports and sustainable external balance.

The large currency devaluations that often occur in the next stage of the economic cycle tend to stimulate investment in tradable goods. However, this occurs in parallel with the downward adjustment of the economy and usually a rising recessive gap, and under considerable uncertainty, such that financial institutions generally restrict financing for new projects. Consequently, the



market misses the opportunity offered by the depreciated exchange rate to boost productive capacity in tradables. The net result, after both stages of the cycle, is to distort the allocative capacity of the exchange rate and decrease both the production of tradables and their value-added.

Exchange-rate instability clearly distorts project evaluation of investment projects, promotes speculative investment rather than capital formation, artificially crowds out domestic production of importables (many produced by SMEs, which overwhelmingly produce for the domestic market), and discourages value-added in exports.

This severe failure of exchange-rate policy constitutes an acute disadvantage for an export-led development strategy focused on non-traditional exports and higher value-added ones. These exports are the most likely to transmit externalities and to interact with SMEs. A managed flexible exchange rate—in any of its several varieties—is an essential ingredient in a successful export-led development strategy.

The evolution of the real exchange rate must be consistent with economic fundamentals: mainly the current account and the Balassa-Samuelson relative productivity theorem.

In a pro-development, counter-cyclical, approach, then, what is needed is to make real market forces—the producers of exportables and the importers and producers of importables, who are the key players in driving development in relation to the link of the domestic economy with international markets—the strongest influence in determining the evolution of the exchange rate; this must be made under the guidance of the authorities, focused on the sustainability of the current account (Williamson 2008). This is “the market” that should gain ground, the market of generators of real-sector investment, innovation and productivity, not the market of short-term operators and rent-seekers.

In this context, the economic authority must implement a coherent and targeted counter-cyclical capital account management policy, in conjunction with an array of other macroeconomic policies to ensure effectiveness, as summarized later. Otherwise, there is no policy space for an effective macroeconomics for inclusive growth and, thus, development convergence in today’s international financial markets. It is inherently contradictory for a developing economy to aspire to converge toward development if strategic macroeconomic prices such as the real exchange rate are delegated to financial operators.



### 5.3 Quality Jobs and Real Macroeconomic Instability

The labor market structure is a key variable in income distribution in economies with fairly low tax burdens and modest levels of social expenditure (such as the African and Latin American economies).

Creating more and better jobs is crucial to gradually reducing severe inequalities in markets. Macroeconomic policy should consider how its various policies affect large and small businesses, investment and consumption and skilled and unskilled workers in different ways. Gradualism and sound coordination among monetary, foreign exchange, capital account, financial and fiscal policies have a substantial impact on economic growth and its distributive effects, particularly on the level and quality of employment.

As noted earlier, the sharp structural heterogeneity among companies of different sizes and workers with different skills open ways to inequalities in the functioning of markets. Vigorous growth requires much faster gains in the productivity of lower income sectors and, thus, in the employability of the middle- and low-income workers and entrepreneurs. Contrary to the most commonly held neoliberal belief, there is a high level of complementarity among policies that simultaneously contribute to growth and reducing inequality in the labor market (Bourguignon and Walton 2007).

Instability in domestic demand and in the exchange rate has both static and dynamic effects on employment (Ffrench-Davis 2012). Static effects include fluctuations in the utilization rate of available productive capacity in labor and capital stock. The large gaps that emerge repeatedly between installed capacity and actual GDP in turn cause gaps between full employment and actual employment. These recessive gaps and the volatility of variables, such as the real exchange rate, have had profound dynamic effects on (1) the expansion of the domestic capital stock; (2) weakening labor organizations since, when unemployment rises, unskilled workers and smaller businesses usually suffer the most; (3) the value-added intensity of exports and their linkages with the rest of domestic output; (4) the development of SMEs, which tend to be more labor intensive and to compete with imports; and (5) the degree of formality and precariousness of employment and the rate of labor participation.

The deepening of recessive gaps resulting from macroeconomic instability brings an increase in the number of workers into informality and a decrease in the ratio of labor participation. Both imply that the standard figures on overall unemployment underestimate the worsening of labor markets under recessive gaps. Actually, jobs with contracts and social security loose relative weight

in favor of informality and the upward trend in developing countries in labor participation is weakened, given the fact that part of people in working age stop searching when the probability of getting a job decreases under a recessive gap.

One of the links between real macroeconomic instability and inequality is the widespread structural heterogeneity that characterizes developing economies. Given how dominant still is the neoliberal approach, with its belief of homogeneity and policy “neutrality”, it is essential to take account of the diverse capacity for action and reaction of typical agents in different markets. Therefore, as stressed, the heterogeneity between large- and small-scale entrepreneurs, skilled and unskilled workers, productive and financial investors and productive investors and consumers must be taken into account, as well as the high domestic and international mobility of financial capital and skilled labor, in contrast with the limited mobility of physical capital and unskilled workers (Rodrik 2011).

The asymmetries resulting from this heterogeneity are intensified by highly unstable economic activity and macro-prices. A boom period leaves large liabilities without an equivalent countervailing payment capacity. The usual shift in expectations, reversal of financial capital flows and sudden devaluations lead to a recessionary adjustment, with drops in domestic demand. This, in turn, exerts a downward pull on production, employment and its degree of formality, and, therefore, on tax revenue. This is compounded by the limited impact of social protection institutions that have limited counter-cyclical and progressive capacity to transfer income in the event of the following crisis, whether in order to seek reintegration into the labor market, training or compensation for lost earnings during the bust (ILO/ECLAC 2011).

In short, given the structural heterogeneity of the markets, instability in the real macroeconomy associated to volatile capital flows and terms of trade has a distinctly regressive effect on income distribution and job quality (see also discussion of empirical literature on this topic in Sect. 3.1). This is an additional important reason for the need for counter-cyclical management of the capital account.

## **5.4 Counter-Cyclical Macroeconomic Policy Tools and Financial Capital Flows**

There is a rich historical analysis of the diverse policy tools used to affect the size and composition of capital flows since the Great Depression, history which in recent years evolved from the decades of strong capital controls since

the 1930s to trilogy of open capital accounts, free exchange rates and inflation targeting dominance since the 1990s.<sup>8</sup> The great recession, after the 2007–2008 crisis, that severely attacked several developed economies, followed by the contagion to developing countries, brought a number of researchers and institutions to revisit the analysis of the effects of capital flows and capital account management on development. As discussed earlier, the previous trend of views biased toward open capital accounts has evolved quite significantly in the direction of considering counter-cyclical (macro-prudential) regulations of flows, opening space for a growing discussion on alternative capital account regulations.

The analysis focused on financial flows and their effects as opposed to Greenfield FDI, particularly considering the pro-cyclicality exhibited by the former flows in recent decades (see Sect. 4). The focus has been mostly on the macroeconomic effects, and the corresponding need for macro-prudential regulations, of which capital account regulations need to be seen as part, as opposed to the previous (pre-2007–2009 crisis) greater focus of institutions like the IMF, Bank for International Settlements (BIS) and other regulatory bodies like the Basle Committee on Banking regulation, more on the micro and almost exclusively domestic financial regulation. This latter approach was shown to be insufficient, especially in the light of the 2007–2009 crisis, as well-thought and well-implemented micro-prudential and purely domestic regulations may be overridden in situations of great macroeconomic imbalances. And these may be generated by pro-cyclical and reversible capital flows, a significant part of which is naturally temporary.

The tools for capital account management may include market-based or quantitative mechanisms, regulating capital inflows or outflows, with a broad or restricted definition of the flows covered. In Ostry et al. (2011), there is a detailed comprehensive analysis of different sorts of regulations of flows. In the case of *successful* developing economies (the so-called emerging market economies), which under the financial globalization of recent decades tend to attract capital inflows, crises have tended to have been built during booms of financial inflows. Usually, a faster growing part goes to nonbanking users, such as consumer credit, real estate and stock market, which are hardly well covered by prudential micro-bank regulations. This frequent fact makes necessary, in parallel, the *prudential* macro regulations or capital controls on excessive inflows in order to avoid the march toward exchange-rate, domestic credit and external accounts disequilibria.

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<sup>8</sup> See the relevant, rather critical, analysis of the standard formal *inflation targeting* approach developed in a staff paper produced in the IMF (Blanchard et al. 2010).

A recent paper by Erten and Ocampo (2017) quantify the effects of capital account regulations (CARs). They use four indices of capital account regulations: (1) capital inflow restrictions, (2) foreign exchange-related regulations, (3) financial sector regulations and (4) capital outflow restrictions. Summarizing their interesting research, covering 51 emerging economies from 1995 to 2011, they find that CARs, with the exception of financial sector-specific restrictions, have tended to have desired effects on macroeconomic stability, reducing current account deficits, exchange-rate appreciation and overheating during booms of inflows and have enhanced resilience during the busts and reduced their size, contributing to greater macroeconomic stability. Their results further indicate that increasing the restrictiveness of CARs in the run-up to the crisis moderates the growth decline that follows after the crisis.

We conclude summarizing a case that took place immediately before the period covered by Erten and Ocampo that appears to support their conclusion considering CARs as an essential part of the macroeconomic policy tool kit to be used in a counter-cyclical way to smooth booms and busts, adjusting its intensity with the evolution of the supply of external financing, and not seen as measures of last resort. Given that CARs can be circumvented increasingly through mis-invoicing trade flows, derivative operations or FDIs that are in fact debt flows, they require a significant degree of market monitoring and “fine-tuning” as investors adapt and circumvent regulations (Gallagher et al. 2012).

The experience recorded by the Chilean economy on capital account regulations in its return to democracy in 1990 fulfills these requirements. Chile then was confronted with a boom of external financing. This supply of funding was perceived by the authorities as a temporary (pro-cyclical) excess that would destabilize the exchange rate, its export strategy and a sustainable external balance.

Accordingly, the authorities regulated the amount and composition of capital inflows with a *market-based* tool by adding a cost, particularly, of inflows of loans, bonds and inflows to the stock market. This was done, in close coordination by the Ministry of Finance and the Central Bank, by establishing an unremunerated reserve requirement (URR or *encaje*), calculated as a proportion of each gross inflow, to be held at the Central Bank for a given period; the rate of the URRs and period were adjusted from time to time with the intensity of the supply of external funding. By regulating the composition and amount of inflows, the reserve requirement provided effective room for simultaneously implementing counter-cyclical monetary and exchange-rate policies; actually, there was also an active intervention in the foreign exchange

market by the Central Bank, in a managed flexibility approach (Williamson 2003; Magud and Reinhart 2007; Edwards and Rigobon 2009). In parallel, there prevailed fiscal responsibility, with a public surplus, to serve the debt inherited from the dictatorship. The comprehensive counter-cyclical approach allowed Chile to maintain a level of aggregate demand consistent with its productive capacity and a sustainable exchange-rate path. These equilibria contributed to a substantial increase in the investment ratio and in the potential and actual GDP growth rate, with average GDP rising over 7% a year. However, since 1996, gradually, Chile went along with the policy approach in fashion then and allowed the regulatory power of the URRs and the intervention in the foreign currency market to weaken, reaching the formal liberalization of the exchange rate in 1999 and of the capital account in 2001 (Ffrench-Davis 2010a, chapter VIII).<sup>9</sup> Furthermore, Chilean ability to manage the capital account was weakened when it signed a Free Trade Agreement, with the US, at the insistence of the US Treasury. This illustrates the above-discussed point that trade agreements curtail the ability of countries to pursue the capital account management policies they wish, even if these are in accordance with more recent views of institutions like the IMF. Notwithstanding its weakening, Chilean authorities kept significant room for doing counter-cyclical management of financial flows (Ffrench-Davis et al. 2015).

## 6 Concluding Remarks

One of the links between real macroeconomic instability, economic growth and inequality is the widespread structural heterogeneity that characterizes developing economies. In fact, the heterogeneity between large- and small-scale entrepreneurs, highly skilled and unskilled workers, productive and financial investors, and productive investors in contrast with consumers, must be taken into account in the design of policies, as well as the high domestic and international mobility of financial capital and skilled labor, in contrast with the limited mobility of physical capital and unskilled workers.

The asymmetries resulting from this heterogeneity are intensified by highly unstable economic activity and macro-prices under the present globalization of financial volatility. For example, when capital inflows are abundant, a substantial part of them is consumed because consumption responds faster than

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<sup>9</sup>The counter-cyclical policy in Chile was comprehensive only until early 1996. Several researchers do not take notice of this gradual policy change. Since 1996, the exchange rate appreciated, with rising stock of external liabilities and deficit on current account. When the Asian crisis exploded in 1998, it caught Chile with those (pro-cyclical) macroeconomic imbalances (Ffrench-Davis 2010a, chapter VIII).

investment to an increased supply of funds, and financial markets have become more adept at financing the consumption or purchase of financial assets. If this is accompanied by currency appreciation, as is often the case, the bias is exacerbated by higher imports of consumer goods, which diverts “foreign savings” into national “dis-savings”.

Consequently, macroeconomic policies must take structural heterogeneity into account in order to even out different agents’ response capacity. This is essential for development, which, inevitably, requires the constant narrowing of productivity gaps and raising average productivity.

Highly cyclical fluctuations in several emerging economies’ real exchange rate have distorted investment decisions. The booms of inflows, with the attendant currency appreciation, tend to generate excesses in luxury construction and in imports, which create temporary jobs not sustainable when the growing external deficit has to be corrected. On the other hand, they artificially crowd-out production of tradables that compete with imports (many produced by SMEs). They also discourage diversification toward non-traditional goods more intensive in value-added and the addition of value to traditional exports; they negatively affect sustainable employment and job quality. So, economic booms imply some creation of temporary employment and destroy some more permanent jobs.

A non-stable real economy has asymmetrical distributive effects and implies underutilization of potential productivity, with lower actual output, fewer jobs and an expanding informal sector, as compared with a more stable real economy. Higher rates of capital utilization indicate a higher rate of average employment. The resulting increase in actual productivity and reduced income gaps means that the well-being of workers and investors (wages and profits) can be improved, by making better use of capacity and promoting a virtuous circle of more investment, innovation and jobs. That is the mission of macroeconomic policies, which is to be complemented with productive development and training policies, including pro-development reforms of capital markets.

Productive investors and employment have been subject to great instability in the real macroeconomy, with large recessionary gaps, in a notably incomplete capital market, particularly in financing for smaller firms. Real economy instability has been closely associated with the cycles of financial flows to and from abroad, which, in addition to their great pro-cyclical volatility, have little connection with real-sector investment. “Financierism” has prevailed over “productivism” (Ffrench-Davis 2010b). The main reason for this is the existence of an international financial market dominated by short-term operators, whose behavior is often inherently pro-cyclical and flows are mostly

disconnected from capital formation. Increasing integration with more volatile international financial markets, which often means indiscriminately opening the capital account, has led to greater instability.

Given that fluctuations do not occur symmetrically around full employment, but asymmetrically with clear depressive and regressive biases, several “successful” emerging economies have often exhibited activity levels well below full employment of labor and capital. This situation strongly discourages investment and introduces a regressive bias because of its negative effect on employment and on output. These effects are not distribution-neutral, given the prevailing structural heterogeneity, since the existence of the gap often has particularly severe negative repercussions for SMEs, less-skilled workers and non-wealthy sectors.

The challenge of macroeconomics for development is to design a set of counter-cyclical policies—fiscal, monetary, exchange-rate, domestic financial market and capital account regulations—that takes into account the relationship between the short and long term, reconciles real economic stability with more dynamic long-term growth and promotes social inclusion. This requires efficiently coordinated policies between economic authorities.

Under the current and foreseeable international situation, for these policies to be viable, counter-cyclical regulation of the capital account is needed. Effective and efficient capital account regulation would allow counter-cyclical monetary and exchange-rate policies to be implemented. In parallel, the local financial system needs to be reorganized, in order to channel resources toward productive investment, with an inclusive bias, helping to reduce structural heterogeneity and productivity gaps between different economic agents (Ocampo 2011; Bourguignon and Walton 2007). To this end, a reformed financial system is crucial to reduce high structural heterogeneity of developing economies and facilitate structural transformation and innovation, to achieve a more dynamic, sustainable and inclusive development model, and to provide counter-cyclical finance. An important element in such a reformed financial system is the existence of well-functioning and large national development banks (see Griffith-jones and Ocampo 2018, forthcoming).

Unregulated capital flows have been producing negative effects on macroeconomic stability, economic growth and employment. Consequently, policies geared to manage the capital account would reap the positive effects of capital flows while mitigating or eliminating the depressive and regressive effects of unmanaged flows.

The IMF made a major advance with the recognition that there is no obligation to adopt capital account liberalization, which is consistent with its Articles of Agreement. Member countries have therefore full freedom to



manage their capital account. IMF went further in recommending desirability of using counter-cyclical regulation of capital flows, for effective management of the capital account, as discussed earlier.

However, the WTO and especially bilateral trade as well as investment deals have been often inconsistent with this new consensus of IMF and many academic economists, by including provisions, which limit the ability of individual countries to freely manage their capital accounts, and thus regulate capital flows. A central policy recommendation therefore is that neither the WTO nor bilateral or investment trade deals should contain provisions which limit the ability of individual countries to freely manage their capital accounts, if they feel that capital flows could undermine their national policy objectives, especially in areas of growth and employment, as well as increasing the risk of financial instability and thus future financial crises.

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# 21

## Trade and Investment in the Era of Hyperglobalization

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and Richard Kozul-Wright

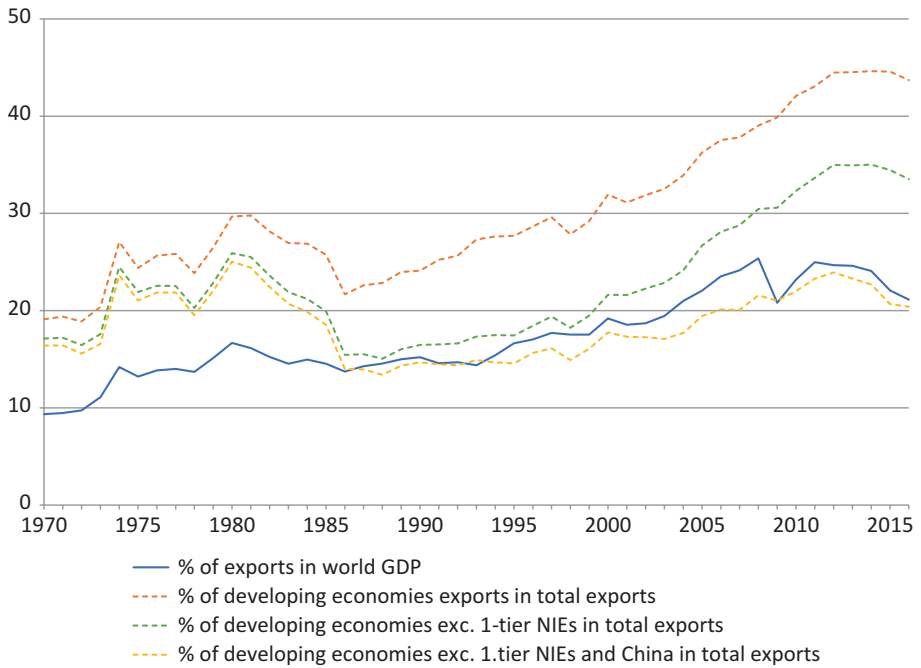
### 1 Introduction

The world economy has, undoubtedly, become more integrated over the last 70 years with a steadily rising share of trade in world output, initially through increased (intra-industry and intra-regional) flows amongst advanced economies, but with the developing countries' share of world trade rising steadily since the early 1970s, and more sharply since the early 1990s, reaching between 30 and 40 per cent of total world trade (Fig. 21.1), with a growing portion of that trade amongst themselves (Fig. 21.2). A large part of this rising relevance of developing economies in world trade, however, is explained by the impressive export growth registered in East Asian economies, led by the first-tier newly industrializing economies (NIEs) and subsequently with China. The composition of world trade has also changed significantly over the last decades, away from primary products (particularly metals, minerals and fuel) with a corresponding rise in the share of manufacturing and services, a shift that also has been pronounced in developing countries (Fig. 21.3).

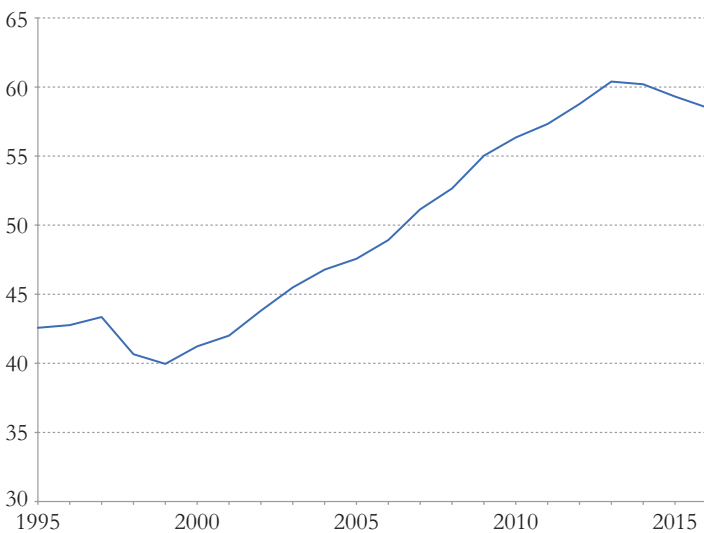
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**Fig. 21.1** World trade and developing economic performance, 1970–2016 (per cent)  
Source: Authors' calculations, based on UNCTADstat



**Fig. 21.2** Share of South-South trade in developing economies' total merchandise exports, 1995–2016 (per cent)  
Source: Authors' calculations, based on UNCTADstat



**Fig. 21.3** Developing economies' merchandise exports by product group, 1980–2015 (per cent)

Source: Authors' calculations, based on UNCTADstat

Conventional wisdom sees these trends as the inevitable outcome of a steadily more open world economy in which countries have adhered to comparative advantages, using their relatively abundant resources to the full and importing goods that embody otherwise relatively scarce resources. According to the standard neoclassical trade theory, liberalization and the increased trade that are presumed to result, by reshuffling a country's resources in line with its comparative advantage, have also yielded significant efficiency gains, raising growth and incomes. In its more popular translation, this narrative lauds the virtues of a globalizing world.

During this same period, however, globalization has gone through a transformation, in part affected by the collapse of communism, but more significantly by the rise of cross-border capital flows, including foreign direct investment (FDI). Indeed, the growth of these flows has been nothing short of spectacular. Analysing these flows would seem a simple step for economists, after all, as one established international economics textbook puts it: "The principles of international factor movement do not differ in their essentials from those underlying international trade in goods" (Krugman and Obstfeld 1997:159).

However, a long and eminent line of economists, from Adam Smith through David Ricardo to Joseph Stiglitz, have been reluctant capital market liberalizers, worrying about the potentially very damaging effects of associated

market failures. The recent rise of cross-border flows and the wider financialization of contemporary capitalism, marked by the “hypertrophy of finance”, its increasing influence on real economies and its capture of regulatory and policymaking processes, have only amplified these worries (Cohen and de Long 2016; Akyuz 2017). By some counts these global financial flows have transformed the plain vanilla globalization that emerged after 1945 into today’s “hyperglobalization” (Rodrik 2016; UNCTAD 2017), whose causes and consequences have become a hotly contested ideological terrain.

The chapter examines this shifting terrain through a trade and development lens. Section 2 provides a brief overview of ongoing empirical and analytical debates amongst economists around the relationship between trade, growth and development, and stresses the importance of diversifying into manufactured exports. Section 3 repositions those debates around the idea of an export-investment-profit nexus and considers the role of foreign direct investment (FDI) in such a nexus. Section 4 looks at the pros and cons of participation in global value chains (GVCs) as the latest iteration of an export-led development strategy and highlights, in particular, potential obstacles to a diversification and upgrading drive. A penultimate section (Sect. 5) offers a reminder that macroeconomic pressures, through the terms of trade, continue to shape how trade impacts the development process. Section 6 draws some policy conclusions.

## 2 Trade and Development: Old Challenges, New Narratives

### 2.1 The Empirical Literature on Trade and Growth

The goodness of trade is hard wired into conventional economic thinking (Mankiw 2018), and an extensive empirical literature on the relationship between trade and growth seems to back that perspective up, generally finding a positive statistical association between the two. However, the strength, nature and even direction of this relationship, as well as the broader economic consequences of increased trade flows and accompanying trade policies, continue to be contested (Rodrik 2017). This is partly an empirical problem, attributable to the familiar methodological pitfalls associated with trying to capture processes as complex as global integration and growth, let alone their interaction, in simple econometric equations. The vague definition of openness (with many mistaking trade volume as a proxy for trade policy and regularly referencing the

former as openness) and the failure to separate episodes of export promotion from those of import liberalization can easily lead to the misrepresentation of trade regimes, making it difficult to draw meaningful cross-country comparisons and interpret findings. Cross-sectional averages hide country-specific differences and breaks in the series. The failure to present an explicit counterfactual, together with biases in country selection, raises further doubts about the robustness of results. And the general inability of such approaches to analyse non-linear historical processes greatly diminishes their value for guiding policy. Findings can be very differently ranked according to the trade measures employed, with few significant cross-country correlations between these measures, raising obvious questions about the reliability of the various indicators used to measure trade policy and the empirical results derived therefrom (Pritchett 1996). Studies have also found that results reporting a strong link between openness and growth are sensitive to additional variables (Levine and Renelt 1992), cyclical factors (Harrison 1996) and periodization (Wacziarg and Welch 2003).

A positive statistical association between trade (not to mention trade liberalization) and growth also leaves open the direction of causation, with plenty of reasons to suppose that it runs from domestic success in raising productivity to increased trade rather than the reverse. This is related to another critique of growth regressions: the fact that a random assignment of liberalization policies is implicitly assumed, depicting governments as non-strategic agents, which is clearly an unrealistic assumption. As Hausmann et al. (2008: 8) have noted, “We know that traffic cops tend to be assigned to areas where there is a lot of traffic. Hence a regression between the volume of traffic and the number of cops would give a positive coefficient, blaming cops for the traffic, even though cops may be optimally allocated.”

It also needs to be stressed that even when a close statistical association between trade and growth (or some other variable) is found, this does not necessarily imply that liberalization will produce the desired effect in a specific country: while in the average country it may be true that more trade or trade liberalization is associated with higher growth, there is no certainty that the same association holds for any given country in the sample. In fact, standard regression frameworks assume that the parameter to be estimated is the same for all the sample countries. But this is an assumption, not a result; the estimated parameter may well be heterogeneous across the sample. More in general, and as it is occasionally acknowledged, linear regression models are particularly ill equipped to link up the many “significant” factors in a plausible, or even consistent, growth story. Despite these basic limitations, such empirical exercises continue to flourish.



## 2.2 Conventional Trade Models

The reason for controversy also lies with the general equilibrium model behind the conventional trade narrative. This is still much admired for its mathematical elegance, but it rests on a set of severely restrictive assumptions which tend to distort its empirical output (Kohler and Storm 2016). The implausibility of a world populated by small firms with the same production techniques, with perfect information about consumer tastes and market prospects, where learning or scale economies are absent, and immobile factors of production (including labour) fully employed, has long cast a cautionary shadow over its derived policy recommendations (Gomory and Baumol 2000; Darity and Davis 2005) and looks even less persuasive for understanding evolving trade patterns in the twenty-first century.

There have, of course, been various efforts to address these limitations. Since the early 1980s, new trade theories have modelled economies of scale (Krugman 1979, 1980), product variety (Romer 1990) and technological change (Helpman 1981; Rivera-Batiz and Romer 1991), revealing a world of imperfect competition and offering an explanation of why intra-industry and intra-regional trade had come to dominate international trade relations over the preceding three decades. In the late 1990s, the so-called new-new trade theories shifted focus from the sectoral-level to firm-level characteristics. Evidence of the heterogeneity in firm productivity between exporters and non-exporters, collected among others by Bernard and Jensen (1995), paved the way for the development of a family of models based on the assumption of the fixed cost of entering export activities and endogenous selection of firms with different levels of productivity on export markets (Melitz 2003). This has served to remind policymakers that much of international trade is dominated by large firms (Bernard et al. 2007) and has thrown up a range of empirical challenges to old and new trade theories, including the rarity of exporting firms, the high concentration of trade across firms and the prevalence of multiproduct exporting firms (Bernard et al. 2007).

More conventional trade theory has also responded to changing trade patterns by refining the notion of endowments at the national level and hence the determinants of comparative advantage. To allow factors of production to differ in their productivities across countries, Feenstra and Taylor (2011), for example, introduced the notion of effective factor endowment defined as the actual amount of a factor found in a country times its productivity. Other authors have reverted to Ricardian differences in technology. Along these lines, Eaton and Kortum (2002) propose a framework in which trade specialization is determined by technological differences and geographical barriers across countries.

However, and despite these various analytical refinements and innovations, when it comes to trade policy, conventional analysis, in both its old and new guises, has tended to retain a singular focus on liberalization as the best policy prescription to capture gains from trade, albeit with an expanded notion of liberalization beyond tariff cutting and with less reference to grand theory and more to episodic government failures and successful export economies (Krueger 1990; Feenstra 2006; Irwin 2009; Mankiw 2018).

### 2.3 Heterodox Departures

While specialization holds pride of place in conventional trade models, with a concomitant emphasis on market competition, consumer welfare and factor price equalization, diversification has been given a privileged position by more heterodox economists and economic historians, with a concomitant emphasis on market failures, production capabilities and catching-up (Toner 1999; Milberg 2008). The resulting rejection of comparative advantage as an explanation of trade patterns tends to focus on the distinct historical roots of those patterns, the interdependence of several structural factors in their evolution and their uneven distributional consequences as much as any efficiency gains.<sup>1</sup> These writers tend to focus on the difficulty of moving resources into higher productivity sectors and activities with the potential for technological progress, learning and upgrading and as a precondition for making lasting gains from integration into the global economy.

From this perspective, and often anticipating the insights in new trade theory, exporting (especially manufactures) can generate productivity growth both within and across industries and sectors through economies of scale and scope. These economies of scale and scope are dynamic in the sense that they afford more than just a one-time shot at raising productivity, they create capabilities and processes that elevate productivity in an ongoing and cumulative way. From this perspective, exporting becomes instrumental because the domestic markets of developing countries are not large or complex enough to support the scale or scope achievable in global markets (an insight related to

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<sup>1</sup> Gunnar Myrdal is a representative spokesperson, “Contrary to what the equilibrium theory of international trade would seem to suggest, the play of market forces does not work towards equality in the remuneration of factors of production and, consequently, in incomes” (Myrdal 1956: 47). Ragnar Nurkse, Raúl Prebisch and others were part of this same cannon to emerge after the Second World War. It is worth noting that whereas later representatives in this tradition were usually portrayed as dissidents, these original thinkers were operating in a world where even a liberal Chicago economist such as Jacob Viner accepted “There are so few free traders in the present-day world, no one pays any attention to their views and no person in authority anywhere advocates free trade” Viner 1947).

Adam Smith's oft-cited sentiment that the division of labour is limited by the extent of the domestic market and that external markets can act as a "vent for surplus") (Myint 1977).

Economies of scale and scope also imply that large firms, or agglomerations of firms, may be necessary for capturing some of the benefits of exporting. Exporting first, and capturing those dynamic economies of scale and scope before others do, affords firms first-mover advantages, making it more difficult for new entrants to compete. That world trade is so dominated by large firms—especially in the top tiers of value added—reflect these points. When economies of scale and scope are in industries open to lots of international competition, which is increasingly the case for a broad swath of manufactures as trade liberalization, technological and managerial portability and the number of international suppliers continue to grow, it is also more challenging to access these economies of scale and scope in ways that benefit development (e.g. as a way of capturing a greater share of value added rather than lowering prices to fend off the competition).

While much of the theoretical literature on the rationale for exports emphasizes efficiency gains and productivity increases, in practice perhaps the most important factor underlying an export drive in developing countries has been the need to overcome the balance of payments constraint. In building up their industrial capacity and competitive strength all newly industrializing countries must import a large volume of capital goods and intermediate goods. Thus, in an economy where investment is growing both in absolute terms and as a proportion of gross domestic product (GDP), such imports will also need to grow faster than GDP and the financing of these imports may pose a serious constraint on the industrialization process if additional export revenue cannot be obtained.

In one way or another, these challenges are the basis for infant industry-type arguments that maintain that developing-country firms need some combination of time, support and protection to adequately build up their capabilities before they can compete internationally, just as developed-country and East Asian firms did during their nascent industrial periods (Wade 1990; Chang 2002). Concerns about excessive infant-industry protection are also linked to how exporting—once protected firms become internationally competitive—can enhance both opportunities and capabilities for learning, discovery and innovation. Technological, managerial and worker capacities are cumulative and path dependent, and experience, especially of the sort afforded by the dynamism of international markets, lengthens the forward reach of prior success (Amsden 2001). Exporting manufactures is, in particular, an activity where these sorts of positive externalities and spillovers are particularly strong.

However, there is an instructive difference between the macro and micro evidence on the learning-by-exporting front. While exporting firms also tend to be the most productive in a sector, the micro-based empirical evidence indicates that this correlation is primarily driven by selection rather than the hypothesized causal link from exporting to productivity growth (Harrison and Rodríguez-Clare 2009; McMillian and Rodrik 2011; Melitz and Trefler 2012). That is, more productive firms tend to self-select into exporting; alternatively, opening to trade simply increases the market share of more productive firms because competition drives less productive domestic firms out of business. Either way, a sector's overall productivity increases, but not because firms are getting more productive.

At the macro level, however, the empirical evidence is stronger in that a country's income is partly a consequence of the technological sophistication of its exports and that "what you export matters" (Hausmann et al. 2007). Dynamic economies of scale and scope, coupled with the productive externalities and spillovers these processes engender, are by their very nature difficult to capture—empirically or practically—at the firm or even industry level (Young 1928). It may be useful here to consider the substantive difference between the narrow benefits of enclave production and the sort that is driven by strong production, income and learning linkages. The former's productivity effects are largely limited to the enclave; the latter spreads throughout manufacturing and can spill over into other sectors. It also touches on the classical point that comparative and absolute advantages are fundamentally aligned: the productivity embodied in a country's exports helps determine its relative income, and thus comparative advantage should be treated as a dynamic, changeable quality rather than a static prescription for maximizing the developmental benefits of participating in global trade in the foreseeable future.

More recently, empirical analyses have explored how trade (both exporting and importing) can affect productivity growth and development via its impact on aggregate patterns of structural change. Part of productivity-enhancing structural change involves shifting labour and resources from low productivity work in traditional agriculture to higher productivity work in manufacturing. And selling to external markets expands these possibilities to a greater extent than what can be achieved by selling exclusively to domestic markets. Hence exporting manufactures can not only raise productivity within industry, it can also raise an economy's aggregate productivity by redistributing existing resources across broad economic sectors. However, when there is surplus labour, import competition and/or productivity growth that is driven by the exit of less productive firms from industry, trade liberalization can result in declines in aggregate,

economy-wide productivity even as it raises productivity in the industrial sector or among trading firms (McMillan and Rodrik 2011). The determinant is what is happening with employment and whether the productivity growth in industry (when it occurs) is outweighed by a larger shift of labour and resources into low productivity work outside the industrial sector. These are the sorts of dynamics that underlie growing concerns with premature deindustrialization and stalled industrialization in the developing world (Felipe et al. 2014; Rodrik 2016; Tregenna 2010).

From this perspective, the attendant policy challenges vary, *inter alia*, with a country's level of income, the structure and sophistication of its productive base, the size of its firms and their technological capacities and the extent of the employment challenge (UNCTAD 1996, 1997, 2003, 2006). However, because successful integration into the global economy depends upon sustained productivity growth, building a strong manufacturing base is generally seen as a key component of any successful trade strategy (Cohen and de Long 2016). A number of empirical regularities associated with manufacturing are key to advancing such a strategy: the contribution of manufacturing to growth has been found to be greater than its share in total output. Faster growth in manufacturing output generates faster growth in manufacturing productivity, and faster growth in manufacturing is linked to faster growth of output and productivity in other sectors of the economy (Ocampo 2014). A strong positive correlation between a country's level of income and the degree to which its economy is diversified also appears to be closely associated with expanding industrial capacity (Imbs and Wacziarg 2003). Furthermore, unlike economies as a whole, manufacturing industries exhibit strong unconditional convergence in labour productivity (Rodrik 2016).

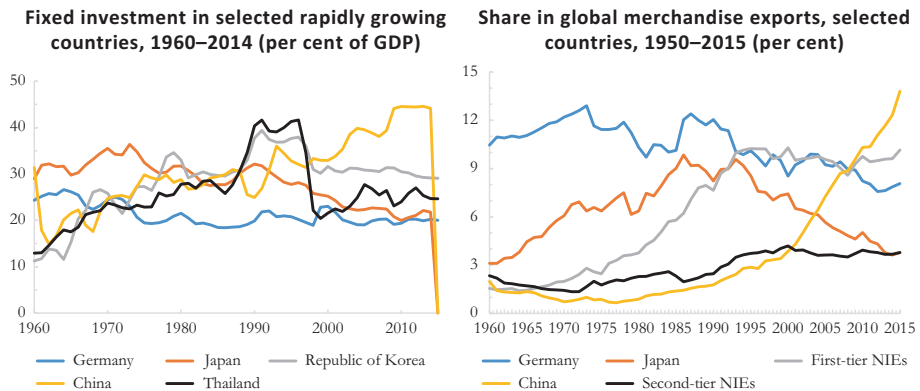
The jump from these broad trends to causal connections is, of course, not an automatic one. Moreover, dynamic and creative impulses are not unique to the manufacturing sector. However, the evidence tends to show that manufacturing carries a greater likelihood of creating both supply side (specialization, scale economies, technological progress and skill upgrading) and demand-side (favourable price and income elasticities) advantages that together can help trigger and sustain a virtuous circle of rising productivity, employment and incomes. The recent work by Rodrik and McMillan (2014) comparing patterns of structural change across different regions confirms the potential of the manufacturing sector, but also that its wider impact depends on whether or not countries are able to shift productive resources to this sector as discussed earlier.

### 3 The Export-Investment-Profit Nexus

Privileging industrialization on the development agenda also stems from its close association with the creation of large-scale production units through the constant addition of new plant and equipment, and the progressive substitution of capital for labour, that is, with the process of capital accumulation. A critical component in this process, neglected (or at best implicit) in more conventional thinking, is a strong link between profits and investment, given that profits provide not only an incentive for investment but are also an important source of financing it (UNCTAD 1994, 2003). A good deal of evidence shows that after the earliest stages of industrialization (when agricultural and commercial incomes can still provide the main source of investment finance), capital accumulation is financed primarily by the retention of corporate profits, often in a close relation with long-term bank borrowing. In many successful late industrializing economies, a strong relationship has been found between a high rate of economic growth, a high savings rate, a large share of manufacturing in GDP and a high profit share in manufacturing (Ros 2000: 79–83).

As investment is one of the few variables to emerge consistently from econometric exercises as an important determinant of export success (see e.g. Westphal 1990; Hanson 2012), and since late industrializers generally require more capital intensity since the onset of the industrialization process than first comers, a strong profit-investment nexus is all the more important from the perspective of developing countries seeking to enter international markets. There is a clear correlation between the star exporting economies in the post-war era and a strong investment push in these economies. The growth spurt in Germany after the Second World War, the leading export economy in Western Europe, was associated with a strong investment push; from the 1960s, Japanese and Korean development required an even faster pace of investment, and this has, more recently, been the case in China (Fig. 21.4).

This pattern of development can open opportunities for rapid productivity growth, including from access to the technology and capital equipment produced in more advanced economies along with accelerated learning opportunities, but it also adds to the strain of mobilizing resources for a fast pace of capital accumulation. This is a long-standing policy challenge for developing countries, but these challenges have intensified with the shift towards a more hyperglobalized world characterized by highly financialized economic relations, more concentrated market structures and a weak public sector with diminished regulatory oversight, all of which have coincided with



**Fig. 21.4** Investment and exporting

Source: Authors' calculations, based on UNCTADstat; and IMF, International Financial Statistics; and China National Bureau of Statistics

an unstable investment climate and a weakening of the links between investment and profits (Stockhammer 2010; UNCTAD 2016).

Conventional trade theorists have responded to these challenges by identifying a healthy investment climate with attracting foreign direct investment (FDI) and diversification with participation in global value chains. Some of the consequences for trade and development are discussed in greater detail later, but behind these responses lies the bigger shift in development thinking associated with the so-called Washington Consensus. This shift included a much more welcoming approach to FDI, with its presumed promises of bringing more reliable sources of capital, instant export opportunities and access to frontier technology, managerial know-how and improved corporate governance. FDI also seemed to offer a convenient package of ready-made firm-level linkages supportive of the sorts of macroeconomic adjustments promoted by the lending programmes of international financial institutions (IMF 1997).

The debt crisis of the early 1980s marks the rise of the Washington Consensus and this turning point in approaches to FDI, although a strong pick-up in these flows to developing countries only began a decade later. In the wake of the debt crisis, the architects of structural adjustment programmes were quick to recast the role of transnational corporations (TNCs) as powerful agents for correcting the distortions associated with import-substitution industrialization and presented the prospect of increased FDI as a reward for getting “market fundamentals” right (Williamson 2002). The pursuit of “responsible” macroeconomic policies, combined with an accelerating pace of



liberalization, deregulation and privatization, was expected to attract FDI to developing countries, thus enhancing their competitiveness and fostering economic growth. Indeed, the claim that FDI would help avoid any further increase of debt and was more stable than other capital flows seemed to confirm it as the development finance of choice (Prasad et al. 2004), as well as the best way to help poorer countries to trade their way out of poverty (Stiglitz 2002: 67).

As with trade liberalization, the econometric evidence linking increased FDI to faster growth is not strong and, if anything, runs in the opposite direction from growth to FDI (Carkovic and Levine 2002; Chowdury and Mavrotas 2006). A possible indirect channel of positive influence whereby FDI crowds-in domestic investment has produced inconclusive econometric results with strong regional variation (Farla et al. 2016). Even the comparative stability of FDI flows has been challenged (Hausmann and Fernandez-Arias 2000; Akyuz 2017: 181–83). Methodological problems again abound across these empirical exercises, not least with the confusion over what actually constitutes an FDI flow given its vague definition of establishing a “lasting interest” in an enterprise located in a jurisdiction other than that of the investor (see further Akyuz 2017: 170–74). These weak empirical results have once again lead FDI advocates to draw on the experience of the fast-growing, outward-oriented East Asian NIEs for evidence that attracting FDI can act as a catalyst for closing the income gaps between rich and poor countries. However, the variation in these experiences gives little support to a simple policy conclusion in support of liberalizing FDI regimes (UNCTAD 1996; Studwell 2014).

There is also still considerable confusion surrounding the decision of firms to expand their activities abroad and their impact on host countries, particularly in the developing world. Most conventional economic models recognize that FDI is not like other capital flows, but it results from a management decision to minimize the transaction costs (from information gathering, contract enforcement, stakeholder bargaining, transportation, etc.) that can arise from exploiting a firm’s unique assets by relocating production close to the final market rather than producing and exporting from a single location.<sup>2</sup> Brainard (1993) provided an early model of this efficiency-seeking FDI, in

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<sup>2</sup>Much like the post-war pattern of international trade, a good deal of FDI occurs among the already advanced economies, often consisting of two-way flows in the same industry. Such intra-industry FDI is either a reflection of competition between firms seeking to access each other’s home market for final products by creating regional centres of production and marketing or an extension of the increasingly fine degree of international specialisation in intermediate products that has been the major impetus for the growth of intra-industry trade (Rayment 1983).



which the decision to invest abroad hinges on a trade-off between transport costs and plant-level scale advantages. Subsequent iterations have added various transaction and agency costs to the equation, often reconnecting with an older literature examining a broader set of social and economic conditions that affect the internal cost structures of international firms (Buckley and Casson 1976; Caves 1982; Markusen 1995).

The broad policy implications are straightforward enough, creating an efficient investment climate attractive to TNCs and beneficial to the host country is best achieved by lowering taxes and removing state regulations, including tariff barriers and local-content requirements, and by allowing the parent company the freedom to integrate the affiliate into its worldwide operations as it sees fit (OECD 1998).

This approach is partial. In particular, it downplays, if not altogether ignores, the significance of firm size and strategic control in maintaining and expanding profitability, and, crucially, it fails to recognize the potential economic distortions that can accompany rent-seeking behaviour by large mobile firms with strategic assets. Recognizing this recalls the seminal work on multinational corporations by Stephen Hymer (Hymer 1972). More generally it means abandoning the fiction of price-taking firms in perfectly competitive markets and contemplating instead an international economic environment structured by hierarchical power relations, inherently imperfect markets and corporate rent-seeking (Cowling and Sugden 1998; UNCTAD 2017). Including these features in the analysis adds a historical dimension to the FDI story, both by recognizing the evolutionary progression of international production and by acknowledging the path dependence of first-mover advantages. The latest wrinkle in this story involves the arrival of the digital economy, including e-commerce, which is already dominated by large international firms with growing concerns about the limited opportunities for developing countries to develop the required capacity to benefit from these new technologies (Dhar 2017; UNCTAD 2018).

While the cross-border expansion of firms certainly generates closer interdependence among countries, it is likely to do so very unevenly, creating hierarchical relations, spreading the benefits unequally and introducing distortions and tensions in the host economies (Hymer 1979). The transfer of production abroad is rarely an all-or-nothing affair and certain functions will often continue to be performed in the country of origin. These are likely to be higher level, strategic functions such as R&D or finance, only the more routine types of production being transferred abroad. Indeed, the capacity of TNCs to slice up the value-added chain may very well translate into an even more rigid hierarchy of activities across countries.

## 4 Disfigured Development: Value Chains and Missing Links

The global economy, and, in particular, the organization of international production and trade, has changed significantly in the last three decades. This change has a quantitative dimension, as reflected in the considerable rise in the volume of trade discussed earlier. But the qualitative change in that organization is seen by many as even more significant, with the structuring of the global economy around global value chains (GVCs), whereby TNCs break up the production process into constituent parts and locate them across multiple national and continental boundaries. As a result, goods (and some services) are no longer simply made in one country and shipped to another for sale, but rather go through many stages, each associated with a specific task, traversing several geographic and organizational borders and adding components and value before they reach their final markets.

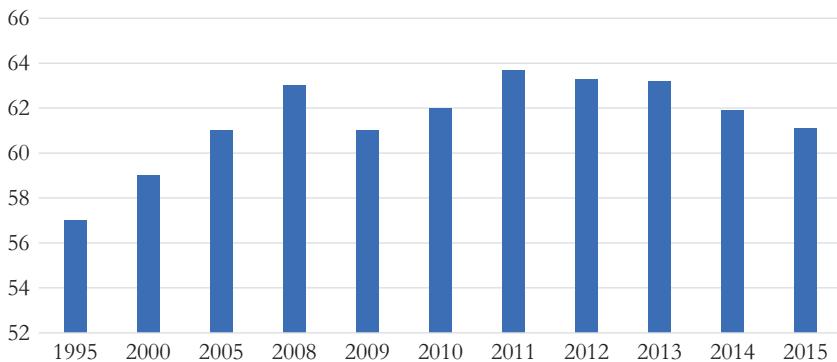
Value chains have been around for centuries (Gereffi et al. 2001) and, in many respects, are just a complex extension of Adam Smith's pin factory logic. However, it was not until Allyn Young picked up the story in the late 1920s that the importance of (industrial) differentiation for the modern development process was more thoroughly analysed by economists. Young observed that "over a large part of the field of industry, an increasingly intricate nexus of specialized undertakings has inserted itself between the production of raw materials and the consumer of the final product" (Young 1928: 527), producing a high degree of economic interdependence both within and across industries. In this world, Young argued, production is best understood as a joint set of activities coordinated by the firm. Initially the cost advantages gained from dividing and sub-dividing the production process tend to cluster around geographical centres because of the presence of highly specialized skills and services required by the separate production tasks, as well as the communication advantages involved when joint production involves "the frequent transfer of an unfinished product between numerous firms with differing specialisations" (Kaldor 1996: 58). Such advantages are not fixed however. In particular, changes in technology can play a significant role in shaping market structure by reducing the costs of coordinating the various activities involved in producing a particular good over ever-greater geographical distances, including across borders.<sup>3</sup>

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<sup>3</sup>This analysis also provides the basis for understanding why much of the growth of trade after the end of the Second World War took the form of intra-industry trade among advanced economies, that is, the simultaneous import and export of a given product or by a given industry. Such trade arises from an ever-

Lower communication costs were certainly a factor in making GVCs a more visible component in the late industrialization experience of the first-tier East Asian economies in sectors such as electronic goods and components, clothing and leather products and subsequently with a new generation of manufacturing exporters in South East Asia and Central America during the 1980s. But while there is little doubting the rise of GVCs, measuring their economic significance with precision is not, however, an easy task. On one level, their growing importance can be gauged by the large volume of trade in intermediate goods whose share of global trade increased from 57 per cent in 1995 to a peak of over 63 per cent in 2011, explaining, in turn, two-thirds of the total growth in trade over the period (Fig. 21.5).<sup>4</sup> More recently this share has been slowly declining, down to 61 per cent in 2015 possibly due to China's greater reliance on locally produced inputs.

This increased volume of traded intermediates can, however, result in exaggerated counting in official trade statistics, as intermediate goods cross borders many times in the process of production in value chains. The recently



**Fig. 21.5** Share of intermediates in global merchandise trade, 1995–2015 (per cent)  
Source: Authors' calculations based on data from OECD-WTO BTDIxE and TiVA

finer division of labour among countries with similar industrial structures and levels of per capita income, which turns less on factor endowments and more on “ephemeral factors” which are embodied in a firm's constantly shifting cost curve (Rayment 1983: 21).

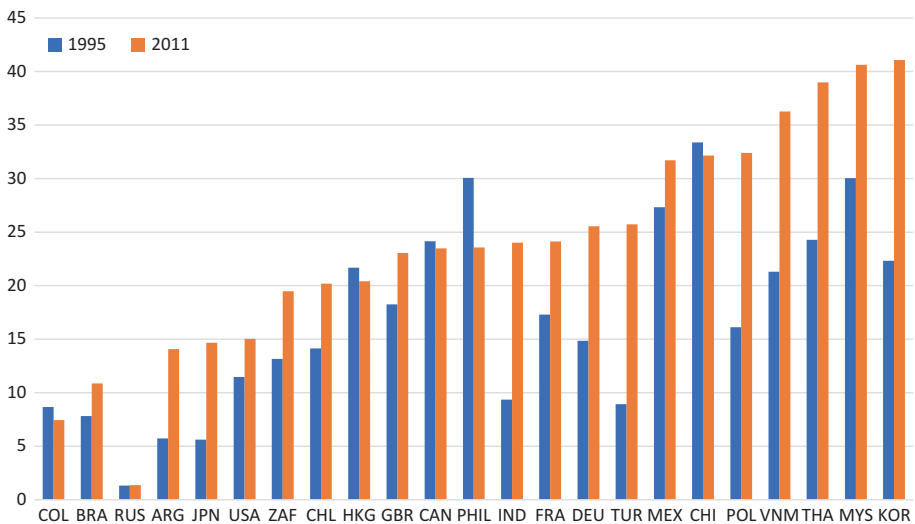
<sup>4</sup>Tracing the evolution of trade in intermediates is not an easy task, but it almost certainly stretches back well into the nineteenth century. Rayment (1983), for example, has noted that international trade in bicycle components and parts of motor cars was already flourishing in Europe before 1914, and recounts how British textile and clothing manufactures at the height of the industrial revolution began to shift labour-intensive sectors of the production process to countries in the European mainland in response to domestic labour shortages and mounting wage pressure. By the 1950s, when national trade data reporting systems of mature industrial countries began to produce the type of disaggregated data required for some tentative estimation, components of machinery accounted for nearly 15 per cent of their manufacturing exports. But this figure grew very rapidly in the 1960s and 1970s, largely thanks to the growth of intra-industry trade inside the Western European trading bloc.

developed OECD/World Trade Organization (WTO) Trade in Value-Added (TiVA) database can be used to avoid some of these pitfalls and represents an important starting point to better understand the impact of GVCs. TiVA identifies GVCs by the country-industry where the last stage of production takes place before the product is sold (the so-called country-industry-of-completion). It is therefore able to provide data on foreign value added (FVA), defined as the value added generated outside the country-of-completion.

Figure 21.6 depicts changes of FVA between 1995 and 2011. It shows that the foreign content of exports has increased significantly in many, particularly Asian, economies but also in Europe and North America over the last two decades. Foreign content shares for example doubled over the period in India, Poland and Turkey, Korea and Vietnam and trebled in Cambodia, with significant increases also observed in OECD economies, such as Germany, whose foreign content share increased by 10 percentage points, up to 25 per cent in 2011. It is worth noting that, on this measure, the variation in both levels of participation and changes over time is considerable.

#### 4.1 GVCs in Perspective

Baldwin (2006) has described the emergence of GVCs as a “paradigm shift” in the organization of the global economy, with the core subject of analysis no longer being final goods and services but the cross-national transfer of tasks



**Fig. 21.6** Foreign value added as a per cent of gross exports, 1995–2011

Source: Authors' calculations based on data from OECD-WTO TiVA Database

and the value added generated by them. Advances in transportation modes and in information and communication technologies (ICTs) have, from this perspective, been seen as the catalyst for change by making it easier and cheaper to manage international production networks. But political and policy choices have been just as important, with the retreat of labour unions, beginning in advanced economies in the early 1980s, and the dramatic expansion of the global labour force following the collapse of communism in Eastern Europe and China's reform drive, altering the balance of economic power and influence in favour of large footloose firms.

Despite the seminal work of Allyn Young noted in the previous section, economists only began to pay closer attention to the fragmentation of production in the early 1990s. Jones and Kierzkowski (1990) showed that three critical factors shape the incentives to fragment a production process across different countries: the size of the target market (the larger the market the higher will be the returns associated with an international division of labour), the costs of connecting production activities in different countries and the heterogeneity of factor costs across countries (a high heterogeneity will raise the gains from offshoring). In line with developments in trade theory discussed earlier, Antras and Helpman (2004) switched the focus from country to firm heterogeneity and investigated the impact of within-sector firm productivity differences on the firm's globalization decisions. They show that different degrees of entry cost to global activities bring about the productivity ranking among firms on the choice of globalization modes. The most productive firms will choose to undertake foreign direct investment, the next most productive firms will use arm's length offshoring, while the least productive firms will engage only in domestic procurement.

Offshoring became a topic of growing empirical research following the signing of the North American Free Trade Agreement (NAFTA), with attention on jobs and wages in the United States, albeit with a strong sectoral focus on the automotive sector. But Feenstra and Hanson (1996) also studied the distributional impact of offshoring in developing countries. They showed that the transfer of segments of production that are more skill intensive by the standard of developing countries, but less skill intensive by the standard of developed countries, tends to raise the demand for higher skilled labour in the light of the respective skill standard of each economy, therefore depressing the relative wages of low-skilled labour in both developed and developing countries. Production networks in the electronics sector in South East Asia led by Japanese firms offered opportunities for further case studies on the impact of GVCs (Ernst 1994, 1997), although firms from the first-tier NIEs were arguably more significant in this respect (UNCTAD 1996). This provided the

material for more general theorizing about the organization of vertical production within TNCs (Hanson et al. 2003; Aghion et al. 2006) and “trade in tasks” (Grossman and Rossi-Hansberg 2008).

While these studies shed some light on specific sectors and different aspects which characterize production in GVCs, including their distributional impact in advanced economies, none of them offered a comprehensive analysis of the structure and mechanism of value distribution among countries participating in value chains. This, in large part, reflected a reluctance to examine issues of corporate governance and economic power in favour of a singular focus on economic efficiency. The first such study in the value chain canon was provided by Gereffi et al. (2005). Focusing on the governance structure of organizing international production networks, this seminal contribution proposes a typology based on power relations between the contracting parties.

The power of lead firms, and their associated capacity to extract rents, has begun to receive closer attention since then, especially with reference to the hierarchy of tasks (Kaplinsky 2005). The underlying corporate rationale for GVCs, particularly in more capital and technology intensive industries, is in fact that, while most industries contain low-skill tasks that are sensitive to wage costs, they also include intangible tasks (R&D, design, marketing and branding) based on unique resources and capabilities that other firms find difficult to acquire; these are the basis of superior returns which often take the form of rents (UNCTAD 2017). A combination of outsourcing low-skill tasks, generating rents from intangible assets and increasing mark-up powers, has allowed lead firms to generate “super profits”, and because there is less need for reinvestment in production capacity, those profits are increasingly devoted to returning shareholder value, acquisitions and financial engineering (Milberg and Winkler 2013: 17).

This ability of lead firms to dominate markets and extract rents is particularly evident in information-intensive activities. Indeed, the construction of legal and financial barriers, as well as more informal mechanisms of control by large international firms with monopolistic or near monopolistic powers, has opened up new avenues in the digital economy for rent-seeking behaviour at the expense of new entrants, public authorities and consumers. The internet has augmented these problems and imperfections exponentially. Digital content can be spread instantly, at the push of a button, and at no charge, while its sharing and cooperative potential appears to be more resilient in the face of legal, economic and political barriers. At the same time, new avenues have opened to create artificial scarcity and erect fences wherever possible. For example “network effects” through which everyone gains by sharing the use of a particular service or resource give rise to the capture of consumers and

“demand-side economies of scale”. These enable the largest firm in an industry to increase and lock in its attractiveness to consumers as it gains market share, making it almost impossible for competitors with declining shares to remain attractive or competitive.

## 4.2 GVCs, Industrialization and Development

GVCs are often presented as the natural outcome of an open global trading system and a promising basis for further trade and investment liberalization (WTO, Fung Global Institute and Nanyang Technological University 2013). Efforts to manage or roll them back are seen as naïve at best and more likely damaging to economic and social progress (Lamy 2006). From a development perspective, participation in GVCs is seen as an attainable first step towards export-oriented industrialization. Rather than having to develop an entire product or break into an extremely competitive market on their own, countries can specialize in specific tasks or components of a multitude of value chains, starting at the relatively accessible bottom.

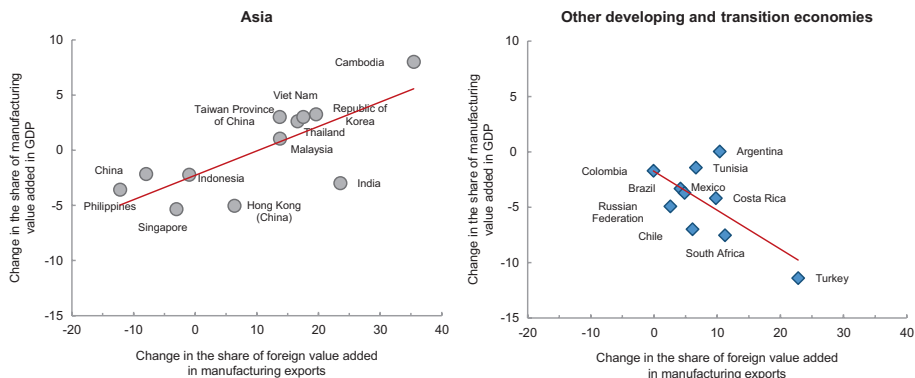
The limits of this approach have long been understood in the context of commodity exporting, given the weak linkage and spillover effects associated with commodity chains. The evidence for a positive causal connection between GVC participation and industrialization is not much better (UNCTAD 2014). Going beyond the primary sector, UNCTAD (2016) shows that only when increases in the foreign value added of exports occur in a larger context of greater production and exports of manufactures can GVC participation complement industrialization and structural change. Conversely, when increasing participation in GVCs reflects a reduction of domestic sourcing in a context of weak export performance of manufactures, GVC participation may even delay structural transformation.

This is illustrated in Fig. 21.7, which plots the association between changes in manufacturing value added as a share of GDP and changes in the import content of export-oriented manufactures (i.e. foreign value addition) between 1995 and 2011, for Asian economies and for the remaining developing countries and economies in transition for which data are available.

Much of the Asian region shows a clear and strong positive association between GVC participation and industrialization, while developing countries in other regions show the opposite relationship as evidenced by the negative slope of the fitted value line for other developing countries in Fig. 21.7.

Claims for how GVCs strengthen productivity or contribute to growth are still largely based on conventional trade models (see, for instance, OECD





**Fig. 21.7** Changes in the shares of foreign valued added in manufacturing exports and of manufacturing value added in GDP, 1995–2011 (percentage point changes)  
Source: Authors' calculations based on OECD-WTO TiVA database and UNSD Main Statistical Aggregates database. Note: Shares taken in current values

2013). But from the vantage point of linking trade and development, the particularities of GVC structures and the consequent distribution of power along the value chain require a more specific analysis. On the one hand, as noted earlier, GVCs lower barriers to entry at the bottom of the value chain, making it easier for developing countries to break into global exports of manufactures than in the past. However, the conditions that ease access can also act as barriers to upgrading. More accessible parts of the value chain are associated with few forward and backward linkages, limited institutional development and little possibility for knowledge externalities in the wider economy. Developing economies with limited productive capacities can therefore remain trapped in, and compete for, the lowest value-adding activities at the bottom of value chains, which can ultimately result in “thin industrialization” and slow economic growth (Gereffi 2014; UNCTAD 2014, 2015). These activities are also detrimental from a dynamic perspective since they do not generate those local productive capacities, which are essential to meaningful development.

Participation in GVCs also carries the risk of specialization in only a very narrow strand of production with a concomitantly narrow technological base and overdependence on TNCs for market access. Hyperspecialization appears to have accompanied the pick-up of trade flows in developing countries from the 1990s (Hanson 2005; OECD 2013). This, in part, reflects the reversion in many countries to primary export dependence against the backdrop of rising commodity prices from the start of the millennium. But it is also a reflection of asymmetric power relations between lead firms and suppliers in



manufacturing activities, as well as the overall weak bargaining positions of developing countries, particularly in countries experiencing premature deindustrialization. The experiences of Mexico and Central American countries as assembly manufacturers, for example, have been linked to the creation of an enclave economy, with few domestic linkages (Gallagher and Zarsky 2007; Paus 2014). The same can be said about the electronics and automotive industries in Eastern and Central Europe (Plank and Staritz 2013; Pavlinek 2015; Pavlinek and Zenka 2016). This has not ruled out “internal upgrading” within TNC affiliates, but it has involved very few spillovers to the domestic economy in the form of productivity improvements and imitation by domestic firms, partly due to limited linkages of TNCs with local firms and labour markets (Fons-Rosen et al. 2013; Paus 2014).

Moving up the chain into more capital-intensive or higher value-added production is particularly challenging in such an environment, because it necessitates relationships with lead firms at the top which are ultimately focused on maintaining their profitability and flexibility. Indeed, these firms sometimes intentionally use GVCs to induce and intensify competition among suppliers and countries for their own benefit (Levy 2005; Phillips and Henderson 2009). There is however some evidence that spillovers increase where joint ventures operate as formalized linkages between local firms and TNCs (Tian et al. 2015).

## 5 The Terms of Trade and Uneven Development

Acknowledging the importance of corporate power in determining the distribution of value in GVCs recalls an older literature on the terms of trade effects of participating in commodity chains. Raúl Prebisch (1950) and Hans Singer (1950) argued that because the price of developing-country exports (largely primary commodities) tends to decline relative to developed-country exports (largely industrial goods), developing countries face a structural disadvantage in global trade relations with the North, one that maintains and magnifies the income gap between rich and poor (the so-called Prebisch-Singer hypothesis). Updates have since taken into account the increasing role of manufactures in developing-country exports (UNCTAD 2002; Sarkar and Singer 1991), but the spirit of the original hypothesis remains a concern. The distribution of income partly determines the nature and rate of capital accumulation and innovation, so the price that developing countries get for their exports may constrain the developmental benefits of trade. And given the highly competi-

tive nature of export markets, especially for manufactures, and the concentration of power in the top tiers of GVCs, it is not clear that developing countries have the pricing power, or capture sufficient value from exporting manufactures, to set these beneficial feedback mechanisms into motion.

Most think of the Prebisch-Singer hypothesis (PSH) in its most simplistic form as a straightforward observation in terms of trade movements. But the more important and interesting takeaway concerns the causal dynamics and associated policy implications of the PSH.

Prebisch (1950) argued that the changing terms of trade reflected differences in market structure between the North and South, with Northern industrial markets being more oligopolistic and Southern primary goods markets highly competitive. Thus, Northern industrial producers could raise relative prices for manufactures even as technical progress and productivity growth proceeded at a faster pace than the South's primary commodity sectors. Relative prices for Southern primary goods exports thus would decline, as would relative Southern real incomes. Hence, trade becomes a vehicle for uneven development between the North and the South and the changing terms of trade a reflection of the distribution of market and pricing power. This is a significant point from the perspective of modern trade relations, where concentration, in terms of both industries and higher value-added segments of GVCs, reflects exactly the sorts of differences in market structure (Northern oligopolies vs. Southern competition) that troubled Prebisch more than half a century ago. Singer (1950) agreed with Prebisch that changes in relative prices did not reflect those of relative productivities. The "fruits of technical progress" could be distributed either to producers as higher incomes or to consumers as lower prices, and monopoly power in Northern manufacturing favoured the former over the latter. Singer also emphasized differences in the income elasticities of demand, arguing that the income elasticity for manufactures is higher than that for primary commodities, so as incomes increase, the relative demand for (and relative prices of) Northern manufacturing also increases.

The natural policy prescription for developing countries to escape the structural disadvantages of trade was to pursue industrialization by promoting import substitution and developing domestic technological capabilities. Combining it with export promotion, both to ease balance of payments constraints on development and to stimulate technological advancement, was also seen as key to a sustained industrialization drive (Prebisch 1964; Ho 2012), foreshadowing the successful export-led industrialization strategies of the East Asian NIEs.

Since the PSH first emerged, developing countries have greatly increased their role in global manufacturing exports. In light of the PSH, an important

question to ask is whether the changing structure of developing-country exports has redressed the disadvantages that Prebisch and Singer (and many others since) warned against. To answer this question, Table 21.1 lists estimated annual growth rates between 1980 and 2014 by country group for three merchandise terms of trade measures. The net barter terms of trade (NBTT) is simply the unit price index for exports divided by the unit price index for imports. An increasing NBTT indicates that a unit of exports is increasing in value relative to imports—a price manifestation of exporting (relatively) high-value commodities. But high relative prices can also detract from competitiveness in markets where demand is very responsive to price changes and competition is intense. So Table 21.1 also lists growth in the income terms of trade, which equals the net barter terms of trade times an index for export volume, indicating how scale can compensate for price in determining a country's capacity to import. The third column is an index for changes in the unit value of exports. It indicates whether changes in the NBTT are driven by changes in import prices (as might be the case given the hike in global commodity prices since the early 2000s).

Table 21.1 presents two sets of estimates. The first for all countries is based on the merchandise terms of trade for all countries in the specified group regardless of export structure (developed vs. developing countries) or sub-

**Table 21.1** Annual terms of trade growth, 1980–2014 (per cent)

	Net barter terms of trade	Income terms of trade	Export unit value index
<i>All countries</i>			
Developed countries	0.0	5.1	2.5
Developing countries	-0.6	5.6	1.3
Africa	-0.7	3.4	2.3
Asia	-1.3	10.3	-1.7
Latin America and the Caribbean	0.3	5.4	2.2
<i>Manufacturing exporters</i>			
Developing countries	-1.1	6.2	0.5
Africa	-0.9	3.5	1.8
Asia	-1.5	10.4	-1.3
Latin America and the Caribbean	-0.9	3.6	1.4

Sources and notes: Terms of trade refer to UNCTAD merchandise terms of trade data. The series for manufacturing exporters includes countries whose mean share of manufacturing in merchandise exports for 1990–2014 was greater than two-thirds. Growth rates figured by regressing the log of the terms of trade for each year and country on a common constant and time trend to get the average annual rates of change reported in the table (fixed effects yield the same results). Results in italics are statistically indistinguishable from zero. To control for effects of fuel prices, developing regions do not include West Asia (though Turkey is included)

group (developing Africa, Asia or Latin America and the Caribbean), while the second set is limited to those countries that are identified as manufacturing exporters. The developed-country group is not differentiated by export structure in keeping with the North-South focus of the analysis.

Starting with all countries (regardless of whether they are manufacturing exporters or not), over the 34 years covered in the table, developed countries experienced no statistically significant change in their net barter terms of trade, though their export unit values experienced the highest annual growth rate of any group in the table, 2.5 per cent. By contrast, developing countries experienced a decline of  $-0.6$  per cent per year in NBT, though export unit values grew at 1.3 per cent per year. At this aggregate level, then, the net barter terms of trade of developing relative to developed countries clearly diverge in a way that is driven by faster increases in import than export prices. There are differences between developing regions as well, with the African and Asian regions experiencing annual NBT declines of  $-0.7$  and  $-1.3$  per cent respectively, and the Latin America and Caribbean region (LAC) an annual increase of 0.3 per cent. This is somewhat surprising, as one might expect the manufacturing export performance of the Asian region to make it a standout in terms of NBT growth if, indeed, exporting manufactures is supposed to be associated with export values converging to those of developed countries. Looking at the growth of export unit values, however, what we find is the opposite, with growth of  $-1.7$  per cent per year. The LAC region is the stand-out star performer, with an annual NBT growth of 0.3 per cent. This is driven by the commodity price boom that began in the early 2000s. Limiting the sample to 1980–2002, the estimate for LAC declines to  $-0.9$  per cent per year NBT growth.

Looking to the second set of estimates for manufacturing exporters only reveals more about the dynamics driving the first set of estimates. Here, all regional groups manifest larger declines in net barter terms of trade growth than when all types of exporters are included. The developing region as a whole experienced an annual decline of  $-1.1$  per cent and the African, Asian and LAC regions yearly declines of  $-0.9$ ,  $-1.5$  and  $-0.9$  per cent respectively. So manufacturing exporters have fared worse, not better, than less industrial-oriented developing exporters, and manufacturing has taken on the features of primary commodities in the global trade regime as a source of structural disadvantage. The results on export unit values confirm this point, as Asian manufacturing exporters experienced the only decline in the set ( $-1.3$  per cent).

These patterns indicate that the prices of manufactures exported by developed countries, with higher technological content, behave differently than those exported by developing countries and are more intensive in low-skilled

labour (UNCTAD 2005). They should not be surprising in light of the chapter's review of the extreme competitiveness of manufacturing export markets and the dangers posed by fallacy of composition-type pressures. But they contradict the oft-made argument that exporting manufactures is desirable partly because of the access it affords to higher value-added production. These results indicate that maintaining price competitiveness seems to dominate efforts to move into higher value-added production. Even among the most successful of manufacturing exporters in Asia, or where large GVC suppliers have gained some market power relative to lead firms in larger middle-income countries like China, there is scant evidence that they have been able to successfully transform that into pricing power (Milberg and Winkler 2013).

Turning now to the income terms of trade reveals another aspect of the story, as well as the basis of Asian manufacturing export success—it is scale, not price. All regions have experienced growth in their capacity to import based on total exports (price times volume), but the Asian region is a strong positive outlier. Considering manufacturing exporters only, the income terms of trade underwent an annual increase of 6.2 per cent for the developing region as a whole and 3.5, 10.4 and 3.6 per cent for the African, Asian and LAC regions respectively. So the Asian region is the only developing region to gain in terms of trade performance relative to the developed region, and here it is volume, not price that drives it. This outsized performance in terms of scale is linked with fallacy of composition pressures on prices; the export volumes that helped propel growth in Asia were at least partly responsible for the falling net barter terms of trade.

Scale can compensate for (and drives) price to some extent, as long as trade and investment policies are able to channel these additional resources towards investment and innovation. But catching-up or converging to high-income countries ultimately requires higher incomes for producers *and* workers, and for that one needs relative prices along with productivity improvements and higher shares of domestic value added in the context of GVCs. Being stuck in a cycle where technical progress and productivity growth are, effectively, given away to global consumers because both market competition and concentration make it difficult to capture value added is one of the more formidable development challenges in the current era of global trade.

## 6 Policy Conclusions and Challenges

Trade and TNCs have been at the centre of development policy discussions over the past 70 years, oftentimes provoking polarized policy discussions. Following the debt crisis of the early 1980s, the rise to dominance of neoliberal ideology successfully anchored those discussions around the virtues of “free trade” and the competitive energies of international market forces and corporations as an antidote to “managed trade” and the damage from “government failures” (Krueger 1990). In reality, the most successful developing economies—during this and previous eras—have adopted a pragmatic position best described as strategic and selective integration tailored to local conditions and capabilities but also tuned to biases and asymmetries in the external environment. This has, in turn, required an active developmental state to set priorities, manage the unavoidable trade-offs and deal with resulting distributional challenges and conflicts of interest. Such institutions have been closely associated with the successful industrialization episodes in East Asia, but as Cohen and de Long (2016) have argued, they can also be traced back to early developments in the United States.

At the same time, it is clear that specific policy measures adopted by successful industrializing countries cannot simply be replicated elsewhere. This is not only because individual country success stories are invariably linked to specific economic histories, initial conditions and political pressures, but also because changes in the external economic environment affect the possible development paths open to countries, as well as the availability and effectiveness of specific policy instruments needed to manage integration strategically (Akyuz et al. 1998).

At present, four elements of the global context are crucial for the way in which proactive trade and investment policies can spur economic development. First, the shift in international economic governance in a more liberal direction has restricted the options available for conducting the kinds of trade and industrial policies that individual countries can use to manage their integration into the global economy (UNCTAD 2014). This is in contrast to conditions prevailing at the time of the export-oriented revival of Japan’s manufacturing base after the Second World War and the rapid economic catch-up of the so-called Asian tigers. Although these economies periodically encountered protectionist barriers in developed-country markets, such as high tariffs and tariff escalation, as well as the so-called voluntary export restraints, the Multi-Fibre Arrangement and other non-tariff barriers, they enjoyed significant flexibility in pursuing their own trade and industrial policies that helped them achieve rapid structural transformation.

This situation changed with the Uruguay Round Agreements (URAs) and the creation of the World Trade Organization (WTO) in 1995. As these agreements pushed the trading system towards deeper integration and established a single-tier system of rights and obligations, in which developing countries are generally expected to commit to a level of obligations much closer to those of advanced economies, flexibilities have been lost and policy messages have been singularly focused on opening up to international market forces and reducing the vector of costs facing international firms. Further restrictions followed with the proliferation of regional trade agreements (RTAs) and international investment agreements (IIAs), many of which contain rules and regulations that go beyond the URAs. Indeed, as Rodrik (2018) has noted, the free trade epigraph attached to these agreements is a misnomer given the corporate lobbying that lies behind them, running the very serious risk of further empowering rent-seeking interests and politically well-connected firms. Where and how to roll back the most intrusive elements of these agreements is becoming a pressing challenge for policymakers at all levels of development.

Second, under the increasing influence of financial markets and interests, many countries have been experiencing unbalanced economic growth and growing inequality, and many policymakers have recognized a link between structural problems in their economies and the evolving global governance regime. These include a heightened vulnerability to shocks and crises (UNCTAD 2011), and the growing influence of large corporations, both through their own governance arrangements and through wider political processes. Since the collapse of the Bretton Woods System, the increasing influence of financial flows on trade patterns and outcomes has been a growing concern for policymakers in both advanced and developing countries. But these connections between finance and trade have arguably gotten more intertwined with the rise of global value chains. The increasingly financialized and footloose lead firms behind these chains have heightened existing imbalances and asymmetries faced by many developing countries and raised further the imperative for strategic trade policy, including strengthened competition rules, possibly at the regional or global level (UNCTAD 2017).

Third, developments in the global economy since the onset of the economic and financial crisis in 2008–2009 have thrown new light on prevailing challenges to export-led industrialization models. It is well known that export-led industrialization strategies must sooner or later reach their limits when many countries pursue them simultaneously, as competition among economies based on low unit labour costs and taxes faces a fallacy of composition that leads to a race to the bottom. This implies that developing countries will need to become more selective in their choices of markets, processes and



products, since both the composition of export-oriented manufactures and the share of domestic value added determine whether and to what extent exporting will induce structural change and productivity growth (Fortunato and Razo 2014). Accordingly, an active and comprehensive industrial policy framework will need to employ subsidies and regulations to support domestic productive capacity, as well as state-owned financial institutions to mobilize and allocate savings to support long-term investment priorities and socialize their risks (Kozul-Wright and Fortunato 2015). Such frameworks will also need to use public-sector procurement policies (such as tendering and reverse auctions) to support strategic sectors and public investment to promote R&D and remove technological bottlenecks. Finally, they should target measures to address regional inequalities, including tax incentives and support for an appropriately qualified labour force through training and education programmes. The challenge, particularly given the constraints on more top-down policy mechanisms, will be to find the requisite mixture of both effective public agencies to bargain with more footloose businesses and more decentralized state institutions able to use an expanded range of support measures and instruments to build the clusters and linkages needed for an effective strategy of industrial advancement and diversification.

These developments are also a reminder that it makes little sense to disconnect the trade and investment story from the wider macroeconomic context and that an integrated approach to managing any economy's external integration continues to be an essential part of building inclusive and sustainable outcomes. At the present juncture, when developing countries' opportunities to increase exports of manufactures to developed countries are likely to remain weak for some time, the limitations of such a growth strategy are becoming even more obvious. It is true that the combination of faster growth of domestic demand and slower growth of external demand could lead to a deterioration of the trade account. This means that such a shift would require proactive macroeconomic, trade and industrial policies that strengthen domestic supply capacities in order to contain trade deficits, which otherwise would have to be redressed through foreign capital inflows.

Finally, in some developing countries, the fear that the surge in primary commodity prices after 2002 has caused or accelerated deindustrialization has given greater urgency to the question of how to foster industrialization in primary exporters at all levels of income. Several developing countries have, moreover, found that their seemingly successful structural transformation, largely built on promoting manufacturing through participation in international production networks, is linked to only "thin" industrialization, often accompanied by an intensification of competition that constrains the gains



from exports, even when export volumes are expanding. That is, they have succeeded in participating in manufacturing networks but only in low-skill activities without the ability to upgrade. This has given rise to fears of a middle-income trap and reopened the search for diversification and upgrading strategies which address the specific internal and external constraints on countries at various levels of development.

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# 22

## International Migration and Development

Hania Zlotnik

### 1 Introduction

Migration is a complex and dynamic process that impacts both the communities where migrants originate and those where they live. Historically, international migration played a significant role in the integration of the European economies with those of the overseas countries of European settlement, but since 1950, international migration has had a relatively minor role in promoting the integration of the developing countries into the world economy, especially when compared with the role of international trade. Although international migration continues to be highly regulated, international migration flows continue to increase and diversify. The persistence of large wage differences between countries, particularly between the high-income countries and the rest, and of demographic imbalances caused by the low or even negative growth of the native labor forces of developed countries coupled with the continued growth of those of developing countries suggest that international migration will continue to be an important factor in the world economy for decades to come. Therefore, it is relevant to understand the role that international migration can play in increasing human welfare and, possibly, in enhancing development outcomes.

Economists have long grappled with questions about migration, such as what propels it, why it is selective and what are its economic implications. Although there is no overarching theory of migration that fits every instance

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of this complex phenomenon, economic thinking has contributed the major guiding frameworks for assessing how migration and the development process interact. Two major effects of migration have long been the object of considerable research: (a) the selectivity of migration and its impact on wages, and (b) the potential of remittances to improve livelihoods and promote productive activities. These two topics are the focus of this chapter.

Recently, attention has been paid to more intangible effects of international migration, such as its relationship with trade (Felbermayr et al. 2015; Tadesse and White 2015), with the diffusion of knowledge (Bahar and Rapoport 2016) or with the generation or directionality of foreign direct investment (Kluger and Rapoport 2005 and Kluger and Rapoport 2007; Leblang 2011). However, much of this research is still being developed and has touched only lightly on the implications for developing countries. There has also been increasing attention paid to the role of expatriate populations or “diasporas” in promoting or supporting development at home, mainly as a result of government efforts to engage their expatriate populations (Plaza and Ratha 2011; Plaza 2013; Newland and Plaza 2013). However, most of the literature on diasporas and development is descriptive and, largely because of the relative recency of the interventions described, their rigorous evaluation is still lacking. For these reasons, this chapter will not cover these emerging topics.

Development is a process that can take decades or even generations to enrich an economy and ensure a satisfactory level of welfare for the whole population. Furthermore, the concept of development itself has been changing. Whereas it was once equated with increases in gross domestic product (GDP) or income per capita, there is now a more holistic view of what it entails—a view that encompasses a wide spectrum of improvements in people’s well-being. With regard to international migration, a common view among governments has been that development, by resulting in the availability of more and better jobs in a country, is the only way to reduce migratory pressures. However, migration scholars have pointed out that the development process itself may generate international migration by, among other things, raising incomes and allowing more people to afford the costs of moving to another country. It has also been generally thought that when countries become “developed”, the international migration of their citizens ceases. Until now, there has not been a long enough time series of estimates of net migration by origin and destination to find out how realistic these views are. This chapter presents a new set of such net migration estimates covering the period 1960–2010. They corroborate the importance of “South-to-North” migration, show that low-income countries experience very low net outflows of international migrants in comparison with those experienced by middle-income

countries (i.e. they corroborate that poverty hinders participation in international migration), and they reveal that migration among developed countries, far from ceasing, has been on the rise.

This chapter presents, first, an overview of global migration trends, including new estimates of net migration by origin and destination since 1960; it then describes the main tenets of the economic theories most influential in guiding research on international migration and development, and proceeds to review the results of research on the linkages between the selectivity of international migration and wages, and on the impact of remittances in enhancing development outcomes in developing countries.

## 2 International Migration Since 1960

An important obstacle in elucidating what the impact of international migration may be is the paucity of complete and reliable statistics on the phenomenon. Even today, many countries fail to produce statistical information on the flows of international migrants. Consequently, to obtain a global view of migration trends, one has to resort to indirect evidence. Population censuses, though usually carried out in most countries only once every decade, provide information on the migrants residing in a country, most often in the form of numbers of foreign-born. Since persons born abroad must have moved into the country of enumeration at some point in their lives, they qualify as international migrants.<sup>1</sup> Using those data, the United Nations Population Division (UNPD) has been producing comprehensive sets of estimates of the total number of migrants (i.e. the migrant stock) present in each country at specific points in time.<sup>2</sup>

Census data on the number of foreign-born persons classified by country of birth provide information on the origin of migrants. From a compilation of those data from all censuses carried out since 1955, the World Bank has produced estimates of the number of international migrants classified by country of origin and country of destination for the years 1960, 1970, 1980, 1990 and 2000. The United Nations Population Division has produced similar estimates for the years 1990, 1995, 2000, 2005, 2010 and 2015. From those data it is possible to estimate net migration by origin and destination over each decade from 1960–1970 to 2000–2010. The estimation procedure used is

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<sup>1</sup>Note that in cases where countries split apart, people who moved as internal migrants before the split become international migrants after the split when the place of birth is used to identify international migrants.

<sup>2</sup>See United Nations Population Division (2005 and 2015a).

based on the fact that the number of foreign-born persons in a country changes because of: (a) the net addition or subtraction of foreign-born persons through migration, and (b) the deaths of foreign-born persons in the country. By estimating the latter, it is possible to estimate net migration flows.<sup>3</sup>

## 2.1 The Stock of International Migrants

Estimates of the global number of international migrants show that it doubled from 1960 to 1990, passing from 75 million to 153 million, and that it reached 245 million in 2015 (Table 22.1). In 1991, when the former USSR disintegrated into 15 independent states, the number of international migrants identified by place of birth increased markedly because people who had been internal migrants within the USSR became international migrants virtually overnight. For estimation purposes, this increase was backdated to 1990 and is presented separately in Table 22.1. The global estimates of the migrant stock show that there has been an increasing concentration of international migrants in developed countries. In 1960, the number of international migrants in developing countries (43 million) surpassed that in developed countries (29 million) by a wide margin. By 1990, the developed countries excluding the USSR had about the same number of international migrants as the developing countries as a whole (61 million vs. 62 million), but by 2015, the number of international migrants in developed countries was about a quarter higher than in developing countries (122 million vs. 98 million).

At the regional level, Asia has hosted the largest number of international migrants since 1960, followed by Europe and Northern America<sup>4</sup> (if one dis-

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<sup>3</sup>If the number of foreign-born persons living in a country at time  $t_0$  is  $FB_0$  and that at time  $t_1$  is  $FB_1$ , then:

$$FB_1 = FB_0 - D + NM$$

where  $D$  represents the deaths to the foreign-born over the period  $t_0-t_1$  and  $NM$  is the net number of foreign-born migrants arriving (or departing) during the period  $t_0-t_1$ . Then,  $NM$  can be obtained as follows:

$$NM = FB_1 - FB_0 + D$$

Because the full matrix of net flows by origin and destination is estimated, one can obtain for each country not only the net migration of the foreign-born but also the net migration of natives by summing over all the possible destinations of those natives. Hence, the overall net migration can be calculated for each country.

<sup>4</sup>Northern America is the region composed of Bermuda, Canada, Greenland, St. Pierre et Miquelon, and the United States.

**Table 22.1** Number of international migrants by major region, 1960, 1990 and 2015 (in millions)

Region	1960	1990	2015
World	75	153	245
Developed countries excluding the former USSR	29	61	122
Developing countries	43	62	98
USSR (Former)	3	30	24
Africa	9	16	21
Asia	28	40	70
Western Asia	4	14	38
Europe (excluding the former USSR)	14	28	58
European Union	13	25	53
Latin America and the Caribbean	6	7	9
Northern America	13	28	54
Oceania	2	5	8

Source: Estimates made by author from UNPD (2005, 2015a and 2017)

regards the former USSR in 1990). By 2015, Asia hosted 70 million international migrants, 38 million of whom were in Western Asia, where the oil-producing countries belonging to the Gulf Cooperation Council (GCC) are major magnets for migrant workers and Israel is an important country of immigration. In Europe, 53 million of the 58 million international migrants in the region were being hosted by members of the European Union, and in Northern America, Canada and the United States were jointly hosting nearly as many international migrants as the European Union (54 million). In Oceania, the number of international migrants had quadrupled since 1960, to reach 8 million in 2015, largely driven by immigration to Australia and New Zealand. In Africa, the number of international migrants had more than doubled between 1960 and 2015, from 9 million to 21 million, a good portion of the increase resulting from refugee flows within the continent. Lastly, the migrant stock in Latin America and the Caribbean had increased the least since 1960 and was a low 9 million in 2015.

## 2.2 International Migration Flows

Estimates of the decennial net migration flows between developed and developing countries are shown in Table 22.2. Note that most estimates are negative because they are presented from the perspective of the region of origin and represent a net population loss. The totals represent the overall net loss due to emigration from countries of origin but, because the numbers are net over a decade, they represent a lower bound for the number of people who might have migrated over that decade since persons who left and returned to

**Table 22.2** Estimates of net migration between and among developed and developing countries, 1960–2010

Period	Developing to developed	Developing to developing	Developed to developed	Developed to developing	Total
<i>Estimated net migration flow (in millions)</i>					
1960–1970	–5.0	–5.2	–6.3	0.6	–15.9
1970–1980	–11.0	–6.7	–2.0	0.1	–19.5
1980–1990	–12.5	–8.4	–3.9	–0.2	–25.0
1990–2000	–17.3	–1.2	–4.0	1.5	–21.0
2000–2010	–22.5	–19.2	–7.0	–1.1	–49.9
<i>Percentage female</i>					
1960–1970	49.5	49.1	45.6	22.0	48.8
1970–1980	48.2	36.6	79.5	89.0	47.2
1980–1990	48.7	38.7	57.4	93.2	47.1
1990–2000	50.3	51.5	56.4	58.1	51.0
2000–2010	52.6	34.9	58.2	30.4	46.1

Note: The former USSR is excluded from the estimates referring to dates prior to 1990  
Source: Estimates made by author on the basis of data produced by the World Bank (migrants by origin and destination) and the United Nations Population Division (2015b). The data from the United Nations Population Division were used to obtain estimates from 1990 onward

their country of birth within that decade would not be reflected in the net number. At the world level, the total net outflows presented in Table 22.2 would be balanced by net inflows to the countries of destination.

As Table 22.2 shows, total net emigration has been increasing from one decade to the next, passing from nearly 16 million in 1960–1970 to 50 million in 2000–2010. Except for the 1960s, net migration from developing to developed countries (also called “South-to-North” migration) has been the largest component of the total net outflow, accounting for at least half the total outflow from 1970–1980 to 1990–2000 and for 45% of the total during 2000–2010. This “South-to-North” migration is usually the main focus of studies assessing the impact of migration on development.

Net migration from developing countries to other developing countries, also called “South-to-South” migration, increased decade on decade from 1960 to 1990, but declined markedly in the 1990s as a result of major repatriations of refugees taking place during that decade. In 2000–2010, “South-to-South” migration rose sharply, to 19 million, not far behind the 23 million level reached by South-to-North migration.

Net migration between developed countries, which was the largest component of overall net migration in the 1960s, declined sharply during the 1970s, when the main labor-importing countries in Europe discontinued their guest-worker programs, but has been rising since then and involved a net movement of 7 million persons in 2000–2010.

Lastly, net migration from developed to developing countries has been the smallest component of overall net migration and has been positive during several decades, implying a return of people born in developed countries from their stay in developing countries, a movement that was common during the decolonization process of the 1960s and 1970s and that occurred in the 1990s when Russian-born populations in the developing successor states of the former USSR returned to the Russian Federation.

The participation of women and girls in international migration flows has been significant. Their share of overall net migration has fluctuated between 46% and 51%, respectively. They have accounted for close to half the net migration from developing to developed countries, and they have been a majority in the net migration from developed countries to other developed countries. A distinct underrepresentation of women and girls has been noticeable in “South-to-South” migration, especially during 2000–2010, when female migrants accounted for a low 35% of that net flow.

One problem with the classification of countries as “developed” and “developing” or “North” and “South” is that several countries in the global “South” have high income levels. It is therefore useful to consider net flows between groups of countries defined by income level according to the 2017 classification used by the World Bank. Table 22.3 shows the results. It is clear that, except for the low-income countries, the largest outflows from the other three groups of countries have been directed to today’s high-income countries. The outflows from upper-middle-income countries to the high-income countries have tended to be the largest, but in 2000–2010, they were surpassed by those from the lower-middle-income countries. In the 1960s, the largest outflows were from some of today’s high-income countries to other high-income countries, reflecting in good part the large migration of European workers to the labor-importing countries of Europe. Outflows from high-income countries to other high-income countries declined markedly during the 1970s but have been increasing since then. During 2000–2010, high-income countries are estimated to have gained nearly 6 million migrants from other high-income countries.

The net migration estimates by income grouping reveal that low-income countries are the least likely to experience large outflows of international migrants. Low-income countries have often been sources of refugees or asylum seekers. In the 1990s, the positive flows they experienced from countries with higher incomes were related to the repatriation of refugees taking place during that decade and from repatriations following the first Gulf War. In 2000–2010, the outflow of international migrants from low-income countries to upper-middle-income and high-income countries increased but was still a low 3.5 million.

Table 22.3 Net migration between and among country groupings defined by income level, 1960–2010 (in millions)

	From high-income countries	From upper-middle-income countries	From lower-middle-income countries	From low-income countries	Total
<i>1960–1970</i>					
To high-income countries	-8.35	-2.76	-1.92	-0.22	-12.85
To upper-middle-income countries	0.13	-0.58	-0.29	-0.08	-0.79
To lower-middle-income countries	0.11	0.47	-0.86	-0.98	-1.29
To low-income countries	0.34	-0.03	-0.44	-0.82	-0.96
<i>1970–1980</i>					
To high-income countries	-2.23	-8.40	-5.78	-1.17	-17.12
To upper-middle-income countries	0.14	-0.40	-0.37	-0.28	-0.86
To lower-middle-income countries	-0.13	0.34	-0.28	-1.08	-1.19
To low-income countries	0.10	-0.06	-0.02	-0.36	-0.34
<i>1980–1990</i>					
To high-income countries	-2.89	-8.50	-8.59	-0.99	-22.11
To upper-middle-income countries	0.19	-1.08	-1.08	-0.80	-2.73
To lower-middle-income countries	-0.28	0.15	1.17	-0.14	0.88
To low-income countries	-0.02	-0.05	-0.43	-0.54	-1.04
<i>1990–2000</i>					
To high-income countries	-3.23	-13.93	-7.39	-0.98	-25.52
To upper-middle-income countries	0.47	-0.42	-1.46	0.78	-0.63
To lower-middle-income countries	-0.04	2.19	1.49	0.19	3.84
To low-income countries	-0.04	-0.03	-0.35	1.94	1.52
<i>2000–2010</i>					
To high-income countries	-5.89	-14.95	-18.15	-2.43	-41.42
To upper-middle-income countries	-0.79	-0.66	-3.25	-1.03	-5.73
To lower-middle-income countries	-0.14	-0.21	0.81	-0.94	-0.48
To low-income countries	-0.03	-0.03	-0.04	0.62	0.53

Note: The former USSR is excluded from the estimates referring to dates prior to 1990. The totals for estimates from 1990 on do not exactly add up to the totals presented in Table 22.2 because some entries in the original data could not be classified by income level and were therefore excluded from the calculations presented in this table

Source: Estimates made by author on the basis of data produced by the World Bank (migrants by origin and destination) and the United Nations Population Division (2015b). The data from the United Nations Population Division were used to obtain estimates from 1990 onward

These estimates of net migration by income level provide some confirmatory evidence for the conclusion reached by the US Commission for the Study of International Migration and Cooperative Economic Development, which stated that “the economic development process itself tends in the short term to stimulate migration by raising expectations and enhancing people’s ability to migrate” (Papademetriou and Martin 1991:221–2). Indeed, low-income countries, where the development process is lagging behind, are the least likely sources of international migrants, whereas countries where the development process is more advanced, including both middle-income and certain high-income countries that are considered as fully developed, are more likely to be important sources of international migrants.

### 2.3 Immigrants and Emigrants as a Percentage of the Population

In 2015, the global migrant stock represented just 3.3% of the world population, but whereas migrants in developing countries represented a low 1.6% of the total population of the developing world, those in developed countries accounted for 11.7% of their population. Few countries or areas had high proportions of international migrants. In only 38 of the 232 countries or areas of the world did international migrants constitute over 30% of the population and, with the exception of Saudi Arabia, all those countries had fewer than 10 million inhabitants. Regarding countries with at least 1 million inhabitants, international migrants constituted over 10% of the population in just 38 of them (Table 22.4). In contrast, the share of international migrants was below 3% of the populations of 90 countries.

Estimates of the emigrant stock for each country (i.e. the totality of persons born in that country who reside abroad) show that, in 2015, just 43 among the 158 countries with at least 1 million inhabitants had an emigrant stock equivalent to more than 10% of their population (Table 22.5). No country with more than 50 million inhabitants had an emigrant stock above 10% of its population, but among this group, Mexico had the highest percentage of emigrants, equivalent to 9.8% of its population. Among the 32 countries with populations ranging from 1 million to 10 million inhabitants and with an emigrant stock equivalent to at least 10% of their respective populations, 16 were successor states of countries that disintegrated after 1990 and, therefore, many of their emigrants had actually been internal migrants at the time of migration.



**Table 22.4** Countries with more than 1 million inhabitants where the immigrant stock constitutes over 10% of the population, 2015

Immigrants as percentage of population		Immigrants as percentage of population	
<i>Population from 1 million to under 10 million</i>		<i>Population from 10 million to 50 million</i>	
United Arab Emirates	88.4	Saudi Arabia	32.3
Qatar	75.5	Australia	28.2
Kuwait	73.6	Canada	21.8
Bahrain	51.1	Kazakhstan	20.1
Singapore	45.4	Spain	12.7
Oman	41.1	Belgium	12.3
Jordan	41.0	Netherlands	11.7
Hong Kong	38.9	Greece	11.3
Lebanon	34.1	Ukraine	10.8
Switzerland	29.4		
Israel	24.9		
New Zealand	23.0	<i>Population over 50 million</i>	
Austria	17.5	Germany	14.9
Cyprus	16.8	United States	14.5
Sweden	16.8	United Kingdom	13.2
Ireland	15.9	France	12.1
Gabon	15.6		
Estonia	15.4		
Norway	14.2		
Croatia	13.6		
Latvia	13.4		
Libya	12.3		
Slovenia	11.4		
Belarus	11.4		
Denmark	10.1		

Source: United Nations (2015a)

Among the 11 countries with populations ranging from 10 million to under 50 million and having an emigrant population equivalent to at least 10% of their respective populations, 5 have been important sources of refugees and an additional 2 are successor states. That leaves just 4 countries (the Dominican Republic, Poland, Portugal and Romania) whose emigrants may have been responding mainly to economic opportunities abroad.

Among the countries with over 50 million inhabitants, Table 22.5 lists those with an emigrant stock equivalent to at least 4% of their respective populations. The list includes countries that have been and continue to be major countries of emigration, such as Bangladesh, Mexico and the Philippines, but also countries that are considered today to be major countries of destination, such as Germany, Italy and the UK. This outcome underscores the complexity of international migration: all countries experience inflows and outflows of foreign-born persons as well as inflows and outflows of natives.

**Table 22.5** Countries with a population of between 1 million and 50 million with an emigrant population equivalent to at least 10% of their resident population and countries with at least 50 million inhabitants with an emigrant population equivalent to at least 4% of their resident population, 2015

Emigrants as percentage of population		Emigrants as percentage of population	
<i>Population from 1 million to under 10 million</i>		<i>Population from 10 million to 50 million</i>	
State of Palestine	76.2	Syrian Arab Republic	26.7
Puerto Rico	48.1	Kazakhstan	23.0
Bosnia and Herzegovina	46.7	Portugal	22.1
Albania	38.4	Romania	17.1
Jamaica	37.2	Somalia	14.4
Armenia	32.1	Afghanistan	14.4
Trinidad and Tobago	26.7	Ukraine	13.0
TFYR Macedonia	24.8	Cuba	12.4
El Salvador	22.8	Dominican Republic	12.4
Republic of Moldova	21.9	Poland	11.6
Georgia	21.2	Haiti	11.2
Croatia	20.4		
Lao People's Dem. Rep.	20.2	<i>Population over 50 million</i>	
Ireland	18.8	Mexico	9.8
Lithuania	18.6	United Kingdom	7.5
New Zealand	17.4	Russian Federation	7.4
Latvia	16.9	Myanmar	5.5
Lesotho	16.7	Philippines	5.2
Bulgaria	16.4	Germany	5.0
Belarus	15.7	Italy	4.9
Cyprus	15.3	Republic of Korea	4.6
Estonia	15.1	Bangladesh	4.5
Hong Kong	14.4	Turkey	4.0
Lebanon	13.6		
Mauritius	13.4		
Kyrgyzstan	13.0		
Paraguay	12.7		
Azerbaijan	11.9		
Serbia	10.9		
Nicaragua	10.5		
Eritrea	10.3		
Uruguay	10.1		

Source: Calculated from United Nations (2015b)

Some countries experience significant native emigration at the same time that they attract important inflows of foreign-born migrants. Achieving high levels of development does not guarantee the immobility of natives even if the number of those emigrating may diminish with higher development levels.

## 2.4 Types of International Migrants

The preceding discussion has characterized international migrants as foreign-born persons and as immigrants or emigrants depending on the country perspective used (country of destination or country of origin). However, both the literature on international migration and, perhaps more importantly, the governments setting rules on which international migrants to admit, distinguish different types of migrants. Based on the purpose for admission, four basic categories can be distinguished: (a) *settlers*, that is, persons admitted for the purpose of settling permanently in the country of destination; (b) *migrant workers*, that is, persons admitted specifically for the purpose of exercising an economic activity, usually of bounded duration; (c) *migrants for family reunification*, that is, persons admitted because they are close relatives of either citizens of the country of destination or of other migrants; and (d) *refugees*, that is, persons granted asylum owing to a well-founded fear of persecution. Nowadays, countries usually admit international migrants under several of these categories.

Most of the economic literature on migration focuses on “labor migration”, a term that is generally left undefined. In a review of labor migration programs, Ruhs (2013) reports that 46 countries, 34 of which have high incomes, have special programs to admit migrant workers. All of them have at least one program allowing the admission of high-skilled workers, but 35—27 of which are high-income countries—also have programs allowing the admission of low-skilled workers. These 35 countries include 14 members of the European Union plus Norway and three of the countries of immigration (Canada, New Zealand and the United States) plus Israel, all of which also admit other types of migrants which, in many cases, constitute the majority of their migrant inflows. In Latin America, five countries—Argentina, Brazil, Colombia, the Dominican Republic and Venezuela—allow the admission of low-skilled workers but, although Ruhs provides no statistics on the numbers involved, they are known to be small. The remaining 11 countries that admit low-skilled workers are all located in Asia.

Indeed, the major countries of labor migration, in the sense that their migrant inflows are sizable and consist mostly of migrant workers, are located in Asia. The two major groups of Asian labor-importing countries are: (a) the members of the Gulf Cooperation Council (GCC)—Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates—countries that began importing foreign workers in the late 1960s to develop their oil fields and whose economic expansion has relied and still relies heavily on a foreign labor force made mostly of temporary foreign workers under contract, and (b)

the rapidly developing countries of East and Southeast Asia, mainly Hong Kong, Japan, Malaysia, the Republic of Korea, Singapore and Taiwan, that, for both demographic and economic reasons, have been admitting low-skilled foreign workers since at least the 1980s to satisfy the labor demand in selected sectors of their economies. Because none of these countries considers itself a “country of immigration”, they all enforce the temporary stay of migrant workers via systems of visas and work or residence permits that are not renewable in the country of destination. They thus enforce the “circular migration” of foreign workers, since those wishing to extend their period of employment abroad have to return to their countries of origin to restart the application process which usually takes a few months to complete. For most of the labor-importing countries of Asia, international migration has been a positive and, in many cases, a crucial factor in facilitating economic development.

In countries where migrant workers are not the main type of international migrant admitted, studies of labor migration usually focus on all migrants who happen to be economically active in the receiving country, irrespective of whether they were admitted specifically as migrant workers or not. The earlier literature on labor migration implicitly assumed that all migrant workers were male, and studies often do not make clear whether the data considered refer only to male migrants or to both sexes combined. When a gender perspective is adopted, it often means that only female migrants are considered. Comparative studies by sex are rare.

### **3 The Main Economic Theories on International Migration**

#### **3.1 The Neoclassical Theory of Migration**

From the economic perspective, international migration is a mechanism to redistribute labor. Adam Smith viewed the migration of workers as caused by differences in the supply of and demand for labor in different locations. He sustained that in England the laws that hindered the poor from moving from one locality to another only served to maintain inequality between places. He argued therefore in favor of dismantling barriers to the free circulation of labor in order to permit the natural tendency of workers to move from low-wage to high-wage areas to express itself and, consequently, to facilitate not only the economic progress of both the areas of origin and those of destination but also that of the migrants themselves. This view underpins the neoclassical economic theory of migration (Sjaastad 1962; Harris and Todaro

1970; Todaro 1976), which posits that workers tend to move from regions with a labor surplus where low wages prevail to regions with labor deficits where wages are higher. Capital tends to move in the opposite direction. As a result of worker migration, labor eventually becomes less scarce at destination and scarcer at origin. In a perfectly neoclassical world, this process of “factor price equalization” (the Heckscher-Ohlin model) eventually results in the convergence of wages at the sending and receiving ends. According to this theory, therefore, in the long run, wages equalize and the incentive for migration disappears.

This neoclassical view of migration has its roots in attempts to explain why rural-to-urban migration has been a constituent part of the development process (Lewis, 1954; Ranis and Fei 1961). However, as the process of urbanization proceeded in developing countries, the premises of the theory were belied by the fact that rural-to-urban migration often continued even under conditions of rising unemployment in the urban sector. To make allowance for this outcome, Todaro (1969) and Harris and Todaro (1970) introduced the risk of not finding a job at destination and the costs of migration into the neoclassical model. According to the formulation of the Harris-Todaro model, people choose to move whenever the expected benefits of migration are higher than the costs involved. The costs can be tangible or intangible, including the costs of travel, job search, adaptation to a new environment and so on. The benefits of migration are measured in terms of net returns at the individual level discounted over a certain time horizon. Net returns are estimated as the difference between expected earnings in the country of destination and expected earnings in the community of origin. Expected destination earnings are the earnings at destination estimated on the basis of an individual’s skills multiplied by the probability of that individual getting a job at destination. Similarly, expected earnings in the community of origin are the observed earnings multiplied by the probability of employment at origin. Net returns are summed over the time horizon discounted by a factor that reflects the greater utility of money earned in the present than in the future, and the sum is taken as an estimate of the benefits of migration (Sjaastad 1962; Harris and Todaro 1970; Todaro 1976; Massey et al. 1993). The subtraction of estimated costs leads to a measure of the expected gains from migration. This approach implies that migration’s occurrence depends not only on wage differences between countries but also on differences in unemployment levels between the country of origin and that of destination. Furthermore, since expected earnings depend on an individual’s characteristics (including human capital), factors leading to the selectivity of migration are explicitly taken into account. Lastly, any factor

that reduces the costs of migration tends to increase its likelihood of occurring. Empirical tests of the neoclassical model for the causes of migration support the premise that higher wages and better employment opportunities at destination compared to those at origin are incentives to migrate (Todaro 1980; Greenwood 1985; Pedersen et al. 2004). Todaro and Maruszko (1987) have also developed a model for undocumented international migration that adds to the original model the probability of being captured and deported as well as an “illegality tax”.

### 3.2 The New Economics of Labor Migration

In the 1980s, a new theory known as the “new economics of labor migration” (NELM) was proposed to explain why migration often occurs despite lower expected income at destination than at origin and why migration often involves only temporary stays at destination. NELM focuses on the micro level, but instead of assuming that migration decisions are made by individuals acting largely on their own, it assumes that people act collectively, typically within households or families, not only to maximize expected income but also to minimize risks and to loosen constraints associated with a variety of market failures that are particularly common in developing countries where crop insurance markets, futures markets or unemployment insurance either do not exist or are beyond the reach of most people (Stark 1991). Thus, NELM assumes that households are risk averse and posits three hypotheses about the determinants of migration: (a) the insurance hypothesis, (b) the investment hypothesis, and (c) the hypothesis of relative deprivation.

According to the insurance hypothesis, households attempt to minimize risks to their economic well-being by diversifying the allocation of family labor (Stark and Levhari 1982). From this perspective, sending certain family members to work in another country where wages and employment conditions are largely independent of local economic conditions is a form of insurance against the deterioration of the latter.

According to the investment hypothesis, households use international migration and the remittances it generates to obtain the capital they need to increase the productivity of the assets they have or may acquire in the community of origin. Such a function of migration is of particular importance for households in developing countries where capital markets are weak, access to banking services is limited, particularly for lower-income people, and families without adequate collateral find it virtually impossible to borrow at reasonable interest rates.

The relative deprivation hypothesis posits that households send family members to work abroad not only to improve income in absolute terms but also to increase income relative to other households in a reference group (Stark and Taylor 1989; Stark 1991). Thus, if in a community the income of affluent households increases whereas that of poor households remains unchanged, the relative deprivation of the latter increases and, consequently, their incentive to participate in international migration rises as well, even if no change in the wages expected at destination occurs.

The new economics of labor migration (NELM) has important implications for the interrelations between international migration and development. First, it implies that migration can occur even in the absence of wage differentials between areas of origin and destination, since migration may be fuelled by the desires of households in the place of origin to diversify risks. Second, because there are strong incentives for households to engage in both international migration and local economic activities, an increase in the return to the latter may heighten the attractiveness of migration as a means of overcoming capital and risk constraints on investment in local activities. Therefore, successful economic development within areas of origin need not reduce pressures for international migration (Massey et al. 1993). Third, international migration will not necessarily stop once wage differentials between countries of origin and destination have been eliminated because, as long as other markets within countries of origin are non-existent, imperfect or inaccessible, incentives for migration may continue. Fourth, governments of countries of origin can influence migration not only through labor market policies but also through those that shape insurance and capital markets. In addition, government policies and economic changes that modify the income distribution will change the relative deprivation of some households and will thus affect the incentives to migrate. In particular, when poor households in areas of origin do not share equitably in the income gains of other households, their propensity to send some family members abroad will increase.

### 3.3 The Importance of Networks

The focus of the new economics of labor migration (NELM) on the household or family group as the key decision-making unit in migration opened the door to the consideration of how having relatives abroad facilitated migration or, in the language of economics, reduced its costs. Research has

shown that migrants often rely on kin or friends already established in the country of destination to obtain accommodation, find a job or secure financial and other types of support during an initial period of adaptation. Having such support reduces the risks of and increases the returns to migration. The concept of a “migration network” was proposed to encompass all interpersonal ties that connect migrants, former migrants and non-migrants in areas of origin and destination (Gurak and Caces 1992; Massey et al. 1993). Network connections are a form of social capital that people can draw upon to gain information and material or psychological support to facilitate migration and the adaptation process. Migrant networks contribute to maintain the migration momentum even after the factors responsible for initiating the flow have lost their relevance. They play a role in making migration a diffusion process so that as time elapses migration flows become less selective in socioeconomic terms and migrants become more representative of the sending community as a whole. The realization that the ties between migrants who are already established in the communities of destination and persons remaining in the communities of origin as embodied by migration networks persist over time and may grow stronger as more people migrate has led to the concept of “transnational communities” and to a focus on the “diaspora”, that is, the group of all expatriates from a given country whose prosperity abroad and acquisition of valuable skills may be leveraged to promote or support development in the countries or communities of origin (Plaza and Ratha 2011; Plaza 2013).

### 3.4 Migration Intermediaries

Karpestam and Andersson (2013) note that there is a strong focus in economics on the role of institutions in the development process and highlight the role of what they call “underground institutions” that facilitate unauthorized migration and the access of asylum seekers to Western democracies for a fee. Institutions are indeed important in shaping international migration and not just the unauthorized type. In the case of labor migration between Asian countries, for instance, a whole “recruitment industry” has developed to secure contracts for and transport low-skilled migrants to the countries of employment. In most cases, these intermediaries are regulated and, because they work for profit, have an interest in maintaining the flows of migrants. Estimates of recruitment costs show that they amount to a large share of the salaries that migrant workers expect to earn while abroad. Because paying those costs significantly reduces the ability of migrants to remit to their families and therefore hinders the



improvement of their families' welfare, there is interest in reducing those costs. Thus, recruitment costs are to be monitored under target 10.7 of the Sustainable Development Goals, a target that focuses on facilitating the orderly, safe, regular and responsible migration and mobility of people (United Nations 2016). If recruitment costs were to fall, they would make it possible for people with fewer initial resources to migrate and their remittances would then be more likely to produce a more equitable income distribution at origin.

## 4 The Effect of Migration and Migration Selectivity on Wages at the Macro Level

Neoclassical migration theory posits that labor migration will eventually reduce wage differences between origin and destination. Chiswick and Hatton (2002) review the evidence for wage convergence between the main European countries of origin and the transatlantic destinations of European migrants during the period of massive migration in the late nineteenth and early twentieth centuries. They conclude that in almost all instances, wages did converge, rising at origin and declining at destination, and that international migration was responsible for large shares of that convergence. In Portugal and Spain, however, the failure to industrialize led to a divergence of their real wages with respect to those of the countries of destination despite the effects that emigration had in the other direction.

Regarding the effects of post–World War II migration flows to developed countries, multiple studies have shown that they have had small effects on the wages in receiving countries (Chiswick and Hatton 2002; United Nations 2006). In the United States, immigrants have tended to concentrate in a few regions, possibly prompting natives to migrate elsewhere in the country, thereby disseminating the wage effects of international migration to the whole economy where those effects become diluted. In assessing wage impacts, it is crucial to consider low-skilled and high-skilled workers separate, since they are not substitutes for each other in production. Thus, if immigrants are mostly low skilled, they will tend to depress the wages of all low-skilled workers at destination but raise the returns of complementary factors, namely, high-skilled workers and capital. Immigration of predominantly high-skilled workers will tend to lower the wages of high-skilled workers but raise the wages of low-skilled workers and the returns of capital.

Borjas (1987) has explored the factors that lead to the selectivity of international migrants to the United States. In analyzing the wages of different

migrant cohorts in relation to those of natives as captured by the 1970 and 1980 censuses of the United States, he found that one of the important determinants of migrant selectivity was the difference between the income distribution in the country of origin and that in the United States. Provided there was a positive correlation between the earnings a worker might expect in the United States and the earnings he would expect in the home country (i.e. provided the worker's human capital was valued similarly in both countries), if the income distribution of the home country was less unequal than that of the United States, its emigrants would be positively selected in terms of human capital, whereas if the income distribution of the country of origin was more unequal than that in the United States, its emigrants would be negatively selected. However, these findings do not hold in other contexts. Grogger and Hanson (2011) note that migrants residing in OECD (Organisation for Economic Co-operation and Development) countries are positively selected in terms of schooling with respect to the population at origin. This positive selection is evident even with respect to developing countries where relative returns to skills exceed those in the OECD countries (i.e. where the income distribution is more unequal than in OECD countries). Their analysis shows that migrant selectivity is influenced by absolute differences in wage levels for skilled migrants rather than by relative returns. This result is consistent with the original formulation of neoclassical migration theory. In a world where wage-level differences matter, high-skilled workers from low-wage countries have a strong incentive to migrate, even if the relative returns to skill are high in the source country, a fact that explains why the brain drain is a real concern for developing countries. Grogger and Hanson also estimate the fixed costs of migration between 102 countries of origin and 15 OECD countries of destination and find that they are large, often being an order of magnitude greater than source-country earnings for low-skilled workers. This finding explains why international migration to rich countries is generally not an option for the poor in most developing countries. Lastly, Grogger and Hanson consider why skilled migrants tend to be attracted more by Canada and the United States than by European countries and find that the size of after-tax wage differences for skilled migrants is the dominant factor in explaining those migrant preferences.

Docquier et al. (2010), using data on migration flows to OECD countries during 1990–2000 classified by origin, destination and level of education, have analyzed the effects of immigration and emigration on the wages of non-migrants who are college graduates (high educational attainment) and non-migrants who completed at most a high-school education (low educational attainment). Their simulation uses an aggregate production model which assumes that: (a) in the long run, capital adjusts to the labor supply so that the

capital to labor supply ratio remains constant; (b) workers with high educational attainment and those with low attainment are combined in a labor function with constant elasticity of substitution selected within the range of 1.3 and 2 so as to be consistent with the estimates produced by most labor market studies; (c) immigrants and natives within the same education category are allowed to be imperfect substitutes; and (d) the human capital (skill) intensity has a productivity externality because immigration and emigration alter the skill composition in the economy. The results of a range of simulations show that immigration had zero or a small positive long-run effect on the average wages of non-migrant natives in the rich OECD countries.<sup>5</sup> With average values for the parameters involved, the positive effect ranges from zero in Italy to +1.7% in Australia. Emigration had a mild to significant negative long-run effect on the wages of non-migrants, which ranged from zero in the United States (because of its low emigration) to -0.8% in the UK and -0.7% in Portugal. That is, immigration tended to improve the income distribution of European countries, while emigration worsened it by increasing the wage gap between the highly educated and the less educated non-migrants. These results suggest that the increasing emphasis European countries have put on the admission of skilled migrants may be having deleterious economic effects in OECD countries of origin.

#### 4.1 The Wage Implications of Migration When Whole Families Migrate

All the formulations of the neoclassical model of migration discussed earlier assume that people who migrate in order to work abroad do so individually, as they actually do when admitted under the types of labor migration programs described in Sect. 2.3. However, migration often involves the relocation of complete nuclear families, as is usually the case among permanent settlers admitted by the countries of immigration, such as the United States. Noting that families often include more than one worker, Mincer (1978) considered the effects of earnings differentials across space on family migration. In that context, one family member may anticipate gains in potential earnings, while another may expect losses after moving to the place of destination. Hence, the possibility of conflicting goals exists. Assuming that a family consists of at least two married adults, with or without dependent children, Mincer (1978) shows that migration can create “tied movers” or “tied stayers”,

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<sup>5</sup>The rich OECD countries in this case include all those in Western Europe plus Australia, Canada and the United States.

and that the difference between the individual's and the couple's optimal strategy depends upon the degree of correlation in the gains from migration of the spouses. Only when there is perfect correlation do the optimal strategies of the individual and the couple coincide.

Borjas and Bronars (1990) extended Mincer's approach to analyze the selectivity of migration to the United States. When married couples are considered, the selectivity effect that Borjas (1987) had documented for individuals weakens because some low-skilled migrants who would not have migrated on their own to a place with a higher level of income inequality than that at origin may do so if they are married to skilled persons. Such "tied" migrants with low skills are not likely to fare as well in the labor market of the area of destination and therefore may reduce the average wage of all migrants, as Borjas and Bronars (1989) show in the case of the migration of married couples to the United States.

## 5 The Impact of Remittances

Migrant remittances are the most direct and tangible benefit of migration. Globally, the amount remitted is estimated to have increased more than five-fold since 1995, from US\$102 billion then to US\$574 billion in 2016, of which US\$429 billion went to low- and middle-income countries (United Nations 2006; World Bank 2017). Remittances as a share of GDP compare favorably with foreign direct investment (FDI) and official development assistance (ODA). In addition, remittances to developing countries have tended to be relatively stable and acyclical, that is, they have not fluctuated much with the business cycles (World Bank 2015). Therefore, remittances have been able to sustain consumption when economic adversity has hit. Whereas financial flows become volatile during financial crises, remittances, particularly those to countries with an expatriate population disseminated over various destinations, have shown much less year-to-year variability.

Remittances are a source of foreign exchange for the countries that receive them. Because of their relative stability, they can increase a country's creditworthiness and may allow it to obtain more favorable terms of debt service. Since 2009, the World Bank has included remittances in its assessment of how much debt a country may carry (Ratha 2013).

Migrant workers are probably the most consistent senders of remittances because they usually leave their families behind in the country of origin. The institution consisting of the varied money transfer services used by migrants to remit money home has been profiting from migration by charging rela-

tively high fees per transfer (World Bank 2006a, 2017). Given the growing ubiquity of efficient and cheap electronic transfer services, even in low-income countries, there is ample room to reduce those costs and thus increase the remittances actually reaching migrants' families. Transfer costs have been falling but the pace of decline is expected to accelerate as governments work to meet the goals they set for themselves in order to achieve sustainable development. Reducing remittance transfer costs is a means of meeting target 10.7 of the Sustainable Development Goals, making it a development priority (United Nations 2016).

According to the new economics of labor migration (NELM), migration can be a means of getting the funds necessary to make productive investments at origin. Studies focusing on the use of remittances, however, have usually found that they are mostly used for consumption. Other uses of remittances commonly reported in the literature include debt repayment, the education of children, the acquisition of land or housing, and the improvement of housing. Most of these studies focus exclusively on households with migrants abroad and on the use of remittance funds. Economists have noted that such an approach cannot reveal the true effect of remittances. For one thing, money is fungible, so that the right questions to ask are whether household income increases because of migration and how that increase changes the way the household allocates its total income, not just the part coming from remittances. Since data about how households behave before and after the migration of a member are usually not available, inferences about how household income allocation may have been impacted by migration can be made by comparing households with migrants abroad to similar households without migrants abroad. But even using this approach, the problem in trying to assess the impact of remittances is that neither migration nor remittances are random. Migration is selective. The characteristics or attributes of individuals, the households they belong to and their context, both observable and not observable, influence both who migrates and what migration's impacts are. The decision to remit and how much to remit almost certainly is shaped by the characteristics of both migrants and the households left behind. Therefore, in order to obtain unbiased estimates of the likely impact of remittances on any outcome, it is necessary to address the issue of endogeneity intrinsic to the relation between migration and remittances. The standard approach to address such endogeneity is to use appropriate instrumental variables in the statistical specification of the analytical models used (Taylor and Castelhana 2016). Although more studies are following this approach, it has not been standard practice in the past. For the most part, the studies cited in what follows use methods that explicitly address the endogeneity and selectivity issues involved.

## 5.1 The Use of Remittances: Consumption Versus Investment

Adams and Cuecuecha have analyzed the use of remittances in several countries. In all cases, they compare households receiving remittances with households that have similar characteristics and income levels but do not receive remittances. They consistently use estimation models that control for endogeneity and selection bias. They also make a distinction between consumption (in food, consumer goods and consumer durables) and investment, which includes expenditures in education and in the acquisition or improvement of housing. Their findings support the view that remittances can lead to higher investment in human capital (education) and physical capital (housing).

Studying Ghana in 2005–2006, Adams et al. (2008a) find that any differences in the marginal spending behavior between remittance-receiving and non-receiving households are explained completely by the observed and unobserved characteristics of households. In contrast with other studies, which find that remittances are spent disproportionately on consumption or investment goods, Adams et al. conclude that households receiving remittances in Ghana do not spend more at the margin on food, education or housing than similar households that do not receive remittances. In a second study carried out five years later, Adams and Cuecuecha (2013) find that households receiving international remittances in Ghana spend less at the margin on food and more on education, housing and health than they would have done had they lacked remittances. Receipt of remittances also reduces the likelihood of their being in poverty.

In Guatemala, Adams and Cuecuecha (2010a) find that, in comparison with what they would have spent in the absence of remittances, households receiving international remittances spend less at the margin on food and households receiving any remittances, whether from internal or international migrants, spend more at the margin on education and housing. In contrast, in Indonesia, households receiving remittances in 2007 spent more at the margin on food and less on housing compared with what they would have spent in the absence of remittances (Adams and Cuecuecha 2010b). This pattern of expenditure arises because households receiving international remittances in Indonesia are poorer than other types of households and have therefore less capacity to invest. In these circumstances, international remittances had a large statistical effect on the reduction of poverty.

Yang (2006) uses panel data for households in the Philippines gathered before and after the 1997 Asian financial crisis to analyze the effects of a sudden increase in remittances. The crises brought about a devaluation of the

Filipino peso against most of the currencies earned by Filipino migrants abroad. Consequently, the remittances received by most households rose in local currency. Yang found that households receiving higher amounts of remittances increased their expenditures on education, reduced the hours worked by children aged 10–17, increased the hours worked by the self-employed members of the household and were more likely to start relatively capital-intensive enterprises in transportation, communication or manufacturing. The increase in remittances had no significant effect on consumption.

Woodruff and Zenteno (2007) examine how international remittances influenced the capital invested in 6044 small enterprises in urban Mexico in 1998. Most of those enterprises were very small: 60% had no hired employees and an investment below US\$1500. Woodruff and Zenteno estimate that international remittances, principally from the United States, accounted for more than a quarter of all capital invested in small and micro-enterprises in Mexico. In regions of Mexico with the highest rates of migration to the United States, that share increased to 40%.

## 5.2 The Impact of Remittances on Agricultural Productivity

In rural areas where liquidity or risk constraints prevent households from making productive investments, sending a migrant to earn cash abroad may permit the household to boost productivity on the family farm. Productivity impacts, if they materialize, are unlikely to be immediate, since in the short run the family loses a worker. Some time may pass before the household accumulates sufficient capital to make productive investments and adjusts in other ways to the loss of labor. Taylor and Lopez-Feldman (2010), studying the effect of migration from rural Mexico, find that households with migrants abroad in a given year earn significantly higher returns on their land in later years than households that did not have emigrants. The impact varies according to when the migration occurred. Effects are small after one or two years and peak at seven to ten years after the migration occurred. This study shows that the effects of remittances on productivity may take some time to accumulate. Therefore, taking account of time since migration is important in assessing its economic impact. The study also suggests that migration competes primarily with local wage work, altering the composition of rural incomes away from local wages and in favor of migrant remittances. The effect of migration in raising overall incomes depends critically on other household assets, particularly landholdings. In households without migrants in the United States, the returns to land



are lower but the education of the farmer plays a more important role in improving overall income, primarily via work in off-farm activities.

In the rural areas of Burkina Faso, Wouterse and Taylor (2006) found that remittances from intercontinental migrants, by increasing household income, increased livestock production but decreased participation in more labor-intensive staple production and non-farm activities among members of the households that migrants left behind. The positive effect of intercontinental migration on livestock production suggests that remittances enable households to overcome entry barriers resulting from missing and imperfect credit markets. The negative effect on staple production and non-farm activities is consistent with a missing or imperfect labor market in rural areas, coupled with the loss of household labor because of migration. Households with intercontinental migrants abandon or choose not to engage in activities that compete for household time and produce lower returns compared to those from intercontinental migration.

Rozelle et al. (1999) and Taylor et al. (2003) find that internal migration from rural areas in China reduces crop production because of the loss of labor but remittances offset that effect by providing increased access to cash. Benjamin and Brandt (1998) find evidence that participation in rural-to-urban migration in China loosens risk constraints on farm investments by rural households.

### 5.3 The Effect of Remittances on Household Income

Taylor (1992), Taylor and Wyatt (1996) and Taylor et al. (2003) find evidence that migrant remittances have indirect effects on household incomes, consistent with the new economics of labor migration hypothesis that they loosen constraints on production. In Mexico, Taylor and Wyatt (1996) find that a US\$1 increase in remittances increases household income by US\$1.85, that is, remittances generate an indirect effect of US\$0.85 per dollar remitted. They also find that the indirect effects of remittances are higher in households with non-tradable (ejido) land rights, which are likely to increase the demand for complementary inputs that can be financed by remittances. In China, Taylor et al. (2003) found that each yuan remitted by a migrant is associated with 1.36 yuan of additional crop income, compensating for the loss of scarce family labor that migration entails.

Just as remittances can boost household income over and above their actual value, so can they reduce it when they disappear. Taylor and Filipinski (2014) find that every dollar of remittances lost during the recession caused by the



financial crisis of 2007–2008 reduced household income in rural Mexico by US\$ 1.73.

## 5.4 Remittances and the Alleviation of Poverty

Adams and Page (2005) find that both international migration and international remittances correlate with lower levels of poverty at the country level. They estimate that, on average, a 10% increase in the share of international remittances in a country's GDP reduces by 1.6% the prevalence of poverty. In Ghana, Adams et al. (2008b) find that remittances reduce poverty by a large amount and that the reduction is greater for households receiving remittances from international migrants (88%) than for those receiving remittances from internal migrants (69%). They also find that both types of remittances increase income inequality. In Nepal, the World Bank (2006b) estimates that the increase in migrant remittances between 1995–1996 and 2003–2004 accounts for about a third of the reduction in poverty that took place during that period. In Lesotho, Gustafsson and Makonnen (1993) estimate that, in the early 1990s, if the remittances sent by migrants working in the South African mines had stopped, poverty in Lesotho would have increased by 15%.

López-Córdova (2005) finds that in rural Mexico remittance receipts have little or no effect on the proportion of households in extreme poverty, but they reduce the share of households in the next level of poverty. This result is consistent with the view that migration, as a costly endeavor, may not be a viable option for the poorest. Nevertheless, it does relieve poverty for those who can afford to migrate.

Reverse causation is a serious concern in trying to assess the impact of remittances on poverty. If remittances serve as a type of household insurance against worsening economic conditions, when those conditions arise, remittances will increase and will therefore be positively correlated with poverty. Omitted variables can also lead to a misinterpretation of the relationship. Sound macroeconomic policies, for instance, may both promote a reduction of poverty and attract more remittances intended for investment, so that poverty and remittances would be negatively correlated, without remittances being a cause of declining poverty. Yang and Martinez (Yang and Martínez 2006) use the unique natural experiment that the Philippines underwent after the 1997 Asian financial crisis to disentangle the relation between poverty and remittances. Because Filipino migrants work abroad in a variety of countries and the currencies in which they are paid gained value against the Filipino peso by different amounts after 1997, the sudden, heterogeneous and exogenous changes in exchange rates allowed the estimation of the resulting impact of remittance increases on household income and poverty in the

households that the migrants left behind. Yang and Martínez estimate that a 10% increase in remittances over the pre-crisis level produced a drop of 2.8 percentage points in the poverty rate of households with migrants abroad. Furthermore, because Filipino migrants going to specific countries tend to originate in specific regions of the Philippines, the size of the remittance shocks induced by different exchange rates varied by region. In regions with more favorable mean exchange rate shocks, aggregate poverty rates, not just those among households with migrants abroad, also declined, implying that the increase in remittances had beneficial spillover effects on households without migrants.

## 5.5 The Effects of Remittances on Children's Education

As noted already, from the perspective of human capital, improving children's education is an investment. Hence, to the extent that the additional income accruing to the household because of remittances is spent on education, it may be considered an investment in the expectation of increased future productivity. As Taylor and Castelhana (2016) note, migration can affect spending in children's schooling in three ways: (a) by increasing overall household income via remittances so that the household can afford to spend more in education; (b) by changing incentives if, for instance, it is perceived that more education will lead to better earnings either at origin or abroad; and (c) by reducing the ability of the household to supervise children or by changing the opportunity costs of attending school if children are expected to perform more tasks than before the migration of a family member occurred. Because these potential effects can run counter to one another, it is difficult to isolate them econometrically.

In a study of the Dominican Republic, Amuedo-Dorantes and Pozo (2010) find that remittances increase the probability of school attendance among children in households with migrants abroad, especially for those attending secondary school and not being the oldest child in the family. In rural Mexico, Lopez-Cordova (2005) finds that schooling outcomes are mixed. Remittances increase school attendance for 5-year-olds but have no significant effect for 6–14-year-olds, and decrease attendance for 15–17-year-olds. These results confirm the hypothesis that returns for Mexicans having completed high school education but no more are low in the United States relative to Mexico and, therefore, it is rational for children who intend to migrate to the United States when they grow up to drop out before completing high school.

In El Salvador, in 1997, when 15% of all households received international remittances, Cox-Edwards and Ureta (2003) found that remittances had a much larger impact on school retention rates than other types of income. Remittances lowered the hazard that a child would drop out of elementary school by 54% in urban areas and by 14% in rural areas. Acosta (2006 and 2011), analyzing the 1998 data for El Salvador, underscored the importance of considering outcomes by sex. He found that both boys and girls under 14 years of age were more likely to be enrolled in school in households that received remittances than in those without that source of income. Remittances also increased school attendance and reduced labor force participation among girls aged 14 or over but had no significant effect on the schooling or labor activities of boys of the same age. A more recent study by Jakob (2015) using data for El Salvador referring to the period 2004–2012 and focusing on children aged 6–19 years old shows that, when the analysis is carried out on the data organized as yearly cross-sections and using instrumental variables similar to those used in other studies, the effects of migration and remittances on school enrollment are negative, implying that they reduce enrollment. He concludes that these findings are biased because of the use of weak instrumental variables and the lack of controls for changes over time. When he uses a sample stratified by wealth and made to imitate panel information so that changes over time can be controlled for, the effect of having a migrant abroad becomes significant and positive in enhancing overall school enrollment and remittances become significant in increasing school enrollment in private schools.

## 5.6 An Overall Assessment of the Impact of Remittances on Development

This brief review of selected research on the impact of remittances illustrates the fact that, although the empirical literature on those impacts is large and varied, few firm conclusions can be derived from it. Adams (Adams Jr. 2011), for instance, after reviewing 50 empirical studies, concludes that remittances generally contribute to reduce poverty in the countries of origin of migrants but that they can have detrimental effects on their labor supply, education and economic growth. In a previous review (Adams Jr 2007), he had concluded that remittances tended to be spent less on consumption than on education and housing and that households receiving remittances were more prone than households without remittances to engage in entrepreneurial activities. Although there is some truth in these generalizations, the main message is that the impacts of remittances are conditional, varying according to place, time and context. Furthermore, the impacts of remittances go beyond the remittance-

receiving households and reshape the migrant-sending economies over time. Households receiving remittances tend to spend their income locally, stimulating local economic activity and creating multiplier or spillover effects that alter outcomes for households lacking either migrants abroad or remittances. Some of these spillovers may be positive, such as increasing the demand for locally produced goods or services, and some may be negative, such as pushing up prices. Because approaches to detect the effect of remittances often depend on a comparison of outcomes for households with migrants and those without migrants, to the extent that spillover effects make the latter group experience similar outcomes as the former, it may be impossible to detect the true overall effect of remittances. Furthermore, just as the impact in remittance-receiving households may evolve over time, so may the spillover effects. Any study that uses data from a single period to examine the general-equilibrium effects of migration risks missing important dynamic impacts. To understand the full impacts of remittances, we need to see how the economic conditions of a household or of individuals change over time in response to the influx of remittances and to other economic conditions (Taylor and Castelhana 2016).

One important insight provided by the new economics of labor migration (NELM) and confirmed by research is that failures in credit markets are a barrier for rural households and low-income households in the urban areas of developing countries to engage in productive investment. One way to improve accessibility to credit for all households is to promote the channeling of remittances through banking institutions, credit unions or micro-finance institutions that can offer savings accounts to the recipients of remittances and use the accumulated funds to provide loans for those who wish to engage in productive investment. In 2005, a number of micro-finance institutions entered the remittance market by offering remittance transfers to their clients. Mata (2009) shows that by 2006, the fact of having entered the remittance market had had a positive effect on the savings to assets ratio of micro-finance institutions, indicating that, by channeling remittances, they were indeed being able to attract more savings.

In sum, although remittances play an increasingly vital role in securing and actually improving the livelihoods of millions of people in the developing world, it is unlikely that migrants and remittances alone can trigger sustained national development and economic growth. Remittances alone cannot address structural obstacles to development, such as misguided macroeconomic policies, deficient infrastructure or legal insecurity. The potential of international migration to facilitate the development process can best be unleashed when governments manage to establish a development-friendly environment, with a stable economy and institutions that facilitate entrepreneurship.

## 6 Conclusion

This chapter has reviewed some of the consequences that international migration has on economic outcomes. In the receiving countries of the developed world, most of which have been increasingly selecting migrants on the basis of skills, the impact of recent migration on wages has tended to be small and largely beneficial. Because skilled persons seek high absolute wages, rich countries are magnets for skilled personnel, often to the detriment of the countries of origin, particularly developing countries with small populations where the stock of skilled persons was small to start with. This problem is of long standing and has prompted the adoption of measures to reduce or palliate the loss of skilled workers from the most affected developing countries, with emphasis in the area of health. Although, it is generally accepted that the emigration of skilled workers can have more negative consequences on countries of origin than that of unskilled workers, a systematic assessment of those consequences has not been done. It has been pointed out, however, that even if skilled workers remained in their countries of origin, local conditions would prevent them from making the contributions that they are potentially capable of. This point is crucial: for the beneficial consequences of international migration to reach their full potential in countries of origin, it is necessary that those countries offer a propitious environment. Otherwise, although migration can help remove some of the obstacles to improve livelihoods and productivity, such as the lack of insurance or credit markets, it cannot by itself address all the constraints typical of underdevelopment.

As this chapter has shown, the high levels of migration directed from middle-income countries to high-income countries have led to a boom in global remittances which have been contributing to improve the livelihoods of millions of people. The studies reviewed show that remittances not only ensure a satisfactory level of consumption but are also used to improve agricultural productivity or to make investments in small or microenterprises. In several contexts, remittances increase the school enrollment of children in households with migrants abroad. In addition, remittances boost household incomes and reduce poverty. The studies reviewed stress the need to analyze impacts over an extended time horizon, since those impacts are likely to vary over time. A question that these studies have not answered is whether the households receiving remittances eventually manage to thrive without that external boost to income. Because international migration is unlikely to cease over the coming decades and the development process has still a long way to go in the majority of developing countries, answers to this and other ques-

tions regarding the linkages between international migration and development will continue to be relevant for a long time to come.

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# 23

## The International Monetary System and Economic Development

José Antonio Ocampo

### 1 Introduction

The 2007–2009 North Atlantic financial crisis<sup>1</sup> showed how dysfunctional the current international monetary and financial architecture is for managing today's global economy, and led to calls for reforms. Similar calls were made after the sequence of crises in the emerging economies<sup>2</sup> that sparked in East Asia in 1997 and then spread to Russia and Latin America, but reforms were then marginal at best.<sup>3</sup> The fact that the industrial countries were at the center of the more recent storm led to a broader set of initiatives.

The North Atlantic crisis was unleashed by the collapse of the market for subprime mortgage-backed securities in the United States (US henceforth) in August 2007, followed by that of several investment banks and other financial institutions, notably the bankruptcy of Lehman Brothers and the

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<sup>1</sup>Following Mohan and Kapur (2014), I use this term rather than “global financial crisis” because, although the crisis had global effects, its epicenters were the US and Western Europe.

<sup>2</sup>The term “emerging economies” lacks a clear definition, in contrast with “developing countries”, to which in a broader sense they belong. Broad access to international private capital markets may be their distinguishing feature. This is why I refer, in the discussion on capital flows and capital account crises, to emerging economies and not to developing countries as a whole.

<sup>3</sup>This was accompanied by extensive academic debates. See, among others, Kenen (2001), Eatwell and Taylor (2002) and Ocampo et al. (2007).

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This chapter borrows from my previous work on the subject, particularly from Ocampo (2011 and 2017).

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near collapse of the American Insurance Group (AIG) in September 2008. European banking also suffered major problems generated by investments in US high-risk assets and the real estate euphoria and lending booms in several countries. All this made clear that there was significant deficit in the regulation and supervision of financial activities. The crisis led the Group of 20 (G-20) to re-regulate finance, particularly through the reformed Financial Stability Board (previously Forum) and the Basel Committee on Banking Supervision. These reforms, though positive, were characterized by a low speed of implementation and partial reversals.

In turn, the expansionary monetary policies and initially also the coordinated counter-cyclical fiscal policies helped moderate the recession, though with only gradual effects on economic activity, particularly in Europe. However, monetary expansion in developed countries generated large capital flows toward emerging economies, with major effects on exchange rates and current account balances. In the face of the flood of short-term capital, several emerging and developing countries responded by strengthening or reimposing capital account regulations. These facts, plus the debates during the boom years on the contribution of global payments imbalances to the North Atlantic crisis, as well as old calls for reforms of the role of the US dollar (simply dollar in the rest of this chapter) in the international economy, made clear that the global monetary system also needed deep reforms. Major proposals were made in the early post-crisis years, particularly those by the Chinese Central Bank governor (Zhou 2009) and the UN Commission of Experts on Reforms of the International Monetary and Financial System (United Nations 2009), headed by Joseph E. Stiglitz.

However, global monetary reform has been very limited. Important efforts were made to reform IMF credit lines and increase the resources available to this institution. The G-20 also agreed in 2009 to make the largest issue of IMF's Special Drawing Rights (SDRs) in history. Debates took place in the IMF in 2011–2012 on the role of capital account regulations as a macro-prudential policy tool. Some reforms were also undertaken by the IMF in 2014 to improve market-based sovereign debt restructuring, and a debate took place in the United Nations in 2014–2015 to approve some principles in this area.

This chapter analyzes the international monetary system and the reforms it requires, particularly from the perspective of emerging and developing countries. It is divided in seven sections, the first of which is this introduction. Section 2 briefly analyzes the major features of the current international monetary system and sets the major objectives of a reform agenda. Section 3

delves into the global reserve system. Section 4 discusses the interlinked issues of monetary cooperation and the exchange rate system. Section 5 tackles capital account regulations. Section 6 focuses on the interlinked issues of emergency financing and sovereign debt workouts. In Sect. 7, I conclude with a brief analysis of the institutional design of the system.

## 2 The Need for a Comprehensive Yet Evolutionary Reform

Reforms of the global monetary system should take into account the characteristics of the global monetary system which evolved in an ad hoc way after the collapse of the original Bretton Woods arrangement in the early 1970s (Ocampo 2017). The abandonment of the gold-dollar parity in 1971 gave way to a system in which the fiduciary dollar is the main global currency, though in potential competition with others. The SDRs, although created in 1969 with the aspiration of making them “the principal reserve asset in the international monetary system”,<sup>4</sup> play a secondary role. Major currencies float against each other, and IMF members were allowed in 1976 to adopt any exchange rate regime they chose, so long as they avoided “manipulating” their exchange rates—a term that, however, has lacked a clear definition. The attempt, in 1997, to introduce the principle that capital accounts should be liberalized (“capital account convertibility” in IMF terminology) failed, but market pressures and mainstream economic thinking largely imposed this principle in practice. As a result of the scale of capital account crises, the size of IMF financing packages tended to increase. The frequency of financial crises also led to a failed attempt by the IMF in the early 2000s to introduce a formal debt restructuring mechanism.

An additional element is global monetary policy cooperation. However, although this was envisioned as a major role of the IMF, it has been limited to exceptional circumstances and has generally relied on cooperation through ad hoc bodies (Gs) rather than the Fund. The most important efforts at strengthening macroeconomic cooperation were undertaken by the G-20 after the North Atlantic crisis, together with stronger bilateral and multilateral surveillance by the IMF of macroeconomic policies of major economies and their linkages.

So, the major elements of the (ad hoc) global monetary system that evolved out of the breakdown of the Bretton Woods arrangement are:

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<sup>4</sup>IMF Articles of Agreement, Article VIII, Section 7, and Article XXII.

- a fiduciary dollar standard, seconded by competition of other currencies and by the irregular issues of SDRs;
- limited macroeconomic policy cooperation, generally under crisis conditions and outside the IMF but may be supported by this institution;
- freedom of countries to choose whatever exchange rate system they prefer, with flexible exchange rates being the dominant mechanism among major currencies;
- largely free capital movements or the market expectation that countries would move in that direction, but with the capacity of countries to control capital flows;
- IMF financing packages that are large relative to quotas but may be small relative to the magnitude of balance of payments crises; and
- debt restructuring limited to market-based mechanisms.

The two major crises of the last decades—that of major emerging economies in the late twentieth century and the North Atlantic financial crisis—have shown that the system must be reformed in a comprehensive way. What makes it viable is that many of the elements of such reform can evolve out of existing arrangements, as have been happening already with the issuance of SDRs, new IMF credit lines, the acceptance of capital account management as a macro-prudential policy tool and so on. The G-20 and its associated bodies have made advances in other areas, including new mechanisms of macroeconomic policy cooperation. So, advances under way create the real possibility of comprehensive yet evolutionary reform.

The major objective of the reform effort should, of course, be global macroeconomic stability. This objective must be consistent with the fact that the system is an *international* one—that is, based on different *national* monetary systems (regional in the case of monetary policy in the euro area and some other cases), which use their own fiduciary currencies, managed by authorities that obviously determine their policies based on their own national (or regional) priorities. The challenge is how to make that system consistent with a reasonable level of *global* macroeconomic stability, thus avoiding both expansionary and recessionary biases, and thus sharp world business cycles, as well as inflationary and deflationary surges. A second objective, and a major one from the point of view of emerging and developing countries, is to make the system more *equitable*. This requires helping to overcome the asymmetries that these countries face in the current system, in particular, the need to accumulate large amounts of foreign exchange reserves to manage the strongly pro-cyclical capital flows they face. In terms of governance, it also means an adequate voice and participation of these countries in global decision-making.

A comprehensive global monetary reform should, therefore, include seven major objectives<sup>5</sup>:

- designing an international reserve system that provides adequate international liquidity through mechanisms that are considered as fair by all parties;
- creating instruments that guarantee the consistency of national economic policies of major countries, thus contributing to the stability of the world economy;
- in close relation to this, and given the central role that it plays in balance of payments adjustments, designing an exchange rate system that promotes stability and avoids negative spillovers on other countries;
- regulating cross-border finance to mitigate the pro-cyclical behavior of capital flows and the risks it generates, particularly for emerging economies;
- offering appropriate emergency balance of payments financing during crises;
- creating adequate sovereign debt workout mechanisms at an international level to manage problems of overindebtedness;
- reforming the governance of the system to make it more inclusive—as we will see, an element of this reform is developing a “dense” architecture, in which the IMF is complemented by regional and interregional institutions.

In the following sections, I deal with these objectives and how they interact with each other.

### 3 The Global Reserve System

The basic characteristics—and associated deficiencies—of the current global reserve system have been identified in a sequential way in the global policy debate (Ocampo 2017, ch. 2). The first, underscored by Keynes (1942–43), is the *asymmetric adjustment* to payments imbalances that deficit versus surplus countries face: the former must adjust, particularly during crises, when financing dries out, but surplus countries do not face similar pressures to correct their imbalances. As Keynes underscored, this has been a characteristic of *all* international monetary systems—and, indeed, it was even more severe during the gold standard era. The major implication of this feature of the system is the global recessionary bias<sup>6</sup> it generates, particularly during crises.

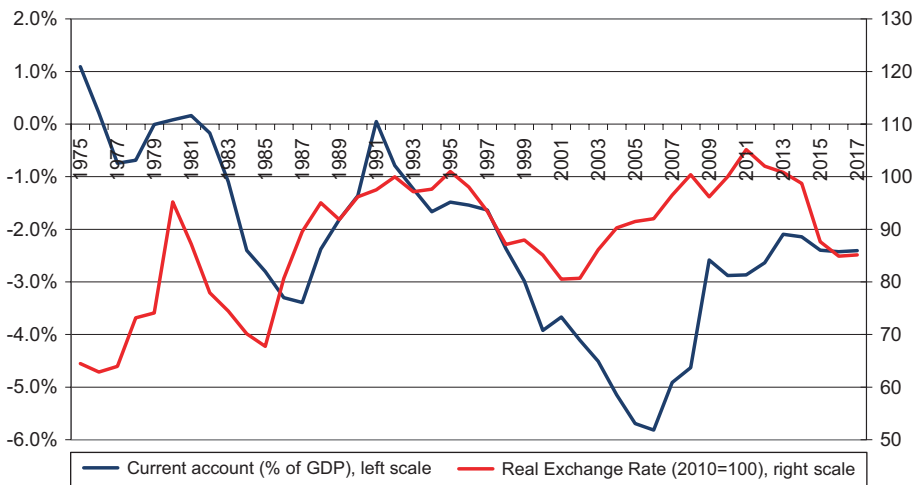
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<sup>5</sup> See parallel consideration on pending reform issues in Obstfeld and Taylor (2017).

<sup>6</sup> I prefer this term to “deflationary”—generally used in the literature—as this pressure is more likely to be reflected today in economic activity rather than in price deflation.

The second feature is the *Triffin dilemma* that characterizes a system in which a *national* currency is used as the major *international* currency. The essential problem, as formulated by Triffin (1961, 1968) in the 1960s, is that the provision of international liquidity requires that the country supplying the reserve currency run balance of payments deficits, but this tends, in turn, to erode the confidence in that currency. The collapse of the original Bretton Woods arrangement in the early 1970s was associated with this problem, as the increased supply of dollars in the international economy led to the collapse of the gold-dollar parity. Under the fiduciary dollar standard that has prevailed since then, the basic manifestation of the Triffin dilemma has been the alternation of periods in which the US runs current account deficits with others in which such deficits tend to be corrected; this cycle is accompanied by significant variations in the real exchange rate of the dollar (Fig. 23.1).

This indicates that the currency at the center of the current global reserve system has an unstable value and that the world economy is hostage to the monetary policy of the main reserve-issuing country, which is generally adopted with no regard to its international spillovers. This may have global implications, as the stability of the system may be inconsistent with the monetary policy objectives of the major reserve-issuing country (Padoa-Schioppa 2011). Also, the confidence in the dollar may be undermined by the fact that



**Fig. 23.1** US current account balance and real exchange rate. The real exchange rate is depicted here to show an increase when there is a real depreciation (the opposite convention to that used by the IMF). It is thus the inverse of the real exchange rate estimated by the Fund. For 1975–1980, it is estimated on the basis of the Fund series with base 2000

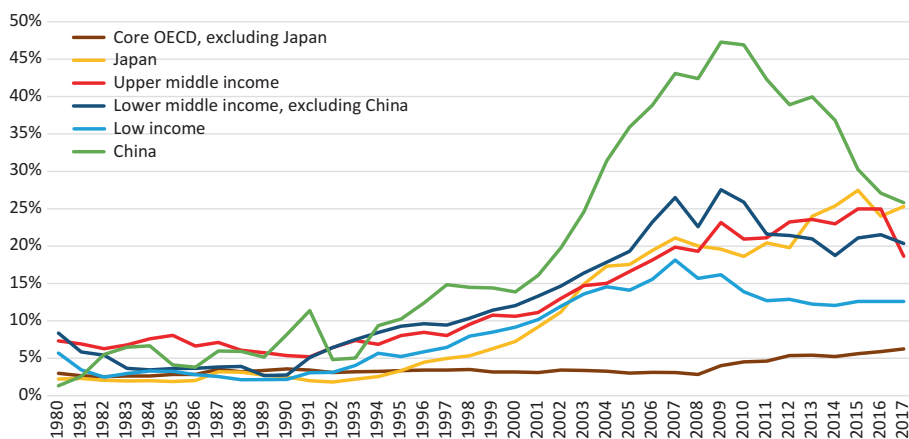
Source: IMF, *International Financial Statistics*



the net US investment position has been consistently negative since the early 1980s and has tended to deteriorate since then (see Mateos y Lagos et al. 2011, among others). However, although this is a potential problem, the dollar has continued to be the dominant global currency—and, indeed, somewhat paradoxically, that role was enhanced by the North Atlantic crisis, despite the fact that the US was at the center of the crisis.

The third characteristic of the system is the *inequity bias* generated by the need of emerging and developing countries to “self-insure” against strong volatility of capital flows through the accumulation of large amounts of foreign exchange reserves and, particularly, to defend themselves against “sudden stops” in external financing. Figure 23.2 shows that, starting in the early 1990s, and particularly after the crises faced by many emerging economies in the late twentieth century, the demand for reserves by all categories of low- and middle-income countries increased substantially, whereas that by OECD countries remained low, with the notable exception of Japan. This pattern has changed little since the North Atlantic financial crisis, but OECD countries have increased somewhat their demand for reserves, those of low-income countries have fallen somewhat, the upward trend of reserve accumulation by middle-income countries has moderated and that by China has fallen to levels similar to other those of middle-income countries.

Since reserves are invested in safe industrial countries’ assets, the reserve accumulation is nothing else than lending to rich countries (particularly to the US) at low interest rates. This is what generates the inequity of the system.



**Fig. 23.2** Foreign exchange reserves by level of development (% of GDP). Countries are categorized by income levels according to the 2000 World Bank classification  
Source: IMF, *International Financial Statistics*

Furthermore, if the majority or, at least, a large group of emerging and developing countries accumulate reserves by running current account surpluses or moderating their deficits, it will contribute to the generation of global imbalances. Reserve accumulation will also contribute to changing the composition of the demand for international financial assets, tending to increase the prices and reduce the interest rate of safe assets.

There are two alternative ways to reform this system.<sup>7</sup> The first is to effectively make it a multicurrency arrangement, something that it already potentially is. The second would be to fully exploit the role of the only truly global reserve asset that the world has created: the SDRs. In practice, these two alternatives can be combined, and this may be the only way to make the wider use of SDRs acceptable to the issuers of reserve currencies, particularly to the US.

On the first alternative, it should be underscored that, although the current system allows any currency to compete with the dollar as international means of payments and reserve assets, such competition has been weak. This means that the dollar enjoys stronger “network externalities”, largely because there is no alternative to the market for US Treasury bonds in terms of liquidity and depth. The dollar is followed by a large margin by the euro, which showed a remarkable resilience as a reserve currency during the Eurozone crisis of 2011–2012. The British pound, together with the Swiss franc, the Australian and Canadian dollars, and more recently the Renminbi, plays a tertiary role.

The basic advantage of a multicurrency arrangement is that it allows reserve holders to diversify the composition of their foreign exchange reserve assets and thus manage the risks associated with fluctuations in the value of individual currencies. Although it may be convenient, as I argue later, to manage the exchange rate flexibility among major currencies, such flexibility is essential for the stability of the system, to avoid the problems that the original Bretton Woods arrangement faced due to the fixed gold-dollar parity as well as the collapse of bimetallism in the late nineteenth century. However, to manage the risks associated with possible reduction in the demand for a specific reserve currency, an IMF “substitution account” should be created, allowing countries to exchange for SDRs the reserves currencies they do not want to hold. This is one of the potential complementarities between the two reform paths. The creation of such an account was proposed by the US in the 1970s to manage the instability of the dollar, and it has come back periodically into the debate, but it was not adopted because of the lack of agreement on who would bear the potential losses that it could generate.

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<sup>7</sup>Of course, more ambitious alternatives would be to return to Keynes’ proposal for an International Clearing Union or to create a truly global reserve bank (see, e.g., on the latter, Stiglitz 2006, ch. 9), but none of these alternatives would be viable. A more active use of SDRs in the way suggested in this chapter has, in a sense, some elements of a global central bank.

However, aside from diversification, this reform path would not address any of the other deficiencies of the current system: the benefits from the reserve currency status would still be mainly captured by industrial countries, it would not solve the asymmetric adjustment problem and it would not reduce the demand of emerging and developing countries for self-insurance. Also, in the light of the growing world demand for foreign exchange reserves, it could further worsen the net investment position of the US and thus the Triffin dilemma.

The alternative reform path would be to enhance the role of the SDRs. The basic advantage of this reform path is that all countries would share in the creation of international liquidity (and the associated seignorage), and would make the system less dependent on the US dollar, making it less hostage to the macroeconomic policies and the potential risks of the deterioration in the US's net investment position. Of course, to make such benefits more equitable, IMF quota shares must be reformed. Furthermore, given the inequities associated with the differential demand for reserves by developed versus developing countries, it might be convenient to include a "development link" in SDR allocations.

Under current rules, the IMF makes SDR allocations proportionally to country quotas. The share of high-income countries has gradually declined, but it was still over 60% in the most recent allocation (see Table 23.1). Three allocations have been made since the creation of the SDRs: in 1970–1972, 1979–1981 and 2009; the latter included an allocation that had been agreed to in 1997 but had not been effective until the Fourth Amendment of the IMF Articles of Agreement of which a part was approved by the US Congress in 2009.

**Table 23.1** SDR allocations by level of development (in millions of SDRs)

	Allocations (million SDRs)			Share in total allocations (%)		
	1970–1972	1979–1981	2009	1970–1972	1979–1981	2009
High income: OECD	6796	7906	1,08,879	73.6	65.8	59.6
United States	2294	2606	30,416	24.8	21.7	16.6
Japan	377	514	11,393	4.1	4.3	6.2
Others	4,125	4,786	67,070	44.7	39.8	36.7
High income: non-OECD	17	127	3588	0.2	1.1	2.0
Gulf countries	0	78	2057	0.0	0.7	1.1
Excluding Gulf countries	17	49	1531	0.2	0.4	0.8
Middle income	1488	2730	54,173	16.1	22.7	29.6
China	0	237	6753	0.0	2.0	3.7
Excluding China	1488	2493	47,420	16.1	20.7	26.0
Low income	933	1254	16,095	10.1	10.4	8.8
Total allocations	9234	12,016	1,82,734	100.0	100.0	100.0

Source: Author estimates based on IMF data and on World Bank classifications by level of development in 2000

As Fig. 23.3 indicates, the use of SDRs tends to increase after each allocation. From the mid-1980s to 2008, the use of SDRs fluctuated between 30% and 50% of total allocations. This proportion fell substantially after the large 2009 allocation, but it has tended to increase since then. Many countries tend to use their allocations, including high-income ones, but developing countries make a more frequent use of them (Erten and Ocampo 2013, and Ocampo 2017, ch. 2). Since countries that use them have to make interest payments to the IMF, they are not a pure reserve asset and should perhaps be considered as an unconditional overdraft facility.<sup>8</sup>

A more active use of this instrument should preferably make SDR allocations in a counter-cyclical way (Camdessus 2000; Ocampo 2002). Indeed, all allocations have been made during periods of turbulence in global markets; this includes the initial one, which coincided with the crisis of the US dollar. An alternative, of course, is to make regular annual allocations but with the capacity of the IMF Board to keep them on hold until global economic conditions make them necessary. Of course, issuance must take into account the global demand for reserves. Most estimates indicate that average allocations for the equivalent of US\$200–300 billion a year (or slightly more) would be reasonable, but even this size of allocation would only increase the share of SDRs in non-gold reserves to just over one-tenth in the 2020s (Ocampo 2017, ch. 2). This indicates that SDR allocations would still largely complement other reserve assets.

Even a moderate reform along these lines would help mitigate the three major problems of the current system. First, as indicated, it would allow developing countries to partly benefit from the seignorage associated with the creation of international money. Second, if SDRs are allocated in a counter-cyclical way, they would constitute a global macroeconomic instrument to manage crises and would reduce the recessionary bias associated with the asymmetric adjustment problem. Third, they could help reduce the need for “self-insurance” by developing countries.

To enhance the first and third of these benefits, SDR allocations could include a “development link”, an idea that has been on the table since the discussions of the 1960s. The best rule would be to include the demand for reserves as a criterion in SDR allocations. A simple rule could be that suggested by Williamson (2010), according to which 80% of allocations would

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<sup>8</sup> Formally, they are both an asset and a liability. Countries receive interest for their net holdings and have to pay interest for their net use. This peculiar structure is a legacy of the debates of the 1960s, when France, against the view of most countries, opposed the idea of creating a pure reserve asset. See a review of this debate and the contemporary developments in the international monetary system in works by Solomon (1982, ch. 8) and Eichengreen (2008).

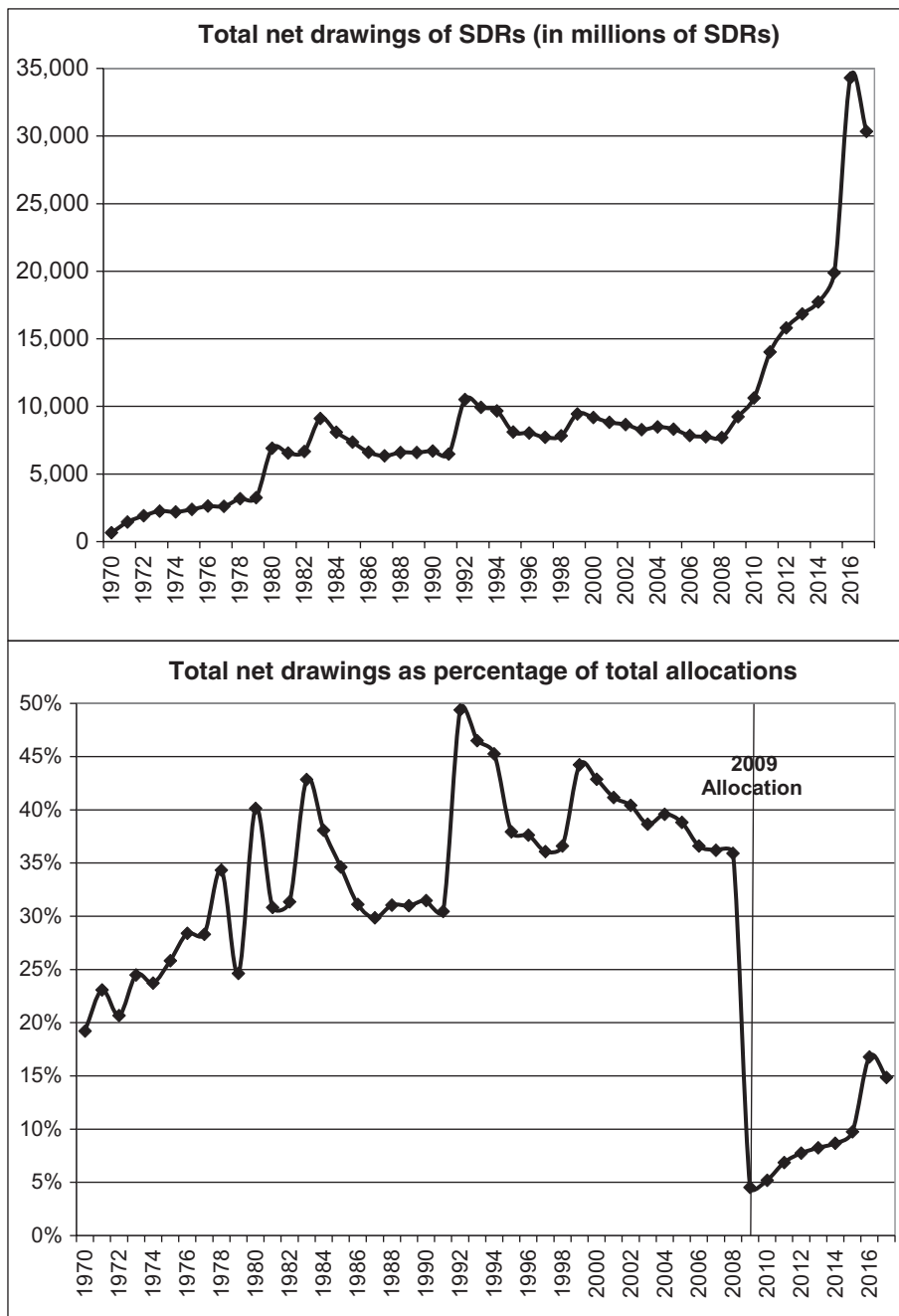


Fig. 23.3

Source: Author estimates based on IMF data

go to developing countries, with allocation among the groups of developed and developing countries made according to IMF quotas. A complementary solution that has been suggested by several authors is to allow unutilized SDRs to be used to provide or leverage financing for development (e.g., buying bonds from multilateral development banks) or support institutions that provide global public goods (such as climate mitigation and adaptation) (United Nations 2009).

In turn, to enhance the second of these benefits, allocation rules could make countries with large surpluses and/or excessive reserves ineligible to receive SDR allocations. This would help mitigate the asymmetric adjustment problem.

Following the proposals made by Polak (1979), the most important reform would be to finance *all* IMF lending with SDRs, as part of a broader reform to make the IMF operate exclusively in SDRs. This would make global monetary creation similar to how central banks create domestic money. The way he suggested would be to finance IMF lending during crises with new SDRs, which would be automatically destroyed once such loans are paid for. The alternative I have suggested is to treat the SDRs not used by countries as deposits in (or lending to) the IMF, which could then use them to lend to countries in need (Ocampo 2017, ch. 2). Either of these proposals would involve eliminating the division in the IMF between what are called the general resources and the SDR accounts (Polak 2005, Part II).

The use of SDRs to finance IMF programs would eliminate the need for the IMF to get financing from its members in the form of “arrangements to borrow” or bilateral credit lines. In fact, it would also eliminate the need to make additional contribution to the IMF through quota increases as well as the need of the IMF to manage multiple currencies, most of which are useless for its operations.

Several analysts have suggested that the private sector should also be allowed to use SDRs, making it a truly global currency (Cooper 2010; Eichengreen 2007; Padoa-Schioppa 2011). However, such private use of SDRs could generate problems of its own, particularly speculative changes in the demand for this global reserve asset. Such reforms could also face strong opposition by the US. For these reasons, it may be better to think of a mixed system in which the SDRs continue to be used mainly as reserve assets and medium of exchange in transactions among central banks (i.e., as “central bank money”), and national or regional currencies continue to play the major role in private transactions. Of course, countries or firms could issue bonds denominated in SDRs (China is actually doing so) or use this instrument as a unit of account for certain transactions, but these alternatives are less interesting than the pos-

sibilities of a broader official use of SDRs as a reserve currency and the financing of IMF programs.<sup>9</sup>

As pointed out, under a system that mixes SDRs with a multicurrency arrangement, a substitution account could be created, allowing central banks to substitute for SDRs other reserve assets they do not want to hold. Kenen (2010) has also suggested that it could be used in a transition mechanism to a more ambitious reform effort.

In any case, the most important reform would involve counter-cyclical *allocations* of SDRs that would increase international liquidity during crises and help fund counter-cyclical IMF *financing*. It would also involve designing criteria for SDR allocations that take into account the very different demand for reserves by developing versus developed countries. The introduction of a substitution account would make this system complementary to a multicurrency system. The mix between the two alternative paths of reform is the best practical option for moving forward.

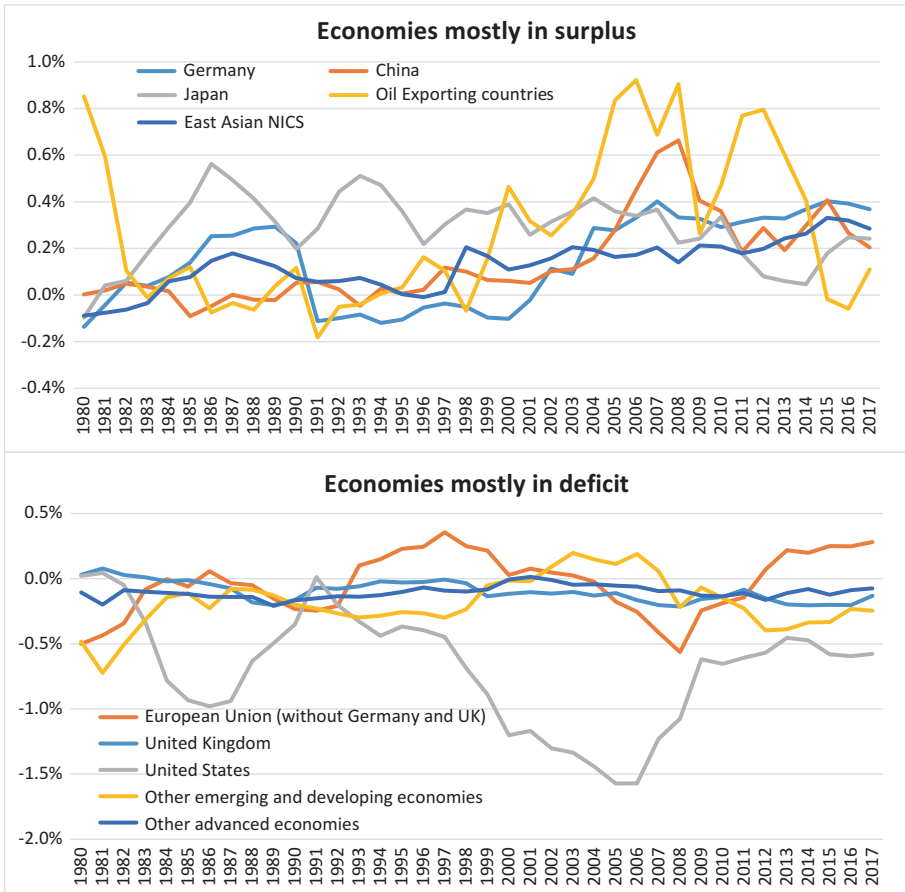
## 4 Macroeconomic Cooperation and the Exchange Rate System

The main challenge of macroeconomic policy cooperation is managing global imbalances, which reflect structural, cyclical and short-term phenomena. The main structural factor is the tendency of the US to run persistent deficits under the current “fiduciary dollar standard”, which has, of course, important implications for the Triffin dilemma. The surplus of oil-exporting countries is strongly cyclical, but has also structural dimensions. High savings rates may be seen as the source of the structural surpluses in East Asian countries, including Japan, the newly industrializing economies (NIEs) (though only in a consistent way since the 1997 crisis) and China. In the latter case (and perhaps of some NIEs in the past), it may have been associated in part with the undervaluation of the Renminbi, but this situation has been fully corrected.<sup>10</sup> Normally, as a group, other emerging and developing countries tend to run a deficit, whereas European other developed countries have a mixed pattern. In the case of Europe, an important example is the contrast between Germany and the United Kingdom (UK henceforth), normally surplus and deficit economies, respectively (see Fig. 23.4).

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<sup>9</sup> See, for instance, the recent analysis and proposals presented by the IMF (2018).

<sup>10</sup> This is partly due to nominal appreciation but even more to relative wage movements, which are not captured in traditional estimations of real exchange rates. Indeed, in recent years, China has rather been making efforts to avoid a depreciation of the Renminbi, sacrificing a large amount of reserves.



**Fig. 23.4** Current account balances as a percentage of world GDP. (Notes: Oil-exporting countries: Algeria, Angola, Iran, Iraq, Kuwait, Libya, Nigeria, Norway Qatar, Russia, Saudi Arabia, United Arab Emirates and Venezuela. East Asian NICs (newly industrializing economies): Hong Kong, Republic of Korea, Singapore and Taiwan POC) Source: Author estimates based on statistics from the IMF International Financial Statistics and updates in the World Economic Outlook. World GDP according to World Bank

One of the best cases of asymmetric adjustments of deficit versus surplus economies, but also of the global linkages associated with balance of payments adjustment, is that of the European Union, and particularly the Eurozone, after the outbreak of the North Atlantic financial crisis. There was a massive adjustment of the deficit economies (Greece, Portugal, Spain and Ireland, ordered by the magnitude of their 2007 deficit) and to a lesser extent of Italy. In contrast, the major surplus economy, Germany, but also others (the Netherlands, in particular) continued to run sizable surpluses. The net effect



was that the European Union moved from running a large deficit in 2008 to a large surplus by 2015. The change, which was equivalent to about 1% of world GDP, was similar to the reduction of the US deficit between 2006 and 2009. The mix of the two changes forced other economies to either reduce their surpluses (China and Japan), which may be seen as a positive phenomenon, or run deficits. The major case of larger deficits was that of other developing countries, which as a group moved from running a small surplus before the North Atlantic crisis to running a sizable deficit, a change equivalent to 0.6% of world GDP. The major mechanisms leading to this result was reduced import demand by the North Atlantic economies and the appreciation generated by massive capital inflows into emerging economies. Viewed overall, emerging and developing countries were thus negatively affected in terms of external balances by the adjustment of the European Union and of the US.

Overall, the evolution of payment imbalances over the past decades thus reflects the deficiencies of the international monetary system: the Triffin dilemma, the asymmetric pressures on deficit versus surplus countries to adjust, and pro-cyclical capital flows to emerging/developing countries. A fourth phenomenon has also been at work: the strong cyclical pattern of the balances of oil-exporting countries, which generates a strong demand for recycling their surpluses during periods of high oil prices, but also reduces the supply of financing during periods of low prices.

To manage these imbalances, the world counts with a limited set of mechanisms of macroeconomic policy dialogue and cooperation. The IMF was, of course, created to serve as the major multilateral institution for this purpose, but most macroeconomic cooperation over decades has taken place outside the IMF, through support among major central banks and ad hoc groupings of major economies—G-10, G-7 and, more recently, the G-20, which self-designated itself, at the peak of the North Atlantic financial crisis, as “the premier forum for our international economic cooperation” (G-20 2009). In short, macroeconomic cooperation has taken place predominantly through mechanisms of “elite multilateralism”—a term I have proposed (Ocampo 2011)—rather than through the formal multilateral organization that the world has created for that purpose.

G-20 cooperation was successful in the initial phase of the crisis, when the major economies adopted complementary expansionary monetary and fiscal policies. However, in relation to fiscal policies, the consensus broke down in the June 2010 Toronto meeting, when some major economies moved to place their priority on public sector debt sustainability. The European Central Bank also temporarily reversed its monetary stimulus in 2011. The need for continued monetary stimulus in the advanced economies was a major source of capital

flows toward emerging economies, which in turn generated the strong exchange rate pressures that these economies faced—that is, a “currency war”, the term then coined by the Brazilian finance minister Guido Mantega.

The G-20 launched in Pittsburgh in 2009 its major instrument of macroeconomic policy cooperation: the Mutual Assessment Process (MAP). In 2011, it agreed that “the persistently large imbalances that require policy action” under the MAP are public sector deficits and debts, private savings and private debt and external current account imbalances, taking into consideration the macroeconomic policies of different countries that may generate these imbalances (G-20 2011a). The G-20 countries later defined the indicative guidelines for each indicator, which were explicitly defined as “reference values” and not as targets (G-20 2011b).

In practice, the IMF provides the main technical support to the MAP and makes its own policy recommendations to guarantee the consistency of the macroeconomic policies of major economies (IMF 2011). In turn, aside from strengthening their own bilateral surveillance of major economies through Article IV consultations,<sup>11</sup> it created a myriad of new multilateral surveillance reports: the Consolidated Multilateral Surveillance Report, the Spillover Reports for the “systemic 5” (the US, the UK, Eurozone, Japan and China) and the external sector reports assessing global imbalances. In 2010, it was also decided that all systemically important financial economies (25 jurisdictions) must be subject to financial sector assessment programs (FSAPs).

This is, no doubt, the most elaborate system of surveillance and macroeconomic policy dialogue that has been ever put in place. It also places particular attention to the economies of systemic importance. But whether this mix of stronger surveillance and peer pressure is effective in terms of inducing changes in the macroeconomic policies of major economies continues to be the major question. Its incapacity to avoid the asymmetric adjustment in the Eurozone and the spillovers generated by the expansionary monetary policies of developed countries on emerging markets since the North Atlantic crisis are two clear manifestations of its, at best, limited “traction”—to use a typical IMF term. So, it may be essential in the future to move to specific macroeconomic *targets*, particularly the current account and foreign exchange reserves levels, following recommendations that go back to the debate of the 1970s.<sup>12</sup>

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<sup>11</sup> The more “candid” assessment of major economies in Article IV consultations was a response to the views, held by the IMF’s Independent Evaluation Office (IMF-IEO 2011), among others, that the Fund had lacked strong assessments of major developed countries in the run-up to the North Atlantic financial crisis.

<sup>12</sup> The US backed at the time a “reserve indicator” system, under which each IMF member would have been assigned a target level of reserves and forced to adjust to keep reserves around that target.

This may be particularly important in relation to exchange rates. The importance of this issue is its relation not only to the correction of global imbalances, but also to another major purpose of the IMF, which, as stated in the Article of Agreement, is “to facilitate the expansion and balanced growth of international trade” (Article I). The major problem is that with the breakdown of the original system of fixed but adjustable pegs, the world moved into what can be clearly characterized as a “non-system”, as all countries are essentially free to choose their exchange rate regime, subject only to the condition that they avoid manipulating their exchange rates to gain competitive advantages, as stated in the revised Article IV approved in 1976. This was also the focus of both the 1977 and 2007 decisions on bilateral surveillance of exchange rate policies. The basic problem is that none of these decisions provided a clear definition or criteria to determine when a specific country is “manipulating” its exchange rate. The complexity of this issue is, of course, that “manipulation” could take place, not only in a direct way (fixing a specific exchange rate or band or intervening in foreign exchange markets) but also indirectly through other macroeconomic policies that may affect this variable.

An alternative would be to allow countries to use the World Trade Organization’s (WTO) dispute settlement mechanism to argue that other partners are manipulating the exchange rate, as Matoo and Subramanian (2008) have proposed. But this is not a good idea, as it could end up weakening one of the few successful mechanisms for enforcing international agreements. It would also ignore that exchange rates may respond to other elements of macroeconomic policies or to financial flows and associated boom-bust cycles. These are basic reasons why exchange rate policies should continue to be under IMF jurisdiction, as part of broader mechanisms of macroeconomic policy cooperation.

The system should, therefore, be improved by introducing elements that enhance the capacity of exchange rates to contribute to correcting global imbalances and providing a reasonable level of exchange rate stability among major currencies, which is crucial for international trade. The best system may be one of *reference rates* among major currencies, which was initially suggested by Ethier and Bloomfield (1975), and later by Williamson (1983, 2007), among others. This would imply that currencies would be subject to some form of managed floating around multilaterally agreed parities or bands, particularly in the case of major currencies. Interventions in foreign exchange markets and other macroeconomic policies would support the movement of exchange rates toward the agreed bands. In turn, if interventions and policies help exchange rates move in the opposite direction, it may be argued that countries are “manipulating” the exchange rate. An additional advantage of this system is that it would also give some guidance to markets.

This system should, of course, take into account all macroeconomic determinants of the exchange rate and payment imbalances—for example, the broader set of indicators chosen by the G-20 for its MAP. It could also take into consideration global output (employment) gaps and inflationary or deflationary pressures. But a simple set of indicators should be preferred, mixing reference exchange rate with information about current account deficits, reserve levels and global output gaps.

In the case of emerging and developing countries, it should be noticed that they moved to more flexible exchange rate regimes in the 1970s, following the collapse of the original Bretton Woods arrangement and the adoption of flexible rates by developed countries.<sup>13</sup> The move was less sharp in middle-income countries, which had been using a broader set of exchange rate flexibilities (such as the crawling peg) since the 1960s. The popularity of greater flexibility increased among emerging and developing countries in the 1990s<sup>14</sup> only to give way to more cases of managed flexibility after the crises they experienced in the late twentieth century. This implied a pragmatic rejection by authorities of what came to be known as the bipolar view defended by Fischer (2001), according to which only freely floating exchange rates or hard pegs are stable exchange rate regimes.

## 5 Capital Account Regulations

The central role that capital flows play in determining exchange rates and macroeconomic activity brings into focus an additional leg of international monetary reform: the management of the capital account. International capital flows are also a major determinant of financial stability, again particularly in the case of emerging economies. Paradoxically, however, *cross-border* finance was entirely left out of the financial stability agenda of the G-20 and Financial Stability Board. It was, nonetheless, taken up by the IMF as part of global monetary reform. In this regard, the IMF adopted in 2012 an “institutional view”, which implies that regulating (or managing)<sup>15</sup> cross-border capital

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<sup>13</sup> For a discussion of the evolution of exchange rate regimes, see Reinhart and Rogoff (2004), Ghosh et al. (2015) and Ocampo (2017, ch. 3).

<sup>14</sup> There was also the spread of what Reinhart and Rogoff (2004) call “free falling” exchange rates, which were the results of high levels of inflation. The group of countries in this situation increased in the 1970s and 1980s, peaking in the early 1990s before falling sharply, as part of the worldwide reduction in inflation rates.

<sup>15</sup> The terms “regulation” or “management” of the capital account should be clearly preferred to the most common use of “controls”, as they have significant similarities with other financial prudential regulations and can include price-based mechanisms. Indeed, the common use of the word “controls” carries an implicit stigma. For a broader discussion on this issue, see Gallagher (2014) and Ocampo (2017, ch. 4).

flows is a useful instrument of macroeconomic adjustment under certain conditions (IMF 2012). Managing capital flows had, of course, been an area of consensus in the Breton Woods discussion, except when they affected international trade. “Current account convertibility” was, therefore, introduced as a basic principle in the IMF Articles of Agreement, but there was no commitment to “capital account convertibility”. The attempt in 1997 to introduce the latter into the Article of Agreement—that is, the liberalization of cross-border capital flows—was defeated, mainly by the opposition of developing countries.

The essential problem is that finance in general, and capital flows in particular, are highly volatile and pro-cyclical. Furthermore, capital account volatility tends to be stronger in emerging market economies than in advanced economies. Low-income countries are less affected by this problem due to their greater dependence on official flows, but some of them have been dragged into a similar volatility phenomenon as private capital flows started to taper the so-called “frontier markets” after the North Atlantic crisis. Swings in sovereign risk spreads, net flows and availability of long-term financing are some of the determinants (and, under certain conditions, *the* major determinants) of business cycles in emerging economies (Prasad et al. 2003; Ocampo et al. 2008). The fact that domestic financial markets are more incomplete and characterized by variable mixes of currency and maturity mismatches in portfolios is the basic source of vulnerability. This also implies that room for maneuver of macroeconomic policy is more limited, indeed forcing authorities on many occasions to adopt pro-cyclical policies, particularly during balance of payments crises, but also during capital account booms.

One of the major determinants of capital flows to emerging economies is monetary and financial conditions in advanced economies, which operate as “push” or “pull” factors, positive or negative. A major case of a push was, as already pointed out, the massive capital flows toward emerging economies and some frontier markets generated by expansionary monetary policies in developed countries after the North Atlantic crisis. The major problems in this regard are that such flows are entirely delinked from the demand for capital by emerging countries and that, due to the relative size of advanced countries’ financial systems, a small change in their portfolios can have major effects on emerging economies.<sup>16</sup>

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<sup>16</sup>According to Bank for International Settlements data, the peak of emerging and developing countries in the issuance of bonds and notes in the international market was before the East Asian crisis and was less than 15%. Before the North Atlantic crisis, it had fallen to just 7%. See Ocampo (2017, Table 4.2).

The 2011–2012 IMF debate on this issue recognized that capital account regulations (“capital flow management measures”, CFMs in IMF terminology) may have an important role in supporting macroeconomic and financial stability, as part of the broader family of “macro-prudential” regulations and as a complement and not a substitute for appropriate macroeconomic policy. This implies, in turn, that there is no presumption that full liberalization of capital flows is an appropriate goal for all countries at all times, an idea that had already spread in emerging and developing countries since the series of crises of the late twentieth century. These ideas were incorporated into what came to be known as the IMF’s *institutional view* on liberalization and management of capital flows (IMF 2012).

The IMF view has a preference for regulations of inflows over outflows, for price-based over-administrative ones (quantity based, in the terminology of the debate) and for those that do not discriminate according to the resident of the agents involved. It also tended to regard these regulations as a sort of “interventions of last resort”—that is, as policies to be adopted once other macroeconomic options had been exhausted. However, this view is too narrow. They should be seen as part of the *normal* toolkit of macroeconomic interventions that should be used *simultaneously* with other macroeconomic policies to limit excessive capital inflows or outflows, avoid strong business cycles and excessive exchange rate instability and, more generally, increase the policy space for counter-cyclical macroeconomic policies.<sup>17</sup>

In turn, capital account regulations should be seen as a continuum, which go from prudential regulations on assets and liabilities in the domestic currency, through those that relate to the use of assets and liabilities denominated in foreign currencies in the domestic financial system, to regulations on cross-border capital flows as such. The particular mix would depend on the characteristics of the domestic financial system of the countries involved and of course on the policy objectives of their authorities (Ocampo 2011; Ostry et al. 2010, 2011). There should be no presumption that regulation of inflows should be preferred over those on outflows—in fact, the latter may be more effective—and administrative regulations may be more effective than price-based mechanisms. Avoiding discriminating between domestic and foreign residents may also be impossible in practice, given their very different demands for domestic assets. More broadly, regulations should be used pragmatically and modified dynamically to avoid their elusion. Interestingly, this more pragmatic view is implicit in the only framework on this issue adopted by the G-20 (2011c).

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<sup>17</sup> For a critique of the IMF view along these lines, see Gallagher and Ocampo (2013).

Overall, there is significant evidence that capital account regulations improve the composition of capital flows toward less volatile flows and increase monetary independence by partly weakening the trade-off that authorities face between monetary policy autonomy and exchange rate stability, particularly in emerging economies. There have been strong debates on other effects, particularly on those on exchange rates, where several authors have found that they are temporary or statistically insignificant. Studies also indicate that all these effects are stronger for emerging and developing countries. If impacts are temporary, this could be interpreted as the need for authorities to dynamically adjust regulations to take into account the response of the private sector, including “innovations” to circumvent them.<sup>18</sup>

The IMF institutional view also recognized that source countries should “better internalize the spillovers from their monetary and prudential policies” (IMF 2012, par. 36). This implies, in particular, that there should be “a more consistent approach to the design of policy space for CFMs under bilateral and regional agreements” (IMF 2012, par. 33). This is the principle that should apply to rules that limit the use of capital account regulations in free trade agreements (particularly those with the US) and on the liberalization of capital flows of the Organization for Economic Cooperation and Development (OECD). So far, however, there has been no significant action to apply these principles in those agreements.

## 6 Crisis Resolution: Balance of Payments Financing and Sovereign Debt Workouts

### 6.1 Balance of Payments Financing

The creation of credit lines to counteract or at least mitigate the contractionary effects of balance of payments crises was one of the major innovations that came with the creation of the IMF. The initial framework aimed at financing current account imbalances, as those associated with capital outflows were supposed to be managed by interventions in the capital account. However, with the reconstruction of private international capital markets, crises came to be increasingly associated with capital flows. Since the 1960s, a major issue was, therefore, how to provide support in the face of capital account crises. The importance of this issue was further raised by the balance of payments

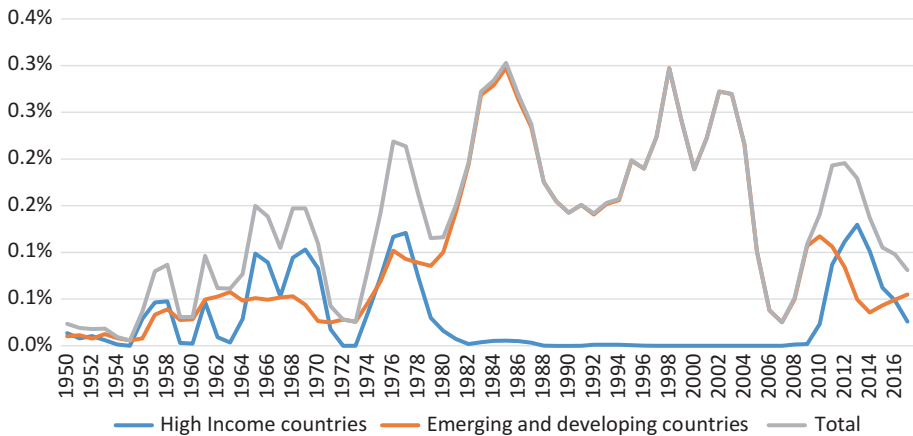
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<sup>18</sup>For reviews on this debate, see Magud et al. (2011), Erten and Ocampo (2017) and Ocampo (2017, ch. 4), among others.



crises in emerging and developing countries during the last decades of the twentieth century. This required a much larger scale of financing relative to quotas—“exceptional access” in IMF terminology. The contagion associated with international financial crises came also with the call for preventive or precautionary facilities to mitigate and hopefully avoid this problem. The swap facilities that central banks from developed countries had been creating since the early postwar period<sup>19</sup> also responded to these demands. These elements were also present in the major reforms adopted after the North Atlantic financial crisis, which was one of the major reforms in IMF history (IMF 2009b). The design of new facilities has been accompanied with debates about IMF conditionality, which are as old as the Fund but were particularly heated after the crises of emerging economies of the late twentieth century.

Figure 23.5 indicates that Fund lending has clearly met its counter-cyclical objective through history. The peaks of financing have followed major crises: those generated by the return of volatile capital flows in the 1960s, the 1973 oil shock, the Latin American debt crisis, that of a broader set of emerging markets in the late twentieth century, and the North Atlantic financial crisis. Lending to high-income countries was larger during the first two, but then emerging and developing countries came to dominate IMF financing, with some high-income countries returning to the IMF during the most recent crisis.



**Fig. 23.5** IMF lending relative to world GDP. World GDP according to Ocampo (2017), which coincides with World Bank in recent decades. Countries are categorized by income level according to the 2000 World Bank classification

Source: IMF, *International Financial Statistics*

<sup>19</sup> Some of them were made available under the umbrella of the Bank for International Settlements, which was also active in raising financing packages for the UK, which faced the decline of the sterling as an international currency.



Exceptional financing to manage capital account crises came with stronger procedures for decision-making and program evaluation, a rigorous analysis of debt sustainability and considerations of whether countries have good prospects of regaining access to private capital markets. A major constraint has been all along the lack of institutional debt workout mechanisms that countries could use to manage unsustainable debt burdens.

The creation of a successful precautionary facility in 2009, the Flexible Credit Line (FCL), which lacks *ex ante* conditionality and is aimed at countries with “solid fundamentals” but a risk of facing contagion, came after several failed attempts—the 2003 Contingent Credit Line, the 2006 proposed Reserve Augmentation Line and the 2008 Short-Term Liquidity Facility. However, its use has been quite limited, indicating that it still carries the stigma associated with borrowing from the IMF. Swaps facilities are much better in this regard; as indicated, they are the major mechanisms for liquidity financing among developed countries’ central banks.

The 2009 reforms also included the doubling of the size of other credit lines, the wider use of traditional stand-by agreements for preventive purposes, to which a new Precautionary Credit Line (later called Precautionary and Liquidity Line) was added in 2010 for countries that do not meet the criteria of the FCL. For the poorest countries, the Poverty Reduction and Growth Facility created in 1999 was transformed into the Extended Credit Facility in 2009. Other facilities were made available to these countries for shorter-term difficulties associated with temporary external shocks and natural disasters. The most important reform for these countries was, however, the decision to move from a single design to a menu of options, which allows low-income countries with stronger management capacity and limited debt vulnerabilities to eventually access non-concessionary facilities (IMF 2009c).

The 2009–2010 reforms have been insufficient in two ways. The first is that the resources available for IMF lending have lagged behind other global aggregates. This is despite the increasing demand for financing, particularly to manage capital account shocks. Hence the importance of quota increases but, even more, as argued above, of using SDRs as a source of resources for IMF lending. The second is the need to continue making progress in designing financing facilities that either are automatic or have simpler prequalification processes to overcome the stigma associated with borrowing from the IMF, which is associated with conditionality.

The focus of debates on conditionality has changed over time. One of the older debates relates to whether countries should be subject to strict conditionality when crises originate in adverse external shocks rather than as a result of expansionary domestic policies and when deficits are expected to be temporary

and self-reversing. The low-conditionality compensatory financing facility created in the 1960s as well as the oil facilities of the 1970s were designed to face external shocks, but the low-conditionality features of the compensatory facility were gradually dismantled later on. As indicated above, an additional reason for low or no conditionality is financing to avoid contagion.

However, the most important criticisms of conditionality came with its extension beyond the strict macroeconomic realm, to include structural adjustment. This became a typical pattern in the 1980s and 1990s with the balance of payments crises of emerging economies and reinforced with the major economic reforms of the transition economies in the 1990s. Criticisms of the structural adjustment go back to the 1980s but became frontal after the East Asian crisis.<sup>20</sup> The major criticism was that such conditionality was too rigid and uniform, reflected controversial orthodox views on economic reforms and was excessively intrusive on domestic decision-making processes. Furthermore, in some cases, they reflected pressures from influential countries on what they wanted specific borrowing countries to do.

The guidelines on conditionality approved in 2002 (IMF 2002) were steps in the right direction. They introduced three basic principles: (i) member countries' *ownership* of policies; (ii) the requirement that structural conditions should be *macro-relevant* and focus on the core competencies of the IMF (monetary, fiscal and exchange rate policies, as well as financial system issues); and (iii) the need to streamline conditions to those that are *critical* to achieve program goals. These reforms were complemented in 2009 with the elimination of the relationship between IMF disbursements and structural conditionality (the structural performance criteria) and the elimination of ex ante conditionality for the FCL. Overall, existing evaluations, particularly by the IMF's Independent Evaluation Office, indicate that the volume of structural conditions has decreased since the mid-2000s and that conditionality has focused on the macro-relevant areas but that there is limited evidence that these advances have been reflected in increased ownership and reduced stigma of IMF programs (IMF-IEO 2007, 2018). This indicates again that much more has to be done to design automatic credit facilities with no conditionality, making them available to a larger set of countries.

The counter-cyclical role of IMF lending should be complemented by other mechanisms, as part of what has come to be called the "global financial safety net". Notable among them is counter-cyclical lending by multilateral development banks. As indicated, swap facilities are already the major mechanism among

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<sup>20</sup> For early criticism of structural adjustment, see Cornia et al. (1987). The best-known criticism after the East Asian crisis is the work by Stiglitz (2002).

developed countries; in the case of the FED, they were temporarily extended to a few emerging economies (Brazil, Mexico, the Republic of Korea and Singapore) during the peak of the North Atlantic crisis. There is also a growing use of swap facilities by China and other countries, which will undoubtedly grow in the future. There is also an incomplete set of regional arrangements, the most important of which are the small but well-functioning Latin American Reserve Fund (FLAR, for its Spanish acronym), the Chiang Mai Initiative of ASEAN+3 (Association of Southeast Asian Nations, China, Japan and the Republic of Korea) and the European Union mechanisms, notably the permanent European Stability Mechanism for Eurozone members inaugurated in October 2012. The BRICS Contingency Reserve Arrangement, launched in 2015, is a new addition to the safety net. The association with IMF programs beyond a certain level of lending has been a basic constraint to the use of the Chiang Mai Initiative—due to the stigma associated with IMF programs—and this rule has (paradoxically) been adopted by the BRICS arrangement. Since the North Atlantic crisis, most European programs have been jointly done with the IMF.

## 6.2 Sovereign Debt Workouts

The second element of a well-structured crisis response architecture is a system to manage debt overhangs. One basic reason for this is that the dividing line between “illiquidity” and “insolvency” is not easy to draw, as an inadequate management of the former may lead to the latter. Another is that the absence of an effective mechanism of this sort forces debtors to adopt excessively contractionary adjustment policies during crises, which may have negative long-term effects for both debtors and creditors.

Advances made in improving emergency financing have not been matched by the development of an institutional framework to manage debt overhangs. The only regular mechanism in place is the Paris Club, which deals exclusively with official creditors; its reach has been limited by the rise of the official lenders that are not members (notably China). There have also been a few ad hoc debt relief initiatives: the Brady Plan after the Latin American debt crisis, the 1996 Heavily Indebted Poor Countries Initiative, and its successor, the 2005 Multilateral Debt Relief Initiative. However, most debt restructurings with private creditors must be done through individual voluntary negotiations, generating solutions that come “too little and too late”, according to the IMF’s own evaluation (IMF 2013); they also lack a uniform treatment of both debtors and creditors.<sup>21</sup>

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<sup>21</sup> See also the considerations on debt issues in low-income countries, in the context of the aid-debt-growth debate in the chapter by Nissanke (Chap. 15, in this volume).

Several proposals to create a multilateral framework for dealing with international debt crises involving private creditors have been on the table since the 1994 Mexican crisis. They have followed two different approaches, which have been called “contractual” and “statutory”. The major attempt to create a statutory regime was the 2001–2003 IMF proposals for a Sovereign Debt Restructuring Mechanism. Although it failed, due to the joint opposition of the US (which had originally launched the initiative) and some emerging countries, it helped improve the contractual approach by leading to agreement that collective action clauses should be introduced in all debt contracts in the US market (they were already in place in the UK). The contractual approach has been further improved in recent years after the difficulties faced by Argentina in US courts in 2013 in the confrontation with “holdout” creditors that had not participated in the 2005 and 2010 debt restructurings. In 2015, the International Capital Market Association (ICMA 2014) and the IMF (2014) agreed to include aggregation clauses and a new *pari passu* clause that avoids the problems faced by Argentina. Eurozone bonds also require aggregation clauses since 2013. The United Nations also adopted in 2015 basic principles on sovereign debt restructuring (United Nations 2015).

Therefore, the basic framework continues to be the contractual one: voluntary negotiations with private creditors. As indicated above, the first problem with this mechanism is that it generates incentives for both debtors and creditors to delay restructurings, which may have long-term effects on debtor countries and may result in renegotiations, thereby also affecting creditors. A second problem is that the effects of the new clauses introduced in debt contracts will only be gradual, as a significant part of the debt stock lacks collective action clauses and only a small part has aggregation clauses. In any case, aggregation does not exclude the possibility of blocking majorities in individual issues, and excludes other creditors aside from bondholders, particularly syndicated bank lending and bonds bought by international investors in the domestic markets of emerging economies. A third problem is that credit default swaps may reduce the incentive to participate in debt renegotiations and introduce a whole new set of actors into the process.

The limitations of the contractual approach are the basic case for a statutory solution or a mixed system. Any mechanism that is put in place must follow three basic principles: a fresh start, comprehensive debt restructurings and impartiality of the mediation and arbitration processes. The first of these principles indicates that the solution should be seen as a permanent one that allows the debtor country to take off and avoid renegotiations. The second may imply that aggregation should encompass *all* obligations, possibly including official creditors and even multilateral lending, with proper seniority rules

and preferences for creditors that provide funding during crises. The third is essential to guarantee a fair solution for debtors and an equitable sharing of haircuts among creditors.

The statutory approach would involve the creation of an international debt court, the decisions of which would be legally enforceable in the main financial markets. A mix between the voluntary and statutory solutions could be a mechanism similar to the WTO dispute settlement, in which there is a sequence of voluntary negotiations, mediation and eventual arbitration that would take place with pre-established deadlines, which are an essential incentive to reach an agreement before arbitration takes place. The mechanism could be created as a new institution in the UN system, but also as *independent* mediation and arbitration processes within the IMF, similar again to the WTO dispute settlement mechanism. This would require that mediation and arbitration would operate independently of the Executive Board and the Board of Governors and with strong provisions to avoid interference from IMF staff, directors and member states.<sup>22</sup> This should be complemented with the creation of an international debt registry and a multi-stakeholder sovereign debt forum. The latter would include governments, international institutions, the private sector and civil society and could be organized under the umbrella of the UN Financing for Development process.

## 7 The Governance of the System

Substantive reforms of the system must be matched by appropriate governance structures. This involves three interrelated reforms. The first one is the design of an appropriate apex organization. The second is to enhance the “voice and participation” of developing countries in the Bretton Woods Institutions (BWIs)—in the case of the international monetary system, in the IMF. The third is the design of a dense multilayered architecture, with active participation of regional, subregional and interregional institutions.

In the first area, the major step is undoubtedly the reform of the G-20, which self-designated itself as the premier forum for international economic cooperation. The creation of this G-20 at a leaders level was, of course, a step forward in relation to the G-7, but ad hoc self-appointed bodies can never replace representative institutions in a well-structured international institutional architecture. The preference for “Gs” has deep historical roots, reflect-

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<sup>22</sup>This is what is implicit in Krueger’s (2002) late proposal during negotiations regarding the Sovereign Debt Restructuring Mechanism.

ing the preference of major industrial countries for institutional mechanisms over which they can exercise direct influence—a view that may be shared now by some large emerging economies. But this “elite multilateralism” creates a tension between representativeness and the legitimacy associated with it, on the one hand, and power structures, on the other. Effective decision-making may require small bodies, but this is *not* inconsistent with representation, as those small bodies can be embedded in larger representative institutions that elect their members according to agreed criteria.

As noticed previously, the G-20 played an important role after the outbreak of the North Atlantic crisis by adopting coordinated expansionary policies that allowed the world to avoid another Great Depression, together with a new mechanism of macroeconomic cooperation (the MAP) and a series of financial regulatory reforms in the major industrial economies. It also put in place a new instrument of international tax cooperation (the Base Erosion and Profits Shifting process, led by the OECD) and helped avoid in the initial stages of the crisis the protectionist responses that deepened the Great Depression—though it has been unable (so far) to limit the 2018 US protectionist actions. But its record in terms of effectiveness is mixed: quite good in the early phases of the crisis but weaker since then. Performance is also poor in three other dimensions: representation, contribution to the coherence of the global system of governance and lack of an effective secretariat (Ocampo and Stiglitz 2011; Woods 2011).

The G-20 should, therefore, be transformed into a more representative mechanism of international economic cooperation. The best proposal in this regard is that of the UN Stiglitz Commission to create a Global Economic Coordination Council (United Nations 2009, ch. 4), which in a sense belongs to the series of proposals to create a UN Economic Security Council. The Coordination Council proposed would be UN *system* organization, to include the BWIs and possibly the WTO (the former are part of the UN system but not the latter), and it would be formed on the basis of constituencies elected through weighted votes—a similar mechanism to that of the BWIs, though improving the voting weights of developing countries. The proposals by the Palais Royal Initiative (2011) are similar but it would create an apex organization for the international monetary system, and thus more limited in its functions than the proposed Global Economic Coordination Council.

The debate on voice and representation of developing countries in the BWIs should continue beyond the advances made in 2010, following discussions that had taken place in previous years. In the case of the IMF, they became effective only in 2016, due to the late approval by the US Congress of the quota increase, which was part of the reform process. The reform included

the doubling of IMF quotas, changes in their allocation and in voting power among members, the reduction by two of the European representatives in the Board and the principle that all of its members should be elected. In any case, this reform was still short of what is required. As Table 23.2 indicates, although the quota and voting power of European countries were reduced—particularly of the European members of the G-10, which includes some small countries that are financial centers—the region continued to be overrepresented relative to its current share in the world economy. The representation of emerging and developing countries was increased, but the gain was concentrated in a few large ones (see again Table 23.2) and, as a group, these countries continued to be underrepresented relative to their current size, particularly in the case of the Asian economies. Low-income countries saw their quotas decline, but this was compensated by the increase in basic voting rights (those rights that are allocated equally to all countries). Additional reforms are, therefore, necessary, and indeed a mechanism should be put in place facilitating regular adjustment of the quotas according to the share of different countries in the world economy.

There are other issues of governance that have to be addressed, including those proposed by the 2009 Commission for IMF Governance Reform (IMF 2009a). They include the creation of a Council of Ministers, with effective powers to adopt the most important political decisions, thus replacing the International Monetary and Financial Committee; reorienting the Board toward formulating strategy and monitoring policy implementation rather than overseeing day-to-day functions; and reducing the threshold of votes

**Table 23.2** 2010 Redistribution of quotas and votes in the IMF (versus pre-2006 situation)

	Quota			Votes		
	Pre-2006	2010	Change	Pre-2006	2010	Change
Advanced countries	61.6	57.7	-3.9	60.6	55.3	-5.3
United States	17.4	17.4	0.0	17.0	16.5	-0.5
European G-10 <sup>a</sup>	26.7	22.5	-4.2	26.3	21.5	-4.8
Other	17.5	17.8	0.3	17.3	17.3	0.0
Developing countries	38.4	42.3	3.9	39.4	44.7	5.3
China	3.0	6.4	3.4	2.9	6.1	3.1
Other winners <sup>b</sup>	5.8	9.7	3.9	5.7	9.3	3.6
Rest	29.6	26.2	-3.4	30.7	29.3	-1.4
Low-income countries	3.5	3.2	-0.3	4.0	4.5	0.5

<sup>a</sup>European G-10: Belgium, France, Germany, Italy, Netherlands, Sweden, Switzerland and the UK

<sup>b</sup>Other developing countries winners: Brazil, India, Mexico, Turkey and Republic of Korea

Source: Author's estimates based on IMF data



needed to approve important IMF reforms from the current 85% to, for example, 70–75%. It is also crucial to guarantee a transparent and open process to select the IMF managing director, based on the merit of the candidates and regardless of nationality.

The third line of governance reform is the creation of a multilayered architecture that relies on a dense *network* of global, regional, subregional and interregional institutions rather than on a single global organization. The best example in this regard is the system of multilateral development banks, where the World Bank Group is complemented by a network of regional development banks (including the European Investment Bank) and several subregional and interregional banks (the Islamic Development Bank and now the New Development Bank). The basic advantages of such a system is the stronger voice that smaller and poorer countries would have, which also implies a stronger sense of ownership of regional and subregional institutions, as well as stronger competition in the provision of services to member countries (Ocampo 2006). An important implication is that the IMF of the future should be conceived as the apex of such a network rather than the single global organization it now is.

Regional monetary arrangements can take different forms: payments agreements, swap lines, reserve pools and common central banks. They can also have different degrees of multilateralization. FLAR, the Chiang Mai Initiative and the European Stability Mechanism are three frameworks already in place, the last case complementing the role of the European Central Bank. The new BRICS Contingency Reserve Arrangement is an additional recent mechanism of an interregional character. But large parts of the world lack such arrangements. These arrangements should cooperate with the IMF but in a system of “variable geometry” and with no presumption that the IMF views and programs would prevail.

This tripod of governance reforms is essential for the global monetary system—the global financial safety net, in IMF terminology—to provide better services to the international community along the lines presented in the previous sections of this chapter.

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# 24

## Global Public Goods and Governance for Addressing Sustainability

Inge Kaul

### 1 Introduction

The 2030 Agenda for Sustainable Development, agreed to by 193 countries in 2015, sets out 17 goals and 169 targets. Its overarching aim is to promote growth and development on a global scale, that is, economically, socially and environmentally sustainable.<sup>1</sup> Taking heed of multiplying reports that, in increasingly urgent ways, draw attention to the growing number of unmet global challenges, such as climate change mitigation, ocean health, communicable disease control, financial stability, conflict prevention and peace, and the universalization of such norms as basic human rights, the 2030 Agenda, in addition to calling for reinforced national and regional development efforts, also urges stronger efforts to ensure more adequate policy responses to these global challenges. As many of these challenges concern us all, they are also referred to as global public goods (GPGs). If left unresolved, they might impede and reverse developmental progress in the North and South, in areas within and beyond national jurisdictions.

As such, the 2030 Agenda possesses two important novel features. First, it extends the notion of development to cover both developed and developing countries; and, second, it recognizes that development and GPG provision are interlinked.

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<sup>1</sup> For the 2030 Agenda, see [http://www.un.org/ga/search/view\\_doc.asp?symbol=A/RES/70/1&Lang=E/](http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E/)

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However, it is important to note that many of the Agenda's goals and targets are also contained in earlier international agreements in which states have repeatedly committed themselves to fostering their attainment; and although follow-up action was taken, nationally and internationally, it has not yet gone far enough. As a result, gaps in provision arose and persist in many global challenge areas. Over time, as new challenges emerged (e.g., problems of cyber-insecurity or the risk of misuse of not yet fully understood technologies, such as artificial intelligence), the list of unmet global challenges kept lengthening and risks began to cluster. This has happened even in such policy areas as global warming, in which critical thresholds of risks turning into acute crises, and perhaps even into crises of catastrophic proportions, are fast approaching despite decisive corrective action being technically and economically feasible and, from a global perspective, also economically desirable.

An important question, therefore, is why GPG-type challenges appear to be so difficult to govern. Are they exceptionally complex—"wicked"—problems, as some analysts and policymakers claim? Alternatively, are the present governance arrangements not fit for the purpose? Furthermore, what could be done to foster more adequate GPG provision and, thereby, more sustainable global growth and development?

This chapter examines these questions. Section 2 theorizes about what it might take to promote an adequate provision of GPGs under the current global policymaking realities. Three enabling conditions are identified: (1) a clear focus of public policymaking on the good to be produced; (2) incentives to encourage, as and when needed, state and nonstate actors to increase their contributions; and (3) participatory decision-making on GPGs to foster efficient bargaining, increasing the likelihood of achieving policy outcomes that are perceived as mutually beneficial, motivating actors to comply with the commitments they have voluntarily undertaken, thereby making governance for sustainability itself more sustainable.

Based on select empirical evidence, Sect. 3 then explores how GPG provision today actually functions: whether the enabling conditions identified in Sect. 2 are being met and with what results; whether other enabling factors can be discerned; and, given the lengthening list of unresolved GPG-type challenges confronting us, what the impediments currently constraining more adequate provision are. It finds that change along the suggested lines is happening, although only of a nascent, ad hoc or experimental nature. Yet, this offers insights about how the three enabling conditions could be made operational and institutionalized. Section 4 draws on these insights and suggests an agenda for further research and policy debate.



In summarizing the discussion, the conclusion emphasizes that, in order to promote enhanced governance for global sustainability, it is important and urgent to begin constructing a new branch of public policy that is GPG centered and offers systematic, well-founded advice on how to combine individual state and nonstate actor interests, including national sovereignty concerns, while achieving and maintaining adequate GPG provision.

## 2 Theorizing the Provision of Global Public Goods

Public goods are usually defined as goods marked by publicness in consumption owing to their being non-rivalrous, non-excludable or both. According to standard economic theory, non-rivalry means that a good's consumption by an individual does not reduce its availability for others. Non-excludability exists if, for technical, economic, sociocultural or political reasons, it is not feasible to exclude others from consuming a good, even if they did not contribute to its provision. Goods that are fully non-rivalrous and non-excludable are pure public goods, and those that possess only one of these properties are said to be impure public goods.

The effects—namely, the benefits and/or costs—of a public good can be of varying geographical reach, ranging from local, national or regional to global. Those of GPGs span several regions of the world and, in some cases, even all regions and countries, as well as areas beyond national jurisdictions, such as the Arctic and Antarctic regions, the high seas and outer space. Some GPGs may also be of longer duration, affecting past, present and future generations. An example of this is the atmosphere's gas composition, which changes only gradually through the addition of pollutants and can be corrected also only gradually.

The standard economic theories of public goods have, for the most part, been formulated with national public goods and a domestic policy context in mind.<sup>2</sup> For a proper understanding of GPG provision, it is thus useful to

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<sup>2</sup> For the history of the notion of public goods, see Desai (2003) and Pickhardt (2006). For the contributions that, in a decisive way, formed the conventional theories of public goods, see, among others, Buchanan (1965), Musgrave (1959), and Samuelson (1954, 1955). While some of the textbooks on public economics and finance by now mention the concept of GPGs, they usually do not discuss the implications of the existence of these types of goods for the conventional public goods theory. See, for example, Cullis and Jones (2009) and Stiglitz and Rosengard (2015). However, a wealth of valuable insights on GPGs and their provision is available in scholarly publications across a wide range of disciplines, notably in studies on environmental and natural resource economics, global health, knowledge and intellectual property, as well as international security, especially terrorism. See, for example: Atkinson

consider some of the features that, notably under the current global policy-making realities, set GPGs apart from their national counterparts.

As Richard Haas (2017:5) notes, for GPGs, the reality of borders, including national borders, “count for naught.” Their effects permeate and penetrate everywhere, whether desired or not. Climate change–related droughts, floods and storms are a case in point, as well as the health impacts of infectious diseases such as the Ebola and Zika fever or the often worldwide financial contagion effects originating from lax financial regulations in one or several countries. Similarly, knowledge and information travel across borders and do so ever more speedily because of new communication technologies and other forms of greater connectivity.

In many cases, privateness or publicness in consumption are not innate properties of the good but rather a social construct, that is, the result of a political or social choice. However, we live in a world of wide disparities and differences. Therefore, preferences for public goods, including GPGs, will likely vary. This raises the question of who makes the decisions on GPG provision, regarding, for example, which goods to provide, where on the public-private continuum to locate them and how to distribute costs and benefits.

To complicate matters further, many GPGs, perhaps the majority, are global public not only in consumption but also in provision.<sup>3</sup> They require inputs from all countries and often all people, such as in the case of climate change mitigation. In these cases, the GPG often emerges from a summation or aggregation of inputs provided at multiple levels by multiple groups of state and nonstate actors functioning in multiple policy areas, as depicted in Fig. 24.1.<sup>4</sup>

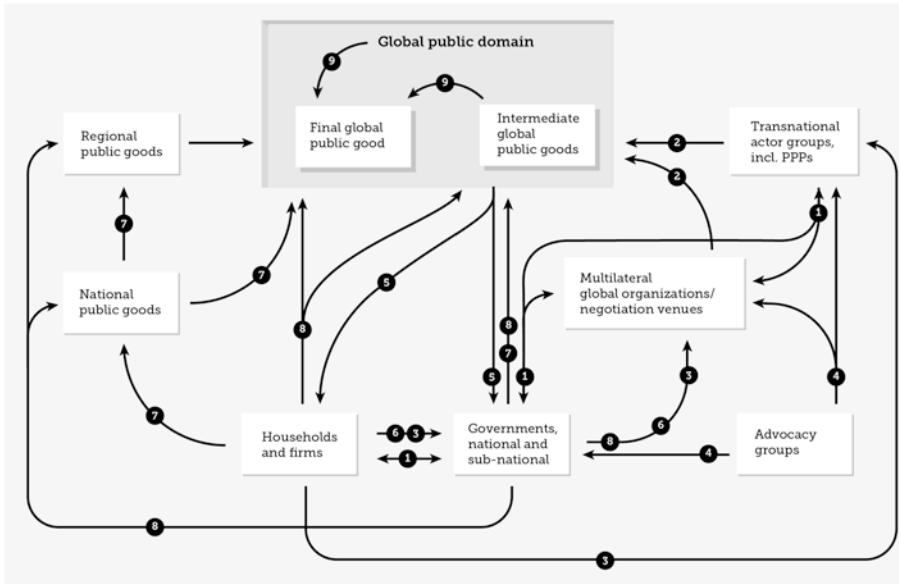
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(2006), Barrett (2007), Costanza et al. (2015), Kaul (2016), Kaul et al. (1999, 2003), Kaul and Conceição (2006), Nordhaus (2006), Sandler (2004), Sandmo (2000, 2007), Stern (2007, 2015), and Stiglitz (2014). A comprehensive overview of the social science literature published between the early 1970s and 2015/2016, explicitly employing the analytical lens of public goods for the examination of the phenomena referred to here as GPGs (though perhaps employing terms such as international or transnational public goods or global commons), is presented in the work of Kaul et al. (2016).

<sup>3</sup>The term “provision” refers to both the political (negotiation or decision-making) side and the operational (implementation or production) side of the generation or maintenance of GPGs. In many instances, both sides are closely intertwined. However, in the following, when a statement refers primarily to only one side of the provision process, the term “political decision-making” or “production” will be used.

<sup>4</sup>Based on Hirshleifer (1983), three main types of so-called production technologies are being distinguished: (1) summation technology, which is given, when each input adds to the overall availability of the good (e.g., climate change mitigation); (2) weakest-link technology, in the case of which the smallest contribution determines the good’s overall availability (e.g., dyke construction or terrorism control by way of passenger screening at airports); and (3) best-shot-technology, where one single contribution (e.g., the discovery of a new vaccine by one inventor) determines the good’s availability. See, for a more detailed discussion on this topic, for example, Cornes and Sandler (1996). However, important is to add that, frequently, GPG provision depends on the availability of inputs that each follow one or the other produc-





- 1 Incentives**  
Encouraging actors to deliver direct and indirect inputs or change behavior to take account of global concerns
- 2 Opportunities**  
Generating goods and services that either feed directly into a global public good (GPG) or facilitate its provision by individual state and nonstate actors
- 3 Demands for international cooperation**  
Reflecting national preferences for cooperation beyond national borders
- 4 Political pressures**  
Coming from transnational advocacy and lobbying groups calling on governments, intergovernmental organizations and other potential providers to help fund or deliver GPGs
- 5 Consumption**  
Consuming the benefits and/or costs of intermediate public goods intended to motivate and empower individual actors to contribute to the final GPG
- 6 Coercion and nudging**  
Measures designed to 'push' or 'pull' individual actors towards enhanced externality management or other forms of cooperation
- 7 Externality**  
Public effects emerging from actions by individual actors
- 8 Direct provision**  
Financial and non-financial inputs directly provided by individual states to national and regional public goods
- 9 Linkages**  
Feed-in effects from intermediate public goods into the targeted final GPG and inter-linkages between this good and other GPGs in the global public domain

**Fig. 24.1** The provision path of global public goods  
Source: Kaul, Blondin and Nahtigal 2016:xxxix

If the goal is to ensure adequate GPG provision, then a logical first step in this direction would be to place the good to be produced at the center of public policy analysis and policymaking and not the interests, preferences and priorities of actors, as is the case in standard economic theory. Most economics

tion technology and, not uncommonly, even, in themselves, a combination of these technologies, as discussed in Kaul and Conceição (2006).

textbooks refer to the “Samuelson rule,” which says that the supply of a public good is optimal when the aggregate marginal willingness of all consumers in society to pay for the good equals the good’s marginal costs of production. However, such an optimally provided good could be severely underprovided, because, for various reasons, such as bounded rationality, the sum of the concerned actors’ willingness to pay may not cover the full costs of adequate provision. Goods with specific systemic integrity requirements, in particular, may thus remain underprovided and continue to threaten the sustainability of global growth and development.<sup>5</sup> It is, therefore, important to establish in each case clearly observable indicators of adequate provision.

Publicness in consumption may give rise to “free-riding” and other types of collective-action problems.<sup>6</sup> Within the domestic context, an important role of the state is to help prevent and correct such problems. However, the institution of the state has no full equivalent at the international level. Moreover, when acting in an international-cooperation context, states are individual actors likely to represent and pursue particular national interests, which might overlap only partially, if at all, with the provision requirements of the relevant GPG; and as with other individual actors, they, too, may be tempted to free ride. Although recent research has shown that such behavior is not as common as assumed in standard economic theory, it may still occur; therefore, in the case of GPGs, care must be taken to effectively incentivize both, concerned nonstate and state actors, to contribute to the supply of these goods.<sup>7</sup>

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<sup>5</sup> Some public goods, including GPGs, such as the global knowledge stock, lend themselves to gradual and continuous improvement. By contrast, other public goods generate expected benefits (or stop generating costs) only if their requirements for systematic integrity or other standards of adequate provision are met. Thus, effective international cooperation is particularly critical in the case of these latter public goods. For example, climate change mitigation depends on achieving defined reductions in global CO<sub>2</sub> emissions by defined target dates. For a discussion on different types of adequacy standards, see, among others, Barrett (2007), Conceição (2003), Costanza and Mageau (1999), and Rockström et al. (2009).

<sup>6</sup> The assumption of individual actor being tempted to free ride in the presence of public goods dates back to a thought experiment in David Hume’s *Treatise of Human Nature* ([1739] 2015) what would happen to the provision of public goods if all actors were rational and pure selfish individuals. By implication it follows that they would most likely wait and see whether others provide the good, hoping that they themselves might be able to enjoy the good for free once it is available. But if many or all act in this way, the good (assuming it is not a best-shot good) is likely to be underprovided or not available at all. Hence the assumed rational actors would in due course realize that they are “rational fools” (Sen 1977:317). However, over time, this assumption has been treated as if it were a well-established fact, despite mounting evidence showing that many individual—state and nonstate—actors have, as Sen (2007) says, plural affiliations, identities and, hence, mixed motivations—in the presence of private goods and public goods. Some may even be “pure cooperators.” See, on the evolution of the thinking about the behavior of states in international cooperation, also Kaul et al. (2016), notably Section II.

<sup>7</sup> In fact, offering effective and efficient incentives to states is of special importance, because, if they hesitate to cooperate and contribute, they might underprovide the incentives that nonstate actors require to overcome their respective private-business or other personal interest hurdles and dual—state and nonstate—actor failure might occur. The terms “private-business” and “personal interest” hurdles do not

Clearly, if any one country or group of countries wishes to modify the current provision level or form of a GPG that is public in provision, multilateral cooperation would be needed. During previous decades, such cooperation could sometimes be brought about through power politics. However, owing to growing global trends toward multipolarity, connectivity, political freedom and policy engagement by civil society, demands for an effective voice in matters that concern them have also been growing among actor and stakeholder groups; and in many GPG-related policy fields, power politics are increasingly losing whatever effectiveness they might have had in the past. Therefore, to foster willingness to cooperate among all concerned, it is important to match the interdependence that GPGs entail, owing to their publicness in consumption and provision, with publicness in decision-making, so all parties involved have an opportunity to express and defend their interests and views about how to shape and produce a good and share the benefits and costs.

With advancing globalization, formerly national or regional public goods have increasingly been globalized. In part, this has happened intentionally to facilitate international investment, trade, transport, communication and travel. This outcome shows that, as with standard publicness in consumption and, notably, non-excludability, global publicness in consumption and the resulting publicness in provision are often a social construct. However, in part, the globalization of public goods has also happened unintentionally via spillover effects or externalities emanating from increased cross-border economic activity and connectivity.<sup>8</sup>

The number of human-made GPGs, in particular, has risen (e.g., the Internet, the rapidly expanding global stock of knowledge and technologies and the thickening global normative framework, including agreements regulating international trade, finance and transport or the use of weapons). Together with the growing overuse of natural GPGs and global spillover effects, such as forced migration, resulting from the underprovision of international peace and security as well as environmental security, there are now more issues to debate and act on concerning GPG-type global challenges.

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imply that nonstate actors pursue only selfish economic interests as the rational-choice actors in the conventional public goods theory are assumed to do. Yet, they may be mixed-motive or pure other-regarding actors. However, even then, their top-priority concerns may, if at all, only partially overlap with the provision requirements of the GPGs that need to be addressed. On the behavioral assumptions underlying individual actor's willingness to cooperate see, again, the literature review in Kaul et al. (2016) referred to in footnote 2.

<sup>8</sup>Externalities or spillover effects arise when an individual actor or a group of actors undertakes an action that affects third parties, perhaps even society as a whole for which the latter do not pay or are not being paid for. As Fig. 24.1 shows, externalities may be among the effects that affect the availability of public goods, including GPGs, for better or worse.

In light of the foregoing considerations, it appears that achieving adequate and production-efficient GPG provision is likely to depend on the following three conditions being met:

- 1) GPG provision is recognized as a new, additional focus of public policy analysis and policymaking at the national and international level.
- 2) State and nonstate actors are incentivized, if and as necessary, to contribute their voluntarily committed or otherwise determined share to GPG provision and, upon request, to cross their individual interest hurdles and make additional necessary contributions to achieve agreed targets of adequate provision.
- 3) The provision process is organized so as to afford concerned actors and stakeholders an effective voice in matters that might affect them.

Considering the present lengthening list of unmet global challenges, it is expected that the aforementioned conditions of adequate provision are currently not yet being fully met. Therefore, the question to address now is: Are change initiatives under way that allow to empirically assess the plausibility of the stipulated conditions of adequate provision and to refine or revise them?

### **3 Examining the Current State of Governance for Global Public Goods Provision**

Even a cursory look at today's public policymaking at national and international levels shows that a range of diverse change initiatives along the lines previously suggested are underway, and, as expected, most are isolated, ad hoc or pilot initiatives. It seems that, so far, GPGs are primarily being addressed through the current market-centered public policy approaches and treated as if they were national public goods or development-cooperation concerns.

To illustrate the situation in respect to each of the three enabling conditions, here are a few examples of recent change initiatives.

#### **3.1 Global-Issue Focus**

Undoubtedly, GPG-type policy challenges figure ever more prominently on both national and international policy agendas. Most also form the subject of a large and growing number of academic journal articles, books and other

types of publications, often supporting or emanating from a continuous stream of international meetings and conferences on related topics.<sup>9</sup> However, as Kaul et al. (2016) show, many of these analyses and debates deal with a specific scientific, technical or economic facet of a good or, as most social science contributions tend to do, examine the behavior of particular actors at a particular level of governance in the presence of GPGs, notably looking for select evidence on whether or not publicness in consumption encourages free-riding. To date, it is still rare to find analyses that look at a good, including its provision path, in a comprehensive, holistic and integrated manner.<sup>10</sup>

A further example of a growing global-issue focus is that GPGs like, for example, climate change, financial stability and control of weapons of mass destruction, have become specialized subfields of diplomacy.<sup>11</sup> In addition to national diplomats specializing in negotiating GPG-related issues, there are special representatives of the UN Secretary-General, whose role it is to help focus the policy attention of the international community on particular GPGs.<sup>12</sup> Mention can also be made in this context of the large number of global funds and programs such as the Global Fund for AIDS, Tuberculosis and Malaria, which support developing countries in addressing GPGs<sup>13</sup>, and initiatives such as the Base Erosion and Profit Shifting Project, ICANN and CleanSeas, which aim at mobilizing developed and developing countries to cooperate on producing a particular GPG.<sup>14</sup>

In addition, although GPG-type global challenges have entered the policy debates, the conventional public policy paradigm also continues to exist, together with its actor focus and its basic underlying principle of national

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<sup>9</sup>The Google search engine listed in response to the entry “global reports on global challenges” 6.5 million entries in 0.47 seconds and 5.3 million entries in 0.42 seconds in response to “reports on transnational challenges” on 12/05/2018.

<sup>10</sup>The report of the Intergovernmental Panel on Climate Change (IPCC 2014), for example, presents detailed analyses of a wide range of issues relating to specific facets of climate change mitigation and adaptation. However, while interlinkages are mentioned, each aspect is discussed separately. Yet, it seems that the “need” for a more integrated approach is being realized, judging from the fact that terms such as “orchestration” and “regime complex” are emerging and being applied in a number of GPG-related policy fields. See, for example, the following contributions: Dubash and Florini (2011)—on energy governance; Hale and Roger (2014) and Keohane and Victor (2010)—on climate change; Nye (2014)—on cybersecurity; and Ocampo (2017)—on the provision of global liquidity and macroeconomic policy coordination. In the same vein, Frenk and Moon (2013) and Kickbusch and Szabo (2014) refer to global health as a new policy space to be in an integrated way, across borders.

<sup>11</sup>See, for an overview of the new fields of diplomacy that have emerged with advancing globalization, Cooper et al. (2013).

<sup>12</sup>The list of the special representatives of the UN secretary-general can be retrieved from: <https://www.un.org/sg/en/content/other-high-level-appointments/>

<sup>13</sup>See <https://www.theglobalfund.org/en/>

<sup>14</sup>See <http://www.oecd.org/tax/beps/> <https://www.icann.org/> <http://cleanseas.org/>

policymaking sovereignty. This has given rise to states now often confronting contradictory policy demands, as, among other things, evident from the two landmark agreements of 2015, the 2030 Agenda<sup>15</sup> and the Paris Agreement.<sup>16</sup>

By way of illustration, although the 2030 Agenda highlights the importance of addressing several GPG-type challenges and claims to be “a charter for people and the planet” (para. 51), it also repeatedly emphasizes the importance of respect for each country’s policymaking sovereignty and primary responsibility for its own development (including, e.g., paras. 46, 47, 63 and 66). However, it does not indicate how to reconcile national policymaking sovereignty and adequate GPG provision, should the latter require states to contribute more (as it often does) than what they are willing to do in relation to a particular good, both individually and collectively.

The Paris Agreement takes some cautious steps toward addressing the issue of combining national policymaking sovereignty and global exigencies, by urging, in its preamble, the parties to the agreement, when acting on climate change, to be mindful of their “respective obligations” on, for example, human rights, the right to development and intergenerational equity and to promote “environmental integrity” (Article 4, para. 13). However, this is done by relying on voluntarism in addressing global challenges, with stipulations that each party to the agreement should “prepare, communicate and maintain successive nationally determined contributions that it intends to achieve” (ibid.:4). This approach is being pursued, despite warning calls from renowned experts that the aggregate number of voluntary commitments might not result, as Article 2 of the Paris Agreement stipulates, in holding the increase in the average global temperature to well below 2 °C above pre-industrial levels but, preferably, to 1.5 °C.

Thus, there exists an awareness of GPGs and their importance for sustainable global growth and development. The problem is that this recognition has apparently not yet been translated into requisite institutional innovation. In particular, a clear policy on how to combine national policymaking sovereignty and local-context specificity with global exigencies such as the requirements of adequate GPG provision appears still to be lacking, as the following discussion demonstrates more clearly.

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<sup>15</sup> For access to the text of the Agenda, see again footnote 1.

<sup>16</sup> The text of the Paris Agreement can be retrieved from <https://unfccc.int/>

## 3.2 Incentives Aimed at Fostering Adequate GPG Provision

The Paris Agreement (Article 4, para. 2) requires each party to prepare, communicate and maintain successive nationally determined contributions (NDCs) to climate change mitigation that it intends to achieve domestically. As of June 2018, more than 170 countries have done so.<sup>17</sup> However, NDCs assessments indicate that they do not yet keep global warming below the 2 °C target (UNEP 2017).<sup>18</sup> Similar findings of interventions falling short of requirements can be found in other global challenge areas, including global macroeconomic stability, financial market regulation, control of tax evasion, multilateral trade, communicable disease control, removal of marine litter and restoring ocean health, water security and nuclear weapons control.

These shortfalls should not come as a surprise. Evaluations of World Bank programs and projects in areas involving GPG-type challenges have repeatedly found that countries intervene in these policy areas but tend to do so to the extent that national and global interests overlap (see WBG-IEG 2008; WBG-OED 2004, 2002). For example, states may address global challenges, such as climate change mitigation, if those interventions also contribute to achieving national policy priorities (e.g., cleaner air, which, in turn, might reduce the burden of respiratory diseases). As noted, the reasons for this behavior could be many, ranging from selfishness or perceived unfairness in the distribution of costs and benefits to various problems of bounded rationality. Importantly, very similar behavioral patterns exist in both developed and developing countries.<sup>19</sup> In other words, GPG provision often happens as a by-product of intended or unintended global co-benefits emanating from policy actions that could be driven mainly by national or other individual motives—not necessarily because the main policy goal is to foster adequate provision.

In light of this, the recent change in the dominant narrative on GPG provision is surprising, because it seems to be a step backward from deliberate interdependence management and enhanced sustainability. Previously,

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<sup>17</sup> See <https://unfccc.int/process/the-paris-agreement/nationally-determined-contributions/ndc-registry/>

<sup>18</sup> See also Burck et al. (2018) and <https://climateactiontracker.org/publications/paris-tango-climate-action-so-far-2018-individual-countries-step-forward-others-backward-risking-stranded-coal-assets/>

<sup>19</sup> Mention can in this context, for example, be made of the US withdrawal from the *Paris Agreement*: <https://unfccc.int/news/official-communication-from-the-us-on-its-intention-to-withdraw-from-the-paris-agreement>; and Germany's "jobs first, then climate" policy that led to its delayed exit from coal and the postponement of achieving its declared climate goals: <https://www.dw.com/en/germanys-coal-exit-jobs-first-then-the-climate/a-44046848/>



analysts usually referred to the national benefits of contributing to GPGs as being co-benefits. According to Helgenberger and Jänicke (2017:1), they have now moved “from the sidelines to the centre” and become “key drivers of the global transition towards the new renewable energy world.” This change in narrative could reinforce the conventional focus on national self-interest of public policy rather than encourage a more realistic and enlightened understanding among national policymakers and their constituencies that, in this age of policy interdependence, effective international cooperation is in many cases in their national self-interest, more so than non-cooperation.

The World Bank evaluations suggest that the observed national interest-oriented response pattern might be related to the Banks’ and other multilateral development banks’ (MDBs’) conventional country-focused business model and its main policy instrument: sovereign loans. This could certainly be the case. But, why then do the shareholders of the MDBs continue to rely primarily on this instrument for GPG purposes? Could the reason lie in the growing reliance on private finance for public policy purposes that is increasingly being advocated in recent years?

The arguments for increased private sector involvement usually rest on the premise that governments face serious fiscal constraints and that, therefore, the estimated investment needed to foster global sustainable growth and development by far exceeds the volume of available public finance. At the same time, so the argument goes, large volumes of capital are looking for investment opportunities that generate stable, long-term rewards, such as physical infrastructure projects.<sup>20</sup> According to the Blended Finance Task Force report (2018:9), “The growth of the green bond market from US\$ 7 billion in 2012 to an estimated US\$ 295 billion outstanding at the start of 2018 shows appetite among investors for this kind of product.” Hence, to increase and accelerate developmental progress, including enhanced GPG provision, it is desirable for governments to strategically use scarce public finance to attract private investment to relevant national projects.<sup>21</sup>

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<sup>20</sup> See, on the now widely advocated reliance on private finance, for example, Bhattacharya et al. (2016), MDBs (2017), OECD (2018), and WBG (2017a, b). For studies arguing for a financing approach based on a more systematic consideration of the role specificity and complementarity between public and private finance for development and the provision of GPGs, see, among others, Development Initiatives (2016), Griffith-Jones and Ocampo (2018), Kaul (2017), Müller (2016), and Oxfam (2018).

<sup>21</sup> In this context, it is also important to note that, in part, the financing for private-sector incentives comes out of the resources available for official development assistance (ODA). In addition, ODA is increasingly being used to cover a part of the costs that developed—“donor”—countries incur for hosting, in their country, refugees or undertaking civilian reconstruction efforts in developing countries, such as Afghanistan, in which they are involved in military activities (see OECD 2016). In addition, an increasing volume of MDB lending is being allocated to enhanced risk management and strengthening the resilience of local communities to cope with external shocks and other ill-effects resulting from GPG



Although much policy attention is being devoted to ensuring the availability of attractive national and international public incentives for the private sector to contribute to development and, thereby, also to GPG provision, international incentives directed at governments to do more than they would, if they were guided by national interests only, are less precisely defined. For example, if a national development project that is likely to generate positive cross-border spillovers or global co-benefits entails higher costs than one that does not produce such effects, international development partners tend to offer, through bilateral channels or, more often, multilateral channels reimbursement for those incremental costs that the client country incurs if it decides to proceed with the former type of project. However, from the available literature and data on international cooperation finance, it is difficult to determine: how incremental costs are being calculated; how the criteria and method for determining them may vary, depending, for example, on the issue at stake and the development level and other characteristics of the country undertaking a qualifying project; the schedule of payments (i.e., whether they are paid *ex ante* or only upon completion of the project); the volume of disbursements for this purpose; and the likely attractiveness and effectiveness of incremental cost-reimbursements as an incentive instrument.<sup>22</sup>

Of course, fostering sustainable development is in the long-term self-interest of all countries. However, if the MDBs, for example, ratchet up, as they have done,<sup>23</sup> their lending targets for climate investments in developing countries while richer countries renege on theirs, how does this then square with the principle of common but differentiated responsibilities and respective capacities (CBDRRC)?<sup>24</sup> Could it be that the developing countries perhaps take on more than their fair share of the global adjustment burden?

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underprovision (see Kaul 2017). These are important initiatives. But, they do not resolve the underlying problem or, if so, then only marginally. Moreover, it would be important to assess whether and to what extent they might undercut or distort national development efforts in poorer developing countries on which effective GPG provision depends, for example, in the fields of communicable disease control or fighting international terrorism.

<sup>22</sup> See, on this, also the WBG's Guidance Note on Shadow Price of Carbon in Economic Analysis, dated November 12, 2017, which is based on the report of the High-Level Commission on Carbon Prices (2017). Available at <http://documents.worldbank.org/curated/en/621721519940107694/pdf/2017-Shadow-Price-of-Carbon-Guidance-Note.pdf>

<sup>23</sup> See, on this topic, the MDBs' joint 2018 report on their climate finance in 2017, which shows (*ibid.*:5) that 80 percent of their climate finance supports mitigation and only 20 percent adaptation, despite the Paris Agreement's call (in Article 9, para. 4) for aiming to achieve a better balance between mitigation and adaptation. <https://reliefweb.int/sites/reliefweb.int/files/resources/2017-joint-report-on-mdb-climate-finance.pdf>

<sup>24</sup> The principle is enshrined in UNFCCC Article 3(1). See <https://unfccc.int/>. On the importance of the principle as a negotiation tool, see Brunnée and Streck (2013).

The main focus of the policy debates and operational activities at present is clearly on mobilizing voluntary contributions from state and nonstate actors—encouraging bottom-up contributions. Much less attention is being devoted to the question of provision-gap closure. Of course, one could argue “first things first”: how far GPG provision can be stretched by relying on available “scarce” public finance and private finance before offering additional incentives aimed at provision gap closure. But, is it realistic to assume that, one day, individual state or nonstate actors will volunteer to pay for restoring the health of the ocean? Moreover, is taking corrective action on this issue not urgent right now? Why not also accelerate progress by setting up pooled international financing arrangements such as advance market commitments (AMCs) to encourage R&D in issue areas such as sea water desalination to ensure water security? Why not introduce select global taxes, such as a global carbon tax (accompanied, if warranted for global equity reasons, by transfers from developed to developing countries) or a tax on aviation and bunker fuel? These would generate public revenue, thereby relieving current public resource constraints and allowing states to offer more effective incentives, nationally and internationally, including attractive grant (cash) payments to “best” providers of inputs needed for provision gap closure, especially in policy fields in which existential risks exist and critical thresholds are fast approaching.<sup>25,26</sup>

An existential, global sustainability threatening provision gap, which is often overlooked, exists in the field of global norms, notably in respect to the

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<sup>25</sup> Numerous studies on the feasibility and desirability of various types of global taxes and other innovative sources and instruments to mobilize additional public finance have been undertaken. See, for example: Atkinson (2005), Kaul and Conceição (2006), Leading Group (2010), and UNDESA (2012). So far, however, governments have shown limited interest in pursuing these options. For example, as of April 2018, only 26 countries have a national carbon tax (WBG and ECOFYS 2018:8). In fact, like in other policy fields, policy approaches to carbon pricing have also shifted away from promoting global, cooperative arrangements to relying on initiatives taken by individual national and sub-national jurisdiction or firms and, importantly, by appealing to actors’ self-interests. Promoting political support for policy initiatives is important. However, will promises of appropriable individual benefits allow provision gap closure or further reinforce individualistic—rather than mixed-motive or other-regarding—political attitudes and behavior? Also, will reliance on voluntary incremental progress happen fast enough to avoid crossing global tipping points? And what are the implications of leaving matters to individual voluntary change initiatives for compliance with the CBDRRRC principle? These and other questions about GPG provision gap closure and global sustainability find only passing, if any mention in some of the newer studies on carbon pricing, which tend to hope for multiple isolated incremental change initiatives to set in motion an upward spiral of ambition and progress over time. See, among others: Cramton et al. (2017), Edenhofer et al. (2015), High-Level Commission on Carbon Prices (2017), and Klenert et al. (2018). Also, despite still rising greenhouse gas emissions (see IEA 2018), limited progress on mobilizing new and additional revenue from measures such as carbon taxes, and actual or perceived fiscal constraints, states, including the G20 member states also still go slow on reducing or eliminating altogether fossil fuel subsidies. See Coady et al. (2017).

<sup>26</sup> On existential and nonexistential risks, see Bostrom (2013), GCF (2017), and World Economic Forum (2018).

norm of global fairness and justice and its operationalization through measures such as adequate compensation of countries affected by ill-effects resulting from GPG underprovision, be it climate change or lack of international peace and security. Clearly, cash transfers are required for these purposes—because how is it justifiable that countries which voluntarily or involuntarily provide specific services to the global community (such as Jordan and Lebanon do by hosting Syrian refugees) have to take a loan from the World Bank Group (WBG), even when provided at a concessional rate, but “donor” countries can, as noted earlier, report part of the in-country costs of hosting refugees they incur as official development assistance (ODA)?

Tapping new sources of finance even if only on a temporary basis to tackle the current backlog of unmet challenges could go a long way toward closing existing provision gaps and resolving global challenges, not just addressing them a “bit.”

However, looking at the incentive picture as a whole, it appears that governments themselves are quite reluctant to engage more effectively in international cooperation and, to this end, introduce institutional innovations and mobilize requisite public finance, even though the opportunities for doing so exist. As Mazzucato (2015) argues, this behavior may reflect the dominant thinking about states as being less efficient and effective than markets, which has prevailed in many countries in the past several decades. Such thinking, according to Mazzucato (*ibid.*:10), “creates a self-fulfilling prophecy: the less big thinking a government does, the less expertise it is able to attract, the worse it performs, and the less big thinking it is allowed to do and capable of doing.” Therefore, governments become “increasingly timid” and “austerity driven” (*ibid.*:15). Given this context, it is not surprising that the World Bank’s shareholders agreed to follow a so-called cascade approach of financing<sup>27</sup> and, despite all the challenges the world faces, transfer a paltry amount of US\$100 million a year from the Bank’s net income or profit on its lending to middle-income countries to be used for GPG-related purposes.<sup>28</sup>

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<sup>27</sup>The cascade approach is to ensure that only, if all other efforts fail, public and concessional finance will be used. See, for a graphic presentation of the approach, WBG (2017a:6).

<sup>28</sup>In her comment on this decision, Nancy Birdsall (2018:2) states that this is not big money but a breakthrough, as this decision “opens the door to continued and increasing annual transfers for a set of GPGs critical to the development and poverty mission of the Bank (and other MDBs).” But again, the question of how these US\$100 million a year (which moreover represent money coming from middle-income countries) compare to the value of the global co-benefits emanating from GPG-related activities in developing countries, benefitting both, North and South, arises. This perspective on GPGs as “being good for developing countries” is, as noted, correct but only capturing half the story, because these goods are in

Although reliance on private finance is undoubtedly an efficient and effective way to proceed in certain investment areas, it may not be the right type of finance in other areas, including national capacity-building, so that governments can efficiently and effectively play their part in ensuring that agreed public policy goals are being realized. However, it appears that, at present, there is not much discussion about the role specificity of public and private finance in promoting GPG provision—let alone adequate GPG provision. The reason may be the strategy of generating GPG inputs as co-benefits of national development initiatives and the lack of provision path analysis and, hence, a fuller understanding of all the required inputs, including private goods and public goods national, regional and global.

### 3.3 Publicness in Decision-Making

Turning to the third enabling condition identified in Sect. 2, one response to the growing demand for more open and participatory international decision-making on the part of developing countries has been greater reliance on multilateral forums or, as Ocampo (2016:13) says, “elite multilateralism,” that is, bodies, such as the Group of Seven (G7),<sup>29</sup> the Group of 20 (G20)<sup>30</sup> and the BRICS.<sup>31</sup> In addition, public-private forums, such as the World Economic Forum (WEF),<sup>32</sup> and civil-society forums, such as the World Social Forum (WSF),<sup>33</sup> have emerged as important platforms for global policy dialogue. Regional associations, too, have multiplied. Perhaps as a result of these trends, intergovernmental bodies have strengthened their outreach to nonstate actors.

For example, the G20 has made special efforts to enhance its legitimacy by establishing seven engagement groups: the Business 20, Civil Society 20, Labour 20, Science 20, Think Tank 20, Women 20 and Youth 20, as well as many other more issue-specific working groups composed of experts and policymakers. Thus, the preparations for the 2018 summit meeting of G20 leaders

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many cases also good for developed countries. See, for this perspective (i.e., GPGs being good for the development of developing countries), also CGD (2016).

<sup>29</sup>The G7 includes Canada, France, Germany, Italy, Japan, United Kingdom, United States and the European Union.

<sup>30</sup>For detailed information about the composition and functioning of the G20, as well as a listing of its policy statements and reports, see the G20 Information Centre’s website at: <http://www.g20.utoronto.ca/about.html/>

<sup>31</sup>About the BRICS and their 2018 summit in South Africa, see <http://www.brics2018.org.za/>

<sup>32</sup>For the WEF’s initiatives, agenda and reports, see <https://www.weforum.org/>

<sup>33</sup>See <https://wsf2018.org/en/> for more details about the history and activities of the Forum

were reported to involve more than 60 meetings attended by a total of some 20,000 participants.<sup>34</sup> However, assessments of G20 effectiveness indicate that larger numbers of participants do not necessarily result in higher levels of decision-making effectiveness. The reason seems to be that the same views as expressed in prior meetings are repeated, sometimes by the same people (see Kaul 2018b).

Much the same holds for the multiplying informal bodies and events in the legacy of multilateral bodies, such as those in the UN system, created to facilitate information sharing, reporting and monitoring. For example, the UN High-Level Political Forum might, sometimes, foster a more integrated perspective on one or the other issue, but it is essentially just another intergovernmental body. More frequent and more participatory discussions may improve mutual understanding of the issues under consideration but not necessarily new thinking.<sup>35</sup>

Maybe, the world would face more severe challenges had international cooperation continued to be primarily intergovernmental. However, so far, more participatory decision-making has not helped to significantly narrow the hiatus between, on the one side, the ambition of the goals announced in the 2030 Agenda and the Paris Agreement and, on the other side, the vagueness of the commitments stated therein on how to realize the pronounced goals and targets. Although more participation has led to a more fractured landscape of international cooperation, it has been promoted further by some scholars and policymakers, who suggest that polycentric “bottom-up” GPG provision building on voluntary actions of individuals and communities might be a more promising way than top-down global governance (see, e.g., Hale et al. 2013; Ostrom 2010, 2014). Of course, the latter has lost whatever effectiveness it might have had in the past. However, it seems evident that bottom-up strategies alone are also unlikely to achieve adequate GPG provision, particularly in a complex “large-number” context of decision-making on GPGs that, moreover, calls for policy innovation.

To summarize, judging from the select evidence presented in this section, it appears that, although a number of change initiatives exist that indicate the growing awareness of GPG-type policy challenges, the three enabling conditions of adequate GPG provision identified in Sect. 2 are far from being met.

The immediate reason seems to be the continuing prime focus of public policymaking on individual state and nonstate actors and their respective interests and, as a result, the neglect of the adequate provision requirements of GPGs

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<sup>34</sup> See, for information about the preparations for the 2018 G20 Summit, <https://www.g20.org/en>

<sup>35</sup> See <https://un.org/> (to be amended; UN website is under maintenance).

forming part of both the natural and human-made environment. This neglect happens particularly at the operational level, when it comes to translating policy goals into policy action and real progress.

The root cause of this discrepancy between policy rhetoric and policy action, however, likely lies in the current confluence of a number of structural change processes, including increasing multipolarity accompanied by intensifying rivalry among states at a time when transformations with major distributional implications are occurring, such as the shift toward a low-carbon economy and the new fourth industrial revolution, and the role of governments is weakened owing to decades of pro-market policy thinking and practices. While GPGs by their nature call for concerted, coordinated and collective action, and while urgency is required owing to the in part existential threat posed by GPG underprovision, these trends seem to pull public policymaking in the opposite direction: toward more disaggregated and cautious, even indecisive and change-avoiding policymaking, as well as protectionism and conflict, including disputes over access to markets, resources or advanced technologies and capabilities.<sup>36</sup>

Therefore, for the most part, GPG provision today follows what might be called a co-benefit strategy: It happens when individual state and nonstate actors undertake activities that are in their particular respective interests.

It could, thus, be argued that the current underprovision of GPGs reflects, in large measure, state failure: states being content with their current limited and often fiscally constrained role rather than cooperating among themselves toward necessary governance innovation and that GPGs suffer from dual actor—market and state—failure.

So, is the world caught in a global policy trap?

The following section suggests “no,” not necessarily, because, as the foregoing discussion has shown, awareness of the need for change exists, but a key missing element is a systematic, well-founded theory of GPG provision offering feasible policy advice on how to do better in terms of combining individual interests, including national policymaking sovereignty and adequate GPG provision. Therefore, GPG provision is still being approached through conventional actor-focused rather than actor- and good-focused policy approaches. In contrast to the more structural impediments, this factor lends itself more easily to correction and could, potentially, change the global public perception of the role of GPGs for global public well-being and sustainability.

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<sup>36</sup> See, on these global trends, among others: Bremmer (2012) and Rachman (2017).

The following section offers, for further research and debate, ideas about policy instruments and mechanisms that could perhaps be explored toward this end.

## 4 Creating New Policy Instruments and Institutions

Reform ideas include (1) introducing global-issue management as a new, additional policy field and organizational criteria into existing governance systems; (2) creating a dual-track international cooperation model, composed of a development assistance track and a GPG provision track; (3) forging consensus on a notion of mutually respectful national policymaking sovereignty; (4) establishing a global stewardship council to advise on combining the interests of diverse groups of state and nonstate actors and the adequate-provision requirements of GPGs; and (5) formulating a theory of GPG provision for the present era of global multipolarity.

### 4.1 Introducing Global-Issue Management as a New Policy Field

In practical terms, this could, for example, mean establishing, at least for critically important, existential risk-entailing GPGs, dedicated units within national and international governance systems, including, for example, units for climate change, water security, infectious disease control and “known unknowns.” These units could be charged with ensuring an orchestrated and coherent process of input provision that facilitates and complements the contributions to be provided by other concerned state and nonstate actors. According to Kim and Bosselmann (2013:285), considering complex issues comprehensively could help move scholars’ and policymakers’ approach to these issues away from piecemeal contributions and toward targeted problem solving, to achieve the desired level and form of adequate provision. Global-issue management should not entail a return to the top-down implementation of international agreements often practiced in the past. It would be important to find ways, as Shaffer (2012) puts it, to avoid the comfort of a loose pluralist framework and the risk of overcentralization.

An important, even indispensable policy tool for a more holistic approach to global-issue management would be GPG provision path analyses or roadmaps, indicating, at least in broad-brush strokes, what it would take to achieve



an adequate provision of a particular good and do so in an efficient and effective manner in line with a balanced approach to the three—economic, social and environmental—dimensions of global sustainability.<sup>37</sup> If, moreover, the heads of the proposed national and international global-issue units were to form a global governance network, the coming together of GPGs could be further facilitated.

Clearly, making this rather straightforward idea of global-issue management operational is likely to entail considerable theoretical and empirical research and debate, including, in many countries, a rewriting of budget rules and a shift in the current resource allocation patterns, as the discussion on the next research topic shows.

## 4.2 Devising a Two-Track Model of International Cooperation

To promote GPG provision in a way that considers the differences and disparities among countries, it is critical to end the current practice of confounding development assistance and GPG provision and introduce, as a further institutional adjustment, a business model of operational international cooperation composed of two main tracks along the lines depicted in Fig. 24.2.

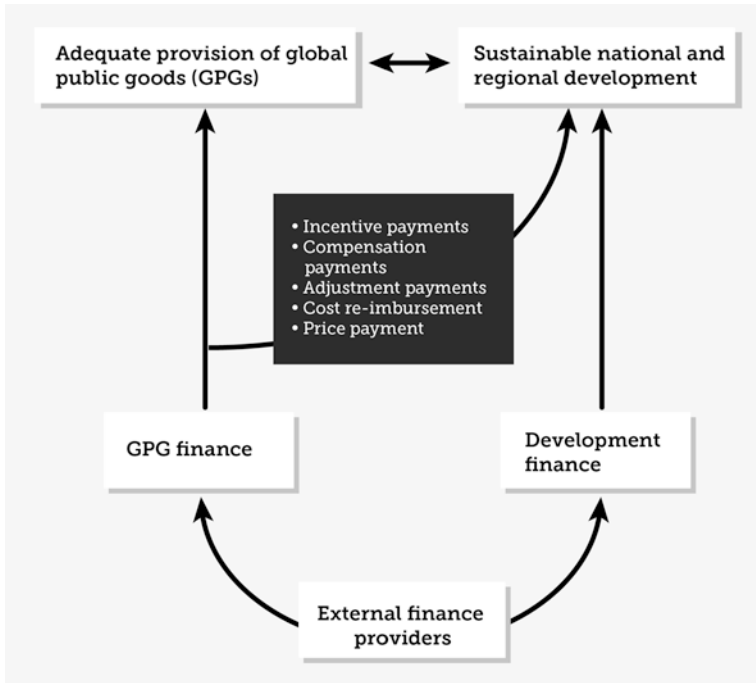
*Track 1* This is the existing country-focused business model aimed at supporting countries and, upon request, regional entities in devising and implementing national and regional development programs and projects, including the intended nationally and regionally determined CO<sub>2</sub> reductions that states have agreed to undertake as their contribution to climate change mitigation.

*Track 2* This is a new, additional business model focused on GPG provision with emphasis on “closing the gap” between what individual actors are willing to do for certain GPGs, in line with established principles, such as common but differentiated responsibilities and capacities, and what is required to meet the systematic integrity requirements of GPGs or other internationally agreed standards for adequate provision. To this end, the track 2 model must determine, as noted, effective and efficient ways (many still to be invented) of incentivizing and enabling state and nonstate actors to voluntarily move beyond trying to satisfy their individual interests and offer additional contributions.

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<sup>37</sup> Pathway analysis is an approach already being used by scholars in the field of earth system governance “seeking to advance understanding of the governance processes by which to steer human behavior in a way that maintains safe and stable conditions for human well-being on planet earth” (Biermann 2014:25). For an overview of the literature in this field, see besides Biermann (ibid.) also Patterson et al. (2017).





**Fig. 24.2** Two-Track International Cooperation Model  
Source: Based on Kaul 2017:23

Most track 2 activities are likely to require grant resources. Thus, it is important to provide well-founded proof that these activities merit considerable investment, from the viewpoint of individual contributors as well as a global perspective. Considerations include whether to establish (1) a regular budget for recurrent track 2 activities, because, in some cases, such as biodiversity preservation, maintaining adequate provision is likely to be a continuous, longer-term effort; and (2) program budgets for major shorter-term interventions. For both, appropriate scales of assessment and cost-sharing formulas should be instituted.

Further reform steps include states agreeing that the financing for track 2 operations should come out of state budgets in areas linked to GPG-related focal points, that is, for example, from ministries of health or the environment and not, in the case of “donor countries,” out of development assistance budgets, as proposed by Kharas and Rogerson (2017) and Kaul (2017). Separating development assistance and GPG financing could help avoid the current inefficiencies resulting from blending these resource streams and help promote more incentive-compatible international cooperation.

Another option could be to mandate the World Bank to set up a new operational arm with its own governance arrangements. This entity could function, in close cooperation with other MDBs and global-issue financing mechanisms, as the core agency responsible for track 2 operations.

### 4.3 Integrating a Global Perspective into National Policymaking Sovereignty

States might initially regard the previous proposals as limiting their sovereignty or representing a step beyond the partial commitments to externality management and concern for the planet as a whole they have become involved with over recent decades (Bosselmann 2017). Given this perspective, what could persuade states to enact the proposals mentioned in the previous subsection, all of which imply states' consent for a qualified notion of national policymaking sovereignty? According to some scholars it is simply enlightened self-interest.

According to Kaul (2013) and Kaul and Blondin (2016), states may increasingly realize that, in policy fields involving interdependence, a hesitation to engage in international cooperation, motivated by concern to safeguard national sovereignty, often generates a "sovereignty paradox": global challenges will remain unresolved and, therefore, states will find themselves subjected to one crisis after another, losing control over their policy agendas and, as a result, policymaking sovereignty. Therefore, defining a sovereignty-compatible rationale for international cooperation might be the critical missing link in addressing this paradox. This may require forging consensus on a notion of mutually respectful exercise of national policymaking sovereignty, as discussed in Box 24.1.

#### **Box 24.1 A Responsible Exercise of National Policymaking Sovereignty: A Collective Way of Safeguarding National Policymaking Sovereignty?**

International cooperation is often seen as undermining states' policymaking sovereignty. No doubt, it often does; therefore, governments frequently shy away from a global, concerted policy response, even in issue areas that involve transnational challenges which no single nation can effectively and efficiently address alone. In the absence of a cooperative approach, global challenges will linger unresolved, potentially making all parties worse off.

Thus, when confronting challenges that entail policy interdependence, it is often in the enlightened self-interest of all concerned states to offer fair and mutually beneficial cooperation. This requires mutual confidence and trust. Accordingly, there must be a shared commitment among states to act responsibly, both toward their own territories and constituencies—protecting against negative spill-ins from abroad—and toward other states, because non-cooperation could undermine welfare and well-being for all.

In other words, exercising responsible sovereignty means pursuing national interests in a way that is fully respectful of both the sovereignty of other nations and the systemic integrity requirements of GPGs and, to that end, oriented toward the maintenance of global balances and planetary environmental boundaries.

Just as states' commitment to the norm of collective security strengthens the inviolability of national territorial borders, a commitment to exercising their policymaking sovereignty in a mutually respectful and responsible manner could, in areas of policy interdependence, be the best way to secure their national policymaking capacity.

However, a precondition is that international-level decision-making on global challenges is marked by fairness and justice and fostering mutually beneficial policy outcomes.

Source: Based on Kaul and Blondin (2016)

A commitment to a notion of mutually respectful sovereignty could lay a solid foundation for a subsidiarity-based approach to global-issue management, because actors might be more inclined to trust each other and, therefore, be more motivated to improve their externality management in agreed global challenge areas. Thus, fewer issues would need to be repeatedly negotiated internationally, which might drive down transaction costs and enhance both the effectiveness and equity of international cooperation.<sup>38</sup>

Haas (2017) also emphasizes this point, contending that the present world order, which he calls World Order 1.0, “has been built around the protection and prerogatives of states [...] Little now stays local [...] The result is what goes on inside a country can no longer be considered the concern of that country alone. Today’s circumstances call for an updated operating system—call it World Order 2.0 that includes not only the rights of sovereign states but also those states’ obligations to others” (ibid.:2). Moving qualified notions of national policy sovereignty from theory to practice requires consensus on the details concerning the appropriate obligations of states; and, as Bodansky (2012) underlines, those obligations would vary from good to good. For example, would it be legitimate for a country to undertake climate engineering unilaterally in the hope of achieving a best outcome?<sup>39,40</sup>

<sup>38</sup>On different conceptualizations of subsidiarity, see Føllesdal (2014), and on applying the principle of subsidiarity to determining the balance between centralization and decentralization in designing public-policy initiatives, see, for example, Jachtenfuchs and Krisch (2016) and Wyplosz (2015).

<sup>39</sup>To address these legitimacy issues that Bodansky (2012) raises would require clearly defined norms and targets, as well as indicators and measurements. Interestingly, the use of such tools has rapidly proliferated in recent years, as seen from the extensive reporting and monitoring requirements set forth in the 2030 Agenda (paragraphs 72–91 of UN resolution A/RES/70/1 mentioned in footnote 1) and in the Paris Agreement (Articles 13–14 of the document mentioned in footnote 15).

<sup>40</sup>Before leaving this discussion about sovereignty, it is important to mention that the concepts proposed here differ from the notion of “sovereignty as responsibility” and the so-called R2 principle. According to

A body such as the global stewardship council proposed next might be in a position to offer states practical policy advice on alternative ways to address and settle these most likely highly controversial and contested issues.

#### 4.4 Creating a Global Stewardship Council

The main purpose of this council would be to advise the international community on making GPG provision incentives compatible and public policy-making more GPG compatible. In addition, it could help avoid the risk of a “beauty competition” among GPGs by focusing on the overall composition of the global public domain. Accordingly, the council’s membership should include representatives of GPGs requiring urgent attention and of select population groups and members representing the basic policy lessons learned about making international cooperation work effectively.

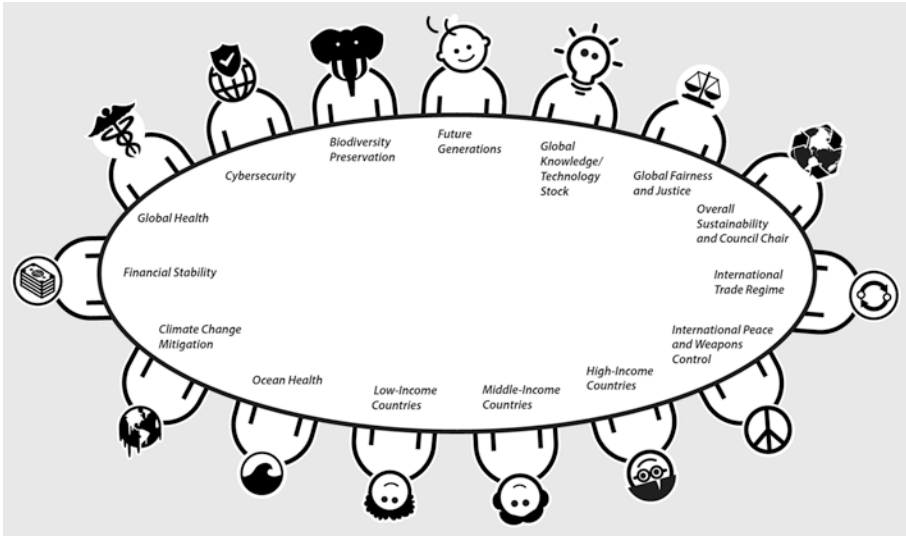
Figure 24.3 illustrates the types of issues that might be represented around the council’s conference table. The represented GPGs should be periodically reviewed to ensure that newly emerging challenges find timely and adequate consideration. Not all challenges now on the table pose existential risks. However, ensuring adequate provision of, for example, financial stability could maintain or even strengthen actors’ willingness to cooperate internationally and promote effective policy responses to more serious, existential challenges and threats, such as runaway global warming or misusing nanotechnology. The GPG representatives would focus on drawing attention to provision gap issues and suggesting ways to close them.

The other seats at the table could, for example, be held by members representing such concerns as intra- and intergenerational fairness and justice, including national and local differences and disparities between low-, middle- and high-income countries as well as those among population groups within countries.

The goal of council members’ deliberations would be to identify ways of how the different sets of interests could be combined in cooperation bargains that all the parties would perceive as the better option—compared to non-cooperation.

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this principle, states have the responsibility to protect their populations against atrocities such as genocide, ethnic cleansing or other severe human-rights violations; and if a state fails to provide such protection, the international community has a responsibility to help prevent or halt such violations. The R2P notion originated from the 2001 report of the International Commission on Intervention and State Sovereignty (ICISS 2001) and was endorsed by the UN General Assembly in its resolution A/60/L.1 of September 15, 2005. For more details, see also Thakur and Maley (2015) and [http://www.globalr2p.org/about\\_r2p/](http://www.globalr2p.org/about_r2p/)



**Fig. 24.3** A model global stewardship council  
Source: Kaul 2018a:93

The council chair could represent the overarching goal of global sustainability and encourage council members to explore linkages and foster synergies among various issues. She or he could distill from the council’s deliberations a consolidated response agenda to avoid what often happens today—one crisis grabbing the media and political spotlight from previous crises. The chair could also be the member mainly responsible for scanning the global horizon to spot newly emerging risks, the current “unknown unknowns.”

The council would not have any legislative authority but act primarily as a catalyst of global sustainability-oriented—rather than anthropocentric—thinking and policymaking. It would not conduct its own studies but rather draw on available research or suggest new lines of inquiry.

The representatives—and voices—of the issues and concerns around the table would need to be independent, world-renowned personalities, enjoying the highest professional respect, preferably with experience in steering, facilitating and orchestrating the emergence and result-oriented functioning of global networks, including multilevel governance and public-private partnering, and possessing a reputation for being firmly committed to the goal of inclusive and sustainable global growth and development.

Among the concerns still to clarify would be: how to select the council members; how to ensure that the council’s advice is heard; and where to locate it. In respect to the last point, it could be useful to find, perhaps for a span of

two years, an interim home to act as council incubator. This could be a foundation, an international consortium of think tanks or academic institutes working on issues of remodeling global governance or a group of governments, such as the G20—or all of them and others together.

In the long run, however, the most appropriate institutional base for the global stewardship council might be the UN. Considering the importance that the council would attach to the issue of combining international cooperation on global challenges and national policymaking sovereignty, the UN would clearly be the most appropriate institutional base for the council. However, it would not just be “yet another” UN forum but one that aims at giving a voice not just to all countries and people but also to the natural and human-made environment. Perhaps, the council could be linked to the High-level Political Forum on Sustainable Development<sup>41</sup> or, what would be even more fitting, an apex body such as the global economic coordination council proposed by the UN Stiglitz Commission (2009)<sup>42</sup> and Ocampo (2016), which would be mandated to facilitate coordination among the UN system entities.

#### 4.5 Constructing a Theory of Global Public Goods

As noted in Sect. 2, a large and growing body of literatures exists on most GPGs, including in the social sciences. For the most part, however, social science studies explicitly using the GPG concept examine a limited facet, notably the behavior of particular actor groups when encountering a policy issue marked by global publicness in a specific policymaking context, such as at the international, national or local-community level. As such, these studies reveal much about actor responses to publicness, which, undoubtedly, is important to GPG provision. However, the overall provision process, including how to achieve adequate provision, tends to remain outside of their focus.<sup>43</sup>

In contrast, the distinctive feature of a GPG theory is that it adopts an integrated, comprehensive and holistic perspective on the provision path of these goods and explains how it functions and could be made to meet expectations of enhanced efficiency, equity and effectiveness.

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<sup>41</sup> <https://sustainabledevelopment.un.org/hlpf/>

<sup>42</sup> This 20-member commission of independent experts chaired by Joseph E. Stiglitz was appointed by the president of the United Nations General Assembly in 2008 to assist member states in their deliberations on the world financial and economic crisis. Its 2009 report is available at: [http://www.un.org/ga/econcrisissummit/docs/FinalReport\\_CoE.pdf/](http://www.un.org/ga/econcrisissummit/docs/FinalReport_CoE.pdf/)

<sup>43</sup> For a comprehensive overview of social science contributions to GPG-related topics, see Kaul et al. (2016)

One starting point for the process of theory-building could be to “mine” relevant literatures to see which theoretical and empirical insights still hold; another could be to design and test new policy instruments and mechanisms, contributing to theory building and improving, without much further delay, the current policy practices.

The construction of a systematic theory and policy practice of GPG provision would itself be a GPG, as it would be non-rival knowledge and, if made freely and accessibly available, it could gradually become global public in consumption—a new standard policy.

## **5 Conclusion: Sparking Change Toward Governance for Global Sustainability**

The present chapter examines why GPG-type global policy challenges often suffer from under provision, posing risks to the sustainability of global growth and development. Its analysis reveals that the current system of governance acts as a major impediment. The sum of what individual state and nonstate actors are motivated to contribute often falls short of what is required for an adequate provision of these goods. Provision gaps arise and are allowed to persist and widen. This is particularly problematic in the case of goods possessing systemic integrity requirements that must be met in order for the good to provide expected benefits, such as in the case of climate change, keeping global warming below 2 °C. A reason is that, in many cases, GPGs are still treated as if they were national public goods or development cooperation concerns. They are fitted into existing policy models. Accordingly, the chapter suggests, for further research and debate, a number of concrete institutional innovations aimed at constructing the building blocks of a new branch of public policy that is GPG centered and offers well-founded advice on how to combine individual state and nonstate actor interests, including national sovereignty concerns, while achieving adequate GPG provision.

The rationale for proposing this research agenda is that, to a large extent, the present social science theories dealing with GPG-related topics reflect, even mimic and, thus, condone the current maladjusted policymaking practices, this notably by arguing for reliance on bottom-up provision and the use of private finance. New thinking along the lines suggested in this chapter could offer analytical lenses through which to look at current policymaking realities, better understand the impediments and facilitators of GPG provi-



sion and, perhaps, spark willingness among policymakers to choose new policy paths—realizing that those actually lead to enhanced interdependence management, development and global sustainability.

By implication, a major responsibility for fostering governance for global sustainability rests with social science scholars.

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