STUDIES IN ECONOMIC TRANSITION

# COLLECTED WORKS OF DOMENICO MARIO NUTI, VOLUME II

## Economic Systems, Democracy and Integration

*Edited by*

Saul Estrin · Milica Uvalic

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Studies in Economic Transition

This series brings together theoretical and empirical studies on the transformation of economic systems and their economic development. The transition from planned to market economies is one of the main areas of applied theory because in this field the most dramatic examples of change and economic dynamics can be found. It is aimed to contribute to the understanding of specific major economic changes as well as to advance the theory of economic development. The implications of economic policy will be a major point of focus.

Saul Estrin • Milica Uvalic
Editors

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Photograph of Domenico Mario Nuti

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# An Introduction to the Collected Works of Domenico Mario Nuti

Saul Estrin and Milica Uvalic

## 1.1 Domenico Mario Nuti's Life and Work

These two volumes bring together many of the most significant contributions to economic theory and policy of Domenico Mario Nuti (1937–2020).

Mario's remarkable professional career is intrinsically linked to his rich and eventful life. He was born and received a classical education in Arezzo (Italy) and grew up in the nearby Tuscan village Castiglion Fibocchi.[1] After having graduated at the University of Rome in 1961 with a thesis on "Problems and models of economic growth", he worked briefly at the

[1] Further details about Mario Nuti's life can be found in Chapter 2 of Volume 1 which contains his autobiography.

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Bank of Italy and at the Inter-Ministerial Committee for the Development of Southern Italy, seeing at first hand the problems of underdevelopment and poverty. A scholarship at the Polish Academy of Sciences took Mario to Warsaw in 1962–1963, where he learnt Polish and was taught by Oskar Lange and Michal Kalecki, two giants of socialist economics. They both strongly influenced Mario's research interests and remained lasting intellectual influences. It was upon the recommendation of Kalecki that Mario was admitted in 1963 to King's College, Cambridge, to work under the supervision of Nicholas Kaldor and Maurice Dobb towards his 1970 PhD on "Problems of investment planning in socialist economies". Mario stayed at Cambridge University until 1979 as a Fellow of King's College and later as Lecturer in the Faculty of Economics. During those years, Mario was deeply involved in the debates among Cambridge economists which embedded Mario's understanding about macroeconomics, growth and the possibilities for widespread state intervention in the economy. These experiences led Mario to develop his own intellectual framework, combining his knowledge of the socialist economy with his understanding of macroeconomic issues and leavened with his own fierce logic and systematic analysis. Mario was appointed Professor of Political Economy and Director of the Centre for Russian and East European Studies at the University of Birmingham in 1979, where he continued to explore how to combine socialist ideals with elements of a market system.

In 1982, Mario left the UK to take up the position of Professor in Economics at the European University Institute (EUI) in Florence, where he stayed until 1990. The protracted economic crises in Eastern Europe during those years brought a number of important and controversial issues onto the research agenda, to which Mario made significant contributions. While at the EUI, Mario organized seminars and conferences on socialist economies, inviting the most prominent experts on Eastern Europe, both from the East (e.g. Tamas Bauer, Janos Kornai, Vladimir Dlouhy, Grzegorz Kolodko) and the West (e.g. Jozef van Brabant, Wlodzimierz Brus, Gregory Grossman, Kazimierz Laski, Marie Lavigne). Mario's interest in comparative economic systems led him to launch another project, on economic democracy, inspired by James Meade's early work on alternative ways of firm organization. The project focused on the labour-managed firm and Italian cooperatives and involved Saul Estrin, Derek Jones, Steve Smith, Jan Svejnar, Will Bartlett and Milica Uvalic. Soon after, Martin Weitzman's

work on profit-sharing inspired new research on participatory forms in the European Community, which resulted in the publication of the PEPPER Report (an acronym coined by Mario that stands for Promotion of Employee Participation in Profits and Enterprise Results).

After the fall of the Berlin Wall, the European Commission lacked the expertise to deal with the momentous changes this event heralded, so Mario was invited to Brussels in 1990 as an advisor to DG-II (Economic and Monetary Affairs, as it then was called), with responsibility for relations with transition economies. He returned to his alma mater, the University of Rome *La Sapienza*, as Professor of Comparative Economic Systems in 1993, a position he held until his retirement in 2010, alongside other appointments. Thus, during 1993–2005, Mario was also Visiting Professor at the London Business School (LBS) working closely with Saul Estrin, head of the Centre on CIS and Middle Europe, jointly running a seminar on transition economics. Mario's engagement with policy went even deeper after 1994, when he was appointed Economic Advisor to the Polish government—under Grzegorz Kolodko from 1994 to January 1997; Marek Belka until September 1997; and again, Kolodko in 2001–2002, during the final stage of Poland's successful accession negotiations with the European Union. Mario's deep knowledge and expertise on socialist economies brought him other important assignments. He was consultant to the World Bank with a number of missions to Poland and work on post-communist economies; economic adviser to President Lukashenko of Belarus under World Bank sponsorship (1998); consultant to the IMF, ILO, NATO, UNDP, OECD; and Specialist Adviser to the House of Lords European Communities Committee (1993–1994).

Mario Nuti became an Emeritus Professor of the University of Rome *La Sapienza* in 2010 and also remained an Honorary Senior Research Fellow of the Centre for Russian and East-European Studies at the University of Birmingham. His retirement did not interrupt his research, production of papers and commentaries (including his blog, "Transition") and active involvement in various projects. In October 2017, he presented one of his last papers on "The Rise and Fall of Socialism" at a conference in Berlin published in 2018 (see Volume 2).

Mario made significant intellectual contributions across many fields, inspiring generations of students and colleagues for more than fifty years. However, he is fairly difficult to classify as an economist, not least because

in order to get to the heart of complex ideas, he played the role of an iconoclast. Much of his work was centred on trying to understand actual socialist and capitalist systems, conceptually and in practice, as well as, later, the paths from socialism to capitalism.

Our purpose in these volumes has been to select from Nuti's papers so as to make his best works, including his policy contributions, readily accessible. Moreover, in bringing his work together for the first time, we hope as well to elicit the underlying intellectual framework. Mario made contributions across a variety of topics that have resonance and significance today. In particular, he brought an original and distinctive intellectual vision to bear on some of the grand issues in economics: what drives growth and development; what is the most efficient economic system; can socialism be combined with markets; how should firms be organised; and how should economies be managed? To these questions, he provided answers which continue to have contemporary relevance. His was also a powerful intellectual voice for a more radical theoretical and policy framework to analyse the economic problems in his homeland, Italy, in the UK, and in various transition and developing countries.

Much of Mario's published output is fragmented across a variety of scholarly and policy outlets, while some of his most significant works are only available in publications that are neither readily accessible nor even simple to find. We have tried to select papers that cover the whole range of his ideas and contributions, including some unpublished papers. In some cases, we have chosen versions of his papers different from those actually published, because in our judgement, they more clearly present his analysis and arguments. Moreover, we have left the papers as written with no editorial intervention (although minor errors in subediting of texts have been corrected), so that Mario's voice can be heard as he intended through his own words.

Mario had a coherent intellectual vision which was well understood by his colleagues and close associates, and which we hope to transmit to a wider audience by publishing these volumes. Mario never produced an integrated account of his contributions, except, partly, through the blog "Transition" where he made available most of his papers written after 2009. Mario also did not produce a full bibliography of his own work. A more complete bibliography is provided at the end of each volume.

## 1.2 Structure of the Two Volumes

We have organised our selection of papers into five areas spread across the two volumes. The first volume entitled *Socialist Economic Systems and Transition* is concerned with Mario's writings about socialist economic systems, their growing problems in the 1980s and their abrupt demise at the end of that decade. The papers in the first volume are organised into two sections: Socialist economic systems and the Transition to a market economy respectively. The second volume entitled *Economic Systems, Democracy and Integration* is more wide-ranging and includes papers in three areas: Evolution of economic systems; Economic democracy; and East—West integration and globalisation. The papers in the first part of Volume 2 are more theoretical, and concern Mario's analysis of the functioning of capitalist and socialist systems. The papers in the second part focus on Mario's lifetime concern with alternative ways to organise production and the possibilities of bringing economic democracy into the workplace. In the final section, we bring together Mario's recent writings about some topical issues in the new EU member states in the 2000s, as well as his concerns about globalization, the state of the world economy and the problems of the European Union. We provide brief Forewords for each of the five sections to integrate the arguments across the papers.

In organizing these sections, the classification of Mario's writings into distinct research areas has been a heroic task, since there is a substantial overlap of underlying themes across his writings. This should be of no surprise, since a handful of fundamental concerns have been at the basis of Mario's research throughout his life, from his early days in Cambridge to his more recent work on the transition in Eastern Europe and globalisation. Perhaps the major concern that inspired much of his life-long research revolves around the quest for a more just and more egalitarian economic, social and political system. Indeed, the search for a more democratic economy and society can be found at the basis of many of his papers. As well formulated by Michael Ellman in his memorial article, "Nuti considered that economics should be about understanding the world and using that understanding to help improve the life of its population." (Ellman 2021 p. 1363).

Thus, Mario's reflections on socialist economic systems closely overlap with some of his writings on the evolution of economic systems, but also anticipate themes related to economic democracy. Similarly, the themes addressing the transition to a market economy are closely inter-related with those covered by topics on integration and global economic issues, while reflections on the evolution of economic systems are intrinsically linked to the broad area of comparative economic systems.

While he held a variety of prestigious academic positions, Mario was never just an ivory tower economist. We have seen that he was closely involved in analysing and advising international organizations about policies in Central and Eastern Europe on transition. His rigorous training in economic theory combined with his long practical experience meant that his papers on transition, as well as his more recent work on global economic issues, bring a unique perspective and provide long-lasting lessons from his analysis of what were then contemporary issues. Mario continued to reflect on major economic issues throughout his life, in his later years through his blog site, and we include few of these writings in order to indicate his thinking on these more contemporary issues.

In the remainder of this Introduction we will briefly present the five areas of Mario Nuti's opus following the classification adopted in these two Volumes.

### 1.2.1 Socialist Economic Systems

The section on Socialist Economic Systems includes his work on the functioning of the Soviet-type centrally planned economies and variants that developed during the post-Second World War period in Central and Eastern Europe. Mario's interest in this topic no doubt was strongly influenced by his early studies in Warsaw and the economic discussions at Cambridge University in the 1970s. The topics he addressed reveal his deep Keynesian (and Kaleckian) influences, focusing on investment, trade cycles and growth in socialist economies.

Mario was primarily interested in the functioning of actual socialist economies, 'realised socialism', from Soviet planning through market socialism in Hungary to the self-managing socialism of Tito's Yugoslavia.

He always favoured clear definitions and careful categorisation. He was not in sympathy with the traditional Soviet variant of socialism, which he described as 'Rugged … the bestselling type of socialism', but was more positive about the Yugoslav and Hungarian reform variants, though not entirely convinced by either. In particular, he described Yugoslav socialism as an 'ingenious and peculiar system'. More generally, he was intrigued by market socialism which he viewed as a capitalist system improved by embodying socialist features.

Mario addressed the question of why socialism everywhere collapsed in 1989 only in his later papers, but many of his writings offer important insights about the key contributors to its demise. In addition to the protracted economic and political crises, he stressed the positive role of Gorbachev's Perestroika and Poland's trade-union movement *Solidarność*. He noted that none of the reform systems had traction in their own right; when the Soviet Union withdrew and then fell, they all fell too; even the Yugoslav variant disappeared at the same time as systems based on central planning. He felt this was because the socialist systems were unable to reform themselves further and the Party was unwilling to give up its monopoly of power, even when this might have helped the long run survival of the system. In Mario's view, the collapse of the Soviet Union did not invalidate the socialist model: it was the failing of one (unattractive) variant of it. He argued that Soviet-type socialism suffered greatly from the belief that economic laws would not operate at all in the socialist economy.

### 1.2.2 The Transition from Socialism to Capitalism

Given his deep understanding of socialist economic systems, Mario was well placed to analyse questions of the transition to a market economy. In the absence of blueprints at that time, his innovative ideas on how to implement radical reforms of the socialist economy were important in defining the main objectives, speed, and sequencing of economic reforms; suggesting desirable macroeconomic stabilization and exchange rate policies; and explaining the specific supply inertia behind the deep recession

of the early 1990s. He was also deeply involved in analysing the advantages and disadvantages of different privatization methods, arguing in favour of a multi-track approach. He warned against the glorification of mass privatization 'as a method for implementing instant, irreversible, politically self-supporting, large-scale capitalism'. He also warned against simplified interpretations of dominant insider ownership, a frequent yet unexpected consequence of privatization in many countries across Eastern Europe.

Mario was also among the first to emphasize the flaws of the transition. These included the high social costs of transition: the persistence of unemployment, the rise of inequality and of poverty. These phenomena were particularly serious because they meant a drastic reversal of earlier conditions of full employment, greater equality and low poverty incidence. He was also a fierce critic of hyper-liberal economic policies, arguing that excessively restrictive monetary and fiscal policies are detrimental for economic growth.

### 1.2.3 Evolution of Economic Systems

A related area of Mario's work is about how economic systems evolve. Most economists have for years regarded capitalist systems as inherently superior to socialist ones though the latter may have some potentially attractive features in terms of income distribution and other values. Mario's analysis was more nuanced, pointing to developments in general equilibrium theory that might invalidate such claims of inherent superiority. To quote, 'I believe the neoclassical picture of the capitalist economy is fantasy because markets are both incomplete (where are the future markets for manufactured goods, or the contingent commodity markets?) and, most importantly, sequential. Hence resource allocation is ruled by price (and quantity) expectations as much as by actual spot prices, and therefore from [the] Arrow-Debreu [model] we instantly fall into a Keynesian world of expectations – whether self-fulfilling or false—of underemployment equilibria and economic fluctuations' (see Chap. 1). There is little doubt that his thinking was strongly influenced by both the Cambridge School, including his supervisors Kaldor and Dobb, but also

mathematical socialist economists from eastern Europe including Kalecki, Lange and also Dmitriev, whose work he introduced to the Anglo-Saxon world with an Introduction to the English translation of his Essays.

Mario's papers in this area were largely theoretical papers including work which criticises, from a Kaleckian perspective, the Kaldor-Mirrlees model of growth, and contributions to the lively debate between the followers of neoclassical economics and those in the Keynesian, Marxian and Ricardian traditions about the measurement of capital and the use of aggregate production functions. Further, Mario developed a critique of traditional capital theory that developed a 'flow-input flow-output' model, inspired by Kalecki's investment criteria and compared Kalecki and Keynes in their approaches to demand-determined income.

Mario was also concerned about the evolution of economic systems in practice. He sought to analyse from a comparative perspective a variety of models, including recent variants of the socialist economic system—such as that of China. Many of the included papers also provide comparisons over time of the evolution of economic systems.

### 1.2.4 Economic Democracy

Mario had a profound interest in industrial and economic democracy, alternative forms of enterprise that assure workers' participation in decision-making and in enterprise results. His work was inspired by the practice of workers' cooperatives, profit-sharing and co-determination in western market economies and the self-management experience in Yugoslavia. He was also interested in the experiences of employee ownership in western market economies as well as in workers' share-ownership in many East European countries as a result of privatizations in the 1990s.

His research interests did not preclude his open criticism of some of the most influential works. Mario considered Martin Weitzman's Share Economy, that proposed giving workers a share in profits in addition to a fixed wage and leading to full employment resilient to deflationary shocks, 'a Catch 22' based on 'claims and overclaims'. Similarly, Mario was a great admirer of James Meade's work, but he questioned the assumptions of Meade's capital-labour partnership due to the violation of the

principle of equal pay for equal work. Through his critical analysis of existing models, Mario tried to elaborate his own, that would offer more viable participatory solutions.

With the start of transition in Eastern Europe, Mario raised his voice against simplistic generalisations regarding the negative implications of diffused employee ownership. In countries that had to privatise entire economies but had no domestic capital and lacked the major interest of foreign investors, privatizations had often led to the sale of shares under privileged conditions (or free distribution) to workers. Hence, insiders often became the dominant shareholders 'by default'. Mario was well aware of the drawbacks of the insider-controlled firm, but he formulated the conditions under which the expected adverse effects would be avoided, showing how the outcome depends on the worker's short-term interests as a wage-earner and his/her longer-term interest as a shareholder. Inefficiencies would arise only if employees as shareholders had a lower share in company equity than they had in labour supply as workers. Mario also correctly anticipated that enterprises in which insiders held a controlling interest might be institutionally unstable. He further considered that employee participation in enterprise results encourages higher labour productivity, not so much via greater individual effort (given that the employee only gains a fraction of the extra product due to his/her greater effort), but through the greater intelligence and cooperation with which any given effort is exercised and through mutual employee monitoring. He argued that employee ownership creates a sense of identity with the company, improves channels of communications and the chances of avoiding and resolving conflicts.

### 1.2.5 East -West Integration and Globalisation

Mario's research interests included issues related to integration between Western and Eastern Europe, and therefore also the policies of the European Union. He stressed the benefits of fast Western support of the countries of Central and Eastern Europe after 1990 and contributed one of the first in-depth analyses on the impact of the transition on the European Union. He was also involved in examining the benefits and

costs of adoption of the Euro by the new EU member states. Another concern was that most of the new EU member states had adopted social models based on the liberal approach, with weak trade unions and a minimal role of the welfare state, thus contributing to the 'dilution' of the European Social Model. When the global financial crisis hit the European Union in 2007–2008, Mario drew an interesting parallel between the underlying causes of the crisis in developed market economies and those in Eastern Europe, pointing to the common features of subprime loans in the West and East.

Mario was an attentive observer of the challenges posed by increasing integration and by the unregulated nature of many global processes. He noted, in 2009, that globalisation is equally as spectacular in its progress as in its incompleteness, in addition to being distorted and unfair. In his view, globalisation was incomplete because of the maintenance of many forms, often intense, of protectionism and the proliferation of free trade agreements. He also viewed it as distorted, unfair, and asymmetric in favouring the international mobility of capital rather than labour and financing global imbalances instead of investment and growth in poorer countries. He therefore considered it to be essential to create and strengthen redistribution agencies at all levels—of nations, commercial blocks, the global economy. He was prescient in pointing out that failure to govern globalisation and to correct its impact on poverty, inequality, and redistribution, would breed increasing opposition to its further progress.

Additional challenges are faced regionally by the member states of the European Union and especially the Eurozone, given the disintegration trends resulting from their dysfunctional construction. Mario particularly condemned the persistence of austerity policies, arguing that fiscal consolidation can actually increase, instead of decreasing, the public debt/GDP ratio. He believed there were remedies in line with the original European design—such as a common asylum acceptance regime to reduce the migration crisis, or excluding public investment from the permitted public deficit, that would loosen austerity; but he was also aware that these remedies may not be consistent with what he saw as the dominant hyper-liberal perspective.

## 1.3 Concluding Remarks

Mario always stressed that no theoretical paradigm in economics should be accepted a priori, but its use should depend on the problem to be solved. This was in line with his own approach. In his autobiography, he wrote: 'I am not fond of labels; like all aggregates they destroy information and are potentially misleading. If pressed, I would choose a handful of them. I would call myself a keynesian-kaleckian-kaldorian-robinsonian when modeling the macroeconomics of the capitalist economy; a "left-wing monetarist" … when modelling the macroeconomics of the socialist economy; a consumer of Marxian techniques when studying the dynamics of economic institutions and systems, but ready to turn them against Marx-inspired systems with a vengeance; a neo-classical in microeconomics, convinced of the importance of prices and a strong supporter—though very critical—of markets as homeostatic mechanisms, indispensable no matter how crude or imperfect. What approach is best depends on the question you ask (Oskar Lange); you choose a model as you would choose a map, according to the nature of your journey (Joan Robinson)' (see Chap. 2, Volume 1). In these Volumes, we have tried to illustrate the richness of models and frameworks he applied as his eye roamed across a wide variety of economic issues over half a century.

Mario Nuti had many students, collaborators, colleagues, close friends. On the occasion of his 70th birthday, a Festschrift was prepared by his colleagues to honour his work, with contributions, in addition to the editors, by M. de Cecco, L. Csaba, S. Commander, P. Desai, J. Eatwell, M. Ellman, M. Keren and G. Ofer, V. Popov, S. Godoy and J. Stiglitz, J. Prasnikar and J. Svejnar, and V. Tanzi (Estrin et al. 2007). Mario taught his students to be critical, rigorous, thorough, substantiating every sentence they wrote; in this, his own papers served as the best example to follow. He transmitted to his students the passion for research and thorough analysis, as he was never satisfied with simple explanations. Nor was he always an easy interlocutor, especially regarding issues about which he had strong beliefs, but he was always ready to enter a discussion about alternative views. As these volumes show, he was an intellectual of a special kind, with a critical mind and great knowledge in many fields that extend far beyond economics.

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# Part I

## Evolution of Economic Systems

### Foreword to Part I: Evolution of Economic Systems

Saul Estrin and Milica Uvalic

In the previous volume, we looked at Mario Nuti's work on socialism and the transition to a market economy, themes which he revisited throughout his working career. The papers in this section contain much of the theoretical analysis behind that more applied work, presenting his key conceptual reflections comparing capitalist and socialist economic systems as well as his views about how alternative economic systems might evolve over time. It will be remembered that there were two pivotal theoretical influences on Mario's work. The first came from socialist economic modelling by giants such as Michael Kalecki and Oskar Lange: researchers who sought to model economic behaviour under socialism using mathematical models. The second came from his engagement in the intellectual hothouse of Cambridge, England, at a time when economists were using new modelling techniques returning to the big themes of the classical era: growth and distribution. There was no dominant single school of thought and Mario absorbed, and was clearly influenced, by them all, notably by analysts of the structure of the capitalist economy like Sraffa, Goodwin and Pasinetti; by neo-Keynesians such as Nicholas

Kaldor and Joan Robinson; and by Marxists like his supervisor, Maurice Dobb.

The so-called Cambridge capital controversy took place from the 1950s to 1970s between economists based in Cambridge, England—such as Nicholas Kaldor, Joan Robinson and Pierro Sraffa—and Cambridge, Massachusetts, such as Paul Samuelson and Robert Solow. The debates were highly abstract and theoretical, concerning the role of capital in growth, though behind that were differing views about the effectiveness of the market system and regarding the trade-off between efficiency and equality in the distribution of income. The specific focus, however, was how the warranted and natural growth rates were to be brought into equality. The American side believed markets would naturally adjust through substitution between capital and labour; in contrast, their British protagonists concentrated on how changes in the distribution of income might alter the savings ratio. Important battles raged over the possibility of reswitching, whereby the choice of technique (the capital-labour ratio) was found not to be necessarily a monotonic function of the rate of interest (profit); cases were identified in which high rather than low interest rates were associated with more capital-intensive techniques, bringing into question the possibility of smooth market adjustments.

Mario Nuti joined Cambridge, England, at the tail end of these controversies, but they greatly influenced his thinking. His original twist was to use these frameworks to compare capitalist economic systems with socialist ones, within a largely neo-Keynesian framework. This section contains four sometimes highly technical papers in this genre. In the first chapter (Chap. 2), Nuti provides an analysis of a so-called "putty-clay" model comparing the choice of technique made by a "capitalist entrepreneur maximising the present value of his firm's assets at a given interest rate and the socialist planner maximising the consumption per head associated with the maintenance of a given growth rate" (see Chap. 2). He shows that the inherent problems in maintaining equilibrium between growth, interest rates and savings appear under both capitalism and socialism, though the form of the difficulties differ. An important result is that socialist as well as capitalist economies may suffer from reswitching; thus the capital-labour ratio may rise as well as fall as interest rates increase. In

Chap. 3, Nuti critically explores the assumptions behind an important paper by Kaldor and Mirrlees which establishes the relationship between the wage rate and the marginal productivity of labour. Nuti points out that some of the assumptions of the model appear to imply imperfect competition while others imply perfect competition - an inconsistency that undermines the whole argument. He proposes a "way out": creating a new endogenous variable, the degree of monopoly, which he links to Kalecki's formulation of the relationship between monopoly power and income distribution. In Chap. 4, Nuti explains the mathematical model of the economy developed by the late nineteenth century Russian economist, Dmitriev, linking it to later work by Leontief on input-output models and explaining its importance for understanding Soviet planning models. He also compares Dmitriev's work to that of Sraffa and Marx, as ways of understanding the relationship between the rate of profit and the use of labour in production. The fourth in this group (Chap. 5) compares the analysis of the macroeconomic demand in the models of Keynes and Kalecki. An important purpose of the paper is to establish Kalecki as an independent major thinker in economics; as Nuti says, "while Kalecki and Keynes have in common a theory of national income determination based on effective demand and driven by investment, and the important policy implications that descend from it, each of them followed a distinctive intellectual route, used very different building blocks and covered distinctly different additional ground." (see Chap. 5).

The remainder of this section contains a variety of papers that apply various aspects of these theoretical ideas to a number of key issues in comparative economic systems. Thus, a deep understanding of Keynesian economics proved to be a useful training to analysing the impact of wage indexation, a problem that arose in the context of the high inflation which accompanied the early years of transition. In Chap. 6, Nuti provides an admirably clear and crisp exposition of the conceptual and practical issues raised by indexation; one that continues to have relevance to this day. The paper also explores the consequences of various levels of indexation for employment, the protection of real wages, and the implications for a wage-price spiral.

In a short and rarely considered paper (Chap. 7), Nuti considers the process of dynamic change in economic systems. His analysis goes right

back to Marx, who he considers to be the first contributor in this important field. He approvingly quotes Engels: "Just as Darwin discovered the law of development of organic nature, so Marx discovered the law of development of human history" (Nuti, 1996, p. 7) and proposes that, "In the end this may turn out to be Marx's main, indeed perhaps only, lasting contribution to political economy." (Nuti, 1996, p. 7). The paper reflects on the evolution of socialist as well as capitalist systems, also placing transition from socialism to capitalism within the same framework. Chapter 8 is also explicitly about comparative economic systems, considering the numerous variants of economic systems, both capitalist and socialist, which remain after and despite the collapse of socialism in the Soviet Union and its former spheres of influence. He concludes that transition has in fact "enriched the range of system morphology and has greatly enhanced the importance and significance of the study of comparative economic systems, policies and institutions, and their processes of transition and evolution" (Nuti, 1999, p. 159).

In Chap. 9, Nuti returns to the theory of the socialist economic system, turning a benevolent but nonetheless critical eye to the work of Janos Kornai. Kornai argued that capitalism could be viewed as a surplus economy while socialism represented a shortage economy. Mario agrees that this is a fundamental distinction, and that socialism is indeed best characterised by widespread, indeed ubiquitous, shortages. But Kornai proposes the cause of this are soft budget constraints in state owned firms—the ability of firms to obtain limitless financial credit when prices were raised to ease shortages. Nuti instead views the problem as stemming from the fixing of prices at deliberately too low a level and because planners sought to eliminate inflation even though the economy was run with excess demand due to over-ambitious plans and full employment. These arguments are therefore the other side of the coin from the analysis of indexation in Chap. 6, where the consequences of excess demand in the capitalist economy, and especially in the transition to it from the shortage economy, are examined.

The demise of the Soviet Union and its empire left China holding the flag as the most significant "realised" socialist system. In Chap. 10, Nuti tries to bring together his own views on the Chinese economic system, linking elements to Soviet antecedents but also highlighting differences

as well as China's unique "transition" path to a more market-based economic system. In this chapter, Mario introduces his own methodology for classifying socialist economic systems on an ABCD scale,[1] from 0000 (capitalism) to 1111 (socialism), placing China as a partially (but not very) socialist economy. Nuti is also more pessimistic about the prospects for the continued rise of China than many other analysts.

Chapter 11 focuses on another issue that concerned Nuti on and off throughout his life: pensions and how they affect the broader economic system. His particular concern was the creation of the most adequate pension system for the transition economies. The collapse of socialist planning meant that decisions had to be made about the nature and form of the pension system to be chosen, with the choice having enormous consequences for the distribution of income and inter-generational equity. In this chapter, Mario provides a critical overview of the economic principles underlying alternative pension systems and the implications of alternative policy choices. The chapter is sprinkled with insights about the relationship between pension systems, fiscal implications, and the consequences for income distribution. Nuti concludes: "only a gradual and partial transfer to a funded system is recommended" (see Chap. 11). Linked to these issues, a much shorter paper (Chap. 12) focuses on a specific fiscal arrangement: the flat tax. Mario is amusingly critical of the flat tax, linking it to the belief in a flat earth, and also explaining, *en passant*, his views about the need for progressivity in the tax system.

The final chapter in this section (Chap. 13) is an essay written towards the end of Mario's life. It reflects at length on comparative economic systems on the basis of a lifetime's research and experience. Nuti explicitly places all the socialist systems he has encountered into the categorisation discussed above, comparing their performance with that of the capitalist economy as modelled by both sides of the Cambridge controversy. Thus, for example, socialist shortages and inefficiency are brought face to face with capitalist unemployment and inequalities. The variety of "realised" socialist systems are reviewed and critically evaluated in terms of the "violation of economic laws", what Nuti memorably refers to as the

[1] The four components are A: state ownership of firms; B: equality; C: economic democracy; D: macroeconomic control. Countries can take the value zero or one in each category.

"original sin" of socialism. This chapter therefore represents Mario's last written thoughts on many of the key issues that concerned him, as well as providing a fairly exhaustive list of the references that had been central in the development of his thinking. Most importantly, it brings a full circle of many issues raised in previous writings, notably his Inaugural Lecture (Chapter 2, Volume 1) and some of his early theoretical work contained at the start of this section.

# 2

# Capitalism, Socialism and Steady Growth

Domenico Mario Nuti

## 2.1 Introduction

The purpose of this paper is that of considering the choice of production techniques from the point of view of both the capitalist entrepreneur maximising the present value of his firm's assets at a given interest rate and the socialist planner maximising the consumption per head associated with the maintenance of a given growth rate.

A model of production is set up, in which output is made of a versatile consumption and production good, called putty, and of the machines which are made of putty and are necessary to assist labour in order to

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produce putty. It is assumed that technical choice is irreversible, i.e., that putty is moulded and baked into clay machines of given specifications, which cannot be turned back into putty or into machines of different specifications. Also, their use is not affected by technical progress, which improves the design of new machines but not the operation of those already constructed.

This framework, which Phelps first named "putty-clay",[1] has been widely used in recent economic literature.[2] This paper, however, differs from other putty-clay models in that it does not contain two customary assumptions, namely that:

i. the process of transforming this versatile consumption-production good into durable machines is costless, i.e., no labour is needed to mould and bake putty into clay, and
ii. putty is turned into clay-machines instantaneously, so that there are no gestation lags of investment. Both assumptions, as we shall see, reduce significantly the scope of technical choice.

The first assumption, that the transformation of putty into clay is costless, is necessary to keep a putty-clay model in the realm of a one-commodity world. Only in this case can gross investment be measured simply by the amount of putty which is turned into clay in each period. If moulding and baking putty into clay requires labour the value of a new machine expressed in terms of putty depends on the interest rate (or the wage-rate). *Gross* output will be made up of that part of putty which is actually devoted to consumption *plus* the output of machines; in addition to the sector producing putty, one needs as many other sectors as

[1] E. S. Phelps, "Substitution, Fixed Proportions, Growth and Distribution," *International Economic Review*, September 1963.

[2] L. Johansen, "Substitution versus Fixed Production Coefficients in the Theory of Economic Growth: a Synthesis", *Econometrica,* April 1959; W. E. G. Salter, *Productivity and Technical Change* (Cambridge, 1960); R. M. Solow, "Substitution and Fixed Proportions in the Theory of Capital", *Review of Economic Studies,* April 1966; M. C. Kemp and P. C. Thanh, "On a Class of Growth Models", *Econometrica,* April 1966; R. M. Solow, J. Tobin, C. C. von Weizsacker and M. Yaari, "Neoclassical Growth with Fixed Factor Proportions", *Review of Economic Studies*, April 1966; C. J. Bliss, "On Putty-clay", *Review of Economic Studies,* April 1968.

there are units of time—in the course of the gestation period of machines—during which labour is needed to process putty into machines. To measure *net* output a number of other sectors are needed, in addition to the putty-producing sector, equal to the number of time units into which the lifetime of a machine can be broken, from the beginning of its construction to the end of its lifetime, because each machine at each different stage of its construction or its operation is a different commodity. We can look at the production process either as joint production of putty and machines or as joint production of dated putty. In this system, as Professor Kaldor once put it, "the inputs of different dates jointly produce the outputs of different dates; and it is impossible to separate out the contribution to the output of different dates of the input of a single date."[3] Output per head—whether gross or net—associated with a given technique would then depend both on the rate of interest—determining the price of each machine in terms of putty—and the growth rate, determining the relative proportion of putty and machines of all kind in total output. The assumption of the costless transformation of putty into clay and the use of gross measures evade this fundamental issue of capital theory.

The second assumption, of no gestation period of investment, which is also customary in putty-clay models, eliminates one of the possible dimensions of technical choice, namely the possibility of a trade-off between the length of the gestation period and the durability of fixed equipment.[4] Both assumptions, as we shall see, are relevant to the problem of "reswitching" of techniques, i.e., the eligibility of the same

[3] N. Kaldor, "The Controversy on the Theory of Capital," *Econometrica*, July 1937, reprinted in *Essays on Value and Distribution* (1960), p. 159.

[4] A. Bhaduri has investigated this aspect of technical choice in a simple case, in: "An Aspect of Project-selection: Durability *vs.* Construction-period," *Economic Journal*, June 1968. He finds that "on economic grounds (other things being equal) one may expect a combination of shorter durability and shorter construction period to be more advantageous in a fast growing economy" (p. 346). Here we shall treat gestation and durability more generally, as being only a partial aspect of technical choice—and not necessarily directly related—without the "other things being equal" assumption.

technique at more than one level or range of the interest rate, with other techniques being eligible at intermediate levels.[5]

Neither assumption is made in this paper. A more flexible model will be used instead, which takes into account the labour cost of investment, and the gestation and durability of investment, and is designed to handle production techniques characterised by any possible time profile of output and inputs.

Within this framework conditions for reswitching of techniques are stated, and the problem is shown to be relevant both to the capitalist firm and the socialist planner. A version of the golden rule of accumulation is stated, with a second-best proposition. It is shown that the relevance of the re-switching phenomenon is not affected by technical progress. Relative prices of machines and consumption goods are introduced, and the conditions for macroeconomic equilibrium are examined under both capitalism and socialism. In the context of the model the concept of capital is shown to be dispensable under socialism.

## 2.2 Assumptions

There is a versatile commodity, putty, which can be either consumed directly or turned into machines by an irreversible process requiring labour. Time is divided into periods of equal length. Putty is perishable and lasts for one period only, unless it is turned into clay. Clay-machines last for more than one period; their durability depends on their shape, the amount and the time pattern of labour and putty which has gone into their making.

Putty is produced by labour and machines. Labour is homogeneous. The technical specifications of machines, i.e., the pattern of the time flow

[5] This phenomenon was first noticed in the modern literature by Joan Robinson, Champernowne and Sraffa (J. Robinson, "The Production Function and the Theory of Capital," *Review of Economic Studies,* 1953; *The Accumulation of Capital* (London: Macmillan, 1956); D. G. Champernowne, "The Production Function and the Theory of Capital: a Comment," *Review of Economic Studies*, 1953; P. Sraffa, *Production of Commodities by Means of Commodities, Prelude to a Critique of Economic Theory* (Cambridge University Press, 1960), and has been widely debated in a series of papers in the *Quarterly Journal of Economics,* October 1966. See also G. C. Harcourt, "Some Cambridge Controversies in the Theory of Capital," *Journal of Economic Literature,* June 1969.

of inputs and outputs associated with them, differ and cannot be altered after their construction. A "technique of production" is represented by a time-flow of putty-output, in which the putty to be moulded and baked into durable machines appears with the negative sign, and a time-flow of labour inputs. The sequence of the time pattern of putty-output is given by $\{a_t\}$, where $a_t <= 0$ for $i = 0,1, \ldots k - 1$ is the amount of putty which is needed initially to be handed over to the workers making machines during period $i$ (the making of a machine can take more than one period; if one single period is needed, $k = 1$; if putty is being produced by labour only, then $k = 0$); $a_k > 0$, $a_t > 0$ for $i =- k + 1, \ldots$ n is the putty which is produced thereafter, during each of the subsequent $n — k + 1$ periods.

We assume that $\sum_{1}^{n} a_t > 0$, i.e., total net putty output over the time of operation is strictly positive. The sequence of the time pattern of labour inputs required first to make machines, then to operate them to produce the flow of putty output, is given by $\{li\}$, where $1_0 > 0$ (because labour is always required to start the process), $l_i >= 0$ for $i = 1; 2, \ldots n$. We also assume that $I_n$ and $a_n$ are both positive. There are constant returns to scale. The scale of a technique of production is taken so that $l_0 = 1$. Any convex combination of two techniques is also a technique, but the number of techniques which cannot be expressed as a convex combination of other techniques is finite. The length of $k$ and $n$ is not necessarily the same for all techniques. If a process does not have to be operated to the $n$th period, but can be stopped after a number of periods $m < n$, each length of operation of the same process is regarded as a separate process. We neglect "inferior" techniques, *i.e.*, such that they give an amount of output at some period lower than another technique, without having a higher output at some other period, and/or a lower labour input at the same or some other period.

We shall consider the full-employment growth of economies with access to this kind of technology, under institutional conditions corresponding to textbook capitalism, centralised and decentralised socialism. In all systems production is organised in productive units called firms, by managers who are all equally efficient. In each period total labour supply is given, and growing at a steady rate $\lambda$, $\lambda > —1$. Labour is hired by firms at a real wage $w$ per man per period, paid at the end of the period.

Managers are homogenous with the rest of the working force, and the input of their labour is included in the labour coefficients $l_i$. Economic systems differ in three respects: property relations, market conditions and criteria for technical choice.

Under centralised socialism physical productive assets belong to the State, which appropriates whatever is produced in excess of the payment of wages. It is a monopsonist in the labour market, and fixes the wage-rate $w$, to which labour supply is inelastic. Firms are simply administrative units, managers are state officers who are ordered to use the technique chosen by the central planner, and receive the necessary material inputs and wage fund (in excess of their current production of putty) free of charge as grants from the State.[6] Among the production techniques available, the central planner selects the technique maximising the rate of consumption per head associated with the maintenance of full-employment steady growth.

Under decentralised socialism physical productive assets belong to state firms. Firms have access to a perfectly competitive labour market, and have infinite power of borrowing and lending putty from and to the State, at a rate of interest $r$ fixed by the State. They have built their assets by borrowing from the State in the past, they appropriate current output and pay wages and interest out of it. Among the production techniques available, they select the technique maximising the present value of their assets at the ruling interest rate.[7] The socialist planner will still wish the technique maximising consumption per head to be chosen, but the only way he can affect technical choice is by choosing the interest rate $r$, which is the basis of the decisions of state managers.

[6] Central fixing of the wage-rate, free investment funds granted from the state budget, central choice of production techniques, administrative orders to the managers of state firms: these are aspects typical of the pre-war Soviet planning system.

[7] These characteristics can be found, for instance, in the Czechoslovak economy in 1967. According to the documents of the 1967 economic reforms, wage guidelines were fixed centrally, but managers could pay additional bonuses to workers, out of an enterprise fund made of retained profits, subject to the payment of a tax on the wage fund, called "stabilisation" tax. See "General Guidelines for Enterprise Operation, Valid from January 1, 1967," in *New Trends in the Czechoslovak Economy*, Booklet No. 6, September 1966. The present value criterion for investment choice was introduced in April 1967 by the State Commission for Technology, *Zdsady hodnoceni ekonomicke efektivnosti investic* (Criteria for the assessment of economic effectiveness of investment), n.j. 16.653/42/67. See D. M. Nuti, "Investment Reforms in Czechoslovakia," *Soviet Studies*, January 1970.

Under capitalism, physical productive assets belong to individual capitalists, either directly or through shareholding. Firms have access to a perfectly competitive labour market, and have infinite power of borrowing and lending putty at a rate of interest $r$. Capitalists appropriate the excess of output over what is needed to pay managers and workers the competitive wage, consume part of it and accumulate the rest. Among the production techniques available, the one which maximises the present value of the assets of capitalists at the ruling interest rate is chosen.

Both under capitalism and decentralised socialism macroeconomic equilibrium requires that the production of putty in excess of current consumption requirements should be equal to the material input requirements in the construction of machines. The conditions for equilibrium will be examined in the next sections; we can imagine, provisionally, that the economy in question is connected with a perfect international capital market.

## 2.3 The "Wage-Interest" Frontier

We shall first consider the implications of the present-value maximisation criterion for technical choice. Suppose there is one technique only, and no technical progress. The present value $v$ of starting a unit scale process, $(a_i)$, $(l_i)$ is given by

$$v = \sum_{i=0}^{n} \left(a_i - w l_i\right)\left(1+r\right)^{-i}. \tag{2.1}$$

Since the labour market is competitive, as long as $v$ is positive workers will be successful in demanding higher wages, from firms competing with each other trying to get hold of labour. Equilibrium in the labour market requires that Type equation here.

$$v = \mathrm{O}. \tag{2.2}$$

At each level of the interest rate there is, for a given technique, a maximum wage-rate which firms, performing lending and borrowing operations, can afford to pay to workers and make no loss. This is given by the following equation, obtained from (2.1) and (2.2):

$$w = \frac{\sum_{i=0}^{n} a_i (1+r)^{-i}}{\sum_{i=0}^{n} l_i (1+r)^{-i}} \tag{2.3}$$

This we call the "wage-interest frontier". (The general form of this function, $w = w(r)$, is discussed in the mathematical appendix.) The function has the following properties:

(i). for r = 0, $w = \sum_{i=0}^{n} a_i / \sum_{i=0}^{n} l_i > 0$

(ii). there is only one value of $r$, $r^*$, for which $w(r) = 0$ because $\sum_{i=0}^{n} l_t (1+r)^{-t}$

is always positive, and because there is only one inversion of sign in the coefficients of the polynomial at the numerator.[8]

From (i) and (ii) it follows that $w(r) > 0$ for $0 < r < r^*$. (iii) the sign of the first derivative of $w(r)$ is negative for $r = r^*$, but for $0 < r < r^*$ does not have to be negative throughout, and the graph of $w(r)$ may present "bumps." The maximum number of bumps is shown in the appendix to be given by the number of alternations of sign of $\left( \frac{a_{i+1}}{l_{i+1}} - \frac{a_i}{l_i} \right)$, for $i = k, \ldots n$.

Bumps therefore might occur if output per man fluctuates from the $k$th period onwards, for instance, if machines require periodical repairs and spare parts are made out of current output ($a_i$ could even become negative for some $i > k$ if repairs requirements exceed current output, but we have assumed that this is never the case). The economic meaning of

[8] The number of positive real roots of a real polynomial is equal to the number $q$ of its variations of sign-after having suppressed all terms having zeros as coefficients-or is less than $q$ by a positive even integer.

the bump is that, over some range of the rate of interest, a firm is a borrower in some periods and a lender in some other periods, and it gains from an increase of the interest rate as a lender more than it loses as a borrower, so that it is able to pay a higher wage-rate if it can perform lending-borrowing operations at a higher interest rate. The presence of bumps, however, is not essential to the following argument.

(iv) The only cases in which the *w(r)* function is a straight line are ones in which $l_0 = 0$. This will never be the case under our assumptions, because we always have $l_0 > 0$.

Possible graphs of Eq. (2.3) are given in Fig. 2.1.

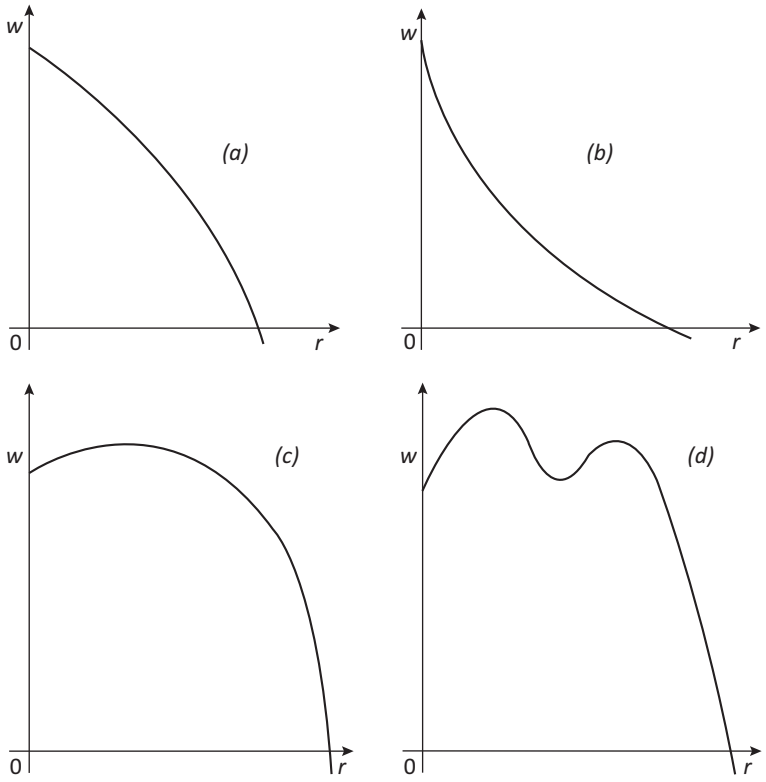



**Fig. 2.1**

If a given process does not have to be operated to the nth period but can be stopped before at no additional expense we draw the wage-interest frontier for each length of operation T such that k < T < n, and superimpose them on the same diagram.[9] Some of them might be inferior. For instance, if output per man is constant after the machine is built, i.e. $\frac{a_i}{l_i} = \bar{a}$ for $i \geqslant k$,

any length of operation T < *n* will give a lower wage-rate than T= *n* at all values of the rate of interest. If, however, output per man varies over the operation of a machine it might happen that different lengths of operation will be best over different ranges of the interest rate. If the wage frontier has bumps this procedure will smooth the bumps out of the external boundary of the frontiers.[10] If different lengths of operation of a technique appear in the outer boundary of its wage frontiers the optimum economic lifetime of plant is shown to depend on the interest rate.

If we perform the same operation for all techniques of production available, and superimpose all the *w = w(r)* functions in the same diagram, we obtain a picture whose outer boundary gives the maximum wage-rate which firms confronted with a given range of techniques can afford to pay, given the rate of interest at which they can undertake lending and borrowing operations. Throughout this paper by *w(r)* we shall always indicate this outer boundary, which is illustrated in Fig. 2.2.

It might be impossible to rank techniques of production so that each technique is associated with a single value or range of values of the interest rate. Reswitching of techniques might be observed in economies with access to the same technology and different values of the interest rate: the same technique might be in use at two different values of r, with another technique used at intermediate values of r. If there are two techniques, A and B, reswitching means that A affords the same wage-rate as B at more than one level of the interest rate. Suppose technique A is given by.

[9] Of course there is no point is considering T < k, because $\sum_{i=0}^{t} ai < 0$ for T < k, and at non- negative interest rates the wage would be negative.

[10] Choosing the length of operation T might not always be possible, for instance, if putty is mined in open-cast mines requiring the replacement of topsoil with relatively large labour expenses towards the end of the operation of the process.

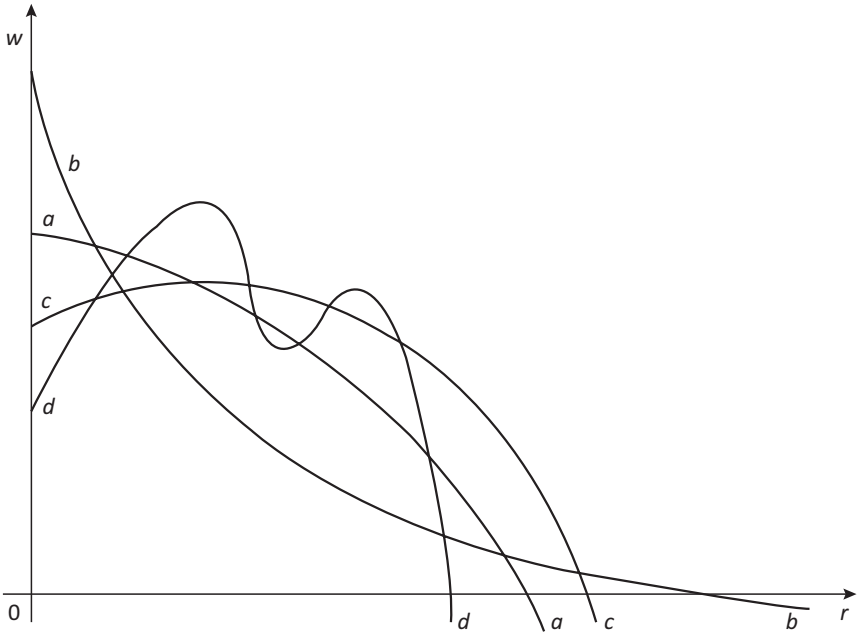



**Fig. 2.2**

$(a_{Ai}, l_{Ai})$, where

$$a_{Ai} \leqslant 0 \text{ for } i = 0,1,\ldots k_A - 1$$
$$a_{Ai} \geqslant 0 \text{ for } i = k_A,\ldots n_A$$
$$l_{Ai} \geqslant 0 \text{ for } i = 0,\ldots n_A$$

and technique $B$ is given by $(a_{Bi}, l_{Bi})$, and $k_A \gtreqless k_B$, $n_A \gtreqless n_B$.

Reswitching will occur if the equation

$$\frac{\sum_{i=0}^{n_A} a_{Ai}(1+r)^{-i}}{\sum_{i=0}^{n_A} l_{Ai}(1+r)^{-i}} - \frac{\sum_{i=0}^{n_B} a_{Bi}(1+r)^{-i}}{\sum_{i=0}^{n_B} l_{Bi}(1+r)^{-i}} = 0 \tag{2.4}$$

has more than one positive root. This condition can be rewritten as

$$\sum_{i=0}^{n_B} l_{Bi}\left(1+r\right)^{-i} \sum_{i=0}^{n_A} a_{Ai}\left(1+r\right)^{-i} - \sum_{i=0}^{n_A} l_{Ai}\left(1+r\right)^{-i} \sum_{i=0}^{n_B} a_{Bi}\left(1+r\right)^{-i} = 0 \quad (2.5)$$

having more than one positive root. There is no reason whatsoever to assume that this is not the case on grounds of realism. Suppose that the two techniques are such that $n_A = n_B$ and $l_{Ai} = l_{Bi}$ for all $i = 0,1, \ldots n$. The condition for reswitching becomes

$$\sum_{i=0}^{n} \left(a_{Ai} - a_{Bi}\right)\left(1+r\right)^{-i} = 0 \quad (2.6)$$

having more than one positive root. The necessary (but not sufficient) condition for this being the case is that the sign of $(a_{Ai} - a_{Bi})$ should alternate more than once: there is nothing extravagant in assuming that output (investment counting as negative output) with one technique is higher in two periods and lower in an intermediate period, with respect to another technique, as in Fig. 2.3 below.

The actual number of roots (and therefore of switching points) can be found by using Sturm's theorem.[11] When reswitching occurs, the available blueprints cannot be so ordered in a book that at a higher interest

[11] Let $f(x)$ be a polynomial with real coefficients such that $f(x) = 0$ has no multiple roots. Construct the identities

$$c_0 f = q_1 f' - f_2, c_1 f' = q_2 f_2 - f_3, c_2 f_2 - q_3 f_3 - f_4,$$
$$\ldots\ldots\ldots$$
$$c_{k-2} f_{k-2} = q_{k-1} f_{k-1} - f_k,$$

where $q_r/c_{r-1}$ is the quotient of the division $f_{r-1}/f_r$; $f_k$ is a constant $\neq 0$, and each $f_r$ is of degree one less than its predecessor. Let $a$ and $b$ be real numbers neither of which is a root of $f(x) = 0$, while $a < b$. Then the number of real roots between $a$ and $b$ of $f(x) = 0$ is the excess of the number of variations of sign in the chain

$$f(x), f'(x), f_2(x), \ldots, f_{k-1}(x), f_k$$

for $x = a$ over the number of their variations of sign for $x = b$. Terms which vanish are to be discarded before counting the variations of sign.

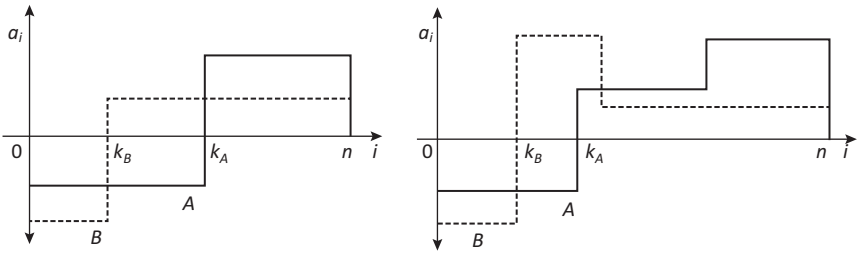



**Fig. 2.3**

rate a higher numbered page contains the "best" technique, unless the same blueprint can be inserted more than once. It should be noted that the actual number of reswitching points between the wage frontiers of two techniques is totally uninteresting: in a sense, we can say that the greater the number of reswitching points, the closer the two techniques can be considered to be, and therefore the less important the fact of reswitching. A better measure, however loose, of the importance of reswitching can be given by the maximum difference between the wage-rates afforded by the two techniques at the same rate of interest, because this is a measure of the maximum inefficiency which can result from a wrong choice of techniques (or otherwise some other statistics of the distribution of such differences, taken with the positive sign: $|w_A(r) - w_B(r)|$).

## 2.4 The "Consumption-Growth" Frontier

We shall now look at what determines, under the technical conditions already described, the level of consumption per head at different alternative steady growth rates, and its relation with the wage-frontier.

Suppose there is only one technique available, the number of projects (of unit scale) started in each period has been increasing at a constant rate $g$ per period in the last n periods, and the amount of labour currently employed on projects just started is $L_t$. The number of projects started at time $t - i$ is equal to $L_t(1 + g)^{-i}$. A project started at time $t - i$ will require

$l_i$ units of labour and will be associated with $a_i$ units of output (or $-a_i$ units of investment, if $i < k$). Current employment on projects started at time $t - i$, $L_{t-i}$, is therefore given by Eq. (2.7):

$$L_{t-i} = L_t (1+g)^{-i} l_i, \quad i = 0,1,\ldots n \tag{2.7}$$

From this we can now determine total employment, $N$; total gross putty output, $X$; total putty needed as a material to make machines, $J$; and consumption, $C$. They are given by the following equations:

$$N_t = \sum_{i=0}^{n} l_i (1+g)^{-i} . L_t \tag{2.8}$$

$$X_t = \sum_{i=k}^{n} a_i (1g)^{-i} . L_t \tag{2.9}$$

$$J_t = -\sum_{i=0}^{k-1} a_i (1+g)^{-i} . L_t \tag{2.10}$$

$$C_t = X_t - J_t = \sum_{i=0}^{n} a_i (1+g)^{-i} . L_t \tag{2.11}$$

From Eqs. (2.8), (2.9) and (2.11) we can express gross putty output per head, $x = X/N$, and consumption per head $c = C/N$ as a function of the growth rate of investment:

$$x = \frac{\sum_{i=k}^{n} a_i (1+g)^{-i}}{\sum_{i=0}^{n} l_i (1+g)^{-i}} \tag{2.12}$$

$$c = \frac{\sum_{i=0}^{n} a_i (1+g)^{-i}}{\sum_{i=0}^{n} l_i (1+g)^{-i}} \tag{2.13}$$

Consumption and gross output of putty per head appear therefore to depend solely on the steady growth rate of investment, which will be also the growth rate of the whole economy (as long as investment has been growing at that rate for the last $n$ periods). At full employment (and without technical progress as we have assumed so far) the rate of growth in investment g will have to be equal to the rate of growth of employment $A$. Equation (2.13), expressing consumption per head c as a function of the growth rate $g$ of investment, $c = c(g)$ is exactly identical to Eq. (2.3), the wage-interest frontier, with $g$ instead of $r$ and $c$ instead of $w$. All we have said in relation to Eq. (2.3) applies also to Eq. (2.13), which we shall call the "consumption-growth" frontier, because each of its points indicates the maximum consumption per head corresponding to a given steady growth rate, and vice-versa, the growth rate (or rates, if there are "bumps") achievable with a given level of consumption per head. This relation holds both in a socialist planned and in a capitalist economy, growing at a steady growth rate. If there is more than one technique, however, only under centrally planned socialism will the technical choice be determined with reference to the consumption per head maintainable at a given growth rate, whereas under capitalism and decentralised socialism maximisation of present value, as we shall see, might lead to the choice of a different technique.

If we draw the graph of Eq. (2.13) for all techniques of production available, the outer boundary will give the maximum level of consumption per head which is consistent with each growth rate. The picture is represented in Fig. 2.4, which looks exactly like Fig. 2.2, so that we can measure $w$, $c$ on the vertical axes and $r$, $g$ on the horizontal axes. We can now draw the functions also for $g < 0$ and for $c(g) < 0$: negative growth rates—unlike negative interest rates—are economically quite plausible, and the properties of a steadily declining economy can be explored. Negative consumable output per head at some growth rate indicates how

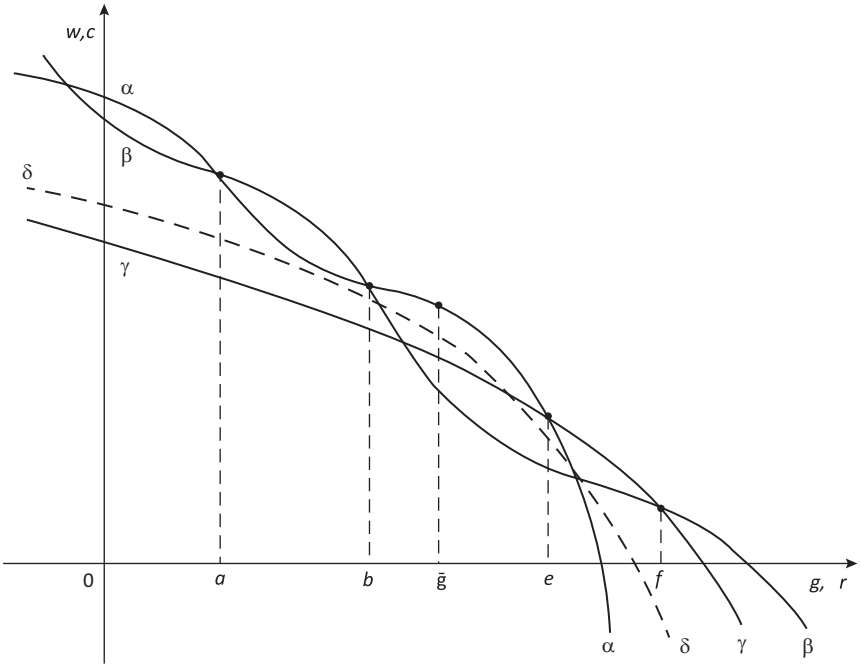



**Fig. 2.4**

much steady external aid per head is needed, on top of subsistence real consumption per head, to maintain that growth rate.[12] However, in order to draw conclusions out of this framework, we need to know not only the outer boundary of the frontiers but also the whole network of frontiers and their interweaving. Under capitalism or decentralised socialism, where technical choice is based on the maximisation of present-value criterion, consumable putty-output per head $c$ will be a function both of the

[12] The maximum number of bumps in the function $c = c(g)$ for $c < 0$ is given by the number of alternations of sign of

$$\left(\frac{a_{i+1}}{l_{i+1}} - \frac{a_i}{l_i}\right) \text{for } i < k.$$

interest rate, which determines the technique chosen, and of the rate of growth of investment.

Let us call $a_{i,r}$ and $l_{i,r}$ the technical coefficients of the technique selected at an interest rate $r$. The function expressing consumable output per head as a function of the growth rate and the interest rate, $c = c(r, g)$ can be written as

$$c = \frac{\sum_{i=0}^{n} a_{i,r}\left(1+g\right)^{-i}}{\sum_{i=0}^{n} l_{i,r}\left(1+g\right)^{-i}} \tag{2.13′}$$

If the rate of interest differs from the growth rate, in such conditions consumption per head is not necessarily located on the outer boundary of the frontiers. We can now state the following propositions:

(i). All we have said about reswitching of techniques at alternative interest rates applies here to the reswitching of techniques at alternative steady state growth rates. (Hence, the same relation holds between T and $g$ for each technique, as it holds for T and $r$.) If growth has been efficiently planned by socialist planners, one might find the same, consumption-maximising technique in two economies where investment grows at a different rate, and another technique in a third economy where investment grows at an intermediate rate.[13]

(ii). If the criterion for technical choice is present-value maximisation at a given interest rate, in a competitive labour market, we can state the

[13] If the consumption-growth frontier is increasing over a particular range of the growth rate the corresponding growth rates are in a sense inefficient, in that higher growth rates could have been attained, raising consumption per head instead of reducing it. The "bump" in the frontier did not matter for the firm, which had to take the interest rate as given, but matters for the planner to the extent to which he can control the rate of growth of labour supply through immigration and population policy.

following version of the "golden rule"[14]: "For a given growth rate of investment, a sufficient condition for consumption per head to be the highest consistent with such growth rate is that the rate of interest should be equal to the rate of growth of investment. If the number of techniques available is infinite, and there is no reswitching, and the switching points are dense, this is also a necessary condition." From Fig. 2.4 we can see that for any given value of $g$, say $\overline{g}$: (*a*) If $r = \overline{g}$, the technique (or techniques if there is a switch point at $\overline{g}$) chosen is that yielding the maximum consumption per head attainable at that growth rate. (*b*) Let us call the switching values of the rates of growth and interest *a*, *b*, *e* and *f*; if the consumption-maximising technique switches at $g = b < \overline{g}$ and at $g = e > \overline{g}$, then as long as $b < r < e$ the present-value-maximising technique and the consumption-maximising technique will be the same (at $r = b$ or $r = e$ present value could be maximised by linear combinations of two techniques, but this would not necessarily maximise consumable output per head). (*c*) If there is reswitching the technique which maximises consumable output per head at a rate of growth $\overline{g}$ might maximise present value also over some other range of *r*. In Fig. 2.4, for instance, the technique maximising consumable output at $\overline{g}$ is also chosen for $0 < r < a$ as well as $b < r < e$. This means that if $a < r < b$ firms can be induced to choose the consumption-maximising technique either by increasing the interest rate, bringing it closer to $\overline{g}$, or by reducing it further and bringing it closer to zero. The different between *g* and *r*, in other words, cannot be taken as a measure of inefficiency. (d) Suboptimality can take not only the form of the wrong plant but also of the wrong length of operation of the "right" plant.

[14] This is the mirror image of von Neumann's statement about the conditions to obtain the maximum growth rate corresponding to a given level of consumption per head, in: "A Model of General Equilibrium," *Review of Economic Studies*, 1945. Several versions of this rule have appeared since: see F. H. Hahn and R. C. 0. Matthews, "The Theory of Economic Growth: a Survey," *Economic Journal*, December 1964. In the context of planned socialist growth the same rule is also stated by M. H. Dobb in *Welfare Economics and the Economics of Socialism* (Cambridge, 1969), Ch. 8.

(iii). We can also state the following "second-best" proposition (whether or not reswitching occurs). If $r \neq \overline{g}$, consumption per head might be higher for values of $r$ farther away from $\overline{g}$ than for values closer to $\overline{g}$, and if for some reason the ranges of $r$ over which the (consumption-maximising) technique is chosen are unattainable, there will be a range of values of $r$ over which a "second-best" technique will be chosen yielding the second highest consumption per head at a rate of growth $\overline{g}$ *among the techniques forming the frontier*. In Fig. 2.4 this is technique γ, which would be chosen over the range $c < r < f$. If appears, however, that, at the rate of growth $\overline{g}$, γ is inferior to a technique δ which does not appear anywhere along the frontier, and will never be chosen at any value of the interest rate. A typical case would be that of the steadily declining economy, where, if the rate of interest is not allowed to be negative, the consumption-maximising technique will never be chosen by firms (unless that technique is also the best at positive growth and interest rates). If wages and prices, however, are expressed in money terms and are expected to change in time at a steady percentage rate $p$ the parameter relevant to technical choice would not be $r$, but $\left(\frac{1+r}{1+p}-1\right)$. Even if there are constraints on the values of $r$, this "deflated" interest rate can be made equal to $g$, provided expectations can be generated of a steady percentage rate of price increase $p$ such that

$$p = \frac{r-g}{1+g} \tag{2.14}$$

The rule for obtaining optimal technical choice in conditions of steady state growth would now become $r = p + (1 + p)g$.

## 2.5 Technical Progress

Suppose technical progress takes place in time, exogenous, disembodied and neutral, in that it decreases labour inputs at all stages for all techniques by the same proportion $d < 1$. If the real wage increases at the rate $h = \frac{d}{1-d}$ the relative profitability of different processes is not altered, and the golden rule remains the same as before. If technical progress is neutral but, as we have assumed in this model, is "embodied" in machines, which permanently have the input and output characteristics of the time of their construction, and real wages increase at the rate $h = \frac{d}{1-d}$ while labour inputs steadily decrease from one blue-print book to another at the rate $d$, the present value of starting a unit scale project at time $t$, $v_t$, is given by Eq. (2.1‴):

$$v_t = \sum_{i=0}^{n} \left[ a_i - w_t (1+h)^i l_i \right] . (1+r)^{-i} \qquad (2.1''')$$

and the maximum real wage-rate $w_t$ which can be afforded at time $t$, on the understanding that if must increase at the rate $h$, is given by putting $v_t = 0$;

$$w_t = \frac{\sum_{i=0}^{n} a_i (1+r)^{-i}}{\sum_{i=0}^{n} l_i (1+r)^{-i} (1+h)^i} \qquad (2.3''')$$

For any state of knowledge at any given time $t$ the real wage-rate will be lower, with respect to the situation without technical progress, if wages are expected to increase for all workers at the rate $h = \frac{d}{1-d}$ as labour inputs are reduced by technical progress at the rate $d$ on machines whose construction is currently beginning. The graph of Eq. (2.3‴) is similar to

that of Eq. (2.3), but the ranking of techniques and the number and position of switch points will differ at different values of $h$.

If a given technique does not have to be used to the end of its physical life, occurring in period $n$, but can be stopped earlier at no extra cost, we can again superimpose in the same diagram the wage-interest frontiers corresponding to different lengths of operation T of that technique, $k \leqslant T \leqslant n$. With wages rising at a rate $h$, the optimum economic lifetime might differ from $n$, even if $a_i / l_i = \overline{a}$ for $i \geqslant k$. Its actual length will depend on the interest rate. The same relation holding between T and $r$ will hold also between T and $g$: given the technical coefficients and their rate of change in time, the best length of operation of a given technique from the point of view of maximisation of consumption per head will depend on the growth rate.

Given two techniques A and B, as described in Sect. 2.3, the conditions for reswitching between them, which in the absence of technical progress was given by Eq. (2.5) having more than one positive root, becomes now that equation

$$\begin{aligned} &\sum_{i=0}^{nB} l_{Bi}(1+r)^{-i}(1+h)^{i} \sum_{i=0}^{n_A} a_{Ai}(1+r)^{-i} \\ &-\sum_{i=0}^{n_A} l_{Ai}(1+r)^{-i}(1+h)^{i} \sum_{i=0}^{n_B} a_{Bi}(1+r)^{-i} = 0 \end{aligned} \tag{2.5′}$$

should have more than one positive root. Again, there is no reason whatsoever to assume that this is not the case on grounds of realism. Suppose that the two techniques are such that $n_A = n_B$ and $l_{Ai} = l_{Bi}$ for all $i = 0,1,\ldots n$. The condition for reswitching is still expressed by

$$\sum_{i=0}^{n} \left(a_{A^i} - a_{Bi}\right)(1+r)^{-i} = 0 \tag{2.6}$$

having more than one positive root. This is exactly as in the case *without* technical progress: at each value of $r$ such that $0 \leqslant r < r^*$ the real wage-rate, corresponding to a given technique if technical progress is expected

to take place, will be lower, of course, than if technical progress were not expected, but $r^*$ for each technique, and the switching values of $r$ between techniques, will be the same. Suppose now that the two techniques $A$ and $B$ are such that $n_A = n_B$ and $a_{Ai} = a_{Bi}$ for $i = 0,1, \ldots n$, but differ for more than one labour coefficient. Without technical progress, the condition for reswitching between the two techniques is that equation

$$\sum_{i=0}^{n}\left(l_{Ai}-l_{Bi}\right)\left(1+r\right)^{-i}=0 \tag{2.15}$$

should have more than one positive root. If there is technical progress the condition for reswitching becomes equation

$$\sum_{i=0}^{n}\left(l_{Ai}-l_{Bi}\right)\left(1+\frac{r-h}{1+h}\right)-i=0 \tag{2.15'}$$

having more than one positive root. The number of switching points remains the same without or with technical progress, but the switching values of $r$ are now different. If without technical progress there is reswitching between two techniques for values of $r$ equal to $r_1$ and $r_2$, with technical progress the switching values of $r$ become $[h + (1 + h)r_1]$ and $[h + (1 + h)r_2]$. It might happen that a switching point which without technical progress occurs at positive values of $w(r)$, with technical progress occurs at negative values of $w(r)$ and therefore loses economic significance.

On the other hand, it might also happen that a switch point which without technical progress appears at negative values of $r$ and has no economic significance appears now at non-negative interest rates and therefore acquires economic significance. Whenever techniques differ with respect to the sequence of labour inputs, whether or not they differ also with respect to the sequence of their $a_j$ coefficients, there is no reason whatsoever to assume on the ground of realism that technical progress reduces the relevance of the reswitching phenomenon. (The same holds *a fortiori* if technical progress is of the "disembodied" kind, because in that case it does not alter at all the relative profitability of techniques.)

When technical progress occurs, the same relation between $w$ and $r$ holds again between $c$ and $g$. Let us again call $L_t$ the amount of labour employed on projects currently being started, and define the scale of projects in to-day's book of blueprints so that $l_0 = 1$. Let the number of projects started in every period increase, as in the case without technical progress, at a rate $g$ per period.

Labour employed on projects started in the previous period, $L_{t-1}$, is equal to $L_t(1 + h)(1 + g)^{-1}l_1$, and in general labour employed on projects started in the period $t - i$, $L_{t-i}$, is given by Eq. (2.7′):

$$L_{t-i} = L_t \left(1+h\right)^i \left(1+g\right)^{-i} l_i \tag{2.7′}$$

Gross putty output, $X$, total material inputs needed to make machines, $J$, and total consumption, $C$, are still given by Eqs. (2.9), (2.10) and (2.11), but employment $N_t$ is now give by Eq. (2.8′):

$$N_t = \sum_{i=0}^{n} l_i \left(1+g\right)^{-i} \left(1+h\right)^i .L_t \tag{2.8′}$$

which means that the proportion of total employment devoted to starting new projects, $L_t/N_t$, varies inversely with the rate of technical progress. Consumption per head at time $t$ is accordingly given by Eq. (2.13′):

$$c_t = \frac{\sum_{i=0}^{n} a_i \left(1+g\right)^{-i}}{\sum_{i=0}^{n} l_i \left(1+g\right)^{-i} \left(1+h\right)^i} \tag{2.13′}$$

If the rate of growth of employment is equal to that of the labour force, λ, we have now

$$\lambda = \frac{1+g}{1+h} - 1 \tag{2.16}$$
$$i.e., g \simeq \lambda + h.$$

If should be noticed that the relation between eqs. (2.3″ ′) and (2.13′) is the same as that holding between eqs. (2.3) and (2.13), namely $w_t(r) = c_t(g)$ for $r = g$ so that the golden rule is not altered by the presence of technical progress of this kind.[1]

## 2.6 Income and Capital

So far we have discussed the problems of growth and technical choice without having to measure the value of "machines" in terms of consumption goods (except that we have stipulated that the value of an investment option, i.e., of a machine not yet built, must be zero). If we want to measure "income" according to international statistical conventions, however, the relative prices of machines of all ages in terms of consumption goods are needed, as the income produced in one period is a collection of heterogeneous objects, made of whatever happens to be in existence at the end of the period, minus whatever was in existence at the beginning of the period, plus what has been withdrawn from the productive system in the form of consumption.

Call $v_j$ the value in terms of consumption goods (putty) of a machine used in a given process of a unit scale at the beginning of period $j$ of its existence (or, more generally, the value at time t of having "access to" a unit scale process started at time $t - j$). Suppose there is no technical progress, wages are paid at the end of the period, and either there is no money or prices are constant in time. The value of a machine is given by

$$v_j = \sum_{i=j}^{n} \left[ a_i - l_i w(r) \right] (1+r)^{-i}, \quad j = 0, \ldots n \tag{2.17}$$

The value $v$ of a piece of equipment embodying a given technique depends on its age $j$ and the rate of interest $r$. We know that $v_0 = 0$ for the technique which is best at any given interest rate, by the very definition of $w(r)$ (see Eq. (2.3)). For a given technique, however, the "price" Wicksell effect $\frac{dv_j}{dr}$ and the "ageing" effect $[v_{j+1}(r) - v_j(r)]$ can in principle

take either sign. When there are many techniques the level of the interest rate will determine *which* of the techniques is in use as well as the relative value of the different processes at each period of their operation.

From Eq. (2.7) we can obtain the number of machines of all ages in existence, so that the value of the capital stock of an economy will be given by

$$V_t = L_t . \sum_{j=1}^{n} v_j \left(1+g\right)^{-j} \tag{2.18}$$

which from (2.17) can also be written as

$$V_t = L_t . \sum_{j=1}^{n} \sum_{i=j}^{n} \left[ a_{i,r} - l_{i,r} w\left(r\right) \right] \left(1+r\right)^{-i} \left(1+g\right)^{-j} \tag{2.18'}$$

In steady growth net investment It undertaken during period t is given by

$$L_t = g . L_t \sum_{j=1}^{n} v_j \left(1+g\right)^{-j} \tag{2.19}$$

which can also be written as

$$I_t = g . L_t \sum_{j=1}^{n} \sum_{i=j}^{n} \left[ a_{i,r} - 1_{i,r} w\left(r\right) \right] \left(1+r\right)^{-i} \left(1+g\right)^{-j} \tag{2.19'}$$

Income produced during period *t*, $Y_t = C_t + I_t$, from (2.11) and (2.19′) can be written as

$$Y_t = L_t \left\{ \sum_{i=0}^{n} a_{i,r} \left(1+g\right)^{-i} + g \sum_{j=1}^{n} \sum_{i=j}^{n} \left[ a_{i,r} - l_{i,r} w\left(r\right) \right] \left(1+r\right)^{-i} \left(1+g\right)^{-j} \right\} \tag{2.20}$$

Income per head, $y = y(r, g)$, can be obtained from (2.20) and (2.8):

$$y = \frac{\sum_{i=0}^{n} a_{i,r}(1+g)^{-i} + g.\sum_{j=1}^{n}\sum_{i=j}^{n}\left[a_{i,r} - l_{i,r}w(r)\right](1+r)^{-i}(1+g)^{-j}}{\sum_{i=0}^{n} l_{i,r}(1+g)^{-i}} \tag{2.21}$$

The value of output per man in an economy with access to a given technology depends on the interest rate, which determines the technique chosen (if many are available) and the relative prices of machines and consumption goods, and on the growth rate, which determines the weight of each kind of commodity in output.

If there is only one technique we have that if $g = 0$, $y = c(0)$; if $r = 0$, $y = w(0) = c(0)$, so that we can say that $y(0, g) = y(r, 0)$. If the rate of interest is zero the value of output per man does not vary with the growth rate; if the growth rate is zero the value of output per man does not vary with the interest rate; and the value of output per man is the same in both cases.

If there are many techniques this is not necessarily the case. If $g = 0$, $y = c(r, 0)$; *if* $r = 0$, $y = w(0) = c(0,0)$. If the interest rate is zero the value of output per head still does not vary with the growth rate; but if the growth rate is zero the value of output per head will vary with the interest rate, and the two will be the same only if r is in the range for which $c(r, 0) = w(0)$.

The value of "capital per man" in the economy is given by (2.8) and (2.18′):

$$\frac{V_t}{N_t} = \frac{\sum_{j=1}^{n}\sum_{i=j}\left[a_{i,r} - l_{i,r}w(r)\right](1+r)^{-i}(1+g)^{-j}}{\sum_{i=0}^{n} l_{i,r}(1+g)^{-i}} \tag{2.22}$$

As we saw in Sect. 2.3, unless one has *faith* that the nature of technology is such that reswitching of techniques does not occur there is no

reason to assume that each technique will be associated with a single value or range of values of the interest rate. But even if there is no reswitching, for a given growth rate the same *value* of capital per man can occur at more than a single level or range of the interest rate; or, conversely, for a given interest rate the same value of capital per man can occur at more than a single level or range of the growth rate.[15]

The concept of "value of capital" therefore does not add anything to the analysis of the problems of choice of production techniques for the capitalist firm and the socialist planner. The values associated with a given technique of production *depend on* the criterion and parameters of technical choice, and therefore *cannot provide* themselves any criterion or parameters on which technical choice could be based.

The analysis of the notions of income and capital could be easily extended to the cases where there is technical progress, wages are paid at the beginning of the period and price level is not constant, but the nature of the problem would remain unchanged.

## 2.7 Macroeconomic Equilibrium under Socialism and Capitalism

If we rule out international borrowing and lending the maintenance of equilibrium growth requires that actual consumption per head should be equal to consumable output $c = c\,(r, g)$, whatever the actual relation between $r$ and $g$. Equilibrium relations must therefore hold between growth rate, interest rate and saving propensities. This, however, poses different problems under socialist and capitalist conditions.

The socialist planner will provide a certain amount of collective consumption per head, $z > 0$; will collect the voluntary savings of workers who will save, say, a fraction $s_w$ of their net wages; will collect a fraction $b$ of workers' wages in taxes, or pay out a corresponding subsidy of $b < 0$.

[15] This has been pointed out by L. Spaventa, "Realism without Parables in Capital Theory," in CERUNA, *Recherches recentes sur la fonction de production* (Namur, 1968); Rate of Growth, Rate of Profit, Value of Capital per Man (mimeographed); and P. Garegnani, *Heterogeneous Capital, the Production Function and the Theory of Distribution* (mimeographed).

As long as the planner can choose $b$ and $z$, he can ensure that the condition is satisfied

$$z+\left(1-s_w\right)\left(1-b\right)w\left(r\right)=c\left(r,g\right) \tag{2.23}$$

and obtain simultaneously equilibrium growth and the desired balance between private and collective consumption. This is true whether or not he sticks to the "golden rule," whether he chooses the technique himself, or instructs state managers to use the present-value maximisation criterion. As long as Eq. (2.14) is satisfied, the excess of current putty output per head over $c$ will be exactly equal to the amount required to maintain the rate of growth $g$, because this is exactly how we have defined $c$ in Eqs. (2.11) and (2.13). The interest rate workers get on their savings is presumably negligible, because the socialist planner does not want them to turn into rentiers, but even if they get the full rate $r$, the planner can always adjust $z$ and $b$ to obtain (2.14). If $w > c$, out of what is collected by the planner from the workers in the form of savings and taxation, $(s_w+b-bs_w)w$, an amount $(w - c)$ per man employed will have to be lent each period to firms via the credit system. If $c > w$ the planner will use the excess of firms' repayments and interest payments over current loans to firms, equal to $(c - w)$ per man employed, to finance collective consumption or to subsidise wages. From one period to another, if $g \neq 0$ the stock of machines of all ages (in gestation, new, used) will grow (or decline) at a rate $g$, the machine-mix depending on $g$, but unless he has to comply with international statistical agreements, the planner does not have to assess the "value" of the State's capital stock and its net change in time (net investment). All he might want to know is the sum of gross output which is due to come in the future from the stock of machines already existing in the economy. Let us call $p$ the rate at which he discounts future output (this can be equal to zero, or to the interest rate he charges state firms, or it can take some other value). At the beginning of time $t$ there are $L_t.\ (1 + g)^{-j}$ machines of age $j$ in existence.

The cumulative discounted putty-output $A_j$ of a machine of age $j$ is given by

$$A_j = \sum_{i=j}^{n} a_i \left(1+\rho\right)^{-i} \tag{2.24}$$

Total cumulative gross putty output $A_t$ from the stock of machines already existing in the economy at the beginning of time $t$ is therefore given by

$$A_t = \sum_{j=0}^{n}\sum_{i=}^{n} a_i \left(1+\rho\right)^{-i} .L_t \left(1+g\right)^{-j} \tag{2.25}$$

He might want to calculate $A_t$ excluding unfinished machines, in which case the sum is taken only for $j = k,.. .. n$. He has no reason to subtract wage costs from future putty output: if; however, he wants a measure of discounted future *surplus* of output over *necessary* labour inputs he will subtract the *subsistence* wage rather than $w(r)$. All these measurements have no interest for the managers of state firms. If they happen to exchange machines and putty with each other they will assess the value of a machine in the same way as a capitalist manager would (i.e., subtracting from future output the expected wage costs as in Eq. (2.17)). Their measure, in turn, is of no interest for the planner: if they have followed his instructions of maximising the present value of their assets, in a competitive labour market, the value of their assets assessed from their point of view is equal to their outstanding liabilities to the State. The planner knows this magnitude from his books, but it is a purely accounting notion of no operational significance from *his* point of view.

The planner is "making profits" in the sense that if $g > 0$ production of machines in each period exceeds the replacement of machines which have come to the end of their physical lifetime; if $g < 0$ he is only making a "gross profit." Since profits are only the measure of investment undertaken, and in this sense are "reinvested" by definition, there is no need for measuring profits, i.e., the net change in time of the capital stock. Within the framework outlined in this paper, this is true even in a socialist economy where "profits" are used as a source of bonus payments (to the managers and workers) and investment finance, because if all managers are

equally efficient, profits in equilibrium should be maximum and equal to zero. If managers are not homogeneous, and managerial abilities need material rewards to come forward, infra-marginal managers would secure quasi-rents to their firms. At the ruling interest rate they would be able to pay a wage higher than that offered by the marginal manager, but they will actually pay the same rate as he does. Given whatever limits the size of their undertakings, infra-marginal managers will obtain quasi-rents equal to the numbers of workers they employ times the difference between the wage-rate they could afford to pay and the wage-rate offered by the marginal manager. The value of their assets, again, would not have to be assessed to compute their "profits." Even under this form of decentralised socialism, which we could call "managerial socialism" to stress the role of managers in the decision-making process and the enjoyment of profits, the socialist planner could still make sure that actual total consumption does not exceed nor fall short of the level consistent with the maintenance of full-employment growth. In addition to the usual instruments of economic policy (namely, the choice of the level of collective consumption and wage taxation of subsidising), the planner could lay down rules about the share of profits retained by enterprises and the way they should be divided among managers and workers and between consumption and investment.

The problem of macroeconomic equilibrium and the role of profits and capital are, of course, entirely different in a capitalist economy. Whatever is produced in excess of what is needed to pay wages accrues to the capitalists in the form of profits; the evaluation of profits requires the evaluation of machines; capitalists might consume part of their profits; workers will get an interest rate on their savings comparable to that of capitalists. Unless there is state intervention, additional equilibrium relations will have to hold between saving propensities, output and consumption per head, rates of interest and growth. Let us suppose that all investment has to be financed out of profits, *either* because the workers' propensity to save is zero or managers of firms have the power to retain part of the profits and distribute the rest to shareholders, and both workers and shareholders have a zero propensity to save (so that $s$ is equal to the retention ratio); *or* workers have a propensity to save $s_w > 0$, but this entitles them to control over a share of total profits equal, in steady state,

to their share in current savings.[16] When this is the case we can write the equilibrium condition as

$$(1-s)\left[y(r,g)-w(r)\right]-=c(r,g)-w(r) \tag{2.26}$$

where $s$ is the propensity to save out of profits. Whenever $y > w$, the equilibrium value of $s$, $s^*$, corresponding to a given pair of values of $r$ and $g$ is given by

$$s^* = \frac{y(r,g)-c(r,g)}{y(r,g)-w(r)} \tag{2.27}$$

Suppose a capitalist economy is organised according to the golden rule of accumulation so that $r = g$: in this case $c = w$, and it follows from (2.27) that the only equilibrium value of the saving propensity of capitalists is unity. It follows that capitalist exploitation takes two forms: one is the capitalists' acquisition of consumption of goods through straightforward command over other people's labour; the other, more subtle form of exploitation is the lower average level of consumption per head associated with a suboptimal technical choice, whenever consumption out of profit prevents the fulfilment of the golden rule. (It should be emphasised again, perhaps, that the golden rule yields optimal technical choice only in conditions of steady state growth, if the criterion of optimality is taken to be the highest rate of steadily growing consumption per head; out of steady state or with a different optimality criterion the rule would not necessarily hold.)

[16] The relation between growth rate, saving propensities, profit rate and distributive shares has been put forward by N. Kaldor, "Alternative Theories of Distribution," *Review of Economic Studies*, 1956; J. Robinson, *The Accumulation of Capital* (1956); and generalised by L. L. Pasinetti, "Rate of Profit and Income Distribution in Relation to the Rate of Economic Growth," *Review of Economic Studies*, 1962. Pasinetti has shown that if workers receive an interest payment on their savings equal to that of capitalists, under certain conditions the propensity to save of workers does not affect the determination of the profit rate and the distributive shares. This proposition has been further discussed by P. A. Samuelson and F. Modigliani, N. Kaldor, J. Robinson and L. L. Pasinetti in *The Review of Economic Studies*, 1966.

Whenever the saving propensity of capitalists is less than unity, for each steady growth rate there will be one, or possibly many pairs of values of $r$ and $s^*$. Given the constraint &$$$; $1 \geqslant s \geqslant 0$, if $w$ is a decreasing function of $r$ we have $c(r, g) < w(r)$ for all $r < g$: for the constraint to be satisfied the growth rate must not exceed the interest rate.

In a capitalist as in a socialist economy, the notion of "value of capital" is not necessary to determine technical choice. In a planned socialist economy the only relevant parameters are the consumption per head—and its behaviour in time if there is technical change or the economy is out of a steady state—and the growth rate of employment. The concept of "value of capital," however, is indispensable to the political economy of capitalism because it performs two fundamental roles, one practical and one ideological.

At a practical level the evaluation of machines of different kinds and different ages in terms of output is needed to settle transactions among capitalist firms, to determine the value of the legal exclusive right to use machinery, and the value of the pieces of paper embodying such rights. It is necessary to determine distribution of income not between the haves and the have-nots but among the haves.

The ideological role of "the value of capital" is that of breaking the direct actual link between the *time pattern* of labour inputs and the *time pattern* of output in which any technology can be resolved, and establishing instead a relation between current output and current labour. To this purpose the current "value of the capital stock" is needed; a mythical conceptual construction in which the past and the future of the economy are telescoped into the present. Attention is focused not on past labour but on the present value of the embodiment of past labour, and its current productiveness can be taken to provide a justification for the attribution of the surplus of current output over the wage bill to those who have appropriated the embodiment of past labour, thereby providing the current basis of future appropriation.

## Mathematical Appendix

Equations (2.3) and (2.13) have the form

$$f(x) = \frac{a(x)}{l(x)} = \frac{\sum_{i=0}^{n} a_i x^i}{\sum_{i=0}^{n} l_i x^i}$$

The equations differ in that in (2.3) $x = \frac{1}{1+r}$, $r \geqslant 0$, so that $x$ lies in (0, 1), while in (2.13) $x = \frac{1}{1+g}$, $g > -1$ and $x$ lies in $(0, \infty)$. We shall analyse[17] $f(x)$ under the following conditions, common to both (2.3) and (2.13):

I: $x$ lies in $(0, \infty)$
II: $l_0 = 1$, $l_n > 0$, $l_i \geqslant 0$ for $i = 1, \ldots(n-1)$
III: $a_i \leqslant 0$ for $i = 0, \ldots(k-1)$, $a_k > 0$, $a_n > 0$
and
$a_i \geqslant 0$ for $i = (k+1), \ldots(n-1)$; $k \geqslant 1$
IV: $\sum_{i=0}^{n} a_i > 0$
If no $a_i$ is negative, $a(x) > 0$ for all $x > 0$ and $a(0) = 0$.

Suppose $q$ is the largest $i$ such that $a_i < 0$. Then if $a'^{(p)}$ is the $p$th derivative of $a$, and $p \leqslant q$, $a'^{(p)}(x) < 0$ for small $x$ and $a'^{(p)} \to \infty$ as $x \to \infty$, together with Descartes' rule of signs, show that $a'^{(p)}$ has one, and only one, zero in $x > 0$. Also its turning-point (*i.e.*, the solution of $a'^{(p+1)} = 0$), if it exists, must occur at smaller $x$ than its zero (the solution of $a'^{(p)} = 0$). For $p > q$, $a'^{(p)}$ has no zero or turning-point.

Similarly, for all $p$, $l'^{(p)}$ has no zero or turning-point in $x > 0$, and $l'^{(p)} \to \infty$ as $x \to \infty$, except for $l'^{(n)} = n!\, l_n$. $l'^{(p)} > 0$ for $x > 0$.

[17] I am greatly indebted to Malcolm MacCallum, who provided this analysis, including the result on the maximum number of turning-points of $f(x)$ and its proof.

Now consider $g_p = \frac{a'^{(p)}}{l'^{(p)}} \left(\text{Note} f = g_0\right)$. This is defined and finite for all $x > 0$. At $x = 0$, $g_p = \frac{a_p}{l_p}$, or if $l_p = 0$ but $l_m \neq 0$ ($m$ being the least number greater than $p$ which satisfies this condition), then as $x \to 0$, $g_p$ is approximately proportional to $x^{-(p+1-m)}$. As $x \to \infty$, $g_p \to \frac{a_n}{l_n}$.

$g_p = 0$ if, and only if, $a'^{(p)} = 0$, so $g_p$ has one, and only one, zero, for $p \leqslant q$, and the zero of $g_{p+1}$ occurs at smaller $x$ than that of $g_p$.

$g'_p = 0$ if and only if $\frac{\left(g_{p+1} - g_p\right) l'^{(p+1)}}{l'^{(p)}} = 0$, *i.e.*, if, and only if, $g_p = g_{p+1}$,[18] and $g'_p$ has the same sign as $g_{p+1} - g_p$. Thus $g_p$ cannot cross $g_{p+1}$ from below (above) when $g_{p+1}$ is increasing (decreasing). If $g_{p+1}$ has a maximum or minimum, and $g_p$ were to meet it there are hence have a maximum or minimum, this would violate the condition that $g'_p$ has the same sign as $g_{p+1} - g_p$, since one would change sign and the other not. For the same reason if $g_p$ were to have a point of inflexion at the crossing of $g_{p+1}$, then $g_{p+1}$ must also have one, and by repetition so must $g_{n-1}$ and $g_n$. But $g_n$ is constant, and so $g_{n-1}$ is either constant or monotone. Thus the only exceptional case is where all $g_p$ are constant, which is ruled out by III.

Thus we see that between any two turning-points of $g_p$ there must be a turning-point of $g_{p+1}$, so $g_p$ has at most one more turning-point than $g_{p+1}$ (if this were not so, the condition that $g'_p$ and $g_{p+1} - g_p$ are of the same sign is violated).

For this to happen we must have $g_p$ initially increasing if $g_{p+1}$ is initially decreasing, and vice-versa. This is to say that $g_{p+2}(0) - g_{p+1}(0)$ and $g_{p+1}(0) - g_p(0)$ must be of opposite sign. Note that $g_p(0) = a_p/l_p$. There are two exceptional cases, one when $l_p = 0$ and one when $g_{p+1}(0) = g_p(0)$.

A. If $g_{p+1}(0) = g_p(0)$, then $g'_p(0) = 0$ and $g'_{p+1}(0)$ has the same sign as $g_{p+2}(0) - g_{p+1}(0)$. Hence $g_p \lesseqgtr g_{p+1}$ for sufficiently small $x$ according as

[18] For the case $p = 0$, this was pointed out to us by the Hon. C. Taylor.

$g_{p+1}(0) \lesseqgtr g_{p+2}(0)$. By repetition of this argument we see that zeros in the sequence are to be ignored.

B. If $l_p = 0$, $g_p \to \pm\infty$ as $x \to 0$, and so we count $g_{p+1}(0) - g_p(0)$ as positive if $a_p$ is negative, and negative if $a_p$ is positive. Since when $l_r = 0$ ($r = h \ldots p$) and $l_{p+1} \neq 0$, we have $g_p \approx x^{-(p-h)}$ for small $x$, we must count $g_{r+1}(0) - g_r(0)$ as negative if $a_r$ positive, and positive if $a_r$ negative.

*Theorem 1*. The number of turning-points of $f(x)$ under conditions I–IV has a maximum $s$, $s$ being the number of alternations of sign of $g_p(0) - g_{p-1}(0)$ as $p$ decreases from $n$ to 1, exceptional cases being covered by *A* and *B* above.

The proof is above. The extension to the case $l_n = 0$ is easy.

We know $g_k$ has at most $(m - 1)$ turning-points, where $(m - 1)$ is the number of alternations of sign of $g_p(0) - g_{p-1}(0)$ in $p = n, \ldots (k + 1)$. If $g_{k+1}(0) < g_k(0)$, $g_q$ can have at most $m$ turning-points, all being at positive values of $g_q$. Since $g_{q-1}$ has its zero at a larger $x$ then $g_q$, $g_{q-1}$ has at most $m$ turning-points at positive $g_{q-1}$, and repeating we have:

*Theorem 2*. The number of turning-points of $f(x)$ under conditions I–IV above which occur at positive values of $f(x)$ is $m$, where $m$ is the number of alternations of sign of $g_{p+1}(0) - g_p(0)$ (using rules *A* and *B*) in $p = n, \ldots q$.

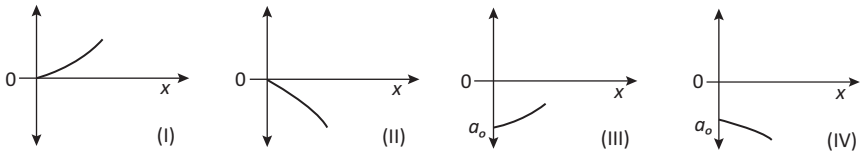
*Corollary*. The number of turning-points of $f(x)$ at negative values of $f(x)$ is at most $(s - m)$.

*Examples*. 1. If $a_p/l_p$ increases steadily for $p = 1, \ldots n$, $f(x)$ has no turning-points at positive $f(x)$.

2. If $a_p/l_p$ increases steadily for $p = q, \ldots v$ and decreases for $p = v, \ldots n$ $(q < v < n)$, $f(x)$ has one turning-point at positive $f(x)$.

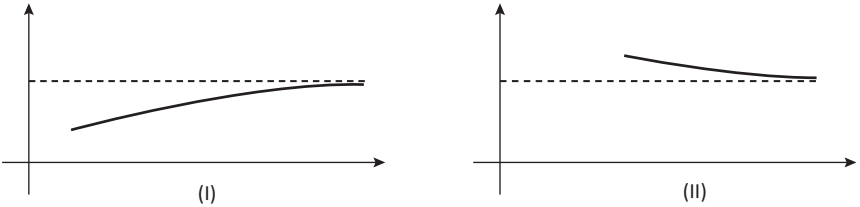
Thus the properties of $f(x)$ are as follows:

1. $f(x)$ starts in one of four ways:



2. In cases II–IV it has one, and only one, zero, in (0,1) as $\sum_{i=0}^{n} a_i > 0$ and $f(1) = \sum_{i=0}^{n} a_i$. In case I it has no zero.

3. It has two ways of ending:




4. The number of turning-points of $f(x)$ has a maximum given by the theorems above.

Once we know the properties of the function $f(x)$, we can infer the properties of $f$ as a function of $r$, say $z(r)$, and/or $g$, which are the actual variables we want economically. We note that $r = \frac{1}{x} - 1$ or $g = \frac{1}{x} - 1$ as appropriate.

$$z(0) = f(1) > 0$$
$$z_{r\to\infty} = f(0)$$
$$z(-1) = f_{x\to\infty}$$

if $x^*$ is a zero of $f(x)$, $z\left(\frac{1}{x^*} - 1\right) = 0$.

The number of turning-points of $z(r)$ for $r$ in (-1, ∞) or (0, ∞) is the same as the number of turning-points of $f(x)$ for $x$ in (0, ∞) or (0, 1) respectively.

# 3

# The Degree of Monopoly in the Kaldor-Mirrlees Growth Model

Domenico Mario Nuti

## 3.1 An Inconsistency

The Kaldor-Mirrlees model of economic growth (Kaldor and Mirrlees 1962) seems to contain an inconsistency between the assumption of imperfect competition and the relation it postulates between the wage rate and the marginal productivity of labour.

Kaldor-Mirrlees state explicitly that "It may be assumed that each entrepreneur operating in *imperfectly competitive markets*, aims at the maximum attainable growth of his own business (subject as we shall explain below, to the maintenance of a satisfactory rate of return on the capital employed) and for that reason prefers to maintain an appreciable amount of *excess capacity* so as to be able to exploit any chance increase in his *selling power* either by increasing *his share of the market* or by invading

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other markets. However, when gross investment per period is in excess of *the number of workers becoming available* to" man "new equipment, the degree of excess capacity must steadily rise" (Kaldor and Mirrlees 1962, p. 188, my italics). Excess capacity, selling power, share of the market, inelastic factor supply are familiar connotations of imperfect competition. Furthermore, one of the boundary conditions of the model states that "… the share of profits resulting from the model must be higher than a certain minimum (the so-called 'degree of monopoly' or 'degree of imperfect competition')" (Kaldor and Mirrlees 1962, p. 180) and therefore

$$\pi > m,$$

where $\pi$ is the share of profits in the national income, and $m$ is the degree of monopoly, very loosely defined as a minimum profit share consistent with the market structure of the economy (Kaldor and Mirrlees 1962, p. 179).

On the other hand, Eq. (3.1) of the model states that

$$p_{t-T} = w_t \tag{3.1}$$

where $p_{t\text{-}T}$ is the product per worker operating equipment of age $T$ at the time $t$, $T$ is the anticipated (and realized) period of operation of equipment, and $w$, is the wage rate at time $t$. As Kaldor-Mirrlees put it, "… since equipment will only be employed so long as its operation more than covers prime costs, the profit on the oldest yet surviving machinery must be zero" (Kaldor and Mirrlees 1962, p. 179). And further on they confirm, in their general conclusions, that "… for the oldest surviving machine, the quasi-rents are zero" (Kaldor and Mirrlees 1962, p. 188).

But Eq. (3.1) holds if and only if there is perfect competition. Let us call $o_{\text{t-T}}$ the physical productivity of a worker operating equipment of age $T$ at the time $t$, and $z$, the unit price of the product at the time t, we then have

$$p_{\text{t}-\text{T}} = o_{\text{t}-\text{T}} \bullet z_{\text{t}}$$

and from (3.1):

$$w_{t/\text{t}/} o_{\text{t}-\text{T}} = z_t$$

But *wt/t/ ot-T*, the unit operating cost of the plants on the margin of obsolescence, i.e. the plants of age *T,* is nothing but the marginal cost of the product. If quasi-rents on those plants are zero, i.e. unit wage costs are equal to the price of the product, then marginal cost equals price in all firms operating such plants throughout the economy. This implies conditions of perfect competition. All known species of imperfect competition—monopolistic competition, kinky demand curve, mark-up pricing, oligopolistic competition, etcetera—have one feature in common: firms could produce additional output at a profit, if there was a demand for it at the ruling price. The assumption of excess capacity, explicitly stated by Kaldor-Mirrlees (Kaldor and Mirrlees 1962, p. 175), automatically ensures that this is the case also in the short run. For all the firms of non-competitive industries, therefore, marginal cost will be lower than selling price:

$w_t / o_t < z$ from which:

$$w_t < z_t . o_{t-T \equiv} p_{t-T},$$

which contradicts Eq. (3.1). This might have puzzled the careful reader, but the contradiction appears to have passed unnoticed in the subsequent literature.[1]

[1] Hahn and Matthews, for instance, in their authoritative survey of growth theories recognize the importance of the assumption of imperfect competition in the Kaldor-Mirrlees model: "[As a result of] the rejection of perfect competition … the profit margin per unit of output at a given capital-labour ratio becomes a variable. The introduction of this extra variable liberates the distribution of income from the shackles of marginal productivity. It thereby permits the existence of steady-state equilibrium at full employment, notwithstanding element (3) [the investment function], which adds an equation to the standard neo-classical set and would therefore otherwise make the system overdetermined "(Hahn and Matthews 1964, p. 797). They take, however, the statements of the model at their face value.

The same contradiction, incidentally, can be found in another paper by Kaldor (Kaldor 1964) on the value added tax. On the one hand he says: "Changes in market demand induce variations in the level of activity of all firms, and not only the marginal firms. This is evidence that conditions of imperfect competition prevail and the output of the infra-marginal firm is limited by demand, and not by the capacity to produce "(Kaldor 1964, p. 273). On the other hand, he also says: "Old equipment works for what it can get; it will continue to be operated so long as the scrap value of equipment is less than the discounted value of the profits from its operation "(Kaldor 1964, p. 275). This second statement is tantamount to Eq. (3.1) of the Kaldor-Mirrlees model. The contradiction undermines Kaldor's analysis of the effects of the value-added tax, but the consequences of this go beyond the scope of this note.

## 3.2 A Way Out: The Introduction of the Degree of Monopoly

One way out of this striking contradiction could be that of "degrading" the model to describe only perfectly competitive situations, abandoning the more ambitious task of introducing imperfect competition in this growth model. The assumption of perfect competition, however, would clash with the postulated type of investment behaviour, which is based on a fixed pay-off period for investment per worker and is essential to the model and its stability (because it breaks the link between the capital-output ratio and the rate of interest).

A better alternative could be that of introducing the degree of monopoly for the economy as a whole, not as a boundary condition as it was in the model, but as a variable defined as $\mu$ $(z_t-(w_t/o_{t-T})/z_t$, i.e. the excess of price over marginal cost, divided by price. But $z_t=(w_t/o_{t-T})$ and therefore $\mu \equiv(p_{t-T}—w_t)/p_{t-T}$. We could now replace (3.1) by.

$$P_{t-T} = w_t / (1-\mu). \tag{3.2}$$

With one more variable and the same number of equations as before, the system would now be underdetermined. Lacking an extra equation for the determination of $\mu$, to make ends meet we have to assume that it is a constant. The introduction of it has the following consequences on the other equations of the model and its general conclusions:

1. The redefined "degree of monopoly" now is no longer a constraint to the value of the share of profit $\pi_{t..}$ If before the constraint was not really expected to bite, now by definition the degree of monopoly $\mu$ is smaller than $\pi_t$, because $p_{t-T}<y_{t,}$ the average product per worker at the time $t$, and hence

$$\mu_{t\equiv}(p_{t-T}-w_t)p_{t-T} < (y_{y-}w_t)/y_t \equiv \pi_t.$$

2. If $\mu$ is a constant, it follows from (3.2) that

$$\frac{\dot{w}_t}{w_t} = \frac{\dot{p}_{t-T}}{p_{t-T}}\left(1 - \frac{dT}{dt}\right),$$

which is the same result that is derived from the original formulation of Eq. (3.1), and is all that is needed in the model to prove that when the rate of growth of the wage rate is constant, T will also remain constant.[2]

3. A constant $\mu$, however, is only a kind of *deus ex machina*, which does not leave things entirely unchanged. The parameter $\mu$, in fact, enters the equations defining the golden age path. In particular, Eq. (3.3) now becomes (3.4):

$$\frac{\dot{y}_t}{y_t} + \lambda + \delta = r\frac{p_t}{y_t} - \frac{(r - \lambda - \delta)w_t}{(1-\mu)y_t},. \tag{3.3}$$

where A is the rate of growth of population, ö the rate of "radioactive" decay of machines, and r the number of workers available to operate new equipment per unit period expressed as a proportion of the working population. Equation (3.3) now takes the form (3.4):

$$\frac{i}{y} = \frac{1 - e^{-(\rho+\delta)T}}{\rho + \delta}\frac{p}{y} - \frac{1 - e^{-(\rho+\delta-\gamma)T}}{(\rho + \delta - \gamma)(1-\mu)}\frac{w}{y}, \tag{3.4}$$

[2] Kaldor and Mirrlees (1962, pp. 181–182). If μ is not constant in time, the equation becomes

$$\partial \mathrm{w}_t / w_t = (\partial p_{t-T} / p_{t-T})(1 - dT/dt) - \partial\mu_t / (1 - \mu_t).$$

where $i$ is investment per worker, $p$ is the general rate of profit assumed by entrepreneurs, and $y$ the rate of (neutral) technical progress.

All the numerical values presented in the tables of section 15 of the article (Kaldor and Mirrlees 1962, pp. 186–187), obtained solving the system for various arbitrarily selected values of the parameters, imply $\mu = 0$. But this is the perfectly competitive case, and is therefore devoid of any interest. Numerical results will have to be reworked anew for alternative values of $\mu > 0$, and it should be an interesting exercise to explore the sensitivity of the solutions to the value of $\mu$. Alternatively, one might take $\mu$ as given, and ask what value of $\pi$ (or $s$, the proportion of gross profits saved, or $T$) would be required for the consistency of the model.

The relation between monopoly and distribution was first formulated by Kalecki,[3] in a form which Kaldor dismissed as tautological.[4] Kalecki assumed a reverse L-shaped cost curve, prime costs being constant up to full capacity output and marginal costs equal to average prime costs. The degree of monopoly, defined as the excess of price over marginal cost, divided by price, was hence equal to the share of profits in the output of each firm, and the share of profits in the national income was a weighted average of the degree of monopoly in all the firms of the economy. In a vintage model à la Kaldor-Mirrlees marginal cost (i.e. labour unit cost on the machine on the verge of obsolescence) is higher than average prime cost because of the coexistence of different vintages, and as we have seen $\mu<\pi$, but μ has an effect on π through the solution of the system of equations. By pulling the loose end thus revealed, namely the impact of μ on π, one might well unravel the carefully woven fabric of the Cambridge theory of distribution.

See (Kaldor 1955).

[3] Kalecki (1938, 1939, ch. I, 1941, 1942a, b, c, 1943, 1954, Part I).

[4] See Kaldor (1955).

## A Further Note

There are two elements in Kalecki's theory of distribution. The first is: "the workers spend what they get and the capitalists get what they spend". The total gross profit per annum in the economy is the gross investment of the year plus the consumption of profits of the year. The second branch of Kalecki's theory is concerned with prices in the short period. He originally set it out in terms of old-fashioned static marginal and average revenue. It can be more simply (and realistically) expressed in terms of the price policy of firms; profit margins, in each market, settle at the level that yields the expected rate of profit (the best attainable in the given conditions) at an average degree of utilization of plant (permitting supernormal profits in a seller's market and sub-normal profits in a buyer's market to be realised through changes in output at constant prices, instead of through changes in prices, as must be supposed to occur under perfect competition). In terms of the old-fashioned theory, given the policy of all the rest, each finds a kink in his individual demand curve at his actual rate of sales; there is no advantage for anyone in trying to sell more today, but each finds the kink moving outwards through time so that he can plan to increase sales in the future at the same level of profit margins as he is enjoying today.

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# 4

# V. K. Dmitriev: Economic Essays on Value, Competition and Utility

Domenico Mario Nuti

## 4.1 Introduction

Vladimir Karpovich Dmitriev (1868–1913) was the first Russian mathematical economist, and his *Economic Essays*, published between 1898 and 1902, are a classic text in economic literature.

The interest of this text for the modern reader is threefold. First, Dmitriev anticipated and formulated in rigorous and unambiguous terms a number of propositions and techniques which are an essential part of modern economics; these range from the foundations of input-output

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analysis to the correct determination of labour values and prices of production, including what is now known as Samuelson's 'non-substitution theorem' and some of Sraffa's propositions on prices and distribution. Second, Dmitriev developed a highly original version of the theory of competition which we could characterise as perfect competition in present markets in the absence of forward markets; this is a fresh and highly relevant contribution to a field where research has come to a standstill. Third, now that there are raging controversies between schools laying different emphasis on the relative role of individual choice and of macroeconomic relations, Dmitriev's attempt at 'an organic synthesis of the labour theory of value' and of the theory of marginal utility' is a most topical reminder of the necessity of considering aspects of the theory of prices and distribution neglected either by one school or the other. In addition, the rediscovery of Dmitriev's work in the 1960s has had a salutary influence on current Soviet economic thought and planning practice; although Dmitriev is not a Marxist, his system of thought is compatible with Marxian economics; he provides opportunities for appealing to a Russian tradition in mathematical economics and his book has greatly contributed to the legitimacy of the use of mathematical methods in both economic investigations and planning practice.

## 4.2 Labour Values

Dmitriev uses 'value' in the sense of exchange value,[1] interchangeably with 'price', not in the Marxian sense of *labour value* or labour embodied in commodities. However, Dmitriev is the first economist to go beyond the mere definition of 'labour embodied' and to provide a theoretical and computational framework for the actual calculation of the 'labour embodied' in commodities. This he does by means of a system of equations expressing the labour value of each commodity in terms of its input coefficients and the labour values of its inputs.

[1] Here labour theory of value 'should really be understood as theory of prices of production', see below.

At the beginning of the First Essay, Dmitriev considers the question 'how is it possible to calculate the amount of labour expended for the production of a given economic good from the very beginning of history, when man managed without capital, down to the present time' (p. 43). He answers that there is no need for 'historical digressions' of this kind; the quantity of labour $N_A$ which goes, directly and indirectly, into the production of commodity $A$ is expressed by the equation

$$N_A = n_A + \frac{1}{m_1} N_1 + \frac{1}{m_2} N_2 + \cdots + \frac{1}{m_M} N_M \tag{4.1}$$

where $n_A$, is the *direct* labour input of a unit of commodity $A$; $1 / m_t$ is the amount of the $i$th commodity *used up* in the production of commodity $A$, where $i$ = I, 2, …, $M$; and $Ni$ is the labour directly and indirectly embodied in the $i$th commodity (this is equation (6) in the First Essay, p. 44). The coefficient $1 / m_t$ here is to be interpreted either as the intermediate inputs requirement for the production of the $A$ commodity, or as the straight-line amortisation of the $i$th fixed capital good (assuming uniform productiveness over its lifetime); some of these coefficients may be equal to zero, as in Dmitriev's system of equations (7) in the First Essay. For each of the $M$ other commodities there is an equation of the same form, relating labour (directly and indirectly) embodied to input coefficients and the labour embodied in the inputs (p. 44). We obtain a system of ($M$ + 1) equations in ($M$ + 1) unknowns, 'which is always adequate for the determination of $N$, giving the required sum of the labour expended on the production of product $A$. Therefore, without any digressions into the prehistoric times of the first inception of technical capital, we can always find the total sum of the labour directly and indirectly expended on the production of any product *under present day production conditions*, both of this product itself and of those capital goods involved in its production' (p. 44, emphasis in the text).

This is clearly a full-fledged input-output system, where $Ni$ are the full coefficients of labour, the $n_i$, are the direct labour inputs, and the $1 / m$

are identical with Leontief's input-output coefficients.[2] The analytical apparatus provided by Leontief four decades later adds two things: (i) a method for the actual computation of the solution, namely the inversion of the matrix (**I**–**A'**), where **I** is the identity matrix and **A'** is the transpose of the matrix of technical coefficients; and (ii) the generalisation of the notion of full input (i.e. direct and indirect input requirements) from labour to other production inputs. In Leontief's type of notation, if we call $a_i$ the amount of *i*th product required per unit of the *j*th product, **A** the $[a_{ij}]$ matrix; $a_{ij}$ the direct labour input of product *j,* and **a** the column vector $[a_{0j}]$; and $f_{ij}$, the full-input coefficient, i.e. the element of the (**I**–**A'**)$^{-1}$ matrix, we obtain

$$f_{ik} = \sum_{j=1}^{n} a_{ij} f_{jk} + \delta_{ik} \tag{4.2}$$

where $i, k, j = 1, 2, \ldots, n$; and $\delta_{ik}$ is Kronecker's delta, i.e. is equal to zero except for $i = k$ when it is equal to unity. If we indicate full labour inputs (i.e. Dmitriev's *N*'s) by $f_{0k}$, Leontief's approach gives

$$f_{ok} = \sum_{j=1}^{n} a_{oj} f_{jk} \tag{4.3}$$

or

$$\mathbf{f}_o = \left(\mathbf{I} - \mathbf{A}'\right)^{-1} \mathbf{a} \tag{4.4}$$

where $\mathbf{f}_0 = [f_{ok}]$. Dmitriev's formulation of full labour inputs is

$$f_{ok} = a_{ok} + \sum_{j=1}^{n} f_{oj} a_{jk} \tag{4.3'}$$

[2] W. W. Leontief, *The Structure of the American economy* 1919–1939, New York, 1941; W. W. Leontief et al., *Studies in the structure of the American economy*, New York, 1953.

or

$$\mathbf{f}_o = \mathbf{a} + \mathbf{A}'\mathbf{f}_o \tag{4.4′}$$

which is just another way of rewriting Leontief's equation (4.4).

Soviet and Western writers have not failed to notice the similarity between Dmitriev's and Leontief's equations. V. S. Nemchinov writes that Leontief 'gave a mathematical interpretation of the balance sheet of an economy by constructing equations relating input and output as Walras and Dmitriev had in their day suggested',[3] he refers repeatedly to the 'iteration equations of Dmitriev-Leontief'[4] and speaks of 'the identity of the results obtained from Dmitriev's equation and Leontief'.[5] The Soviet economists V. D. Belkin, D. M. Grobman and A. L. Lunts maintain the identity of Leontief's full-input coefficients with Dmitriev's results and offer a proof of 'correlation of two ways of determining full inputs '.[6] The similarity of the two approaches has also been emphasised by A. Zauberman and A. Nove in the West.[7] Zauberman gives a conveniently shortened version of the proof offered by Belkin-Grobman-Lunts. Arguing from analogy, the authors of the theorem write down for Dmitriev an equation of full input $c_{ik}$ of any $i$th commodity per unit of a $k$th product:

[3] V. S. Nemchinov, `The use of mathematical methods in economics', in V. S. Nemchinov (Ed.), *The use of mathematics in economic*s, Moscow, 1959, English translation edited by A. Nove, London, 1964, p. 12 of the English edition.

[4] V. S. Nemchinov, 'A model of an economic region', Moscow, 1961, translated in *Mathematical studies in economics and statistics in the USSR and Eastern Europe*, Vol. 1, 1964, p. 14; `Basic elements of a model of planned price formation', Voprosy Ekonomiki, n. 12, 1963, translated in A. Nove and D. M. Nuti (Eds.), *Socialist Economics*, Penguin, 1972, p. 414.

[5] Nemchinov, 'Basic elements …', p. 414, footnote.

[6] V. D. Belkin, 'Natsionalnyi dokhod i mezhotraslevoy balans' [National income and intersectoral balance], in Primenenie matematiki i elektronnoy tekhniki v planirovanii [The use of mathematics and electronic techniques in planning], ed. by A. G. Aganbegyan and V. D. Belkin, Moscow, 1961, p. 28.

[7] A. Nove and A. Zauberman, 'A resurrected Russian economist of 1900', *Soviet Studies*, July 1961; A Zauberman, 'Few remarks on a discovery in Soviet economics', *Bulletin of the Oxford Institute of Economics and Statistics*, 1962.

$$c_{ik} = a_{ik} + \sum_{j=1}^{n} c_{ij} a_{jk} \tag{4.5}$$

for $i, k, j = 1, 2, \ldots, n$. If we compare this extension of Dmitriev's approach with Leontief's equations (4.2) above for full inputs, it can be proved that

$$f_{ik} = c_{ik} \text{ if } i \neq k, \text{ and } f_{ik} = c_{ik} + 1 \text{ if } i = k.$$

Following Zauberman's version of the proof, with $\mathbf{A} = [a_{ij}]$, $\mathbf{F} = [f_{ij}]$ and $\mathbf{C} = [c_{ij}]$, and by definition unit matrix $\mathbf{I} = [\delta_{ij}]$, we have $\mathbf{F} = \mathbf{A}' + \mathbf{IF}$, $\mathbf{C} = \mathbf{A}' + \mathbf{CA}'$. Solving the two sets of equations, we have $\mathbf{F} = \mathbf{I}(\mathbf{I} - \mathbf{A}')^{-1}$, $\mathbf{C} = \mathbf{A}'(\mathbf{I} - \mathbf{A}')^{-1}$; hence the difference of the two matrices $\mathbf{F} - \mathbf{C} = (\mathbf{I} - \mathbf{A}')(\mathbf{I} - \mathbf{A}')^{-1} = \mathbf{I}$, i.e. $\mathbf{F} = \mathbf{C} + \mathbf{I}$, so that Leontief's matrix of full coefficients is different from an analogous Dmitriev matrix only along the leading diagonal.[8] Zauberman explains the difference by saying that ' on the Leontief route full coefficients are computed per unit of output passing into final uses; on the "analogous" Dmitriev route they would be computed per unit of produced outputs ' ; but 'only by resorting to "*analogy*" have Belkin-Grobman-Lunts formulated the equation for a generalised case of $\boldsymbol{c_{ik}}$ which is indeed theirs, not Dmitriev's'.[9]

If one wishes to extend Dmitriev's notion of full labour coefficients to the full coefficients of other inputs as well, it is perfectly clear that the full-input coefficient of a commodity into one *net* unit of the same commodity (i.e. along Leontief's leading diagonal) is given by one unit of itself as well as by the sum of all direct and indirect requirements of that commodity to produce itself. Dmitriev's and Leontief's approaches then turn out to be identical, and the Belkin-Grobman-Lunts proof is unnecessary. The question whether the extension is legitimate is a matter of opinion; as to labour, the identity of Eqs. (4.4) and (4.4′) is incontrovertible, and the problem does not arise. Here priority in discovery is immaterial; whether or not Leontief as a Russian student in the 1920s was acquainted with the work of an economist whose death in 1913 was

[8] See Zauberman, 'Few remarks on a discovery …', p. 422.

[9] Ibid., pp. 422–3.

recognised as ' a great loss for Russian economic science', and was already hailed as the 'first Russian economist-mathematician'[10] Dmitriev's achievement is remarkable all the same.

The importance of Dmitriev's approach for socialist planning was already understood in the 1920s, and A. V. Chayanov developed Dmitriev's scheme of the economy into an input-output table for agriculture.[11] From the beginnings of Soviet planning, the consistency between gross and net output in different sectors was attempted mainly by means of the method of material balances; these are budget-type accounts, showing the resources and uses for each product or group of products; intermediate uses are assessed on the basis of planned input coefficients (' norms ') so that each material balance contains the information corresponding to one row of an input-output table. Even in the absence of input-output techniques, the procedure generally used to construct material balances corresponds to a large extent to the process of inverting a matrix of the technological coefficients of an input-output table, to obtain the $(\mathbf{I–A'})^{-1}$ matrix.[12] But the Stalinist attitude to the use of mathematical methods as a bourgeois deviation inhibited their further development and retarded the use of input-output methods until the late 1950s.[13] Lange had tried to rehabilitate input-output techniques by maintaining the similarity between input-output tables and Marxian reproduction schemes[14]—a far-fetched interpretation in view of the use of value categories in those schemes, and the absence of the notion of

[10] N. N. Shaposhnikov, Pervyi Russkii ekonomist-matematik Vladimir Karpovich Dmitriev, Doklad v posvyashchennom pamyati Dmitrieva zasidanii 0-va im. A. I. Chuprova [The first Russian mathematical economist V. K. Dmitriev, a lecture at a meeting of the A. I. Chuprov Society, held in memory of Dmitriev], Moscow, 1914.

[11] A. V. Chayanov, *The theory of peasant economy* (1926), English translation, 1966; quoted by M. Kaser, *Soviet Economics*, 1970, p. 65.

[12] See H. S. Levine, 'The centralised planning of supply in Soviet industry', in Joint Economic Committee, Congress of the United States, Comparison of the United States and Soviet Economics, Washington, 1959; J. M. Montias, 'Planning with material balances in Soviet-type economies', *American Economic Review*, December 1959 (reprinted in Nove and Nuti, *Socialist Economics*).

[13] See V. G. Tram', 'Input-output analysis and Soviet planning', in J. P. Hardt et at, *Mathematics and computers in Soviet economic planning*, London, 1967.

[14] Lange, *Introduction to Econometrics*, Warsaw, 1958, pp. 218–29 of the English translation from Polish, London, 1959.

input-output coefficients. The ability to claim Russian priority in the discovery of input-output equations in the work of Dmitriev was an important step in the struggle for the use of mathematical methods in socialist planning.

In 1962 the Central Statistical Administration produced an 83 × 83 intersectoral balance of labour outlays in the Soviet economy for 1959–1960, using the first *ex-post* input-output tables for the Soviet economy, compiled for 1959. This balance shows, in terms of labour, the inter-industrial flows, the formation of the final bill of goods, the formation of national product and cost incurred in the non-productive sphere.[15] This calculation corresponds exactly to the Dmitriev-Leontief full labour coefficients. It shows that, for instance, out of 97 million man-years, about 50 million are ultimately devoted to the production of consumer goods; 34 million to that of clothes and footwear alone. The non-productive sphere, including administration, absorbs 17 million man-years and about 30 million go to capital formation, exports and other items. Soviet writers have regarded these computations as methods of measuring the Marxian 'socially necessary labour' contained in different commodities. Eidel'man suggested that this kind of labour balance should be used in an analysis of the price system and as an aid to an empirical price formation.[16] This however is a misapplication of Dmitriev's approach. In Marxian theory labour values are but a step in the understanding of the origin of profit in a capitalist economy, not prices to be charged in a socialist economy[17]; Marx had a theory of prices as *transformed* values,[18]

[15] See M. R. Eidel'man, Pervyi mezhotraslevoi balans zatrat truda v narodnom khoziaistve SSSR' [The first intersectoral balance of labour expenditures in the national economy of the USSR], Vestnik Statistiki, n. 10, 1962; A. Zauberman, A note on the Soviet inter-industry labour input balance', *Soviet Studies*, 1963.

[16] See Eidel'man, Pervyi mezhotraslevoi …'; Mezhotraslevoi balans obshchestvennogo produkta i ego ekonomicheskie soderzhanie' [Intersectoral balance of social product and its economic content], Voprosy Ekonomiki, 1961

[17] For Marx, the proposition that prices in terms of labour embodied are equal to labour values is not an assertion about what happens in economic reality, but an assumption under which the origin of profit is investigated, on the ground that if profit cannot be explained under that assumption, it cannot be explained at all (see K. Marx, *Wages, price and profit*, 1898). In Marx's view, the equality of prices and labour values is not a feature of the socialist economy; see K. Marx, *Critique of the Gotha Programme*, 1891.

[18] See K. Marx, *Capital*, Vol. 1894, Chs. 9 and 10.

which are higher or lower than respective values because of the basic requirement of a uniform profit rate throughout the economy. No wonder that actual Soviet prices do not correspond to the 'labour content' computed in Soviet tables; making average full labour content per rouble equal to 100, it has been found that the actual full labour input coefficients per rouble ranged from 33 in the gas industry to 198 for animal husbandry,[19] but this cannot *per se* be regarded as evidence of irrationality in Soviet pricing. However, in addition to his solution of the determination of labour embodied in commodities, Dmitriev also had a theory of *prices of production* which is a reformulation and development of Ricardian price theory and corresponds to Marxian production prices.

## 4.3 Prices of Production

Imagine an economy where production takes place under constant returns to scale, with the assistance of one primary (i.e. non-produced) input, i.e. labour, which is paid a given real wage, and of produced capital goods. Suppose also that there is only one method of producing each commodity. If the composition of output has been correctly anticipated, and if competition equalises the profit rate on the value of capital goods (including advances to labourers), it can be proved that prices (in Dmitriev's terminology, *values* or *exchange values*) are equal to prices of production. Prices of production are made up of the wage and material costs of production plus profit on capital at a rate determined by the production coefficients and the real wage rate. In modern literature, this proposition can be found in P. Sraffa's *Production of commodities by means of commodities*, 1960, if we add the assumption of constant returns to scale (although Sraffa insists that he is not assuming constant returns to scale, and therefore his analysis holds only for a scale and composition of output which are taken as given). If we assume that labour and produced inputs can be combined in an infinite number of different alternative proportions, profit maximisation by competitive producers leads to the choice of the combination of productive methods that maximises the

[19] Treml, '*Input-output analysis and Soviet planning*', p. 117.

profit rate; it turns out that, although in principle there exists 'substitutability' between inputs, under the given assumptions only one combination of methods will be in use and the composition of output does not lead to substitution between inputs. Demand conditions will affect the relative quantities demanded at those production prices, but relative prices are the same whatever the composition of demand turns out to be at those prices (as long as this composition is correctly anticipated by producers). This proposition, which for a timeless economy has been put forward in 1951 independently by P. A. Samuelson, who labelled it 'non-substitution theorem' and by N. Georgescu-Roegen,[20] can be found in its 'dynamic' version (i.e. for the economy we have described, where production takes time, and intermediate inputs are circulating capital) in Sraffa's book, and is now referred to as the 'dynamic non-substitution theorem'.[21] These propositions can be found in Dmitriev, although the additional necessary assumption of no joint production is not explicit.

Dmitriev starts from the refutation of the criticism levied in his time against the 'classical' theory of price determination based on production costs, 'that it defines price from prices, that it defines one unknown from other unknowns' (p. 41). Among others, Walras had criticised 'the English economists' for expressing price as the sum of profit and wage, and at the same time profit as the difference between price and wage: In the language of mathematics'—Walras wrote—'one equation cannot be used to determine two unknowns'.[22]

This allegation, Dmitriev argues, can be levied against Adam Smith, who did not deal with the problem of the determination of the profit rate, except for a vague reference to the demand for and supply of capital, i.e. going outside the sphere of production.[23] But Ricardo is not subject to this criticism; indeed 'The most important point in Ricardo's theory is undoubtedly his theory of the conditions defining the "average" profit

[20] P. A. Samuelson, 'Abstract of a theorem concerning substitutability in open Leontief models', in T. C. Koopmans (Ed.), *Activity analysis of production and allocation*, 1951; N. Georgescu—Roegen, '*Some properties of a generalised Leontief model*', ibid.

[21] J. Mirrlees, 'The dynamic nonsubstitution theorem', *Review of Economic Studies*, January 1969.

[22] L. Walras, *Elements of pure economics* (1874), Lesson 40, § 368, p. 425 of the Jaffe edition, 1954.

[23] A. Smith, *Wealth of nations*, Book I, Ch. 9, p. 143 of the 1814 edition; see also Dmitriev's First Essay, p. 49.

rate …' and Ricardo's immortal contribution was his brilliant solution of this seemingly insoluble problem' (pp. 50 and 58, First Essay).

For the study of *prices* (or *values*, in his terminology) Dmitriev uses a framework slightly different from that employed for the study of *labour values* (or labour embodied in commodities). Instead of extending his *point input-point output* framework, whereby commodities are produced by means of labour and other commodities (Eq. (4.1)), he uses an Austrian-type model where commodities are produced by dated labour, i.e. a *flow input-point output* framework, whereby commodities are produced by dated labour. For each commodity Dmitriev formulates a price equation of the type:

$$X_A = n_A a X_a \left(1+r\right)^{t_A} + n_1 a X_a \left(1+r\right)^{t_{A1}} + \cdots + n_m a X_a \left(1+r\right)^{t_{Am}} \qquad (4.6)$$

where $X_A$ is the price of commodity $A$, $a$ is the amount of wage good (say, corn) consumed by workers, $Xa$ is the unit price of the wage good; $n_A$, $n_1$, … $n_m$ are the labour inputs required respectively $t_A$, $t_{A1}$, … $t_{Am}$ time units before the output of commodity $A$ becomes available (this is Eq. (25), p. 54). If there are $M$ commodities in addition to the wage good, we have ($M$ + 1) equations; there are $M$ relative prices to be determined, in terms of an arbitrary commodity whose price is taken as unit of account, plus the profit rate; the system is complete and can simultaneously determine relative prices and the profit rate. 'It is to Ricardo's credit that he was the first to note that there is one production equation by means of which we may determine the magnitude of *r directly* (i.e. without having recourse for assistance to the other equations). This equation gives us the production conditions of the product $a$ to which in the final analysis the expenditure on all the products, $A$, $B$, $C$,… is reduced' (p. 59). For the wage good, with labour inputs $N_0$,

$$X_a = a X_a \left[ N_a \left(1+r\right)^{t_a} + N_1 \left(1+r\right)^{t_{a1}} + \cdots + N_q \left(1+r\right)^{t_{aq}} \right]. \qquad (4.7)$$

From this (Eq. (44), First Essay) we can obtain

$$a = \frac{1}{\sum_i N_i (1+r)^i} \tag{4.8}$$

which today is familiar as the 'wage—profit frontier '; Dmitriev writes it instead in the perfectly equivalent form

$$r = F\left(N_a,;,,,,;N_1,;,,,,;\ldots,;,,,,;N_q,;,,,,;t_a,;,,,,;t_{a1},;,,,,;\ldots,;,,,,;t_{aq},;,,,,;a\right). \tag{4.9}$$

The proposition that 'a reciprocal relationship will exist between the profit rate and the level of wages' could already be inferred from Smith's analysis, but the actual quantification of this relation—Dmitriev argues (p. 58)—should be credited to Ricardo.

Dmitriev then extends his analysis to the case where workers consume not a single commodity but a number of commodities α, β, γ, …, in fixed proportions. He indicates by *a*, *b*, *c*, … the quantities of consumption goods consumed by a unit of labour, and by $X_a$, $X_b$, $X_c$… their respective prices. His price equations become:

$$\left.\begin{aligned} X_a &= N_a\left(aX_a + bX_b + cX_c + \cdots\right)\left(1+r\right)^{t_a} + \\ &\quad N_{a1}\left(aX_a + bX_b + cX_c + \cdots\right)\left(1+r\right)_{a1} + \cdots \\ X_b &= N_b\left(aX_a + bX_b + cX_c + \cdots\right)\left(1+r\right)^{t_b} + \\ &\quad N_{b1}\left(aX_a + bX_b + cX_c + \cdots\right)\left(1+r\right)^{t_{b1}} + \cdots \\ &\cdots \end{aligned}\right\} \tag{4.10}$$

(this is his system of Eqs. (48), p. 60). As in the case of a single wage good, 'the level of the profit rate r is determined by the production costs

of products consumed by the workers" (p. 61)[24]; hence 'To level at Ricardo's theory the hackneyed reproach that it "defines price in terms of price" is to manifest a complete lack of understanding of the writings of this very great theoretical economist' (p. 61). The condition for a positive profit rate to arise is that 'we can obtain a larger quantity of the same product within some finite period of time as a result of the production process' (p. 62).

These statements can easily be put in a modern formulation. If we consider the simpler case where production takes place in a single uniform period, which is taken as the time unit, the system of Eq. (4.10) becomes

$$\left.\begin{aligned} X_a &= (1+r)N_a\left(aX_a + bX_b + cX_c + \cdots\right) \\ X_b &= (1+r)N_b\left(aX_a + bX_b + cX_c + \cdots\right) \end{aligned}\right\} \qquad (4.11)$$

$$\cdots$$

For simplicity, we introduce the following matrix notation (where vectors are *column* vectors): $\mathbf{w} = (a, b, c, \ldots z)$; $\mathbf{a_o}$, $= (N_a, N_b, N_c \ldots N_z)$; $\mathbf{B} = \mathbf{a_o w'}$ ; $\mathbf{p} = (X_a, X_b, X_c, \ldots X_z)$. We can now write Eq. (4.11) as

$$\mathbf{p} = (1+r)\mathbf{B}'\mathbf{p} \qquad (4.12)$$

i.e.

$$\mathbf{B}'\mathbf{p} = \frac{1}{1+r}\mathbf{p}. \qquad (4.13)$$

In the language of modern algebra, the profit rate turns out to be equal to $(1 - \sigma) / \sigma$, where $\sigma$ is the eigenvalue of the unique positive eigenvector of the positive matrix **B**; a positive profit rate requires $\sigma < 1$. This is

[24] The idea that for a given real wage the production conditions of wage goods determine the profit rate has now been noted by Soviet economists; see A. A. Konius, Trudovaya teoriya stoimosti i ekonometrika' [The labour theory of value and econometrics], in P. A. Baran and others, *On political economy and econometrics, Essays in honour of Oskar Lange*, Warsaw, 1964, pp. 240–1.

equivalent to Dmitriev's statement above; in fact, to say that 'we can obtain a *larger* quantity *of the same* product within some finite period of time as a result of the production process means that for some vector $\hat{\mathbf{x}}$ of gross output $\mathbf{x}$, such that the condition is satisfied.

$$\mathbf{B}\hat{\mathbf{x}} = \lambda\hat{\mathbf{x}} \tag{4.14}$$

$$\lambda < 1. \tag{4.15}$$

The dominant eigenvalue of $\mathbf{B}$ is in fact the same as the dominant eigenvalue of $\mathbf{B}'$, hence if condition (4.15) is satisfied there is a positive profit rate.

It is interesting to compare this with the Sraffian price equations. Sraffa assumes that wages are post-paid, and that commodities—as well as labour—are needed for the production of commodities. Hence following Sraffa we could write:

$$\mathbf{p} = (1+r)\mathbf{A}'\mathbf{p} + \mathbf{a}\mathbf{w}' \cdot \mathbf{p}. \tag{4.16}$$

If we modify the Sraffa model to allow for wages being anticipated, we obtain

$$\mathbf{p} = (1+r)(\mathbf{A}' + \mathbf{a} \cdot \mathbf{w}')\mathbf{p}. \tag{4.17}$$

Comparing this with Eq. (4.12), we can see that the Dmitriev equation corresponds to the Sraffa equation under the assumption that wages are anticipated and that there are no intermediate inputs. But beside this difference the formal structure of the model is the same, and we find in Dmitriev an anticipation of the notion of 'basic commodities', i.e. the commodities entering directly or indirectly in the production of all commodities. The production conditions of these commodities (in Dmitriev's case, wage goods) determine the profit rate in the economy and the relative prices of *all* commodities, including those which do not enter into the wage basket. However, the Sraffian notion of 'standard commodity', i.e. the composite commodity obtained by combining the basic commodities in proportions such that the surplus has the same composition

as the inputs, is not explicit in Dmitriev, other than in the generic statement of the condition 'we can obtain a *larger* quantity *of the same* product within some finite period of time as a result of the production process'. Sraffa's discovery of the 'standard commodity' and its properties could not possibly be ascribed to Dmitriev.

Dmitriev, in sum, considers 'production of commodities by means of dated labour', not 'production of commodities by means of commodities' (at least when discussing the determination of the profit rate), with wages being advanced, not posticipated' as in Sraffa. Their similarity descends from the common Ricardian root. They also bear a similar relation to Marx: both Dmitriev and Sraffa provide the correct solution to the determination of prices of production, of the kind sought by Marx, but their prices are not, as in Marx, a *transformed* form of *labour values*; they are determined directly from technology and the real wage rate, without the intermediate route of labour values, and therefore without necessarily drawing the Marxian inference of labour exploitation. There is, however, a difference between Dmitriev's and Sraffa's relations to Marx. Dmitriev, like Marx, finds the origin of profit in the production conditions of the real wage. Sraffa, on the contrary, because of his assumption of post-paid wages and his measurement of wages in terms of the 'standard product' (i.e. the net product of a hypothetical economy having the same labour force and producing only the 'standard commodity') loses the Marxian connection between the productive conditions of workers' consumption and the profit rate. In Sraffa the profit rate appears to depend on the distribution in the standard system, while the production conditions of wage goods determine the level of workers' real consumption, not the profit rate.[25]

Although Dmitriev's approach is closer to Marx than Sraffa's, Dmitriev goes out of his way to *deny* the Marxian theory of exploitation and to show, 'proceeding from Ricardo's analysis, that the origin of industrial profit does not stand in any "special" relationship to the human labour

[25] In a sense Sraffa loses, in this way, also something of the Ricardian approach to production and distribution. Sraffa's 'standard commodity' has in common with Ricardo's corn the fact that input and output have the same physical specifications; but unlike Ricardo's corn, the `standard commodity' is not consumed directly by workers. In general, unless workers happen to consume the 'standard commodity', no commodity will have both these properties of Ricardo's corn.

used in production' (p. 64). In order to do this, Dmitriev investigates the properties of an imaginary system where work is performed exclusively by animals and machines.

## 4.4 Workers, Animals and Machines

In an imaginative piece of analysis, Dmitriev argues that although 'The *starting point* for Ricardo's analysis was provided by the present-day *capitalist system* based on the use of *hired human labour* it would, however, be extremely erroneous to imagine that the *conclusions* at which [Ricardo] arrived have a bearing only on the present time' (p. 61). The conditions for a positive profit rate are quite general: '… whenever a known quantity of some product *a* has been used up in the production of *a* and we can obtain a *larger* quantity *of the same product* within some definite period of time as a result of the production process, the profit rate in the given branch of industry will be a fully-determined quantity greater than zero, irrespective of the price of the product *a*. If the production costs of the other goods *A*, *B*, *C*,… are reduced *in the final analysis* to the same product *a*, the same profit rate should also be established in these branches under conditions of free mobility from one branch of production to another. … Whether the potential energy incorporated in the production good a is released and used in production in the form of *human labour*, as happens at present, or by means of some other process (*not involving the participation of human labour*) is a matter of indifference' (pp. 62–63). 'It is theoretically possible to imagine a case in which all products are produced exclusively by the work of machines, so that no unit of *living labour* (whether human or of any other kind) participates in production, and nevertheless an industrial profit may occur, in this case, under certain conditions, a profit which will not differ essentially in any way from the profit obtained by present-day capitalists using hired workers in production' (p. 63). Dmitriev realises that for a process not requiring human labour to be actually employed in production, it is necessary not only that such a process should yield a positive profit rate (equal to the rate of self-reproduction of animals or machines, to whose input any output can be reduced) but also that this profit rate should be greater or equal to that

obtainable by using labour: 'for any given process *actually* to determine the profit rate, it is still insufficient that it *could in general* serve as a source of profit, and it is further necessary that it should yield *a higher profit rate* than all other possible processes' (pp. 64–65); 'in reality one out of all these equation systems [describing alternative technologies] will be in force, namely the one which will yield the greatest value for *r* … (p. 66); 'when different constant profit rates exist in different branches of production, a balance will be established either when products yielding a high profit rate pass into the realm of *free goods* or when the production of products with a low rate of profit is discontinued' (p. 68).

So far so good; this is a neat and modern-tasting piece of analysis. But Dmitriev rather overreaches himself with the claim that *'therefore* … the origin of industrial profit does not stand in any "special" relationship to the human labour used in production' (p. 64, emphasis added). This is a splendid *non sequitur*. What Dmitriev has actually shown is that if no *human* labour is used in production there can be no exploitation of human labour; but then profit will arise from a 'special relation' of capital to animal labour, or robots' labour, and the fact that we do not usually talk of 'exploitation' of animals and machines does not in any conceivable sense rule out the proposition of *human* exploitation when *human* labour is actually used in production.[26]

In view of Dmitriev's claim that profit has nothing to do with the relation between capital and hired labour, it seems apt that he should be classified, in Soviet handbooks on the history of economic thought, as belonging to 'the Russian bourgeois literature'.[27] This classification also seems correct in view of Dmitriev's approach to income distribution; although in his First Essay he says that 'the level of [the real wage] at which equilibrium is established is a question of fact and will be dependent on the strength of the contending parties' (p. 74) and seems to suggest some scope for class struggle in the determination of income distribution, he later seems to have subscribed to J. B. Clark's marginal

[26] See H. Denis, Postface to V. K. Dmitriev, *Essais Economiques*, with an Introduction by A. Zauberman, Centre National de la Recherche Scientifique, Paris, 1968, p. 265.

[27] A. I. Pashkov (Ed.), Istoriya Russkoi ekonomicheskoi mysli [History of Russian economic thought], Moscow, 1966, Part r, Tome 3, p. 182.

productivity theory, i.e. to bourgeois economics at its worst,[28] in a formulation now entirely discredited in the modern discussions on capital theory.[29]

## 4.5 Dmitriev as an Anti-Ricardian

In the scanty references to Dmitriev's work, especially in modern economic literature, Dmitriev is generally regarded as a Ricardian.[30] This is due to the importance of Dmitriev's contribution to the clarification and extension of Ricardo's economics, to Dmitriev's great admiration for Ricardo, and to the wider popularity of his First Essay whose broad contents were cited at length by Bortkiewicz.[31] But any reading of Dmitriev's three Essays should quickly dispel the impression that he is a Ricardian.

The purpose of Dmitriev's work is clearly stated in the subtitle of the Essays: 'An attempt at an organic synthesis of the labour theory of value and the theory of marginal utility.' The preoccupation with providing some *synthesis (reductio ad unum)* of conflicting theories is a typical feature of continental (i.e. European versus Anglo-Saxon) intellectuals; in Russian economic thought, a 'reconciliation' of the labour theory of value (understood here as a theory of prices of production) and Austrian utility theory was attempted by M. Tugan-Baranovsky and P. Struve,[32] and

[28] V. K. Dmitriev, 'A review of Tugan—Baranovsky's Principles of Political Economy', Russkaya Mysl, n. 11, 1909, p. 113.

[29] For a survey of these discussions, see G. C. Harcourt, *Some Cambridge controversies in the theory of capital*, Cambridge, 1972.

[30] See for instance, P. Struve, *Russkaya Mysl*, 1913, n. 10, as quoted in Zauberman, 'Few remarks …', p. 440; M. H. Dobb, 'The Sraffa system and critique of the neoclassical theory of distribution', *De Economist*, Vol. 118, 1970.

[31] L. von Bortkiewicz, 'Wertrechnung und Preisrechnung im Marxschen Sistem' (in three parts), *Archiv fur Sozialwissenschaft und Sozialpolitik*, 1906, Band 23, Heft 1; 1907, Band 25, Heft 1; 1907, Band 25, Heft 2. The second and the third parts are translated into English, as ' Value and Price in the Mandan system', *International Economic Papers*, 1952, n. 2.

[32] M. I. Tugan-Baranovsky, *Osnovy politicheskoy ekonomii [Principles of political economy*], 1909; P. V. Struve, *Khozyaistvo i tsena, Kriticheskie issledovaniya po teorii i istorii khozyaistvennoi zhizni* [Economy and price, critical researches on the theory and history of economic life], Moscow, 1916; Pashkov, *Istoriya*. p. 178. See also Zauberman, 'A few remarks …'.

Dmitriev falls neatly into this tradition, although his contributions were more original and substantial. Having formulated and developed Ricardian propositions on prices of production Dmitriev proceeds to show that these propositions hold only under the most restricting assumptions. Among these are constant returns to scale, i.e. zero rents, and perfect competition of a kind that brings prices down to the (constant) necessary costs of commodities (including profit at a rate determined by technology and the real wage). He decidedly parts company from Ricardo and shows that whenever at least one of these conditions is not satisfied prices depend on *demand conditions* as well, and not even 'long-run' equilibrium prices can be obtained purely from the knowledge of technology and the real wage.

Already at the end of the First Essay, Dmitriev shows that a price theory based exclusively on production conditions, i.e. independently of demand conditions (even for a given real wage) cannot handle the cases of monopoly prices and of positive rent. He follows Cournot in his analysis of monopoly and Auspitz and Lieben in his analysis of rent. In both cases, predictably, prices depend not only on production conditions, but also on demand, or the 'conditions of consumption '.[33] But the greatest blow to the Ricardian theory of price determination is given in the Second Essay, where Dmitriev most emphatically argues that demand conditions contribute to price determination also for 'goods which are infinitely reproducible by labour under conditions excluding the possibility of the occurrence of rent' (p. 92) even under competitive conditions. In order to do this, Dmitriev challenges the proposition that 'competition lowers prices' (p. 93) and starting from Cournot's analysis of competition he constructs a theory of unrestricted but not-so-perfect competition.

[33] There is a warning against the use of average costs in price determination (First Essay, Sect. 4.4) which should be carefully thought upon by Soviet planners; and there is an interesting analysis of the effects of discontinuities in production costs.

## 4.6 Dmitriev's Theory of Competition

The key to Dmitriev's approach to market competition is contained in his quotation from Thornton at the beginning of the Second Essay: 'Dealers do not undersell each other merely for fun. Each is quite content that all the rest should sell dearly, provided he himself can sell as dearly …' (p. 97). Why then does the price-output combination prevailing when sellers are many differ as a rule from that maximising *joint* profits for sellers as a whole? Because, if a price prevails equal to the monopoly price, each seller expects a 'temporary profit' (Cournot's *benefice momentane*, p. 103) from expanding his individual output, and all sellers acting *independently* on the same expectation bring about a greater joint output and lower price and joint profit from the monopoly level. 'It would be a correct economic calculus for each separate entrepreneur to abstain [from expanding output] only if he could be certain that other entrepreneurs would similarly abstain. It is, however, impossible to derive such certainty from the fact that all other entrepreneurs are guided in their action by correct economic calculus' (p. 109). The greater the number of competing sellers, the greater the output and the lower the price, and for the number $n$ of sellers tending to infinity, the competitive price tends to the necessary production cost of the last unit of the product (including profit). When costs are constant, this leads to Ricardo's proposition. This is the picture of competition drawn by Cournot.

Dmitriev points out that there is a crucial implicit assumption in Cournot's analysis, namely that each producer-seller must assume that his competitors' supply is equal to their production (p. 116), i.e. that they do not carry stocks and do not have spare productive capacity. Otherwise, an individual producer's attempt to expand supply would not lead to a *benefice momentane* for him, as his competitors' reaction would be *immediate*, and whoever disturbs monopoly-type equilibrium is worse off along with everybody else. Dmitriev argues that the assumption that supply = production contradicts not only economic reality, but also the other basic hypothesis of competitive analysis, that every individual tends to pursue the greatest advantage' (p. 118). He relaxes the assumption that production = supply, and produces a most refreshing piece of economic

analysis, which stands the test of time beautifully and remains an original and unrivalled contribution to the theory of competition.

If production costs were zero, there would be no limit to the extent production could exceed supply (= sales), and '… when an instantaneous expansion of supply is possible for any number of isolated entrepreneurs competing in the market, the most advantageous general volume of supply will be the same for a monopolist entrepreneur (or when the competitors have reached an agreement) ' (p. 118). More generally, i.e. also for positive production costs, 'whatever the quantity produced, *for a* given *quantity of production, the market price will be fixed at the same level, whether the total quantity produced is in the hands of one owner or of any number of entrepreneurs*. Competition has an effect on the volume of production, but no effect at all on the volume of supply for a given volume of production' (p. 121). In other words, Dmitriev postulates that *for a given volume of production* rational behaviour of producers leads them to a tacit collusion on price, but (i) such collusion is enforceable only because of the existence of a potential threat in the form of a potential supply greater than the collusion sales level, and (ii) competition between producers takes the form of expanding the level of potential supply, with sales lagging behind. Some readers may take the view, at this stage, that this is not simply a way of bringing consistency to Cournot's assumptions, but an entirely different model; whether or not this is the case, the point is that by relaxing Cournot's assumption that production = supply Dmitriev is able to obtain new and interesting results. For a given number $n$ of producers there is an equilibrium potential supply such that the price corresponds to what would be charged by a monopolist, who happened to have that level of potential supply, but none of the $n$ producers can expect to obtain a 'temporary profit' by violating the tacit collusion. For $n$ tending to infinity, the cost of the potential supply tends to equal the revenue from actual sales; profit (over and above the interest component of production costs) is zero, as in the customary competitive equilibrium, not because price is equal to the necessary production cost of the output sold, but because the additional cost of holding stocks or installing unused capacity brings the total cost of potential output up to the level of actual sales revenue and wipes out profits completely (p. 134). This general result is worked out in detail by Dmitriev.

First he considers the case of a perishable product producible at a constant cost $u$. Suppose $Q_m$, is the level of overall supply that maximises the industry's revenue. Dmitriev shows that if the industry's output happens to be lower than or equal to $Q_m$, supply equals production as in Cournot's case; if the industry's output is greater than $Q_m$, supply is equal to $Q_m$ and price is equal to what the monopoly price would be if production costs were zero (p. 127). If, at that price, there is a positive profit calculated over the *whole* output produced, individual producers may have an incentive to expand their individual output. The crucial factor determining whether or not they do in fact expand output is the number of competitors (assumed here to have equally favourable production and sale conditions, so as to expect that their share of sales increases if their output increases). It remains true that several competing entrepreneurs will establish the total volume of output at a higher level than a monopolist' (p. 129), but this output will not be entirely sold; when the number of competing entrepreneurs tends to infinity, the level of output tends to a quantity equal to $Q_m\, p_m / u$, for which overall profit (over and above the interest component of costs) is zero (pp. 132–3). Competition involves a waste equal to

$$u\left(\frac{Q_m p_m}{u} - Q_m\right) = \left(p_m - u\right)Q_m, \tag{4.18}$$

which Dmitriev names sales cost or realisation cost' (*izderzhki pc realizatsii*, p. 134), which the economy has to bear in addition to the necessary production costs of the quantity actually sold. Under unlimited competition price is lower and output is greater, as a rule, than under monopoly, but total (production and realisation) unit costs are greater under competition than under monopoly (p. 136). The exception is the case of a product whose production cost is greater than the revenue-maximising price $p_m$ in which case output is equal to supply, and price is equal to Cournot's competitive price, equal in turn to necessary cost $u$ (Ricardo's price of production; p. 144). Dmitriev's proposition is therefore *testable* to this extent, as it leads to the prediction that the price of a perishable commodity produced under constant costs is fixed at a level where demand

elasticity is equal to unity (this is in fact the definition of $p_m$), unless $u > p_m$, in which case the price is equal to production cost $u$ and demand elasticity is greater than unity at that price. It also follows that, if the demand curve changes, as long as the point where elasticity is unity remains the same, price will also remain unchanged, whatever the shape or the position of the demand curve (because $p_m$ remains unchanged).

If the commodity is storeable (i.e. if storage costs are lower than production costs), the analysis changes slightly. Now the difference between output and sales is not entirely lost, because it can be carried over into the next period at a cost; for competition to eliminate profits it is now necessary for the industry to reach an output level *higher* (other things being equal) than in the case of the perishable product. Actual price as a rule is not now equal to $p_m$ (which is the price a monopolist would charge if he obtained the commodity at zero cost). Dmitriev's result can be stated by saying that in this case price is equal to $p'_m < p_m$, where $p_m$ is the price that a monopolist would charge, if he could produce at a unit production cost equal to the difference between actual production and storage cost, i.e. equal to $(u - v)$, where $v$ is storage cost.[34] Therefore when output is storeable, other things being equal the price is higher and the quantity sold is lower than when it is perishable; output produced is greater because otherwise the conservation of part of excess output would yield a positive profit. In equilibrium, if demand production and storage conditions do not change, production equals sales (footnote 1, p. 137) but the industry carries a certain amount of ' dead ' inventories, serving only the purpose of eliminating any potential *binefice momentane* that individual producers otherwise would get from expanding individual supply; 'potential' supply is greater than actual sales. Unlike the previous case of perishable commodities, these results hold even if necessary production costs $u$ are greater than $p_m$; even then, in fact, *'the equilibrium price would nevertheless*

[34] In fact, for any given production level $Q^* > D$ the total cost of the quantity sold $D$ is equal to necessary costs $uD$ plus the cost of storing excess output, or $v(Q^* - D)$, where $v$ includes all the costs involved in postponing the sale of output to the next period (not only storage in a strict sense, but also interest, insurance, physical wastage, etc.); while the cost of producing excess output is not included in the total cost, because this excess output is carried over and all the costs involved in postponing the sale are already included in $v$. For a total cost equal to $uD + (Q^* - D)v$, marginal cost of sales is $(u - v)$ and the joint-profit-maximising price in the industry is that for which marginal revenue equals $(u - v)$.

*be established at a level higher than the necessary production costs of the product*' (p. 144). It also follows from Dmitriev's theory that unrestricted competition leads to a price/output combination in the industry, such that the elasticity of demand at that price is greater than unity. Ricardian price theory based on necessary costs therefore does not apply, even under the assumption of constant production costs. In any case, Dmitriev holds that production costs higher than the revenue-maximising price are 'a *transient* phenomenon corresponding to a low state of technology and would disappear with further improvement in production methods' (p. 145).

The existence of production capacity in excess of actual production is regarded by Dmitriev simply as a substitute for holding 'dead' unproductive stocks (section 6). This is therefore a case perfectly symmetrical with that of a storeable commodity. If the cost of carrying unproductive stocks is greater than the cost incurred in installing an equivalent amount of additional capacity, competing producers will use excess capacity as a cheaper method of producing a potential threat in order to dissuade each other from failing to conform to their tacit price-collusion. A further instance of unproductive expenditure is mentioned by Dmitriev in his Conclusion, namely 'advertising, in the broad sense', 'not …advertising to expand the market for a given commodity, but only a special category of advertisements to expand sales of an individual entrepreneur *when the total sales level remains the same*.… A distinguishing feature of such advertisements is that they are effective in expanding sales only if used by one or a few of the sellers of a commodity; they are ineffective once used simultaneously and equally by all entrepreneurs' (p. 219). Like the other forms of waste, this kind of expenditure raises costs above necessary costs and wipes out profit at a higher price level and a lower sales level than would prevail under traditional competition.

Dmitriev shows that these basic results remain unchanged when production costs are not constant, and entrepreneurs produce under unequally favourable conditions of production, storage and sale (section 5) : *'for non-productive costs to arise in sale when rent in the Ricardian sense exists, it is sufficient that the necessary costs of the last unit out of a total output equal to the supply yielding the greatest gross revenue should*

*be less than the price at which this quantity yielding the greatest gross revenue may be sold'* (p. 159).

It follows from this analysis that unrestricted competition has a cost for the economy, i.e. a social cost of wasted output, excess inventories, unused capacity or redundant advertising. This is only partly compensated by consumers' gain from prices lower than monopoly prices. '*When monopoly prevails, the national economy as a whole loses nothing; what is taken from the consumers over and above the necessary production costs is at the disposal of the monopolist as a particularly high monopoly profit; conversely, when free competition prevails, the entire sum paid by consumers over and above the necessary production costs is lost without trace to the national economy, by its expenditure on non-productive costs (i.e. costs the expenditure of which does not increase the sum total of benefit or satisfaction)*.' This undermines, in Dmitriev's view, 'the thesis that free competition ensures the greatest productivity of existing means of production, which has become practically axiomatic in classical political economy … (p. 148). In a notable passage Dmitriev compares the role of commodity stocks with the strategy of intensified armament of the Powers in peace time' (pp. 148–9).

A most important implication of Dmitriev's analysis is his account of the economic consequences of technical progress' (Sect. 4.7). The lowering of necessary production costs over time, in conditions of unrestricted competition, results only partly in lower prices; technical progress raises the level of potential supply (which includes stocks, production and excess capacity) at which the *benefice momentane*, obtained by individual producers breaking their tacit price-collusion, disappears. 'Therefore *an expansion of output following a reduction of production costs will, in general, extend not only to an expansion of supply but also to an increase in excess commodity inventories*' (p. 171). The building up of excess commodity inventories following technical progress gives rise to fluctuations in the levels of output capacity, capacity utilisation, and inventory levels (pp. 173–8). When technical progress takes place, 'overproduction' periodically occurs, and this '*is in no sense a result of errors of economic judgement*, i.e. it is not a consequence of the inability of production to adapt to excessively variable demand … but is a direct result of the struggle of competing entrepreneurs, each of whom is motivated in his own actions

by quite correct economic judgement' (p. 177). Here again Dmitriev's modernity is apparent; and his dramatic description of the phases of the cycle is a striking piece of economic literature.

The rise of non-productive costs in conditions of unrestricted competition has nothing to do with the presence of middle men between producers and direct consumers of commodities (Appendix to Sect. 4.7), although their presence amplifies the fluctuations generated by technical progress (pp. 172–3). The only way of eliminating wasted output, excess inventories and unused capacity, and the non-productive costs which these involve, is the establishment of forward markets (*Termin-handel*): 'forward contracts make non-productive "reserve stocks" unnecessary since they make it possible to sell goods which have still not been produced but merely can be produced … (p. 178, footnote 1). Dmitriev relegates this qualification to a footnote, but this is really a central point in his argument, because if there was a full-fledged system of forward markets his whole analysis would collapse. The observable fact that forward markets for manufactured commodities are conspicuously absent in all the economies of the world as we know it makes his analysis infinitely more relevant to the understanding of economic life than the wishful picture of conventional competitive analysis

## 4.7 Utility, Production, Competition

Having established that under no circumstance, not even under constant production costs, is the Ricardian theory of prices based on necessary production costs valid, Dmitriev in his Third Essay naturally turns to the investigation of the 'conditions of consumption' which concur necessarily to price determination.

In a fascinating excursus into the history of economic thought Dmitriev marshals German, French, Italian, English and Russian literature on the subject of utility. He takes the view that 'we find *all the information* needed for the construction of a *finished* theory of marginal utility in the work of such an "old" economist as Galiani, the first "positivist" in political economy …; while 'An impartial analysis must lead to the conclusion that the Austrian school as such (Menger, Bohm-Bawerk, von Wieser and

others) *added very little* (unless much significance is given to the introduction of new terms) to what had been done before them *for the solution of the problem*' (p. 181). A fuller formulation of Galiani's approach, however, is credited to a group of economists who used the mathematical method, which is 'the method of precise knowledge ' ; 'These included Walras (who may justifiably be regarded as the creator of marginal utility theory), Launhardt, Auspitz and Lieben and Jevons …" (p. 182).

Dmitriev gives the Walrasian equations for the case of pure exchange, and accepts them as a rigorous model for the exchange relations of an arbitrarily large number of individuals and products. For Dmitriev, the short-run equilibrium of an economic system is determined by the given levels of supply and the demand functions. (Dmitriev does not enquire into the conditions for the existence, economic meaningfulness, uniqueness and stability of the solution; since he ends up by rejecting this approach, an implicit assumption that all these conditions are satisfied does not harm the following reasoning.).[35] If prices of commodities happen to coincide with their necessary reproduction costs, actual prices will correspond to the solution of the Walrasian system. But if the supply level of a commodity is such that its price exceeds its necessary reproduction costs, the question of the distribution of the extra-normal profit lies, for Dmitriev, 'outside the sphere of economic research', because it is the result of a 'struggle' and is taken as a question of fact by economic theory. There may be 'a general *sociological* solution' (p. 207); 'Otherwise we should have to admit that the question cannot have any *general* solution at all' (*ibid*.). The behaviour of supply in subsequent periods—in the absence of generalised forward markets—is expected by Dmitriev to be regulated in this case by his competition theory: output capacity, output, inventory levels and actual sales are expected to take the values determined by the analysis in the Second Essay (p. 206). This competition analysis, in turn, can only obtain from utility theories certain minimum basic features of utility functions (pp. 210–11), but should not rely on 'hasty and false generalisations' such as the use of logarithmic functions.

[35] Stability' here means simply the ability of the system to reach the equilibrium solution, when production and consumption plans are made by individuals on the basis of prices different from equilibrium prices, as in Walras's case of prices *cries par hazard*.

We can see now the basic outcome of Dmitriev's 'attempt at an organic synthesis between the labour theory of value and the theory of marginal utility'. There is a special case where Ricardo's theory of prices and the profit rate holds, regardless of what we can broadly label 'demand conditions'; this is the case of constant costs for a given real wage rate, provided 'competition lowers prices' to the level of necessary costs, including profit (First Essay). But unrestricted competition in the absence of forward markets leads to tacit price collusion among entrepreneurs, and generates non-productive costs (excess inventories, unused capacity, advertising) and therefore raises price above necessary cost, up to a level which depends on the shape of the demand curve and the number of competitors; in no case, therefore, can price determination be independent of demand conditions, either in the short or in the long run (Second Essay). Because of the absence of forward markets, general equilibrium theory can handle only the special case where equilibrium prices correspond to the necessary reproduction cost (of the last unit produced of each commodity). Outside this case, which is just as special as the 'pure' Ricardian case, price theory becomes the theory of the self-defeating attempts, by economic agents, to gain from a social struggle which is rational by the standards of individuals though not of society, and the theory of the ensuing waste and fluctuations (Third Essay)

This may be regarded as a work of destruction, rather than the promised 'synthesis', but it is also a blueprint for economic investigations. The criticisms put forward by Dmitriev in 1902 are still valid, today, equally against those neo-Ricardians who, unduly extrapolating Sraffa's results, believe they can neglect the role of demand in the theory of prices and distribution, and against those neo-Walrasians who believe that general equilibrium theory contains the answers to every economic question. Marxists and Keynesians should receive support and inspiration from Dmitriev's work. But there is enough in these Essays to shake anybody's complacency.

# 5

# Kalecki and Keynes Revisited: Two Original Approaches to Demand-Determined Income—And Much More Besides

Domenico Mario Nuti

## 5.1 Introduction

In 1962–1963 I had the privilege of attending Michal Kalecki's lectures at the Warsaw Higher School of Planning and Statistics (SGPiS), as it then was, on the dynamics of a capitalist economy. From Warsaw I moved directly to King's College, Cambridge, where I often heard Joan Robinson speak of Michal Kalecki as the man who had discovered the General Theory before Keynes, as she also fully acknowledged in print (1952, 1964, 1966a, 1976) and in correspondence with Kalecki. Such a

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generous recognition was put forward also by some few others, such as Oskar Lange (1939) and Lawrence Klein. Kalecki's pre-1936 writings 'created a system that contains everything of importance in the Keynesian system' (Klein 1951: 447); Klein (1975) makes the even stronger statement that 'Kalecki's greatest achievement, among many, was undoubtedly his *complete* anticipation of Keynes' *General Theory*' (emphasis added; see also Klein 1964, 1966). No recognition ever came from Keynes, or from any of his close associates such as Richard Kahn. Apparently Kalecki had sent to Keynes, before the *General Theory* was published, a German version of his 1933 paper on the business cycle, which Keynes returned to him with a note explaining that he did not know German[1]—others of Keynes' immediate circle certainly did and the resources of the College and of the University make this a curious response; it rankled then and it still rankles today. In 1937 Joan Robinson wrote to Kalecki: 'It must be rather annoying for you to see all this fuss being made over Keynes when so little notice was taken of your own contribution' (reproduced in Patinkin 1982).

In his 1936 review of the *General Theory*, Kalecki was the first to claim similarity of, and priority in, discovery for his 1933 essay: 'The statement that investments determine the total size of output, I have proved in a manner similar to Keynes in *An Essay on the Theory of the Business Cycle* (Institute of Research on Business Cycles and Prices, Warsaw 1933), pp. 114–16' (Kalecki 1936: 268). He also wrote: 'I pointed out the independence of changes in output from shift in nominal wages also in the *Essay on the Theory of the Business Cycle* (1933)' (1936: 260). But he did so in two footnotes, and in another extremely discreet and concise claim in his Introduction to Kalecki (1971): 'The first part includes three papers published in 1933, 1934 and 1935 in Polish before Keynes' *General Theory* appeared, and containing, I believe, its essentials'. Otherwise he never pressed the point. I believe he was much too proud to feel the need to assert it and a claim not spontaneously and universally accepted could only diminish his greatness. After Kalecki's death, Don Patinkin (1982) denied that Kalecki could be credited with anticipating Keynes' *General Theory*: 'Kalecki came significantly closer to the *General Theory* than did

[1] Personal communication from Mrs Ada Kalecka.

the Stockholm School…. At the same time, I cannot accept such claims [as those of Klein and Joan Robinson]'.

As a side note I will argue that while Kalecki and Keynes have in common a theory of national income determination based on effective demand and driven by investment, and the important policy implications that descend from it, each of them followed a distinctive intellectual route, used very different building blocks and covered distinctly different additional ground. It is not a question of establishing priority in discovery, but of crediting both of them with equally original, central contributions to modern macroeconomic theory.

## 5.2 Different Departures

Kalecki's and Keynes' personal backgrounds were very different (on Kalecki's biography see Kowalik 1964). Both knew from direct and personal experience the cyclical nature of capitalist economies, but from different viewpoints. Kalecki was the son of a manufacturing entrepreneur who went bankrupt, and was therefore familiar with the world of production, the investment process and the risk of investing in production on borrowed money. Keynes came from an upper-middle-class family and had direct operational experience as a civil servant and as a financial investor who operated daily in the financial markets, on behalf of King's College and for himself (sometimes more successfully than at other times; he died rich, but he was close to ruin more than once).

Their intellectual formation was also very different. Kalecki was an engineer who lacked the financial means to complete his university degree, was versed in the mathematics of difference and differential equations, a self-taught economist who had not been influenced by the kind of conventional economic theory against which Keynes rebelled and campaigned. He made little use of choice theory and marginalist thinking. He was influenced by Marx's reproduction schemes, by the class categories of people and incomes (capitalists and workers, profits and wages) typical of the Marxian and English classical tradition, by Rosa Luxembourg and Tugan-Baranowsky. He had worked with Ludwik Landau on the construction of Polish national income statistics. Keynes

was a mathematician who specialized in probability theory, which like Frank Knight he found useless in the assessment of business risk. He had an Eton and Cambridge education. He was taught economics by Pigou and Marshall against whom he reacted.

The very titles of their main works display the main differences in their approaches and concerns. Keynes had a theory of employment based on interest and money, Kalecki laid bare the dynamics of capitalist motion.

## 5.3 Common Features in Approach and Propositions

Both Kalecki and Keynes disregarded the role of money wages in labour employment, regarding real wages as determined by producers' price setting; indeed they were both prepared to contemplate even a possible direct rather than inverse relationship between employment and wages. Both followed a bold, macroeconomic and aggregate approach to the theory of national income and employment determination, taking national income identities as their starting points. Both regarded investment demand as the driving force of the capitalist system and assigned a crucial role to government expenditure in macroeconomic policy to supplement investment and net exports when national income was in underemployment equilibrium, regarded as the normal state of the world. But similarities end here. Their investment and consumption functions were different; different too was the theory of interest and the role of monetary policy; the spillover effects of their theories led to important and original developments in entirely different areas of economic investigation.

## 5.4 Investment Functions

Kalecki had a very complex view of the investment process, distinguishing between investment orders, investment output and actual deliveries of investment goods. Investment orders depend on the ratio of profits to the capital stock, and the long term interest rate. Thus for Kalecki, contrary to Keynes' approach, investment profitability is not a marginal

concept derived from discounting prospective cash flows, but a current average ratio projected into the future. Such ratio is an increasing function of the degree of utilization of productive capacity—thus making Kalecki's investment function behave as a flexible accelerator or capital-stock adjustment equation. Short-term interest rate does not matter as much as in Keynes because for Kalecki the rate affecting investment is the long-term rate, which moves more sluggishly than short-term rates, and because increasing risk from the use of borrowed money, and the ensuing danger of bankruptcy, soon stops investment even at low interest rates. Current investment output is the result of lagged past decisions; investment deliveries raise (lower) the capital stock according to whether they exceed (fall short of) the equipment going out of use, feeding back onto current profitability and new investment orders. Expectations play no role, other than in current average profit rate being projected into the future.

For Keynes, on the contrary, current investment depends on both the marginal efficiency of investment—i.e. the internal rate of return on prospective investment projects, ordered in terms of decreasing efficiency—and current interest rate. The marginal efficiency of investment is something which exists solely in the minds of entrepreneurs, it embodies their 'animal spirits' and is subject to sudden changes according to 'the state of the news'. Instead of the long-term interest rate being mildly affected by the current rate, as in Kalecki, for Keynes the current rate depends on expectations about the future normal rate of interest to which the current rate tends to revert (i.e. the interest rate 'hangs from its bootstraps').

## 5.5 Consumption Functions

For Kalecki consumption behaviour differs among income categories: capitalists' consumption consists of a fairly stable amount which is constant over the cycle, as capitalists are constrained by their entire wealth and not by current income; they also consume a small—if any—share of current profits. Workers are presumed to consume all they earn. It follows that the marginal propensity to consume $c$ can be approximated by the

share of wages in national income, and indeed Kalecki's multiplier—which he seldom uses—is expressed as 1 / (1 – wage share) instead of the conventional Kahn-Keynes 1 / (1 – c).

For Keynes, aggregate consumption depends primarily on aggregate income, regardless of its distribution, which comes into play in post-Keynesian (one should certainly say post-Kaleckian) income distribution theory (see below).

## 5.6 The Basic Models

For Kalecki:

| | |
|---|---|
| $Y = C + I$ | Where $Y$ = GDP; $C$ = Consumption; $I$ = Gross investment |
| $Y = W + P$ | Where $W$ = Wages; $P$ = Profits |
| $C = Cc + Cw$ | Where $Cc$ = capitalists' consumption; $Cw$ = workers' consumption |
| $Cc = A$ | Or $Cc = A + b.\ P$ where $A$ = constant and $b$ is a small fraction; |
| $Cw = W$ | |
| $A + W + I = W + P$ | |
| $P = A + I$ | |

Thus profits are determined by capitalists' (fairly constant) consumption and (variable, indeed cyclical) investment expenditure. A fall of money wages would leave demand unchanged if prices fell by the same proportion, and would result in a demand fall and therefore income fall if prices were rigid. Kalecki (1934) specifically considered an open economy in which exports played the same role as investment in driving demand and employment, while government expenditure was viewed as 'domestic exports', with imports as leakages and—ceteris paribus—a trade balance deterioration arising from an increase in government expenditure.

Investment decisions Id are a function of average profit ratio and long term interest rate:

| | |
|---|---|
| $Id = Id(Itr, P/Y)$ | Where $Itr$ = long-term interest rate |
| $P / Y = f(Y / K)$ | Where $K$ = capital stock |

For Keynes:

| | |
|---|---|
| $I = I(r)$ | $r$ = interest rate |
| $M = L(r, Y)$ | $M$ = money supply, $L$ = money demand |
| $C = B = c.Y$ | $B$ = constant, $c$ = marginal propensity to consume |

'For Keynes prices are determined by money wages, investment is determined by the interest rate and the marginal efficiency of capital, the interest rate is determined by liquidity preference' (Joan Robinson). Lower money wages—as in Kalecki—do not necessarily promote employment unless they are accompanied by higher investment, which in Keynes might occur through their impact on the real quantity of money and therefore the interest rate.

For Keynes the central position is taken by the interest rate, as confirmed by the General Theory's full title. He is under the influence of Sraffa (*General Theory*, ch. 17, plus the convention of measuring income and money in wage units).

We are confronted with similar conclusions originally and independently drawn, arising from different starting points, different intellectual and technical backgrounds, different values and above all different building blocks, i.e. different theories of aggregate consumption, investment and the role of money. There is sustained originality in both; there is a very great deal that we can find in Kalecki that is not in Keynes, and vice versa. It is inappropriate to regard them as in competition for the same achievements.

## 5.7 Exclusive Originalities

Kalecki has a theory of distribution, reviewed above. Indeed he has two distribution theories, the other depending on the aggregate degree of monopoly or aggregate mark-up although, as Nicholas Kaldor used to say, this is not satisfactory: for every product a mark-up theory of prices must specify price leadership criteria (in which enterprise's costs matter), the relevant degree of capacity utilization (costs varying with it) and the mark-up determination. Keynes neither has nor needs a theory of

distribution. What is known as the neo- or post-Keynesian distribution theory is actually a neo-Kaleckian reformulation of Kalecki's first theory of distribution, with profit share instead of Kalecki and Keynes revisited absolute profits and a more flexible hypothesis about the magnitudes of propensities to save out of profits and out of wages.

Kalecki has a theory of cycles, indeed a number of theories of cycles that are increasingly refined over the years (including a theory of political business cycles) culminating with the approaches further developed by Nicholas Kaldor and by R.M. Goodwin. Keynes' model is compatible with business cycles and—with the addition of an accelerator or other ingredients—can be and has been turned (beginning with Paul Samuelson and Roy Harrod) into a theory of cycles. But Kalecki had a theory of cycles of his own, driven by investment demand, as early as 1933; he also had growth solutions as special cases of his cycle models.

Finally, Kalecki exercised his talent in diverse other areas of economic research, primarily development theory and economic planning, both in less-developed countries and in centrally planned socialist economies. In particular, his theory of the socialist economy was a strong denunciation of its excessive propensity to invest—excessive with respect to non-inflationary conditions, to population willingness to abstain from consumption for future gains, to the sustainability of income and consumption growth (see Nuti 1984). Had Soviet and central-east-European leaders heeded Kalecki's advice the history of the last 15–20 years in the socialist block would have been very different.

Keynes has a theory of expectations—sometimes self-fulfilling, sometimes self-falsifying (in the Preface to a reprint of the *General Theory* he wrote that if he ever were to re-write it he would distinguish carefully between the two cases). Expectations—he explains—are important because demand for future goods does not have to be expressed in current markets. Today we would say that markets are incomplete (most forward/future markets are missing) and in any case sequential (i.e. even if futures markets were complete, one would not have to transact in them today for markets reopen daily, indeed never close in the global economy). The volatility of expectations is a major ingredient of his approach, and a key to the understanding of his view of financial markets.

At the same time, fairly simple 'reversionary' expectations govern for Keynes the medium-long normal level of the interest rate, which is the foundation of liquidity preference. Right or wrong, relevant or irrelevant at the end of this century, this is a great original feature and a cornerstone of Keynes' theory of effective demand: the notion of money as a potential 'bottomless pit' absorbing purchasing power which otherwise would be expressed as demand for current goods. An intriguing attempt to link the monetary interest rate to real 'own' interest rates for commodities can be found in the controversial Chap. 17 of the *General Theory*.

Finally Keynes, like Kalecki, made diverse contributions to other areas of economic theory and policy, before and after the *General Theory*, from fiscal policy to the shaping of the international monetary system.

Patinkin (1982) argues that Kalecki did not use the marginal method, the multiplier and the notion of under-employment equilibrium, did not consider money markets and did not seek to integrate value and monetary theory. That Kalecki—like post-Keynesians—used marginal notions only sparingly should not be regarded as a defect. He did use the multiplier, but in a different formulation (see above) consistent with his own consumption theory; he was interested in the impact of investment not only on demand but also and primarily on capacity; besides, the multiplier was Kahn's (1931) and not Keynes' creation. Kalecki was more interested in economic dynamics than in the comparative statics of income determination, which he however obtained as a by-product of his dynamic models. Kalecki did not consider financial markets as fully as Keynes, nor did he attempt to integrate value and monetary theory, but his merits were to develop macroeconomic dynamics and to integrate it with distribution theory, while Keynes did not attempt either. It is equally immaterial to criticize Keynes for no theory of distribution, of economic cycles and growth. While Kalecki should not be credited with the 'complete anticipation of the General Theory' (Klein 1975; emphasis added), certainly Kalecki's remarks about anticipating Keynes' relationship between money wages and employment and 'the statement that investments determine the total size of output' are the most admirably restrained and understated of claims. The significant intersection of the sets of their original contributions to the determination of employment and income, and their different, original and fundamental contributions in so many

other areas, place Kalecki and Keynes as the founding fathers of modern macroeconomic theory.

In the last 20 years economic theory and policy have been dominated by what Joan Robinson called 'pre-Keynesian economics after Keynes'. The recent international financial crises, the undeniable cyclical patterns of world development, whether or not synchronized, the widespread delusion that ending world unemployment is just a matter of enforcing wage flexibility, demonstrate fully the continued relevance of Keynesian and Kaleckian propositions. The time has come for a joint revival.

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# 6

# Full Indexation and Less-Than-Full Wage Indexation

Domenico Mario Nuti

## 6.1 Full Indexation

Indexation, i.e. the link of future monetary payments to a price index in intertemporal contracts, can be permanent or temporary, lagged or instantaneous, intermittent or continuous, total or partial in the coverage of money payments, unit-elastic or other than unit-elastic with respect to a price index mutually agreed by the contractual parties, corresponding to a basket selected out of an infinite range of possible baskets.

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We define indexation as "full" if it is simultaneously:

(i) permanent until the termination of the underlying economic relation, e.g. the full repayment of a loan, or the end of recurring deliveries, i.e. without renewals and renegotiations;
(ii) continuous, i.e. with each monetary payment always revised in line with the price index;
(iii) instantaneous, i.e. with money payments at time t geared to the price index also at time t.
(iv) total, i.e. with 100% of future monetary payments being indexed;
(v) unit-elastic with respect to the price index, so as to ensure certainty about the purchasing power of future money payments with respect to the index basket;
(vi) linked to a "customized" basket corresponding to the payee's planned expenditure structure at the time of the payments (this may involve an index basket structure changing over time and agreed in advance).

## 6.2 Generalised Full Indexation

The generalised full indexation of all contracts would be the same thing as demonetisation of the economy, in the sense of a switch from paper money to a composite commodity money whose composition is the same as that of the index basket. In order to have only one money the same index would have to be used throughout the economy and all the time; its possible emergence is a social process depending on the transactors. The use of different indices would be equivalent to the coexistence of different kinds of commodity-money, which would be selected according to the state of transactors' expectations about future money spot prices.[1]

[1] Nicky Kaldor used to say: "You can index everything except money" [personal recollection]. It might seem that money can also be indexed, e.g. in a gold standard, a multi-commodity standard (like the one Kaldor suggested to generate international liquidity) or a foreign exchange-standard (outside the US if dollars are treated as a "real" good). But for this to be equivalent to full indexation in the definition given above (respectively to gold, the selected composite commodity, or dollars), the money price of these anchors would have to remain fixed forever, while this has never happened to date and cannot be believed to be the case at any time: thus Kaldor was right.

Generalised full indexation would be equivalent to barter, intertemporal barter but still barter; therefore it would introduce all the transaction costs and inefficiencies usually associated with a moneyless economy. Uncertainty about the future real value of money payments would not be eliminated because the future implementation of such indexed contracts would not be entirely credible: unless fully and confidently secured by a lien on real assets, future payments would still be subject to default and bankruptcy, whether through moral hazard or by accident.

The actual experience of frequent defaults even on loans secured by real assets—typical in a falling property market at times of recession or of rising interest rates—suggests that the assets used as collateral would have to be of considerably higher current value than the indexed money payments which they secure. The scope of intertemporal exchange would be greatly restricted, causing inefficiency.

Such an economy with generalised full indexation would be—by definition—inflation proof, but inordinately inflexible. Price inflation/deflation and, in general, spot money price changes reconcile monetary claims which are not reconcilable at the prices implicit in earlier interest rates and prices of futures; ex-ante reconciliation is impossible other than in an Arrow-Debreu world where all contracts are struck at time 0 and simply executed thereafter without markets ever reopening. In the sequential market exchange of the real world, an unrestricted spot price level and structure is essential to allow sequential temporary equilibria. Therefore a sequential economy with generalised full indexation of all intertemporal contracts would be necessarily afflicted by widespread defaults and bankruptcies. In order to allow some flexibility, indexation has to be less than generalised, or less than full. The more indexation there is, and the fuller, the more rigid the economy. With less than generalised full indexation, an indexed contract retains elements of uncertainty: future spot prices are no longer related to the current price of futures by a structure of interest rates, and the real value of future indexed payments may be higher or lower than that of non-indexed money payments. Moreover at (now uncertain) future spot prices the desired pattern of expenditure may differ from that anticipated, i.e. the choice of the index basket becomes problematic. Thus indexed contracts lose

much of their attraction, and therefore in an economy with less than full and generalised indexation the scope of indexed contracts is bound to be relatively small.

## 6.3 The Employment Contract: An Untypical Option

A loan contract, or a contract for a future delivery or recurring deliveries of goods or of services other than labour, can be "fully" indexed.[2] Options can also stipulate a fully indexed money price for the future purchase or sale of a given quantity of a good or of a service other than labour. Labour is necessarily different in two very important respects. First, the labour employment contract is an untypical option. Second, the price fixed in that untypical option—the wage rate—can be indexed, but is not and in some respects cannot be fully indexed.

At a prefixed wage, whether indexed or not, the employment contract may or may not stipulate for the employer an irrevocable obligation to employ in the future, but it never involves for the employee an irrevocable obligation to work in the future for that employer. There can only be workers' selling options for their labour services, but no forward markets for labour nor employers' options to buy labour. Otherwise employees could be physically subjected to an employer/master, like slaves or serfs—a set up which is utterly incompatible with the essence of the capitalist economy.

It follows that the employment contract can never secure future deliveries of labour at a price known in advance, whether in real or nominal terms. The contract may have to be and indeed is frequently renegotiated. Thus any commitment to deliver at a prefixed real or money price future goods, which necessarily require labour for their production, is particularly risky. This is a sufficient reason for wage economies not to have

[2] A loan made at a variable interest rate, i.e. adjusted in each future period to the current interest rate, is not the same as an indexed loan, to which it is sometimes assimilated. If over time the real interest rate is constant, interest payments are effectively indexed, but the principal is not; in a fully indexed loan all debt service payments are indexed to the price of a basket.

generalised intertemporal markets for goods and for services other than labour: in the capitalist economy as we know it such markets are not the rule but the exception.[3]

At the same time, continuous spot pricing of the continuous flow of labour services employed in continued production activities would involve the transaction costs of repeated haggling and generate uncertainty for workers about wages incomes and for producers about unit costs, whether in money or in real terms. In order to avoid these costs and reduce these uncertainties, producers and workers stipulate an employment contract of given duration, stipulating not an irrevocable commitment—at least for workers—to exchange labour services for the given wage, but a fixed wage or wage formula at which, if there is an exchange i.e. if labour is employed at all, the transaction must take place. The wage rate does not have to be constant over the period, as long as it is predetermined.

If the arrangement worked fully there could be no labour employment at any other wage rate for the rest of the wage contract duration; this is implicit in nation-wide collective bargaining and in the synchronisation of wage contract renegotiations. In between contracts wages in practice drift away from the stipulated level, mostly upwards, but tend to diverge from that level considerably less than if labour services were priced in continuous spot markets.

The arrangement gives producers certainty about labour costs: although they cannot secure the future labour services of current employees at the given wage, producers know that if necessary they can replace them out of the permanent pool of unemployed roughly *at the same wage*. This

[3] This holds especially in manufacturing where, in addition, there is uncertainty about the technical characteristics available for future output—an uncertainty which does not arise for primary products. Manufacturing sectors where commitments to deliver at a prefixed price are more frequent, e.g. shipbuilding, are particularly bankruptcy-prone. Often the absence of generalised futures markets is explained with the high cost of organising such markets; but even if markets as such were costless, they would be necessarily thin for lack of willing transactors, because of necessarily missing futures markets for labour, and because of the necessarily sequential nature of at least the labour market, which leads to decisions being taken on the basis of expectations about future spot prices and not only on today's prices for futures..Since indexed contracts involve intertemporal transactions, the scope of indexed contracts cannot be greater than that of intertemporal markets; thus indexed contracts are also the exception.

enables them to announce their offer prices and take orders before output is available without taking risks about wage costs. Employees have the same certainty about the wage but do not have the same certainty about the quantity transacted, i.e. about their employment; therefore they may be willing to acquire an option to sell their labour services at the prefixed wage, i.e. to acquire some employment tenure, at a price which is the wage differential between tenured and non-tenured employment. Fixed wages in between wage negotiations may lead to lower (except for the greater stability in case of tenure) or higher employment of labour than would be the case if labour was priced in spot markets, according to the state of the labour market with respect to the expectations embodied in the employment contract.

*On the basis of these considerations we can construe the wage employment contract as an employee's option to deliver her services at a prefixed wage or wage formula (if the employee has some tenure) or as a mutually granted option respectively to buy and sell given amounts of labour services at a prefixed wage. These options are untypical in two respects: (i) they can be costlessly revoked, i.e. the transaction does not have to take place; (ii) if however the transaction does take place, it cannot take place at a wage other than that which has been stipulated.*[4]

## 6.4 The Less-Than-Full Nature of Wage Indexation

Wage indexation cannot alter the nature of the employment contract outlined above. Thus what is being indexed is not an irrevocable commitment respectively to employ and work, but an irrevocably fixed wage for

[4] Other goods and services whose deliveries are recurring and continuous could in principle be the object of a similar regime, but for those the alternative exists and is usually preferred of firm commitments to delivery at a prefixed price or price formula, revocable only at a significant cost. Also, except for labour services it is hard to think of instances of a commitment not to trade at any other price than at the prefixed price. The employment contract is atypical because of workers' total discretion about the future supply of labour services, and because of employers' reliance on a pool of unemployed.

an option which is always costlessly revocable by employees and unless employees have some tenure—also by employers.

Whether indexed or not, this kind of contract cannot have an indefinite duration. Wages have to be renegotiated at time intervals, in order to avoid large discrepancy between the wage trends stipulated in the contract and the trend in the equilibrium wage which would prevail for spot pricing of labour services. Such discrepancy involves either higher redundancies at a higher wage or higher employment at lower wages, with respect to what would be a spot equilibrium. For systematic, unanticipated changes in the state of the labour market, the point would come when an employment contract fixing a wage or wage formula for an indefinite duration would necessarily break down, i.e. wage-fixing would move to a spot market for labour, thus losing the advantages of a longer duration. The agreed duration will depend on the perceived risk of such unanticipated trends.

For these reasons wage indexation, as indexation of a temporary option price, cannot be "permanent" as it is necessarily the case for "full" indexation as defined above (Sect. 6.1). Thus wage indexation is:

(i) Necessarily temporary, covering at most the period in between successive wage negotiations, or less in the case of dismissals or quits.
Because of the atypical nature of the wage option, wage indexation also is:
(ii) Necessarily intermittent and/or (iii) lagged, for as we shall see below (Sect. 6.6) simultaneous and instantaneous indexation of such an option would take us back to wage negotiation in a spot labour market, whose disadvantages the option seeks to overcome. In practice, wage indexation is invariably both intermittent and lagged, thus falling short of full indexation also in these two respects.
(iii) In addition, wage indexation is less-than-full also because, in virtually universal practice though not necessarily so in principle, it is also:
(iv) Partial in its cover of money wage payments, and/or (v) lower-than-unit elastic with respect to the selected price index.
Finally, as part of a contract applying to a large number of non-uniform individuals, wage indexation is:

(vi) linked to a basket other than the payee's actual expenditure basket. The divergence of baskets does not ensure certainty of purchasing power of indexed payments, but the sign of the likely divergence from that certain power can in principle go either way. Still, there is no conceivable way that this weak and indeterminate effect can systematically compensate the shortfalls of the other parameters of wage indexation with respect to the requirements of full indexation.

*It follows that wage indexation is necessarily always a form of less-than-full indexation*. Its effects depend critically on the value of the parameters corresponding to these special features of wage indexation, namely: (i) contract duration; (ii) the frequency of money wage adjustment to prices within that duration; (iii) the lag between changes in the price index and the subsequent money wage adjustment; (iv) the (absolute or proportional, uniform or diversified) part of the wage which is covered by indexation; (v) the elasticity of the protected part of money wages with respect to the price index; (vi) index basket.

## 6.5 Temporary Protection of Real Wages

The risk of unanticipated inflation occurring in between wage negotiations is one of the concerns that shorten the duration of the wage contract. Wage indexation reduces such risk and therefore lengthens the possible duration of the wage contract, though the risk of other unanticipated factors will still keep it relatively short with respect to the life of equipment or to employees' working lives.

For a given money wage at contract negotiation, the alternative is not between indexed or non-indexed wage contracts of given duration, but between either relatively long duration of indexed wage contracts or shorter duration of non indexed wage contracts. The faster the rate of inflation, the shorter the duration of non-indexed wage contracts: for instance, in the Polish high inflation of 1990 money wages were renegotiated monthly; in Latin American hyperinflations cases have been reported of daily wage renegotiations. This connection between contract duration and indexation has been neglected in the literature on the subject.

For a wage contract of *given* duration, the alternative is not between a given money wage being indexed or non-indexed but, given the relative contractual strength of employers and employees, and inflationary expectations, between a relatively high non-indexed money wage and a lower indexed level. Thus for both employees and employers, and indeed for the economy as a whole, wage indexation defuses inflationary expectations and helps to contain inflation through lower wage settlements than would prevail otherwise.

How strong can this effect be in the fight against inflation? Probably quite strong if inflation is accelerating, when employers might actually favour or even propose wage indexation: for instance, when wage indexation was introduced in Italy soon after the War the President of the Confederation of Italian Industry Mr. Costa greeted it as a victory for reason and common sense. The effect of course will not be so strong for constant or decelerating inflation, but will still be positive as long as there is some perceptible positive inflation, which seems to be the rule in modern market economies. Conversely, price deflation—if expected—might be accelerated by wage indexation; accelerated price deflation might be too much of a good thing, but the problem is hypothetical (moreover in Italy the only case of a slight fall in the basket price index did not lead to a wage adjustment).[5]

The temporary nature of wage indexation, limited to the time interval $g$ at which wage contracts are renegotiated, means that the net effects of indexation can be undone at the next wage negotiation and are not carried beyond the duration of the indexed wage contract. It is true that, given the usual downwards inflexibility of money wages, the money wage level reached through wage indexation will provide a floor below which the new money wages cannot fall: if this happens to be higher than the new equilibrium real wage at current prices, that floor will be inflationary. However, this inflationary effect cannot be attributed to indexation.

[5] Employers and unions may hold discordant expectations. If unions expect or fear inflation more than employers, they will prefer an indexation regime and employers will be relatively happy to grant it. In the opposite case unions will not value indexation much and employers will be reluctant to grant it anyway.

First, if at renegotiation the new money wages rise *over* the level already reached through indexation, which is almost invariably the case, clearly none of the excess money wage can be imputed to indexation, but will be a cost-push shock due to the bargaining strength of employees. Second, even if the achieved money wage level is simply maintained, the ultimate or at least concomitant cause of its inflationary impact is money wage inflexibility, rather than indexation as such; downwards inflexibility of money wages and prices is always potentially inflationary even without indexation.

## 6.6 Indexation Lag and Intermittence

Suppose wage indexation was both continuous and instantaneous (in the sense specified in Sect. 6.1): in other words, money wages would adjust as frequently as required by the frequency of price changes, and the adjustment at time $t$ would be related to the level of the price index also at time $t$. In this case wages and prices would be determined simultaneously. Either an equilibrium level of prices and wages would not exist, and the contract would have to be abandoned. Or an equilibrium real wage might prevail, which happened to coincide with the level stipulated in the indexed contract—an unlikely coincidence. Or effectively real wages would be renegotiated all the time, as in a spot market, without having to wait for the end of the contract duration and without indexation coming into operation. This contradicts the premise that wage contracts have some duration, which moreover is lengthened by indexation. Therefore wage indexation must be intermittent and/or lagged.

Lags without intermittence would cause too frequent adjustments of money wages at every small change of even only one good in the index basket. Intermittent adjustments without lags would increase the speed of real wage protection of wages, seeing that positive inflation is in practice the rule, but time is required to collect, process and check information about price changes, to calculate the corresponding wage changes and to arrange for payments of the new rates: some lag is unavoidable.

In actual practice wage indexation is always both intermittent and lagged: the price index change from $t - i$ to $t$ determines a money wage change at time $t + j$, while the new money wage level remains unchanged until time $t + j + i$, where $i$ is the length of time in between adjustments and $j$ is the price-wage lag.[6] The price/wage lag $i$ delays money wage adjustment, while intermittence erodes real wages after each adjustment. Intermittence involves a cyclical pattern of real wages for a constant price trend, and thus makes it possible for *any* average real wage in between automatic adjustments to be attained in spite of indexation—at the cost of inflation. The longer the time interval $j$ lapsing in between money wage adjustments, and the price/wage delay $i$, the greater the reduction of real wages which can be averaged during that time interval for a given rate of inflation.

While wage indexation is lagged and/or intermittent, producers—unless subject to state price controls—can and do change product prices at any time, even continuously at times. For instance, prices adjust virtually continuously for primary commodities, or for manufactured jewels whose price can be geared to the spot price of the precious metals they embody, or for imported goods whose price may be geared to the current rate of exchange. For other goods a limit to the frequency of price changes is set only by the administrative cost of changing price lists, or by a voluntary contractual commitment to keep prices temporarily stable for recurring supplies (especially continuous supplies, in which case transactions are to some extent similar to those involving labour services). Producers can also change their product price also change as soon as they like, even instantaneously, at the news of the price change of one its inputs, or even as soon as they form an expectation of a change in input prices. In most cases the desired real price of their product can be achieved at once, without having to index their supply price.

When an inflationary shock occurs, in such a system prices rise speedily, while money wages adjust only after a while, when their next revision is due, and even then with a lag. The asymmetry between lagged and/or

[6] Of course we must have $i<g$: for $i=g$ indexation is totally useless, for just as the automatic money wage rise is about to take place wages are renegotiated; the longer the length of $i$ relatively to $g$, the less indexation protects real wages.

intermittent wage changes, and potentially instantaneous and continuous price changes, gives an opportunity to producers to react to indexed money wages adjustments by raising their prices again. The same process may be repeated further, thus turning an inflationary shock into an inflationary spiral. Before considering the rise and unfolding of such a spiral, the remaining indexation parameters need to be considered, namely cover/elasticity of indexed wages, and basket composition.

## 6.7 Cover and Elasticity of Indexed Wage: Partial Protection

In a fully indexed contract 100% of a future money payment must have 100% elasticity with respect to the price index. Normally the indexed wage contract fixes, for the intermittent money wages adjustments when they are due, either wage cover or elasticity at less than 100%. Real wage protection, delayed by the price/wage lag, is necessarily partial at the point of adjustment, as well as subject to *any* degree of erosion due to inflation in between intermittent adjustments.

A prefixed elasticity coefficient of the whole money wages with respect to the price index may be constant or variable over time, uniform or diversified by job category, enterprises or sector, but normally it is lower than unity. The values taken by the coefficient imply a time pattern of real wages, at the points when the indexed money adjustments are made, depending on the actual pace of inflation: unless inflation has been correctly anticipated, real wages are bound to behave erratically, thus retaining the uncertainties that indexation is supposed to reduce. Hence this form of indexation is rare.

Indexed wage cover may take the form of a fixed money payment of fX for each point increase of the index (as it used to be the case in Italian indexation). This involves the full protection (meaning unit elasticity of its money value with respect to the index) of a fixed real amount, corresponding to the real purchasing power that fX × 100 had in terms of the basket at the time the price index was equal to 100. This amount can be uniform in the whole economy, implementing the notion that wage indexation should seek to protect a minimum standard of basic

consumption.[7] The level of protected real income could also be unequal (as it was in Italy before the "value of the point" was unified) by job category, sector or firm, reflecting the bargaining power of each group.

The fully protected real income is usually constant over time, but lower than the average real wage; it should also be no higher than that corresponding to the minimum money wage. In fact any employee whose real wage is lower than the protected real level will actually see her real wage increase with inflation and increase faster the faster the rate of inflation. These are perverse cases, which have sometimes occurred (for instance, in Italy in the 1970s). If some wages are regarded as too low, they should be raised at the appropriate time in the desired proportion, not raised too much or too little at times of inflation. These cases can and should be rectified and avoided; their occurrence is not an argument against indexation.

This form of indexation involves an implicit time pattern of elasticity coefficients of money wages with respect to the price index, at the points of intermittent adjustment of wages; they will normally differ by period and by wage class.

In principle the percentage of actual wages which when indexed adjustments are made is fully protected could be explicitly fixed, whether constant or changing over time, uniform or unequal across employees; in practice it is always implicit, and when indexation fixes the price elasticity of actual wages it depends on actual inflation. Whatever the form taken by indexation, throughout the contract duration, the fraction of actual wages which is fully covered (i.e. unit-elastic with respect to the price index) falls with inflation. At renegotiations, that fraction moves in the direction opposite to the trend of renegotiated real wages; the fully covered level can be renegotiated.

Unless the implied percentage of actual wage cover is uniform, i.e. explicit or implied elasticities of actual wages with respect to price are uniform throughout the economy, relative wage differentials will be

[7] In Poland in 1990, for instance, wage guidelines were indexed with monthly coefficients prefixed at the beginning of the year, ranging from 0.2 to 0.6 (except for July when the coefficient was 1). These coefficients embodied government wages policy for the inflation expected with the stabilisation programme; actual inflation was much faster than anticipated and the wage guidelines fell much more drastically than it was originally intended.

upset. When price elasticities of wages are fixed at different levels for different classes of workers, differentials will widen automatically moving in the direction of differential elasticity with respect to the average. When a uniform real level is fully protected, wage differentials will flatten, as all real wages move in the direction of the protected level. Even if these are regarded as moves in a desirable direction, it is undesirable that the pace of desired adjustment should depend on the rate of inflation. More probably, established wage relativities will be disturbed unduly; the question of appropriate wage structure is reopened at the next renegotiation, and inflationary wage-wage leapfrogging might then occur. This is not an argument against indexation, but only against forms of indexation that alter wage relativities excessively.

Less than 100% coverage and/or less than unit elasticity to the price index allow an important degree of real wage flexibility in spite of indexation, already at the first round of wage adjustments, and continuing with further adjustments.

## 6.8 The Price Index Basket

An employee whose expenditure basket is identical to the index basket, with 100% coverage and unit elasticity with respect to prices, and no price/wage lag, at the time of indexed adjustment is bound to be better off in terms of welfare (utility)—as long as relative prices change (as they always do, often faster the higher the rate of inflation). Through substitution of goods become relatively cheaper for goods now relatively more expensive, the employee can dodge some of the effects of a higher average price level; and therefore a somewhat lower degree of protection would be sufficient to simply protect real living standards defined in terms of utility. However, even for such a high degree of real purchasing power protection is unlikely to offset the partial nature of real wage protection and the intermittence and delay of wage adjustments. Moreover, the consumption basket can be frequently adjusted to the relative weight of its components in actual expenditure, thus removing from time to time the gains from substitution.

Necessarily, given the non-uniform composition of individual expenditure, the index basket can never correspond to the actual composition

of employees' consumption, other than temporarily by extraordinary coincidence. Besides, the customary approach is the protection of a minimum basket of basic goods, not a reference to an actual basket somehow "representative" of employees' expenditure pattern. Thus for the overwhelming majority of employees the index basket will be incomplete with respect to the range of their purchases.

In theory, for an individual employee the protection of purchasing power may be lower or higher than with respect to the actual consumption basket, or with reference to a fuller index such as a GDP deflator. But the choice of the index basket composition may lend itself to manipulation: low inflation components may be deliberately given a higher weight than faster inflation components with respect to what may be justified by average consumption patterns; or the price of a particular good or service of given quality may be kept artificially low through lower tax rates or price controls, or pricing policy if it is a public service; goods may be retained in the basket even if they are practically unavailable in the market at their artificially low price (as in the notorious case of Italian "Nazionali" cigarettes). On balance, the index basket is likely to be biased against the protection of employees' relevant purchasing power, a bias enhanced by basket revisions and price manipulations.

With or without such a bias, the indeterminate effect of index basket divergence from actual baskets is unlikely to be significant other than for individual employees. It is inconceivable that such a divergence might offset the implications of the other parameters of wage indexation departing from the value they would have to take for it to be full indexation. Having examined these parameters, we are now in a position to consider the start and development of inflationary spirals in a wage indexation regime.

## 6.9 Inflationary Shocks and the Price/Wage Spiral

An inflationary shock can be exogenous, such as a permanent worsening of terms of trade on the cost side, or a boom in world trade on the demand side. It can also be endogenous, e.g. on the cost side a permanent increase in the rent of non-reproducible factors (land, the environment); or a

domestic currency devaluation requiring lower real wages to sustain competitiveness; on the demand side, an endogenously generated domestic boom.

Most literature on wage indexation considers the price/wage/price inflationary spiral as a typical, ever present negative side effect of any kind of wage indexation, for any kind of shock and even endogenously without a shock. This is not necessarily the case:

(i) Wage indexation, being a passive and lagged adjustment, can never impart an inflationary shock on its own. Wage-push inflationary shocks can and will often occur at wage renegotiations, but these will be the result of the relative bargaining power of employees, not the result of indexation; indeed, we have seen above (Sect. 6.5) that without wage indexation for a given balance of bargaining power money wage settlements will be higher because they will take into account expected inflation, thus contributing to bring it about all the sooner. This positive contribution of wage indexation to the containment of inflation should not be set aside.

(ii) On the contrary, a cost inflationary shock could take the form of a unilateral increase of profit margins, for instance due to an increase in producers' monopoly power. In that case an inflationary price/wage/price spiral is the mode of employees' resistance to such an increase, which is made no less legitimate from the fact of being contractual and automatic. In this case the spiral must be imputed to profit margins increase, not to wage indexation as such.

(iii) When the inflationary shock was fully anticipated by wage negotiators, the first round of price increases and compensated money wage increase should be the end of the inflationary story, without activating a spiral. Such anticipated shocks can be built into the time structure of the agreed money wage and into the degree of real wage protection (cover/elasticity parameters), in such a way as to reconcile target real wages and target profit margins, averaged over the period, without the need for the restoration of profit margins after indexed wage increases through a secondary round of price rises.

(iv) Of course it may happen that even anticipated shocks have not been built into the wage contract so as to reconcile ex ante target real wages and profit margins averaged over the contract duration. The spiral then is the direct and predictable result of a contract voluntarily entered by the parties, who must have known this, as the shocks were anticipated, and yet preferred that arrangement to any other. This does not imply that the contractual parties have necessarily behaved irresponsibly, in agreeing to a settlement certain to set in motion an inflationary spiral: the alternative to wage indexation was a non-indexed contract *of shorter duration*, in which case the conflicting views about value added distribution would have been enacted anyway through an inflationary spiral. The only way to avoid this kind of spiral is an incomes and price policy, devised with government participation and sanction—not the end of wage indexation. A market economy in which prices are fixed daily but non-indexed wages are held prefixed for one or two years and are fully exposed to the ravages of inflation in the meantime is only a half-market economy. This is a respectable political project but is not necessarily economically more efficient and less inflationary than one of partial wage indexation, which is politically equally respectable.

(v) Productivity increases lower than anticipated, both of labour and of all other resources, or worse terms of trade than anticipated, represent an unanticipated cost-shock. But conversely, unanticipated productivity increases and better terms of trade than anticipated offset at least some of the unit cost increase due to unanticipated cost-inflationary shocks, thus reducing or removing the impact of other unanticipated shocks. The relevant period over which such productivity and terms of trade improvements (shortfalls) can reduce (raise) costs depends on the period over which producers average their unit costs over time in their pricing behaviour. This period might correspond to the time interval in between intermittent adjustments in money wages; or to the time lapsed since the previous round of wage negotiations; or to any other time length, depending on actual practice.

(vi) Real wage flexibility built into indexation formulas, through partial coverage or less-than-unit price elasticity of wages, lowers real wages already at the first upwards adjustment of money wages: but there is no reason whatever why real profit margins should be considered as immutable in the face of unanticipated cost shocks. Apportioning between real wages and profit margins the burden of unanticipated cost-shocks is arbitrary, but imputation to profit margins is plausible. Sometimes real profit margins do also contribute to absorb some of the impact of an unanticipated cost shock, but do so by choice, not by default. There is no reason to regard the burden of the unanticipated cost-shock voluntarily taken on by producers, for a given burden taken on by real wages through less-than-full indexation, by any means as "right".

(vii) Unanticipated demand shocks raise real profit margins and represent a windfall in the form of higher prices; there is no reason why these real profit margins should be stabilised at the new, higher level. At least some of the money wage adjustment in response to these higher prices could and should be absorbed by reducing the rise in real profit margins.

(viii) If the cost shock takes the form of higher rent of non-reproducible factors, there is no reason why some of the higher rent should not be taxed away by the government and used to reduce employees' social security contributions or the tax burden on enterprises, thus partly offsetting some of the impact of that higher rent on unit costs.

## 6.10 How Much of the Price/Wage/Price Spiral Can Be Imputed to Wage Indexation?

From these considerations it follows that wage indexation can contribute—at most—to the transformation of an inflationary shock into a price-wage-price inflationary spiral, only for a residual fraction—if any—of some of the shocks. Namely, this amounts to *unanticipated cost-shocks other than from profit margin increase, over and above unanticipated productivity increases and unanticipated improvements in terms of trade, minus*

*actual falls in profit margins (and minus possible redistribution of rent when the cost-shock is rent increase). From this maximum contribution one should also deduct the additional fall in profit margins that might be necessary to lower profit margins to the "right" level.*[8]

When an inflationary spiral occurs, its speed is inversely related to the price/wage lag and the interval in between wage adjustments, and directly related to the cover/elasticity parameters. Whatever the impact of indexation, it comes to an end with the end of the contract; at renewal, indexation will contribute to contain inflation over what would have been the case with a non-indexed contract. In general, the net effect of indexation on inflationary processes, is indeterminate.

Over a long period of time, other things being equal, wage indexation is bound not to make all that much difference to average real wage trends. At times of unanticipated external shocks, it is an important countervailing power to firms' power of instantaneously changing their prices. Short run gains in maintaining real wages may have to be paid for by workers though the discomfort of living with higher inflation, and consequently, already in the medium run, a greater demand deflation—and therefore the discomfort of higher unemployment than otherwise necessary to bring inflation under control. Ultimately, wage indexation formulas open the familiar trade-offs between short and medium-long term, between inflation and unemployment. Thus it does not seem to deserve neither the odium of its opponents nor the sentimental attachment of its proponents.

## 6.11 Further Modifications of Wage Indexation

In given circumstances there may or may not be an optimal balance between wage indexation parameters, which would be best for all parties, but if it exists there are too many parameters and the best combination

[8] It might be argued that whatever flexibility profit margins exhibit is due not to choice but to market forces, as automatic as wage indexation. This argument, if accepted, means that wage indexation may contribute to the inflationary spiral slightly more than the maximum indicated above, namely that part of profit margin fall over and above what might be considered as "right".

may be impossible to identify; it will depend on actual circumstances and therefore vary over time, whereas the arrangement requires some stability in order to work.

Automatic mechanisms such as wage indexation are used, ultimately, because there is no visible individual appropriation, by workers, of the benefits of wage restraint in adverse economic circumstances, whether at enterprise level or in the economy as a whole. Such benefits come in the form of delayed deceleration of price inflation, or higher probability of employment, both difficult to perceive and, on the basis of experience, often not very credible.[9]

The impact of wage restraint on profits, both at enterprise level and in the economy, on the contrary is instant, visible, certain, capitalised in the value of firms as going concerns and reflected in the stock exchange value of their shares. This is why unions' bargaining power is often directed to the establishment and maintenance of indexation mechanisms which automatically exclude or weaken real wage restraint.

In the search for real wage flexibility in between wage adjustments, proposals have been put forward for modifications such as to reduce indexed adjustments. In particular, these involve deducting from the price index:

(i) the impact of worsening terms of trade on GDP;
(ii) the effects of increases in indirect taxation on price increases.

Undoubtedly such modifications raise the economy's ability to contain inflation when such inflationary shocks occur, indeed sterilise completely such shocks. However:

(i) these provisions unload onto real wages the entire shock, not only exempting profit margins completely from the burden of adjustment to shock, even in the case of an anticipated shock, but actually

[9] To convince workers that wage restraints leads to higher employment, the acceptance of a lower wage than otherwise obtainable through exercise of their full bargaining power would have to be indexed to unemployment were it not for the devastating destabilising effects that such a provision would have if the hoped-for employment promotion through lower wages did not materialise in the end.

potentially *raising* profit margins by the amount which may be absorbed by other factors.

(ii) a two-way adjustment should then be contemplated in any case, i.e. the index should also be corrected *upwards* when terms of trade improve and when direct taxes are reduced—something which can also and frequently does occur.

(iii) like any attenuation of the degree of protection of real wages, these provisions will reduce the beneficial effects of indexation as well as the negative effects attributed to it, through higher money wage settlements at money wage renegotiations.

(iv) such modifications are bound to occur after a particularly strong unanticipated inflationary shock, but by the time the modifications are made the shock will have come and gone, and therefore they may be both unnecessary and inappropriate to current conditions.

Moreover, these modifications are totally alien to the logic of traditional indexation (as illustrated in Sects. 6.1, 6.2 and 6.3 above). They imply a specific nation-wide distribution of the effects of inflationary shocks, actually unloading their burden—indeed more than their burden—onto wage earners. Thus this kind of "indexation" does not pertain to the scope of wage negotiations, even in collective bargaining. The modification of wage indexation provisions within the scope of wage negotiations could link money wages to other indicators—however pertaining to the economic performance of enterprises, not of the entire economy. Such could be links to profits, or revenue, or value added, and/or in increases in the stock exchange capitalisation of companies—all taken per employee.

The two modifications indicated above, on the contrary, come close to "indexation" of wages to GDP per employee—perhaps a sound principle[10]—but a completely different logic from that of indexation of intertemporal private contracts. It is a logic that generalises the principle of profit sharing and performance related pay from the enterprise to the national level, i.e. one of participation in the performance of the national

[10] The principle has been recommended by Jacques Dreze [personal recollection].

economy seen as a firm in which all have a stake. It is a logic of neo-corporatist composition of economic conflicts outside the market-place and within a macroeconomic policy-making framework. As such it squarely belong to the scope of a nation-wide social contract, together with the resolution of other distributional conflicts which may arise even for perfectly anticipated inflationary shocks (see above, Sect. 6.10). The scope of such a social contract, with government participation and sanction, could be extended outside the narrow scope of value added distribution thus improving the chances of reconciling otherwise incompatible claims. Wage restraint would be attainable by countervailing concessions of some kind, whether economic or political.

Economic concessions might include, for instance, the protection of employment through public works programmes contingent on a recession (as in old-style Sweden), or of reflationary macroeconomic policies as in Austria, provisions for a citizen's income or a generalised protection of a minimum income, partial relief on earned income taxation or on social security contributions, or the guarantee of more stable prices of public services. Political concessions might include, for instance, greater employee participation in decision making at the enterprise level, or greater democracy at the local level, or a charter of citizen' rights. This list is given by the way of example but could be much longer.

Such a social contract could contain contingent provisions also for distributing the effects of all kinds of shocks yet be compatible with an attenuated form of wage indexation, which would continue to have attenuated but probably still positive effects. The attenuation of wage indexation—especially if by decree—or, *a fortiori*, its abolition, without the institutions of parallel nation-wide political processes leading to a social contract, and without the appearance of compensatory inflationary pressures under the form of higher money wage settlements and/or shorter duration of contracts, should not be saluted as a victory for reason and common sense. These developments are simply the manifestation, for good or worse, of a significant deterioration occurred in both the bargaining powers of employees in the labour market (due to growing unemployment and to recession prospects) and of the political power of their trade unions (due to their delayed recognition of the gravity of the current economic crisis, their failure to protect employment and—last

but not least—their lack of initiative and imagination). With economic recovery, and the accompanying recovery of employees' economic and political powers, wage indexation will probably stage a comeback, whereas a wider, more desirable social pact—easier to reach in the emergency of deep recession by then will be much more difficult to put in place.

## 6.12 Summary and Conclusions

Indexation of intertemporal contracts may take a variety of forms, including prompt and complete protection of the real value of future money payments, i.e. full indexation. Wage indexation is necessarily less-than-full, i.e. necessarily temporary and lagged and/or intermittent; usually with partial cover and less-than-unit elasticity with respect to the price index, linked to an incomplete consumption basket.

Whether indexed or not, the labour employment contract can never secure the actual delivery of labour services at the prefixed wage; instead it fixes an option wage at which any labour employment takes place in between contract renewals. This kind of arrangement gives certainty about money incomes to employees and about unit costs to producers, and avoids the transaction costs that continuous wage negotiations would have in a continuous spot market.

Indexation reduces uncertainty about real incomes and unit costs. It therefore allows longer contract duration, and/or lower money wage settlements at contract renewals than would take place for non-indexed contracts in conditions of inflation and especially of accelerating inflation. Thus wage indexation defuses inflationary expectations and actually contains inflationary pressure at contract renewal.

Wage indexation can never impart an inflationary shock to the economy. When an inflationary shock occurs during the duration of an indexed wage contract, an inflationary price/wage/price spiral may develop, but indexation can be held responsible, if at all, for prolonging and amplifying the effects only of unanticipated cost shocks, over and above those which can be accommodated by unanticipated improvements in productivity and in terms of trade, as well by profit margins flexibility.

The inflationary effect attributable to indexation, if any, is only temporary and vanishes at the next renegotiation of the wage contract, when wage-push pressure is imputable to employees' bargaining strength and not to indexation.

When an inflationary spiral is in operation, its speed depends strictly on wage indexation parameters, and on the nature and intensity of inflationary shocks. In between contracts, real wage flexibility is higher—and therefore the accompanying inflation lower—the shorter is contract duration; the longer is the price-wage adjustment lag; the less frequent are the intermittent wage adjustments; the lower the protected part or price elasticity of money wages; the more manipulable is the index basket and the more frequently it is adjusted to the average expenditure composition. Moves in this direction simply attenuate the protection of employees' purchasing power and the stability of real labour costs, and therefore reduce both the costs and benefits of indexation.

A more sober assessment of the limited effects of wage indexation—which on balance remain of indeterminate sign—is needed, in place of the jaundiced reactions that wage indexation usually provokes in most circles.

The elimination of the inflationary risk associated with wage indexation leads naturally to wage "indexation" to GDP per head corrected for terms of trade changes and indirect taxes: this however is not contract indexation in a strict sense but a more general form of government incomes policy, which is the proper object not of employment contracts but of a nation-wide social contract, through which the wage/profit conflict would be more efficiently composed than through wage and price inflation. A social pact involves neo-corporatist institutions of conflict composition, with government participation and endorsement, trading off real wage restraint for the protection of employment and investment and forms of economic democracy. The modification of indexation to sterilise changes in terms of trade and indirect taxes can be part of such package. But the answer cannot be the sole modification of indexation in this direction, or the abolition of indexation tout court.

For a given relative bargaining strength, without indexation money wages would be negotiated more frequently and would be higher at renegotiation as they would embody inflationary expectations, and/or the

duration of contracts would shrink. The abolition of indexation without nationwide provisions for a social contract, and without these side effects, is the manifestation of a deterioration in the bargaining power of employees, and of the political power of their trade unions. With the end of recession such powers will probably recover; indexation might stage a comeback.

# 7

# Post-Communist Mutations

Domenico Mario Nuti

One of the first, major, contributions to 'Evolutionary Political Economy' was undoubtedly made by Karl Marx with his theory of the evolution of economic systems—which he called, "modes of production".[1] According to Marx's dialectical method, system evolution is driven by the emergence of conflicts and contradictions, and their resolution through change. In short, Marx envisaged conflicts between nature and man; between the development of productive forces and the productive relations associated with them; and between the economic base and the superstructure of a mode of production. In Engels' appraisal, "Just as Darwin discovered the law of development of organic nature, so Marx discovered the law of

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[1] Marx (1859). The best synthesis of Marx's thought on modes of production is provided by Lange (1963, ch. 2) on "Modes of production and social formations" and ch. 3 on "Economic Laws", as well as Lange (1971, ch. 1).

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development of human history".[2] In the end this may turn out to be Marx's main, indeed perhaps only, lasting contribution to political economy.

Marx, however, made three major errors. First, he pushed dialectical materialism to its extreme, i.e., toward the idea of economic determinism (others did so even more in his name[3]). Second, Marx presumed that there existed a necessary sequence from one economic system in history to the next, each corresponding to a specific period in the historical development of mankind: the primitive economy, slavery, feudalism, capitalist production and socialist production.[4] The third, gross, unforgivable error of Marx was the wishful thinking that socialism—conceived as a classless, non-antagonistic society—would be exempt from the conflicts and contradictions characterising all other modes of production and, therefore, would be the final stage of human development—the end of history. Rosa Luxemburg went so far as to claim that "… the realisation of socialism … means the end of political economy as a science".[5] Having once reached the initial stages of socialism, societies, in due course, would simply glide into its final stage, i.e., full communism. Soviet theorists even claimed that this necessary path would be regulated by a series of so-called "economic laws", such as the "law of planned proportional economic development, or the "law of increasing satisfaction of the needs of the population".[6]

These groundless beliefs were challenged by the great Polish economist, Oskar Lange, who started his career as a junior lecturer at Cracow's Jagiellonian University and whom I had the fortune to have as a teacher.[7] Lange stressed the dangers of two kinds of degeneration for the socialist

[2] Speech at the Graveside of Karl Marx, in Marx and Engels (1958, Vol II, p. 153).

[3] "Note on some formulations and on the name of «the materialist interpretation of history.", in Lange (1963, pp. 46–48).

[4] Marx (1859). In addition, Marx also referred to an important, but never dominant, subsidiary mode of production, which he called simple or small-scale commodity production. Lange (1963. Ch. 2).

[5] Quoted by Lange (1963, p. 84, footnote).

[6] Academy of Sciences of the USSR (1953).

[7] At the Central School of Planning and Statistics and at the Faculty of Economics, Warsaw, 1962–1963.

system. The first he defined as anarcho-syndicalist degeneration, i.e., "the absence of trusteeship of the public interest, that is group ownership effectively devoid of any responsibility towards society. The second he called bureaucratic degeneration, i.e., the absence of any effective self-government (Lange 1958). In the end, the old communist regimes came to suffer from both forms degeneration, i.e., the appropriation of social wealth by a privileged nomenklatura and, simultaneously, a new form of alienation arising from the subordination of society to a centralised bureaucratic and party machine.

Lange forcefully rejected "The naive belief that contradictions do not arise in the course of the development of a socialist society…", but still believed that under socialism "… it is possible to control economic laws …", to make their operation conform "… more and more closely to human intentions".[8] This may very well have been possible but was not actually the case. Over time socialist policies and institutions came to be undermined by their own successes, creating precisely the kind of conflicts and contradictions that Marx believed would disappear along with capitalism itself. Paradoxically, the recent collapse of the communist-led regimes in Central and Eastern Europe can be seen as the triumph—with a vengeance—of the Marxian general theory of the modes of production over the Marxian inspired praxis of so-called "realised" or "really existing" socialism.

In these states, the powerful accumulation drive associated with the process of central planning generated rapid growth but came up against the exhaustion of labour and other reserves. Unchanged policies of accumulation in turn became overambitious—as was stressed by another great Polish economist, Kalecki (1969), whom I also had as a teacher. Such policies came up against the problem of maintenance of price equilibrium; in such conditions the administrative pursuit of price stability generated shortages, queues and output disruption on an increasing scale. Inflationary pressures were amplified by the authorities who, faced with workers' demands for full employment, preferred to make impossible economic concessions rather than possible and desirable political concessions.

[8] Lange (1993, ch. 3, p. 87 footnote and p. 85). Mao-Tse-Tung also stressed that contradictions still existed in socialist societies during his time but took for granted the continuous resolution of such conflicts (1957, pp. 22–26).

The very rise in living standards made consumption more unpredictable and harder to satisfy efficiently, which thereby brought about the need for the introduction of new markets to guide resource allocation. Markets were also needed to take full advantage of the international division of labour. But market decentralisation, in turn, did not go well with continued political centralisation. A virtuous circle might have developed, with parallel moves towards both economic and political decentralisation reinforcing each other, but such did not occur. Instead, continued macroeconomic imbalance brought forth more control from the centre and accompanying political repression. By these interactions a political and economic cycle was thereby generated (Nuti 1979, 1984, 1985).

To get out of this vicious circle it was necessary to raise prices to equilibrium levels and, at the same time, to squeeze people's real incomes and wealth. But leaders either did not want to take such measures or lacked the legitimacy necessary to implement them. Thus the increasing, irresistible force of cumulative excess demand collided with the immovable obstacle of administrative price stability and the system was crushed.

Reform attempts were probably doomed also for another reason. Bahro (1978) made a very perceptive and profound observation on the evolution of economic systems: a new system emerging at time t is never an improvement on the system or version most developed at time t-1, but only a less developed side-shoot of the latter, a mutation of a lesser developed system or version. This phenomenon has long been known to students of evolution, under the name of paedomorphosis: "in certain circumstances evolution can retrace its steps, as it were, along the path which led to the dead end, and make a fresh start in a new, more promising direction" (Koestler 1996, p. 1911); a useful evolutionary novelty is likely to appear in the larval or embryonic stage of the ancestor. If so, advanced socialism was not the best starting point for a new system: any further progress built on its foundations would have been a case of gerontomorphosis—the evolutionary transformation of an adult form. But this is only found in quiet periods of consolidation, not of crisis, and "cannot lead to radical changes and new departures; it can only carry an already specialised evolutionary line one step further in the same direction—as a rule into a dead end of the maze" (ibid., p. 194). In any case centrally planned socialist economies, instead of making irreversible

progress, have "re-switched" or "switched back" to market economies founded on private property and private enterprise—in brief, to a restoration of capitalism. Thus I—having misspent some of my youth on the so-called "re-switching of techniques"—have ended up misspending much of my middle age on the "re-switching of systems".

Systemic re-switching, compared with ordinary transition from an old system to an undeveloped, unknown, uncertain new one, should have had an important advantage. Namely, the target model of the transition should have been a well-known, well tried, well-polished system, already diffused—indeed dominant—throughout the rest of the world, which would have allowed for a smooth, clear-cut, beneficial transformation. Yet this is not at all what happened. In Central and Eastern Europe in the early repeated attempts at reform (e.g., Poland 1956, Czechoslovakia 1968, Hungary 1968 and Poland 1980), in the USSR from the inception of Gorbachev's perestroika in the late 1980s, and in China from 1978 to the present day, there was no full or even partial vision of the target model—which was itself a moving target. In China, Zhao Zryang spoke of "crossing the river by groping for stepping stones along the way": "let the rock garden grow…" was another Chinese slogan revealing a considerable degree of spontaneity. Gorbachev's perestroika was simply a catchy label for everything desirable, soon debased—like the rouble—through inflationary abuse. But once, starting in mid-1989, the transformation of Central and East European economies and societies did switch from socialist reform to capitalist restoration, the change was massive, unprecedented, completely unexpected and undertaken at breathtaking speed. The process was extraordinarily diverse, tortuous, troublesome and messy.

In these circumstances the usual label of "transition" economies and societies (as in "Partners in Transition", used by OECD) is somewhat misleading as it suggests a one-stop, linear movement from A to B. On the contrary, the post-communist economies starting from a great variety of economic and institutional conditions, drifted towards different, often still indeterminate target models, moving at different speeds and along different, wavering paths on a hyperplane, often over-shooting and retracing their steps. There were unexpected large scale new experiments, such as mass privatisations; there were also unintended spontaneous developments, such as the rise and growth of payment arrears, the disorderly

economic and monetary disintegration of trade areas and the almost universal diffusion of employee ownership. Finally tragic and frequently brutal conflicts of various ethnic, "civil" and international forms took place.

The uncertain nature of the transition is well reflected in the linguistic evolution of systemic labels in 1990–1991. The old system had been variously called socialist, state-socialist, Soviet-type, a command economy or a centrally planned economy; the terms really existing or realised socialism plainly stated that no other form had yet been implemented. Until the mid-1980s, the talk was of reform; Mikhail Gorbachev, however, advanced this debate to the discussion of radical reform. By 1990, these countries were now being termed Reforming Opening Socialist Economic Systems; while references to a Transition from Socialism at that time left open the final destination point for the post-socialist states. Notions of market socialism (not just Gorbachev's idea of a socialist market) were soon dismissed (Nuti 1992). Slowly, however, markets were being established and there was talk of emerging market-oriented economies (FRB 1990). By July 1990, the old systems had become historically centrally planned economies, but there still remained a question mark over the actual restoration of capitalism (as indicated by two sessions of the Harrogate World Conference of the International Slavic Association: Aslund 1992). By early 1991, there were emerging capitalist economies; later that year emerging capitalism became capitalism tout court (Rosati 1991).

In many respects this rapid systemic evolution overshot its mark and digressed. An illuminating description of the entire process of this evolution was provided by the title of Jacques Nagels' book *Du Socialism Perverti au Capitalism Sauvage* (1991). At least in the first years of the transition, the new system was (and often still is) neither fish nor fowl. Indeed, it is more like a non-system.

The new animal, then, is recognisably capitalism, but still has a few limbs and organs missing, as well as other parts which are redundant and harmful. The best definition to date has been provided by Hanson and Teague (1992): *the Mutant Economies*. Which offers a simple but powerful explanation for recent upheavals: the new monsters (in the Latin sense of unusual and amazing creatures) may all be genetic mutations due to radioactive contamination from the May 1986 Chernobyl nuclear explosion.

In the new systems there are often remnants that should no longer be there; parts essential to the new system are missing, while new unwanted parts have appeared in their stead. This does not imply that there is a unique, clear cut and universally accepted, model of capitalist economy. There is still room for any number of alternative capitalisms, none of which, however, has any of these missing or surplus features. Marx had allowed for the coexistence, in any actual system at any time, of remnants of the previous system with anticipations of the next, to form an integral part of the transformation itself.[9] But in the post-communist systems we have something else: both a vacuum, i.e., a non-system, as well as new atypical institutions replacing the old remnants—for economy, like nature, abhors a vacuum. Thus we witness the emergence of a monster system, inconsistent with either the original, collapsed system or the target model.

Remnants of the old system that should not be present include:

First, *a central planning mentality*. The entire transition has been "an experiment initiated and directed by the central authority' (Hausner 1994) following the imperative method, i.e., the negation of evolution. For example, Czechoslovak mass privatisation was implemented through the fulfilment and over-fulfilment of quantitative targets (Andreff 1993). Simultaneously, The National Bank of Poland has been trying to target simultaneously monetary aggregates, the real interest rate and the nominal exchange rate—an impossible task in an open market economy; predictably NBP has both lost control of monetary expansion and incurred massive costs of reserves sterilisation. Such central targets have been overambitious, costly, disruptive.

Second, *populism*, i.e., the promise of impossible prizes; the delusion that political democracy is not subject to economic constraints, that something can be obtained for nothing. The most glaring example has been mass privatisation[10] which in essence is the purchase of time by mortgaging the future on prohibitive terms. These dangers, well forecast by

[9] Lange (1963, p. 19).

[10] Oddly the ultimate "free lunch" of voucher privatisation was first recommended for Israel by Friedman.

Hausner (1992), are well illustrated in Poland by the fierce resistance to reforming a non-sustainable system of pensions and social security, and by the outlandish promises of candidates in the Autumn 1995 presidential elections. Populism slows down the process of stabilisation and raises its costs.

Third, *an unchanged residual sector*. Naturally, in the technical and political delays of their privatisation, a significant residual amount of assets is bound to remain state proper, in this sense Dombrowski talks of "forced market socialism" in the early stages of transition. What is inappropriate to a market economy is not the ownership regime underpinning it but the unchanged management regime. On day zero of the transition, indeed already beforehand, state enterprises should be commercialised, i.e financially restructured, entrusted to autonomous managers rewarded according to market performance, corporatised, shares partly transferred to employees on favourable terms in exchange for self-management rights, partly assigned to a variety of state agencies (including other enterprises and financial institutions—as in China) instead of being tied to a Branch Ministry or a central agency. After commercialisation any unavoidable delay in privatisation is bound to matter far less than in the case of the 'desertion' and penalisation of state enterprises. Paradoxically, in Poland it has taken six years to even begin such a process of commercialisation, a process which is still being resisted as a dangerous alternative to privatisation and constantly delayed by presidential veto and constitutional wrangles, whereas it should be clear that any government determined to slow down or stop privatisation can do so without the need to commercialise.

*Parts of the new system that are still missing* include:

First, a *basic market infrastructure*. Economists look at markets simply as informational networks connecting economic agents supplying and demanding marketable rights. We have now learned that markets are much more than that; they are a temporal stratification of memories, expectations, traditions, legislation, jurisprudence, trust and reputations—without which a market is a pale imitation, indeed a grotesque

caricature of the real thing" (Nuti 1993). It is not true that "markets spring up as soon as central planning bureaucrats vacate the field" (Sachs 1993, p. 12).

Such a negative situation is most evident in the factor markets. At the inception of stabilisation and transition there was no credit market: either all state enterprises were given access to credit in lieu of subsidies, as in Russia in 1992–1993, or none of them were, as in Poland in 1990–1992. In Poland, in 1995, and in many other transition economies, there was still no law on collateral (Choroszucha 1995). Squeezed by monetary policy (and often, after the initial undervaluation, by growing revaluation and over-revaluation), enterprises short of liquid capital simply grab it by running unauthorised payment arrears towards other enterprises, banks, tax authorities and even their own employees, without immediate danger of being punished by liquidation or bankruptcy. Even the government runs arrears towards its own employees and suppliers. In Russia this practice, perfected by self-styled marketeer Fyodorov in 1993, is still a major device for controlling the budget deficit—a major misunderstanding, which is bankrupting viable enterprises and leading to the emergence of a primitive barter economy.[11] Financial markets are thin, volatile and short-sighted: the time horizon for government bond markets is 20–30 years in the advanced capitalist countries (e.g., USA, Germany, the UK and Japan), 6 years in Italy, 52 weeks in Poland and eight months in Russia.[12] Wages are also frequently constrained either by direct control or by punitive taxation over and above centrally fixed guidelines. In the Czechoslovak Republic in 1990¬93, for instance, strict though intermittent wage controls were implemented by Vaclav Klaus, of a kind that would have been envied by the most orthodox central planner.

Second, *a state administration*. Paradoxically, the withering away of the state, which the Marxist-Leninist tradition had associated with the realisation of full communism, has often become the deliberate or de

[11] Workers of the Barnaul Match Factory in Siberia were paid 5000 boxes of matches each, worth approximately USD 100, in lieu of wages for November 1995 (Financial Times, 22 November 1995).

[12] Over long periods in Moscow or Warsaw, there is either no secondary market, or there is no fixed interest, i.e.. the financial market does not take into account the future, even with respect to assets which, in principle, should be risk-free or at an rate of very low risk.

facto concomitant of the transition process. Partly this is due to the former interpenetration of party and state at all levels; in such conditions the collapse of the party has accordingly greatly weakened the state itself. Indeed, the demise of the state structure has often been partly deliberate: a reaction to the former totalitarian implications of the socialist state. Partly, however, it has happened by default, aggravated by constitutional crises arising from demarcation disputes between state bodies. In addition law and order have also deteriorated rapidly. Initially, there was no protection whatsoever for consumers, investors, traders or bankers. Taxes, excises and custom duties are often still not collected in full.[13] The state has been stripped of its assets, while the provision of social services has deteriorated. Not only does no "developmental" state exist, but even an ordinary state presence is sometimes lacking, with adverse, often devastating effects on employment and output.

Third, *concertation mechanisms*, of a kind that would allow the coexistence of a labour market and wage restraint without any crude forms of wage control. The lack of such mechanisms has led to mass social frustration and to inflationary conflicts enacted through the markets (Hausner 1994).

*The vacuum created by these missing elements necessary for a mature capitalist system has, as a consequence, been filled by a number of new elements which do not belong to the new system and should not be there.*

First, *rent-seeking*. This involves the use of resources exclusively in an effort to alter income and wealth distribution, rather than in any undertaking of production or trade, mostly because of the inadequacy of the markets themselves (Hillman 1995). Thus rent-seeking differs from the ordinary profit-making process and takes the place of entrepreneurship. It is associated with the phenomenon of *nomenklatura* privatisation and other forms of undue appropriation of social income and wealth by insiders.

[13] Eatwell et al. (1995, ch. 2).

Second, *organised crime*, known in Russia as the *mofiyc* for short (such criminal activity involves the use of systematic corruption, in contrast to individual, occasional acts of corruption which are often the counterpart of rent-seeking). Today there is an increasing tendency for journalists, scholars and international officials to regard the rise of this phenomenon as an acceptable, even desirable development. Organised crime, from their point of view, simply provides services which the state is unable or unwilling to provide, such as economic security and contract enforcement.[14] The "Mafiosi are profit-seeking organizations" argues one commentator, who also asserts that the "Mafia is the privatisation of the transition" (Pejovich 1995). Corruption—Johnson used to say—directs resources to their most productive uses, overcoming artificial obstacles in their way, thus becoming an essential part of the market system.

This may well be the case, but it is hardly a cause for complacency. Corruption and organised crime soon spill over into politics and become inconsistent with the normal functioning of political democracy, which is essential for successful capitalism. They corrupt trade unions, enterprise management, local administration and even central government (see the recent indictment of a most prominent Italian politician, many times Prime Minister, for alleged mafia associations). Soon these activities escalate from the provision of missing public services to ever broader forms of criminal activity such as smuggling, drug trafficking and kidnapping. Once established, organised crime is extremely difficult to eradicate even when there is no longer a need for any of its functions. The temporary advantage which the *mofiya* may provide in protecting market transactions is negligible in relation to the associated costs of delaying the establishment of a normal state administration. So much so that in September 1995 FIAT General Manager Cesare Romiti declared that the mafia was a major obstacle to the operation of the markets in Sicily.

Third, *employeeism*: state enterprise employees, the initial losers of the transition, have in the absence of concertation mechanisms often been appeased by the distribution of state assets on an unprecedented scale.

[14] Varese (1994) and Pejovich (1995).

This has desirable implications for economic democracy, individual motivation, and the resolution of conflicts. But they may be too much of a good thing. When control is in the hands of employee-shareholders who individually have a greater share in the wage bill than they have in the profits, there may be adverse implications for corporate administration, distribution fairness, access to risk capital and, therefore, for investment and growth (Nuti 1995).

These reflections on the residual remnants of the old system and the missing or extraneous elements of the new, lead to three main conclusions:

First, the transition is still very far from complete. The current problems indicate in what direction policy makers must act: eliminate the remnants of the old system and the systemic extrusions of the new. and, at the same time, develop those institutions essential to the transition.

Second, the major issue of the transition process, then, is nor that of excessive versus inadequate speed, i.e., the relative merits of gradualism versus shock therapy, overly debated ever since the process began, but the question of the collision, or mis-adaptation, of the various relics, mutilations and hypertrophies of the old and new systems. In any attempt to change an economic system, as my Cambridge supervisor, Dobb, used to say—you cannot change ingredients to taste, as you can with the recipe for a cake. What any institution is and does depends not only on its own features but on the system as a whole: such a holistic approach is essential not only for mature systems but also for the course of the transition itself.[15] Moreover organisms are integral and constrained structures, pushing back against the force of selection to channel change along permitted paths" (Gould 1995): hence the resistance to some systemic developments, or even their rejection, due to underlying inconsistency.

[15] The concept of holism is borrowed from linguistics, but its relevance for economics is well understood. "Meaning … is something that words have in sentences: and it's something that sentences have in a language. Just as nothing is a heart except as it is part of a whole system of organs, and nothing is a Ministry of Finance except as it is part of whole system of institutions, so nothing is a *symbol* except as it is part of a whole system of signifiers" (Fodor and Lepore 1992, p. 9, emphasis in the text).

Third, to end on an optimistic note: if Bahro and the proponents of paedomorphosis are right, these post-communist mutations might eventually lead us to an improved version of a market economy. Far from being the proclaimed end of history, transitional systems are a melting pot, a highly unstable if not explosive mixture of conflicting elements. Some of their features are new and quite attractive, and not at all at odds with the logic of either the old or new system: commercialised state enterprises, though still nor fully developed; widespread solidarity, though often not on an ' affordable scale'; diffused ownership, though probably not (for the time being) diversified enough. We can still guide further evolution. We should not be afraid of untried paths—such was the case with mass privatisation or employee ownership. *Whether a better form of a market economy is feasible and stable, whether it will be a new species or a specimen, a throwback or a super new system, only time will tell. But it is on this positive conjecture that I would like to end.*

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# 8

# Comparative Economics After the Transition

Domenico Mario Nuti

"The future is not what it used to be" (wall graffiti)

"The recent developments in Eastern Europe are irreversible, but this may change any minute" (US Vice-President Dan Quayle, 1990)

The intimation that the two main objects of comparative economics, capitalism and socialism, might be replaced by a single system to which both might converge, was first stated by Jan Tinbergen. An intermediate, optimal regime—Tinbergen argued—would best serve the needs of economies whose structures were seen as in a process of convergence (an underlying trend, much broader than output and growth rates convergence across countries and currently investigated in economic literature). Thus capitalist economies would be moving towards indicative planning with a growing state enterprise sector and welfare state, while Soviet-type economies would replace direct controls with economic decentralization

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through market mechanisms and introduce state enterprise autonomy, some private property and enterprise.

The collapse of Soviet-type systems in CEECs during 1989–91 and the progress of their economies towards capitalist restoration, while falsifying the convergence theory in its original form, seem to support the concepts, the "end of history" as claimed by Francis Fukuyama and, also, the end of the study of comparative economics as a result of the "submergence" of one system by another. We must recall, though, that this submergence is the diametrical opposite of what was anticipated by Nikita Khruschev, "We will bury you!" Has comparative economics consequently turned into a branch of economic history, concentrating primarily on the rise and fall of the Soviet empire? Nothing could be further from the truth.

First, while the frequency of the Soviet-type system has been slashed, the system is by no means extinct. In 1997, Soviet-type economic systems are well alive, if not quite well. Turkmenistan and Tajikistan, for instance, have a private sector that accounts for only 15 per cent of GDP, and their scores in the EBRD transition scoreboard do not suggest significant systemic change. Cuba today is exactly where the USSR was under Mikhail Gorbachev in the second half of the 1980s. Indeed, Cuba is replicating all of Gorbachev's steps and mistakes, one after another. Administrative prices hover below market-clearing levels; price rises are pre-announced; there exists tolerance towards small scale private enterprise outside industry, pseudo-cooperatives and foreign capital, without any privatization of state enterprises and land; official dollarization proceeds; nomenklatura enrichment continues through self-appropriation of public wealth. North Korea replicates Ceaucescu's Romania, right down to the personality cult and hereditary monarchy-style succession that Ceaucescu had been preparing before he was toppled. There is a Jurassic Park of surviving dinosaurs, without any need for us to confine ourselves to fossils or to reconstruct them from their genetic blueprint.

Second, there are countries (namely, Vietnam and China) which are neither Soviet-type traditional systems, nor post-transitional countries such as the new OECD members (Poland, Hungary, Czech Republic) 'in transition to capitalism'. Both China and Vietnam are authoritarian gerontocracies, still subject to the political monopoly of the Communist

Party which, together with the military, is deeply and directly involved in the economy and creams off a significant share of national profits. There has been virtually no privatization of state assets and enterprises to date. The public sector is still dominant despite the growth of locally based enterprises. This is especially the case in China where township and village enterprises (TVEs) are cosmetically labeled 'non-state' but cannot conceivably be classified under private sector. State enterprises exhibit a high degree of output concentration in many crucial sectors, enjoy monopoly position and many of them register large-scale losses. In China, 70 per cent of the 118,000 state enterprises in industry are, reportedly, losing money on an increasing scale and their hidden indebtedness is threatening the solvency of the entire banking system. Above all, there still exists a latent system of direct controls (on prices, wages, interest and exchange rates, credit, investment) readily used at the slightest sign of the market economy getting out of hand. Thus, in the last three years, we have witnessed instant central prohibition of interbank lending; state determination of prices for necessities, administratively set below market prices; the appearance of wage arrears, a phenomenon incompatible with the market economy. Had there not been a 'transition' process elsewhere, such as in Central and Eastern Europe and in some post-Soviet republics, nobody would have even remotely thought of describing Vietnam and China as 'transition' economies.

At the same time, the 1993 Chinese Constitution claims that China is on the way to 'Market Socialism' (variously defined by Deng Xiaoping as 'socialism with Chinese characteristics' or by Wu Jinglian as 'social justice plus market economy'), a bland description that embraces most capitalist economies. Vietnam also aspires to 'market socialism'. Both countries have actually gone further than a 'reformed' Soviet type economy, in particular eliminating shortages and hence creating a proper market environment. In some respects (such as market competition and the building of financial institutions), China is ahead of some transition economies. Clearly, the 'Market Socialism' project is nowhere near completion in either country, but still is a credible undertaking whose success cannot be ruled out on the basis of experience to date. "China is in uncharted waters."

In mid-September 1997 the five-yearly, 15th Congress of the Communist Party appears to have endorsed the re-structuring, downsizing, recapitalization and eventual privatization of state enterprises, as advocated by the reformist Zhu Rongji. After the abandonment of egalitarianism by Deng, President and Party Chief Jiang Zemin seems to be abandoning the dominance of state ownership, on the grounds that "public ownership can and should take diversified forms … " meaning, perhaps, diffused shareholding (Financial Times, 13/14 September 1997). State assets privatization will bring China closer to a final choice between alternative systems. The expected adverse impact of privatization on employment and the parallel explosion of the financial sector might well erode and ultimately undermine party control, thus forcing a change of direction towards capitalist restoration. However, unless and until this happens, China and, similarly, Vietnam cannot be lumped with transition economies and must be regarded as a separate, though still evolving economic system.

Third, as long as we have different systems, there remains the question of actual or possible transition from one to the other (including the possible restoration of seemingly extinct old systems), of its speed, depth and actual path (especially in view of the likely path-dependence of outcomes). In particular, given the unnecessary costs of stabilization and transition suffered by many Central and Eastern European and former Soviet economies, it is essential to study and formulate the economic policies that might best assist such a transition. It is precisely by studying the process of building a system in conjunction with the heritage from another that we see most clearly what particular systems really are.

Moreover, in the course of actual transitions, we are now observing totally new mutants, exhibiting features alien to a modern market economy, such as:

– 'Proto-capitalism', i.e. rudimentary, undeveloped beginnings of a market economy, resulting from institutional 'over-shooting' in the drive back to capitalism;
– Missing or distorted capital markets as, for example, pyramid banking schemes (which interrupted the Albanian transition but were also large-scale phenomena in Russia and Romania);

- Insider domination of corporate governance, whether by ordinary employees ('employeeism') or managers ('managerial proto-capitalism'), as a side-effect of mass privatization schemes (as in Russia) or other forms of managers' and employees' buy-outs (or MEBOs, as in Poland);
- Overwhelming power of a handful of new magnates, in particular bankers, as in Russia where the labels have been used of "crony capitalism" (George Soros), "oligarchic capitalism" (Mikhail Khodarkovsky), semibankirshchina (or the era of the seven bankers, who enjoyed economic favours after backing President Boris Yeltsin's re-election);
- Economies effectively ruled by organized crime which, in Russia, is officially recognized as controlling 40 per cent of economic activity;
- 'Re-demonetization', where budgetary deficits are contained not by lowering government expenditures relative to budget revenues but by withholding payments for government purchases and for irrevocable commitments such as wages and pensions, and where money supply is controlled through failure to issue cash on demand. Russia and Ukraine are cases in point, with the unbelievable complicity and support of international financial institutions such as the IMF.

Transition processes and the new transitional mutants thus remain important objects of study for comparative economics.

Fourth, there exist several prototypes of a capitalist market economy. It may be justifiably argued that there is convergence on this assertion. Japan and Germany are beginning to lose their distinctive features, such as Japanese life employment, or German Mitbestimmung or, more recently, its traditional aversion to company mergers. The Anglo-Saxon model, in turn, may be evolving in a Nippon-German direction, as witnessed by the recent debates on the stakeholder economy and the end, for all intents and purposes, of the Thatcherite/Reaganite model (see the social-democratic revival in the UK, France, Italy and, maybe soon, even in Germany). But there still exist significant differences, for instance, in corporate governance, welfare provisions, scope of non-private enterprise, all worthy subjects of inquiry.

Moreover, even if the market economy were to converge to a single model, this would be likely to be a mixture of markets and hierarchies, of profit-oriented and non-profit organizations, private and public

enterprises. A mixed market economy and, with it, the thorny question of the boundaries and the role of the state in such an economy is a sufficiently voluminous object of study for comparative economics.

Fifth, even economic systems with identical economic institutions may behave very differently if their economic policies are systematically (i.e., permanently and consistently) different. For instance, an economy with an adopted policy of full (i.e., high and stable) employment, an industrial policy and some solidarity measures through budgetary redistribution of income is bound to behave very differently from an economy without one or more of these policies. One may even conceptualize a system without any such policies, based on the Thatcherite principle that "there is no such a thing as society". Systematic policy differences remain important objects of comparative study, especially in connection with different economic performances of countries using different policies (with respect to a whole range of criteria, not just economic growth but also employment, environmental standards, distribution fairness, cohesion).

Sixth, there is, what we could call, economic engineering, i.e. the study of new or modified economic institutions, including their new forms of actual realization such as, for instance, basic income, minimum wage, independent central bank. This study area also includes untried sets of economic institutions such as ideal but unlikely 'Utopias'; dystopias or cacotopias to be carefully avoided; or, desirable feasible systems such as James Meade's Agathotopia. As H.G. Wells put it, "Progress is the realization of utopias", by definition.

Last, but not least, history never ends; both single institutions and the systems which they form, as well as the underlying economic structures evolve continually. Karl Marx was the first notable practitioner of evolutionary economics through his theory of the development of "modes of production" as he called economic systems. Even though, he erred in three major respects: economic determinism, irreversibility of systemic change, and the belief that socialism would be the necessary final point of arrival of systemic evolution. We now know better from direct observation of the post-communist transition processes. But Marx's basic notion that conflicts and their resolution generate economic change still seems promising. Paradoxically, the collapse of the Soviet-type model is best

understood as the result of the conflicts and contradictions that afflicted that model. The very idea of an evolutionary approach to economics, which is the natural preserve of comparative economics, has a wider and more general appeal today. For instance, see the success of the European Association for Evolutionary Political Economy, in spite of its recent proposal to drop "Evolutionary" from its title, which is being considered only in order to avoid ambiguity and to broaden its appeal (EAEPE Newsletter, July 1997).

In conclusion, the spectacular economic transformation of Central and Eastern Europe and of the former Soviet Union in the last eight years has not affected a number of areas which remain the important and unchallenged preserve of comparative economics. Moreover, contrary to widespread expectations and beliefs, if anything this transformation has enriched the range of system morphology, and has greatly enhanced the importance and significance of the study of comparative economic systems, policies and institutions, and their processes of transition and evolution.

# 9

# Kornai: Shortage Versus Surplus Economies

Domenico Mario Nuti

## 9.1 The Shortage Economy

The disagreement with János naturally does not concern the characterization of the Soviet-type, centrally planned socialist economy as the Shortage Economy (Kornai 1980a). There can be no doubt that in all versions of that kind of economy, shortage phenomena (including rationing, queues, waiting lists, forced substitution, and purchase postponement or outright desistence) were general, frequent, intense, and chronic. Whether money prices were stable, rising, or falling, those economies

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were afflicted by large-scale, endemic excess demand at prices below the market-clearing level; whenever technically feasible, re-trading occurred at higher black-market prices (for definitions and a review of attempted measurements, see Nuti 1986).

Nor does my disagreement concern the adverse consequences of shortages. A by-product of repressed inflation was over-full employment of labor, i.e., excess demand for labor by enterprises (involving low labor discipline, high job turnover and wage drift). Consequences included consumers' frustration at their inability to secure goods and services at official prices, lower incentives to supply additional labor and effort, and production inefficiencies due to erratic supplies of inputs. Inequality in the socialist system was grossly understated and hidden, as it took the form of privileged access to underpriced goods not available to the general public: special shops for party apparatchiks, foreign currency purchases (feeding onto a black market for hard currency), special healthcare, etc. This socialist inequality was probably lower than that of today's capitalism of the 1% and the 0.1% where the 62 richest earn as much as the poorer half of the world population (Hardoon et al. 2016), but still excessive. I would add that endemic shortages doomed to failure any reform attempt aimed at establishing forms of market socialism, such as were repeatedly attempted throughout the bloc for almost forty years after Stalin's death in 1953.

The residual disagreement between me and Kornai concerns the causes of shortages in the socialist economy. In his 1980 book and other papers at around that time (1979, 1980b; and 1959 for an earlier statement), Kornai initially attributed such shortages primarily to Soft Budget Constraints (SBC), i.e., the ability of state enterprises to replenish their liquid financial resources through budget subsidies or credit (by banks and/or suppliers) whenever money prices were raised in order to reduce shortages. The notion of Soft Budget Constraints is an original and valuable contribution by János Kornai to economic theory and policy. Volume IV (2014b) of his ten-volume *Collected Works* gathers 13 publications of his on the subject and his *Introduction* to the volume stresses the partial overlapping of SBCs with Moral Hazard and with Time Inconsistency, while claiming their specific additional usefulness. However, soft budgets can explain open inflation, but are neither necessary nor sufficient to

explain shortages, which in the best Walrasian tradition require as a necessary and sufficient condition simply prices consistently lower than their market-clearing level. Under such conditions, soft-budget constraints make shortages persist, as they would if enterprise funds were fully (100%) and continuously indexed to prices, but cannot generate shortages in the first place. Gomulka (1985) showed that shortages did not depend on budgets' softness, but on the degree of budgets' softness being higher than the degree of price flexibility: if prices were flexible, a limit to budget softness would be placed by either planners' concern about resulting open inflation and its adverse political effects, or by the hard constraints of the real economy (Kornai's reply 1985). Moreover, besides causing higher open inflation, soft budget constraints would also result in higher indebtedness of either the government budget if it replenished enterprise liquidity via budget subsidies, or of enterprises if constraints were softened via bank credits, or a combination of both: thus, soft budget constraints would be incompatible with budgetary or monetary discipline, and therefore possibly non-sustainable.

In later works, both in *The Socialist System* (1992) and in a paper on ending shortages in the transition to a market economy (1995), Kornai downgraded SBCs from "prime mover" to concomitant cause of chronic shortage, together with the lack or inadequacy of private sector production and of imports. Even in the absence of the Walrasian feedback of excess demand on prices, of course, shortages are reduced and possibly may be eliminated, or even reversed, also by the Marshallian adjustment of enterprise output (and foreign trade) to profit margins, as well as by the capital-stock adjustment of actual to desired productive capacity. Naturally, both these additional mechanisms must be blocked (as they usually are in the centrally planned economy) for shortages to necessarily arise and persist. But Kornai still regarded shortages as a general feature of the socialist economy regardless of the price level, thus implicitly assuming a zero elasticity of both demand and supply with respect to prices (Kornai 1995a, b, p. 155, Fig. 1, where quantities both demanded and supplied are vertical lines parallel to the price level axis, moreover with demand being subject to horizontal shifts to higher levels even in the short run). The trouble is that we will never know whether this was the case: in peace time, prices were mostly an instrument of aggregation

in Soviet-type economies, and changed infrequently, often remaining virtually unchanged for decades on end.

Holzman (1960) actually produced a measurement of excess demand for food in the USSR in 1937–1958, taking the ratio between the free price in the collective farms (kolkhozian) market and the official state price, and weighing such ratio by the share of free market turnover in total turnover (taken at the respective official and free prices at which they actually occurred). In truth, Holzman's indicator may well overstate the incidence of shortages, for in a dual price system (with free and controlled segments), the free price necessarily must be higher than the single price that would prevail in a unified market, as long as at least part of the consumer surplus enjoyed by buyers of a good sold at below market-clearing is spent on the same good in the free market, thus boosting the free price above what would have been its single equilibrium level. Holzman's index was updated by Garvy (1977) and Dirksen (1981). However, Holzman's series, beside the possible over-statement, takes the initial index as equal to 100 and therefore indicates the trend of shortages over time, but not their absolute incidence at any time.

Both open and repressed inflation encourage dollarization, i.e., the use of foreign hard currencies (such as the US dollar or at one time the DM) as unit of account, means of payment, and store of value. Another indicator used to measure excess demand is the ratio between the black-market exchange rate and the lower official rate for hard currencies in term of domestic currency (as in Culberston and Amacher 1972). The diffusion everywhere in the socialist bloc of special shops where goods were available for foreign exchange (and no questions asked) set a lower bound to the black-market exchange rate, represented by the Purchasing Parity exchange rate for the relatively cheaper goods in those shops. For instance, if a bottle of vodka priced at 100 zlotys in state shops only cost 1 US$, officially worth only 25 zlotys, the black-market exchange rate for the dollar could not be much lower than 100 zlotys. But it could be higher, if lifted by additional, generalized excess demand over and above available supplies of goods and services. Yet black market exchange rates in most centrally planned economies, after the confiscatory currency reforms of the mid-1950s and for most of the 1970s and 1980s tended to be contained within the range of 3 or 4 times the official rate. On that basis, we

might conjecture that excess demand would have been eliminated if official state prices had been, say, doubled or trebled (considering that as indicated above, the equilibrium price in a unified market must be lower than that in the free market segment of a dual market). Only towards the end of the Soviet-type system, in the late 1980s, did black market exchange rates skyrocket. And in the price liberalization of the early 1990s transition, the elimination of shortages required massive price increases, often to the point of open hyper-inflation.[1]

Uncertainty about the persistence of the newly found market equilibrium, and the frequent administrative adoption of the higher prices prevailing in the free market segment of a dual market, naturally led to prices overshooting to levels higher than sustainable equilibrium prices, and to the associated transformation recession (Kornai's own definition; see Nuti 1986, 2012). In conclusion, if our rough and ready assessment of the degree of excess demand in traditional centrally-planned economies is accepted, Kornai's proposition of complete inelasticity of excess demand with respect to price remains a debatable conjecture.

The subsequent approach followed by Kornai (1995) and his current position (Kornai 2014c) on soft budgets constraints is based on self-fulfilling expectations: "The SBC syndrome derives essentially from expectations built into decision-makers at units potentially requiring rescue. Those raising loans expect that if unable to repay them, somebody will bail them out" (Kornai 2014c, p. 73). One problem is that while the degree of budget softness and the degree of price flexibility can be regarded as objective structural parameters of the system, expectations introduce an element of complete subjectivity into the argument. Budgets are soft as long as they are believed to be soft, in which case, of course, that same belief must be shared by the enterprise's lenders and/or suppliers; otherwise it will be the belief of the most prudent of all actors (enterprise, lenders, and suppliers) to determine the relevant degree of budget softness. It is hard to generalize such an expectations model to a whole system of state enterprises under socialism, labeled a "docu-monetary" system by

[1] The answer to the question "What is the correct exchange rate between the rouble, the dollar, and the pound?" used to be: "One dollar, one pound of roubles". In Moscow in 1990, the black-market exchange rate came close to fulfill this proposition: when a taxi driver demanded 5 dollars for his fare, I asked how much that would be in roubles, he laughed and answered, "A kilo".

Joseph Berliner (1957) in which official entitlements as well as money were necessary to secure supplies. And, in any case, once again the identification of soft budgets with shortages is debatable. It is true that the perceived degree of softness may be persistently higher than the degree of price flexibility, thus always fulfilling Gomulka's condition for shortages, but this rather sounds like a *deus ex machina*: if perceived budget softness were repeatedly overestimated, people would soon learn that this was the case, and such perception would stop. All the factors mentioned by Kornai as pre-conditions for the elimination of shortages even in the presence of SBCs (private sector expansion, trade liberalization) presume price flexibility to the point of market-clearing, which in turn remains a sufficient condition for the elimination of shortages—as in any Walrasian world.[2]

Shortages arose as a typical feature of the socialist economy simply because socialist planners wanted to eliminate inflation, one of the main scourges of capitalism, but they could not, for a variety of reasons: over-ambitious plans, especially for investment, wage drift under over-full employment, partial or general under-fulfillment of production targets, import squeezes to give priority to targets other than demand-supply balance, deliberate underpricing of necessities for distributive considerations, or (following a distinct Stalinist strategy) excessive underpricing of shoddy goods unsalable at cost-covering prices. Under such circumstances, socialist planners could still pretend to have defeated inflation by decreeing prices at below market-clearing levels. They could not really defeat inflation, but they could and did repress it instead (socialist leaders adopted the same policy with respect to nationalisms, repressing them rather than eliminating them).

[2] In our private correspondence pertaining the earlier draft of this paper, Péter Mihályi argued that the price level of socialist countries was perfectly adequate to clear the markets in the long run, with full employment of capital and labor, and no excess inventories nor shortages, unlike a capitalist system where under-utilization of capital and labor and excess inventories he regards as evidence of lack of market-clearing. Mihályi seems to confuse short and long run, neglecting that the long run is made up of a sequence of short runs only in which people conduct their daily lives; if in the short run markets never clear, they will never clear in the long run either. He also equates market-clearing with zero inventories, which are perfectly consistent with persistent excess demand.

## 9.2 China

If shortage were a necessary feature of socialism, a dilemma arises: is China a shortage economy or is it fully capitalist? Admittedly, China is a very special case. It is most certainly not a Soviet-type socialist economy. Kornai regards it as being closer to capitalism than to socialism, indeed as "a particular variation of capitalism, generating in most sectors a surplus economy" (in our correspondence and in Kornai 2016). But there is still a sizeable, quite large, though no longer dominant, state enterprises sector, enjoying soft-constraints and government subsidies. And, while the Chinese economy is dominated by markets, the exchange rate is not market determined, for China was granted membership in the World Trade Organization (WTO) without having to liberalize its foreign exchange markets; thus, the exchange rate remains a major instrument of macroeconomic policy used to achieve near-full employment. There are no trade unions and strikes are illegal (though increasingly tolerated). Yet there are minor forms of financial repression, but no significant shortages, if any. Kornai (2014c) indicates the existence of a Chinese private sector and openness to foreign trade as the main explanations for the lack of shortages in a self-styled socialist economy. But it might be simpler to say that shortages are not caused by the SBCs associated with socialism, but by prices set below market clearing, which may or may not be a necessary feature of socialism – and indeed, in China today they are not. Even in China's past, for a long time, prices centrally fixed below market clearing for a relatively small share of necessities were accompanied by additional supplies being available at free prices higher than the hypothetical single price that would have cleared the market—not in black markets, but under the typical Chinese "dual-track" pricing system.

## 9.3 The Surplus Economy

In his latest book, Dynamism, Rivalry, and the Surplus Economy (2013), János Kornai characterizes capitalism on the contrary as the economy of surplus, of excess supply (excess capacity and excess inventories), and

labor unemployment—not cyclical à la Keynes, but chronic. He devotes great attention to conceptual definitions and their consistency with accounting conventions, which is desirable and uncontroversial.

Kornai (2014c) recognizes the significant persistence under capitalism of 9 Soft Budget Spheres: (1) firms in state ownership; (2) local and regional government organizations; (3) budget-funded institutions and nongovernmental organizations; (4) banks; (5) indispensable private firms; (6) large, priority projects funded with public money; (7) firms and individual producers benefiting from sectoral support; (8) private firms rescued through corruption; and (9) central government. A tenth instance is that of households in special cases (such as government relief of the burden of debt for Hungarian households whose mortgages were denominated in rapidly appreciating foreign exchange). Of course, none of these instances of soft budgets is associated with shortages: Kornai attributes this to the existence of a private sector and the liberalization of foreign trade, but once again, one might as well attribute it to market clearing prices, without which neither private production, nor imports, or diversion from exports necessarily prevent shortages.

The novel aspect of Kornai's characterization of capitalism as the surplus economy is its positive assessment as an environment favorable to dynamism, entrepreneurship and technical progress, competition, innovation, and structural change. Central planning, on the contrary, was ultimately responsible for systemic stagnation, due to its failure to make available resources outside a rigid central plan, to allow experimentation, and to adequately reward the successful inventor and innovator. Lieutenant-general Mikhail Timofeyevich Kalashnikov won many medals for various versions of the bestselling AK-47 automatic rifle that he designed, but he died poor.

Kornai makes a fair comparison of both systems: each has its merits and drawbacks that he regards as inseparable and genetically implanted. He recognizes the misery and evil of labor unemployment associated with surplus, but argues that you must take the rough with the smooth: you cannot combine socialist full employment with capitalist dynamism (my teacher Maurice Dobb, a Marxist, also taught me that you cannot mix features of economic systems to taste, as you could with the ingredients of a cake). And between "really existing socialism" and "really existing

capitalism" (for in his view, *tertium non datur* other than in the realm of utopias), Kornai's personal preference, respectable like all value choices, goes to the surplus economy.

## 9.4 Kornai's Evidence

Kornai supports these provocative propositions with a mass of data on technical inventions and their diffusion in the two systems. He lists 111 revolutionary innovations that since 1917 did "fundamentally change the everyday practice of people's lives, work, consumption, recreation and their relationship to others" (2014a, p. 5). He finds irrefutable evidence that "Capitalism produced almost all the breakthrough innovations and was much faster in other aspects of technical progress." For instance, the time lag in the diffusion of innovation from pioneers to followers was much longer in socialist economies, and has been rising rather than shrinking over time. "Assume … that … the world revolution was victorious all over the globe, without a spot of capitalism left. In such a case we would never have gotten the computer and the transistor radio, the refrigerator and the supermarket, the Internet and the escalator, CD and DVD, digital photography, the mobile phone and all the other revolutionary technical changes" (ibid., p. 23). Thus, Kornai regards the promoting impact of capitalism on technical progress as one of its greatest virtues, and the retarding impact of socialism on technical progress as one of the greatest vices of that other system.

Surplus arises in the capitalist system because of factors such as monopolistic competition, uncertainty of demand, economies of scale, and, above all, the "creative destruction" involved by innovation itself; but the main mechanism for the reproduction of surplus is of course the labor market. Out of a country's population of $Q$, a number of people $N$ are inactive because they are "incapable of work" in one sense or another; a number $M$ are capable of work, but are inactive because they are discouraged from seeking a job (retired on pensions; or depending on other means of support; prevented by traditional obstacles or by lack of care for children or elderly dependents; or workers discouraged by their unsuccessful search); a number $U$ are registered as unemployed, and the

remaining $E$ are the employed. Job vacancies $V$ are a measure of labor shortage. Usually the labor force is defined as those economically active, $A = E + U$, but Kornai defines the labor surplus not as $U$, but as $T = M + U$, i.e., including those capable but inactive, his surplus thus corresponding to the Marxian reserve army of labor. $T/Q$ is the rate of labor surplus $t$, $M/Q$ is the rate m of the population capable of working but economically inactive, $u = U/Q$ is the rate of unemployment, $v = V/Q$ the rate of shortage.[3]

I would add to the causes of structural unemployment in the capitalist economy also the downward rigidity of prices, just as I regard their upward rigidity as the main cause of shortages under socialism. Downward price rigidity is also a feature of the labor market, although wage downward flexibility does not necessarily raise employment in view of its negative impact on workers' consumption, which in an open economy may or may not be offset, or more than offset by higher net exports. Akerlof and Schiller (2009) argue that one of the causes of unemployment is the payment by employers of an efficiency wage higher than the supply price of labor. The efficiency wage minimizes labor costs per unit of output, taking into account the higher productivity obtained at wages higher than the supply price of the same employment: therefore, efficiency wages may involve unemployment, although a wage reduction below their efficiency level would never cause higher employment because it would actually raise wage costs per unit of output.

Socialist countries were characterized by high activity rates and labor shortage. In the transition after 1990, activity rates fell in line with capitalist countries and unemployment arose. Kornai confesses a healthy "irritation (even outrage)" at reading "that oft-repeated, canonized expression the natural rate of unemployment" (2014, p. 92). He distinguishes between Keynesian unemployment due to demand and financial constraints, and structural unemployment induced primarily by Schumpeterian creative destruction due to the dynamism and innovation process. The first is cyclical while the second is chronic, which is why labor surplus is present even at the peak of the cycle, is higher than just

[3] See Kornai (2014 Table 4.1, p. 91) for a comparison with standard concepts of labor market statistics.

Keynesian unemployment, and rises with the degree of dynamism of a capitalist system.

Kornai readily acknowledges some collateral damage associated with capitalism, in addition to unemployment. "The shortage economy is ultimately more egalitarian than the surplus economy" (2014, p. 131). Corruption tends to be larger in the surplus economy, where the bribing is done by producers rather than by buyers; indeed, the crony capitalism of state-business connivance for Noam Chomsky is the only form that capitalism takes today. There can be waste in capitalist competition (e.g., in the automotive industry, pp. 132–134). But Kornai ultimately professes to be "a believer in the capitalist system" according to his own system of values, for two main reasons. First, because "(c)apitalism can operate without democracy, but the statement cannot be reversed. Democracy cannot operate without capitalism—'democratic socialism' is impossible" (Kornai 2016, p. 569).[4] Second, because the capitalist surplus economy is the only system able to sustain and drive the continual process of modernization, innovation, and rapid technical progress. Capitalism may be a precondition of democracy, but, as Kornai has repeatedly acknowledged, it is not a sufficient condition for democracy to thrive, as shown for instance today by Hungarian autocracy (Kornai 2016) or the Italian drift towards authoritarian constitutional change; moreover, capitalist inequality jeopardizes democracy. And the dynamic implications of the surplus economy are subject to a number of qualifications.

## 9.5 Some Qualifications

First, the contribution of the state to technical progress is underestimated by Kornai's acknowledged exclusion of military and space expenditure and generally the non-profit sector, without which we would not have had most Information Technology (IT) progress, including the Internet.

[4] He provides a grand synthesis, update, and development of capitalist and socialist taxonomy, and relations between capitalism and democracy, also in the light of experiences in the post-socialist region; and elsewhere, e.g., Kornai (2008).

Conversely, Kornai overlooks the negative impact of the prolonged protection of intellectual property on the spread of innovation under capitalism.

Second, there have been recent reconsiderations of the role of the state as entrepreneur. Mazzucato (2013) notes that in the most successful market economies, the state goes far beyond its orthodox minimalist role of creating infrastructure, investing in science and education and setting the rules, while leaving the rest to the profit motive in markets. Mazzucato recognizes the plentiful examples of private sector entrepreneurial activity and dynamism in new sectors, funded by private sources such as venture capital, but questions their significance. "Silicon Valley and the emergence of the biotech industry are usually attributed to the geniuses behind the small high-tech firms like Facebook or the plethora of small biotech companies in Boston or Cambridge in the UK. Europe's 'lag' behind the USA is often attributed to its weak venture capital sector. Examples from these high-tech sectors in the USA are often used to argue why we need less state and more market: to allow Europe to produce its own Googles" (Mazzucato 2013, p. 20). But "the algorithm that led to Google's success was funded by a public sector National Science Foundation grant", "molecular antibodies, which provided the foundation for biotechnology before venture capital moved into the sector, were discovered in public Medical Research Council (MRC) labs in the UK", while "many of the most innovative young companies in the USA were funded not by private venture capital but by public venture capital such as through the Small Business Innovation Research (SBIR) programme" (ibid.). Beyond the role of the state in stimulating demand, or in "picking winners" in industrial policy, Mazzucato (2013, p. 20) argues that "there is a case for a targeted, proactive, *entrepreneurial* state, able to take risks, creating a highly networked system of actors harnessing the best of the private sector for the national good over a medium to long-term horizon. It is the state as catalyst, and lead investor, sparking the initial reaction in a network that will then cause knowledge to spread. The state, as creator of the knowledge economy."

Such a role of the state is not new, but it has happened in a "hidden way" in order "to prevent a backlash, over the last three decades in the development of the computer industry, the Internet, the pharma-biotech

industry, and many more including today's nanotech industry. None of these technological revolutions would have occurred without the leading role of the state" (ibid., p. 22). Large state investments have enabled a decentralized network of actors to undertake the risky research, and to allow the development and commercialization process to occur in a dynamic way. The recent history of the industrial policy of the USA shows that despite appearances, the US state has been extremely active and entrepreneurial in the development and commercialization of new technologies. Four examples—the Defense Advanced Research Projects Agency (DARPA), Small Business Innovation Research (SBIR), orphan drugs, and recent developments in nanotechnology—are used to illustrate this point. "From the development of aviation, nuclear energy, computers, the Internet, the biotechnology revolution, nanotechnology and even now in green technology, it is, and has been, the state not the private sector that has kick-started and developed the engine of growth, because of its willingness to take risk in areas where the private sector has been too risk-averse. In a policy environment where the frontiers of the state are now being deliberately rolled back, that process needs more than ever to be under-stood so that it can successfully be replicated. Otherwise we miss an opportunity to build greater prosperity in the future"(Mazzucato 2013, p. 24).

In a similar vein, Micklethwait and Wooldridge (2014) talk of a "global race to reinvent the State": three great revolutions have brought about in turn the nation state, the liberal state, and the welfare state, pioneered in Europe and America. They argue that we are now in the middle of a fourth revolution, centered in other parts of the world. In Chinese-oriented Asia, for instance, experiments in state-directed capitalism and authoritarian modernization have ushered an astonishing period of development.

Finally, Kornai's positive assessment of the surplus economy seems to have been somewhat mis-timed, considering both the large-scale costs of the "transformation recession" of transition economies in the 1990s, and the persistence and severity of the current global crisis that began in 2007 and is still rampaging.

Kornai refrains from distinguishing "necessary" from "excessive" capacity reserves, inventories or labor reserves. He writes: "I refrain

from these distinctions not because of ignorance but, rather, because I am not able to find the right borderlines. I do not use these categories because they do not exist in the real world." But there can be no doubt that the capitalist system as we know it today has acquired surplus features to an extent that goes far beyond the level that may be regarded as necessary to enhance entrepreneurship and technical dynamism. An unemployment rate of over 12% as in the Eurozone today, with country peaks approaching 50% of youth (aged 16–24) unemployment, cannot possibly be considered as necessary to preserve the technical dynamism of capitalism.

Piketty (2014) analyzed the recent generalized growth of wealth and income inequality, which he attributes to the rate of return $r$ on capital being greater than GDP growth rate $g$. This undisputed fact only makes inequality trends worse, but even if $r = g$, as long as $r$ is positive even if it is equal to or lower than $g$, profit would still be more unevenly distributed than labor wages, and accumulation of capital out of profit would be more unevenly distributed than savings out of wages, thus providing a mechanism for increasing inequality of wealth and therefore of income over time. And the growth of income inequality is a major factor—via its adverse impact on effective demand—behind the growth of unemployment and therefore the "surplus" nature of the capitalist economy.

The theory of comparative advantage predicts that with expanding global markets, income inequality in poorer countries should decrease. To date, however, the international record on inequality is at best mixed in the face of recent globalization. Kremer and Maskin (2014) suggest that globalization may not reduce inequality in developing countries since skilled workers in those countries are recruited by multinational companies and see wage rises, while unskilled workers are ignored, so their wages fall.

However governments, instead of playing their role in offsetting such natural trends towards growing wealth and income inequality or alleviating the deficit in effective demand due to this and other causes, have adopted austerity policies promoted and enforced by international financial organizations and by the EU's Fiscal Compact as a misguided response to the current crisis. Such austerity policies have magnified the surplus

features of capitalism, condemning it to suicidal stagnation rather than desirable continued technical dynamism.[5]

Capitalism comes in many varieties, depending on alternative institutions and policies: we should not restrict our choice to the stark, defeatist alternative between Soviet-type socialism and neo-liberal capitalism, and never abandon the search for an improved version of capitalism. In his presentation at the WINIR Conference, Kornai (2014a) accepts this, in spite of his skepticism.

Stanislaw Gomulka commented on a first version of this paper that "Our individual views on the merits of each system are not that important. Given the huge variation of views on that subject and the absence of a generally accepted theoretical method to rank systems, what is important is to have the freedom to choose through a generally accepted political process. This is something we did not have under the communist political system."[6]

Unfortunately, at present the dominance of neo-liberal ideology, the generalized adoption of austerity policies, and the competitive pressures of our globalized world are increasingly reducing the scope for our democratic choice of our preferred variety of the capitalist system.

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[5] Nuti (2014) showed that following the IMF upwards revision of the size of fiscal multipliers, fiscal consolidation can raise the debt/GDP ratio, though his proof needs the tacit assumption that the starting position is a balanced budget.

[6] Private correspondence.

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# 10

# The Chinese Alternative

Domenico Mario Nuti

## 10.1 Introduction

Grzegorz Witold Kolodko is a man whose volcanic intellectual interests and prodigious productivity have spanned broadly over both time and space. Time, with his best-selling book trilogy devoted to the Past, the Present and the Future, and space not only as a traveller to almost all the countries of the world,[1] and a runner in 50 marathons worldwide,[2] but as a most knowledgeable explorer of China.

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[1] "God is everywhere, Kolodko has already been", people used to say.

[2] He used to be recognised as "The fastest among finance ministers and the best fiscal expert among marathon runners in the whole world".

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His publications in Chinese include four books and over fifty papers and journal articles (which by themselves would be a respectable scholarly output for a lifetime); and he appears regularly on Chinese television channels. He also wrote extensively in various languages on the Chinese economy, especially on its current economic model, which he regards as unique—combining elements of capitalism and socialism without conforming to either model. The title of his conference paper published as Kolodko (2018a) originally was: "Capitalism or Socialism? *Tertium datur*", for he argued that in present-day China "a unique internal convergence is taking place. Features of socialism intermingle with essentials of capitalism and vice versa, creating a new, different quality." His recent book on China, published in Polish in 2018, "*Will China Save the World*?" is forthcoming in English (2019) by I. B. Tauris and Bloomsbury. It investigates the economics and politics of rising China and its implication for globalization and the future of the world economy, polity and culture. That title is even more telling and positive.

In this essay I would like to support, substantiate and develop Kolodko's notion of the uniqueness of the current Chinese economic system, and at the same time take a more pessimistic view on its economic, political and environmental sustainability, as well as its exportability. The current challenges to the sustainability of the world economy under current policies do indeed require new institutions and policies: these can only partly be learned and copied from China, namely the broad range and high intensity of economic policy instruments mobilised there.

## 10.2 China 1949 to End-1990s

The Chinese Communist Party, that came to power in 1949, after the completion of post-War reconstruction around 1952 followed the Soviet model of central planning, with the 1st five-year plan 1953–1958 and the first two years of the 2nd five-year plan, concentrated in the Great Leap Forward: dominant state enterprises; land reform and land distribution to peasants; encouragement for the establishment of agricultural cooperatives which then become compulsory and merged into large collective farms; priority to heavy industry, a massive investment drive and other

features of the Soviet-type system. There followed a period of restructuring and recovery, with priority given to agriculture (1961–1965), the 1966–1976 turbulent decade of the Cultural Revolution, with the resumption of growth (1970–1974), the rise and fall of the Gang of Four (1974–1976) and the post-Mao interlude (1976–1978).

Since 1978, with the end of the Maoist regime, China undertook a slow and *gradual transition to socialism*, with a predominant role of state property and enterprise, the granting of land to private peasants through long-term transferable rentals (similar to the *arenda* that spread in the Soviet New Economic Policy of 1921–1926), and the growth of locally based Town and Village Enterprises (TVEs), similar to cooperatives run on a territorial basis but able to mobilize local entrepreneurial energies and to reach very large sizes. There was an egalitarian commitment, but without the economic participation of workers, who were not allowed to associate into unions or to strike (and without political democracy given the political monopoly of the Communist Party).

Planning was centralised, but the excess demand and shortages that characterised the Soviet-type model were not there, because prices were set at artificially low level below market-clearing only for minimum amounts of goods, necessary to an egalitarian distribution policy. For the rest, goods were sold at market-clearing prices, not in black markets but legally, a typical two-tier pricing system *(dual track pricing*). Obviously the price in the free market segment was higher than the single price equilibrium price that would have prevailed without the sales at a lower subsidised price; but the price difference between the controlled and free segments did not replenish the liquidity of private black-marketers as it did in the Soviet system. In China the excess liquidity of economic agents was siphoned off into the state budget, which was the only beneficiary of the higher free price, thus preventing shortages to arise.

## 10.3 The Rise of the Current Chinese System

The subsequent evolution of the Chinese system saw the beginnings of a transition in the opposite direction, from *socialism to forms of capitalism*, with the legalization of private enterprise, the creation and dissemination

of Special Economic Zones to welcome foreign direct investment (FDI) on favourable terms, the privatization of state enterprises and assets (that began in 1997 and accelerated in 2005), including TVEs (although it is not clear whether their disappearance by the end of the first decade is due to their actual privatization or liquidation or simply to the facilitation of their registration as private, almost a purely cosmetic administrative reclassification by a stroke of the pen). Officially, the private sector is dominant from about 2001 onwards, but the distinction between the public and private sectors is rather uncertain, also because of the use of 10 different ownership categories in official statistics.[3] In any case the state retains the monopoly of land ownership, and a dominant stake in the property of banks thus affecting greatly the quantity and cost of credit available to all enterprises, private and public. The state control of banks is used to plan the volume and direction of investment, and leads to "soft budget constraints", without producing shortages of goods in the form of repressed inflation but rather other phenomena of financial repression (such as an occasional unsatisfied demand for an artificially undervalued yuan).

The egalitarianism of the 1980s was abandoned and even reversed: in 2017 *Forbes* listed 395 dollar billionaires in China, but the *China Rich List* of the Hurun Report 2015 (Financial Times 16/01/2016) indicates a number of dollar millionaires that rose 8% to reach 3.14 million people in 2015, and a number of 596 dollar billionaires higher than the equivalent number for the US. In 2017, the richest 1% of the Chinese population concentrated 1/3 and the poorest 25% only 1% of the country's wealth; the Gini coefficient for incomes of 2012 was 0.49, reduced slightly to 0.47 in 2015, surpassed only by South Africa and Brazil, compared with 0.41 in the United States.

The authoritarian and repressive character of the Chinese political regime, on the contrary, strengthened (economic liberalisation and political centralisation went hand in hand also during the Soviet period of New Economic Policy, see Nuti 2018a). Article 35 of the Chinese

[3] The Chinese Statistical Office classifies property as state, collective, cooperative, joint, limited liability, share companies, private, funded by Hong Kong Macao and Taiwan, foreign, and self-employed (Kolodko 2018a). No wonder the division between private and public sectors is blurred.

Constitution in theory guarantees "freedom of speech, of the press, of assembly, of association, of procession and of demonstration." But the preamble of the same Constitution confirms the power of the Party, and Article 1 prohibits "the perturbation of the socialist system by any organization or individual".

China's transition from socialism to a market economy was completed with its gradual opening to international markets, which culminated with the accession to the World Trade Organization (WTO) in 2001. In exchange for access to the markets of the other WTO members, China promised economic reforms, but it did not obtain the treatment reserved to a "market economy", the lack of which involved the possible imposition of protective tariffs based on the (higher) costs of third countries. China expected that this temporary treatment should cease after 15 years, whereas tariffs have been maintained and increased over time, leading China to sue the EU before the WTO. The US supported the EU stressing the precedent of other transition economies (Poland, Romania and Hungary) that also had become members of the WTO as non-market economies on the same conditions as China. In December 2017 the EU approved new rules that no longer allowed to consider China as a non-market economy but retained *ad hoc* the use of third countries costs and prices, thus validating the maintenance of additional barriers.

Nevertheless the Chinese President Xi Jinping repeatedly confirmed (e.g. in January 2017 in a long speech at the World Economic Forum in Davos) China's commitment to and support for globalization, much more clearly and energetically than other global leaders (with US President Donald Trump declaring almost at the same time "America first!" and protectionist plans).

At present, a trade war started by President Trump in the attempt to reduce the US trade deficit with China has been escalating, with Chinese retaliation and US counter-retaliation. In Asia, paradoxically, Trump's protectionism has cleared the way for China to increase its regional influence at the expense of the United States. But the dispute over China's status as a market economy will be controversial and time-consuming, not least because there is no internationally agreed definition of a market economy.

The trade war is likely to be lost by the US, simply because its trade deficit is ultimately the consequence of a budget deficit and of savings lower than investment (for national income accounting identities necessarily imply that trade surplus, budget deficit and investment in excess of savings should always add up to zero by definition). But the imposition of tariffs, even if inadequate to reduce the US deficit, threatens to bring about a worldwide recession.

## 10.4 The Challenge of Present-Day China's Classification

The classification of the Chinese economic system today seems to defy traditional criteria.

*Socialism*? "We heard from the Chinese leader at the Congress of the ruling party that "Socialism with Chinese characteristics is socialism and no other—ism." (Berthold 2017: 31).

*Capitalism*? Kornai (2013, 2016) distinguishes between the socialist system—with public property and central planning, characterised by the presence of shortages, with full employment but unable to innovate—and the capitalist system—characterised by systematic surplus productive capacity and unemployed labour, but highly innovative. Kornai classifies the Chinese system as capitalist, precisely because of the absence of shortages and the presence of a surplus and of innovation capacity. However Kornai (1980a, b) considers the shortages as a result of soft budget constraints rather than of prices artificially kept below their market-clearing level. Yet undoubtedly the Chinese economy is suffering from soft budget constraints, in the form of credit and subsidies to enterprises, while not suffering from shortages. In the characterisation of systems followed by Kornai the existence of a market economy is a necessary but not a sufficient condition for the realisation of political democracy. Politically authoritarian market economies are perfectly possible; therefore the authoritarian character of the Chinese system in Kornai's view does not alter its capitalist character.

*State capitalism*? The prevailing characterisation, both in economic journalism (e.g. *The Economist,* 6/10/2012) and in scientific literature (Coase and Wang 2012, 2015; Naughton and Tsai 2015) favours the term "state capitalism", in view of both the high weight of public enterprises and the high intensity of government intervention in economic affairs. However, Lenin had used that label to designate a temporary, transitional state on the road to socialism, whereas there is nothing temporary or transitional about the current Chinese system.

*Political capitalism*? Milanovic (in his forthcoming book Capitalism Alone, Harvard University Press, 2019), defines the current Chinese system as "political capitalism", following Weber, i.e. involving "the use of political power to achieve economic gains". Milanovic quotes Weber (1904b: 21): "The capitalism of promoters, large-scale speculators, concession hunters and much modern financial capitalism even in peacetime, but, above all, the capitalism especially concerned with exploiting wars, bears this stamp [acquisition of wealth by force, political connection or speculation] even in modern Western countries, and some … parts of large-scale international trade are closely related to it."

Weber developed this concept further in *Economy and Society*: "political capitalism exists … wherever there [is] tax farming, the profitable provision of state's political needs, war, piracy, large-scale usury, and colonization" (1922, Part I, Chapter III; Milanovic 2019).

Such system gives bureaucrats great power, but also responsibility for the realisation of high economic growth, needed for the legitimation of its rule. Milanovic consider Deng Xiaoping as the founding father of modern political capitalism, an approach that combines private sector dynamism, efficient role of bureaucracy and one-party system. This is why Deng was particularly opposed to a multiparty system, a tripartite separation of powers and a Western-type parliamentary system (Milanovic 2019). Such a system requires, in order to keep private capitalists under control, an arbitrary and selective application of the rule of law, and therefore it involves congenital vulnerability to corruption, as the elites apply legal rules to themselves and to political opponents at their discretion. "… these organisations are not too dissimilar from the mafias. This creates politico-entrepreneurial clans and represents the skeleton of political capitalism around which everything else revolves." (Milanovic 2019).

Beside China, Milanovic lists 10 other developing countries characterised by political capitalism, ruled by a single party (or a *de facto* single party when other parties are permitted to compete but not allowed to win elections on their own) in power for several decades, after a successful struggle (mostly violent, including civil wars) for national independence, under the leadership of a left-wing or communist party. They are Vietnam, Malaysia, Laos, Singapore, Algeria, Tanzania, Angola, Botswana, Ethiopia, Rwanda, all characterised by an impressive growth performance over the past 30 years and very high current corruption rankings. Milanovic's recent reflections on the Chinese system (2018) speak of "Hayekian Communism", economically a market-driven capitalist system with private property and enterprise, politically run by a monopolistic Communist Party.

*A unique new system*? Kolodko, as we have already indicated, considers China as a wholly new system, a third alternative that combines elements of capitalism and socialism without corresponding to either. "One can say that a hybrid in the form of socialist capitalism or—if you wish—capitalist socialism is developing there; a sort of *Chinism*" (2018a: 22).

## 10.5 My Own Changing Assessment

My own assessment of China's present day economic system also has been changing over time, reflecting both the Chinese evolution and its ambiguity and ambivalence. In my teaching materials of the early 2000s and Nuti (2018a) my economic system taxonomy used a 0 or a 1 to indicate the absence or significant presence of four components of socialism:

- A. public property and enterprise,
- B. equality,
- C. economic democracy and participation,
- D. macroeconomic control.

I labelled systems by their ABCD values: contemporary China was 1001, similar to the Soviet model 1101 except for China's greater

inequality (B=0 with respect to Soviet B=1, in spite of Soviet distributional privileges in the access to underpriced goods).[4]

In a recent lecture (Nuti 2018b) the high element of macroeconomic control, even under full exposure to domestic and international market forces, made me classify today's China still as ABCD=1001, also because of important residual public property elements (all land, banks, most FDI). I believe that China's use of economic policy instruments is particularly active, while certainly today's capitalism has lost most of them (all of them in the Eurozone). The latest data on urban employment in state-owned enterprises (SOEs), down to around 15% from the 80% peak of 10 years ago, made me reconsider and come round to Kolodko's view of *Chinism*, also supported by Milanovic (2018), for whom today's China would warrant an ABCD score of 0001 (which in the early 2000s and Nuti 2018a I had assigned only to the German economy under Nazi rule).

The Chinese describe their economic system as "*hybrid* socialist market economy". No doubt China's economy today is not a *hyper-liberal* market economy, but it's certainly a normal market economy, which, however, has retained, in its evolution, all the economic policy instruments traditionally associated with the conduct of national policy in the capitalist market economy. In his classic economic policy treatise Ian Tinbergen (1952, 1956) theorized the use of instruments such as monetary policy, for the management of the money supply and the access to and cost of credit and of the exchange rate; fiscal policy in the form of the level and structure of taxes and public expenditures, to be harmonised with monetary policy for the management of public debt; the price and investment policy of public enterprises; and finally, albeit as a last resort, the possible use of direct controls.

Tinbergen assumed an objective function of the government, which decided the weights to be assigned to different objectives, and he asserted the need to have at least as many policy instruments as the objectives to be targeted. By modelling the structure of the crucial interdependence

[4] A finer classification, involving even only one additional intermediate value between 0 and 1, or an additional component, would multiply the number of possible systems respectively to 81 and 32, most of which are not representing any actual or even utopic system.

between the macroeconomic variables of the system Tinbergen determined the area of feasible economic policy objectives, within which the government could choose. As a description of the actual process of reaching public policy choices this procedure may appear oversimplified, but its logic is faultless. From this point of view the Chinese economic system of today is undoubtedly a market economy subject to traditional economic policy instruments. In addition, however, Party organisations that exist even in private and foreign-owned companies are another tool that makes policy measures easier to enforce.

Admittedly the victory of liberalism and hyper-liberalism, ushered by the rise to power of Reagan and Thatcher in the 1980s, has pervaded most capitalist economies, with the delegation of monetary policy to independent central banks, moreover disconnected from fiscal policy; the imposition of austerity constraints on public budget deficit and debt, regardless of the cycle phases; the privatisation of public enterprises and the replacement of direct controls with market parameters. But there is no reason to consider these strategies, respectable as national economic choices, as if they were universally valid, especially at a time when their hyper-liberal foundations are subject to strong theoretical, empirical and political criticisms.

It is true that the convertibility of the Chinese currency initially remained subject to a measure of central direct manipulation of the exchange rate, which was allowed by the WTO after China's entry among its members. Initial undervaluation was essential for the promotion of net exports, the growth of income and employment, and the enormous growth of the trade surplus of China and the consequent massive accumulation of foreign exchange reserves and a huge stock of FDI. However, the limitations of earlier incomplete liberalization of currency and credit have been greatly reduced or eliminated in modern China.

In Poland under Gierek in the 1970s, there were discussions about "parametric planning", whereby enterprises could do what they liked but the central power would modify their parameters to the point of inducing the desired results through the manipulation of those parameters at enterprise level. But China does not correspond to "parametric planning" because it remains subject to the checks and automatic mechanisms of uniform market prices for goods and services.

The preservation of the traditional tools of economic policy—fiscal, monetary, public enterprises and direct controls—should be seen as the fundamental feature of public control on economic variables and not as the avoidance or evasion of the fundamental requirements of a market economy. Moreover China has made monetary policy more flexible (for example by reducing commercial banks' reserve requirements), at the same time reforming and liberalizing its financial markets (so that now Chinese citizens can invest abroad up to 50 thousand dollars per person, and the yuan has been revalued repeatedly).

## 10.6 Chinese Achievements

China' growth in terms of income per head has been extraordinary. In the last four decades no other economy in the world has developed faster than China: in 1979–2018 its GDP growth rate averaged 9.5% (including the poor performance of 1989–1990 following the Tiananmen Square massacre). In the recent recession of 2008–2009 the Chinese economy also did much better than many other countries, especially in the West, that experienced large output losses, while Chinese growth rates decreased only marginally—from 14% in 2007, to 10% and 9% respectively in 2008 and 2009, and increased to 10% in 2010–2011, falling very gradually to current rates of 6–7%, in line with the official target of 6.5%–7% in the current five-year plan 2016–2020.

Such growth performance was associated with a massive export drive first facilitated by the undervaluation of its currency, then consolidated by the maintenance and increase of international competitiveness thanks to its growing productivity due to technical progress and innovation, and by the containment of wage costs. The trade surplus that has been generated consistently has allowed China to amass increasing foreign currency reserves, fairly modest as a proportion of GDP (under 2%), but very large in absolute terms (second only to the German surplus, which in the last ten years has consistently exceeded the EU statutory limits of 6% of GDP). While in 2004, out of 49 SOEs listed on the Fortune Global 500, 14 were Chinese companies corresponding to 10% of their value, in 2016 in the group of 101 globally important SOEs there are as many as

76 Chinese companies corresponding to over 20% of their value (Bałtowski and Kwiatkowski 2018).

Popov (2018) attaches great importance to the "institutional capacity of the state" (to collect taxes and to constrain the shadow economy, to ensure property and contract rights, and law and order in general) in long-term economic performance and attributes the acceleration of growth in China after 1978 not only, and not as much, to economic liberalization, as to the strong institutions created by the communist party in 1949–1978. "Without these strong state institutions liberalization would probably have produced the same effects as in Latin America in the 1980s or in Sub-Sahara Africa in the 1990s or even worse—as in the former USSR in the 1990s."

In its "New Era", which aims to achieve a "moderately prosperous" society by 2035 and the role of a great power by 2050, China has embarked on a transformation from a model based on heavy industry, construction and exports, and a high degree of environmental pollution, to a model focused instead in the development of services and of national consumer demand (which still today represents only 40% of GDP), ecologically more responsible and desirable. Over the last 10 years, Chinese enterprises have been particularly active in Latin America and sub-Saharan Africa in the promotion of investment in raw materials, especially in the extractive industries, and infrastructure to facilitate their export to China.

In 2013, President Xi Jinping announced a grandiose initiative called "*One Belt One Road*" (OBOR), a vast infrastructure investment program aimed at promoting trade between China and its foreign partners to the west, south and north, inserted in the Constitution of the Communist Party. The component *One Belt* consisted of rail routes from western China through Central Asia to Europe. The component *One Road* in reality entailed the development of harbours and facilities to increase traffic from East Asia and connect it to the One Belt, making a connection from Indochina to Poland in a generation, with a planned investment of about 4 trillion dollars. The program involves 65 countries in Asia, Middle East, North and East Africa, and East Central Europe (the so-called 16+1 Initiative, including 16 post-socialist countries: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, Estonia,

Hungary, Lithuania, Latvia, Macedonia, Montenegro, Poland, Romania, Serbia, Slovakia and Slovenia). An important role in these developments is taken by the *Asian Infrastructure Investment Bank* (AIIB, although initially grossly under-capitalised compared to the immense planned investment), with the participation of the UK as a founding member, of the World Bank and the Islamic Development Bank, but without the participation or the support of the United States.

Fukuyama (2018) sees this project as an attempt to export the Chinese model of development, by developing industrial capacity and consumer demand out of China, moving its heavy industry (and the associated environmental destruction) to developing countries at the same time stimulating demand for Chinese products. The model seems more promising than the Western strategy of promoting development through investments in health and education, support for civil society, women's advancement and the fight against corruption. The successful export of the Chinese model would put Central Asia at the centre instead of the periphery of the global economy, and the form of authoritarian government of China would adversely affect the development of democracy in satellite economies. In 2017, the initial general support (except the United States and India) for the project *One Belt One Road* cooled down for fear of a new Chinese economic and perhaps even military hegemony.

## 10.7 Globalisation

Kolodko's conjecture (2018b) that China might "save the world" relies on the notion that globalisation—of trade, capital and labour—is an irreversible process, a win-win strategy that has worldwide universal benefits. International trade liberalisation undoubtedly involves net benefits, but at the same time it inflicts losses on some of the national subjects affected. The overcompensation of losers on the part of the gainers would require international transfers that are impractical (because of the lack of global governance institutions with power of taxation and re-distribution) and/or transfers from poorer gainers to richer losers that are undesirable as they would increase inequality (Nuti 2018b). Potential overcompensation is not sufficient, it needs to be actual.

The belief that globalisation benefits everybody, a tide that lifts all boats, whose benefits in any case "trickle down" from the initial gainers to the rest of the population, is unfounded: "trickle up" is most likely (Kolodko 2002, 2004). Hence the recent drive towards protectionism and trade wars, the diffusion of Trump's belief that "trade wars are good", supported by a large number of Americans. The EU has a special fund to alleviate the redistributive impact of trade liberalisation, a purely token amount relatively to the US equivalent fund, which is greater but still grossly inadequate. Shiller (2018) finds that support for protectionism is due to the job insecurity that free trade often creates, which is why governments must find new ways to insure workers against the risks of a globalized market. Unless compensation provisions of some kind are provided, support for protectionism will continue.

The same considerations apply to the mobility of capital, even if we neglect the possibility of capital flowing from less developed to advanced countries, and the risk of sudden reversals of financial capital flows following changes in self-fulfilling expectations. And the same considerations apply to mass migrations of labour that are in practice unrestricted and also lead to the same redistributive problems of benefits and costs associated with other forms of globalisation.

In a world without borders the net benefit from migrations has been often overestimated, but even the more sober assessments are still appreciable: Docquier et al. (2014) estimated that liberalising migration would increase world GDP by between 7.0 and 17.9 per cent, equivalent to 11.5–12.5 percent in the medium term. But the gains of migrants and of their employers, and workers' gains in the country of origin, cannot be tapped to overcompensate the losers, i.e. workers in the host country and employers in the origin country, without international transfers which are not feasible or transfers from the poorer to richer subjects which are undesirable. It is essential to distinguish between refugees and economic migrants, and to contain and control migratory flows within the limits of the various countries' willingness and ability to welcome them and finance their integration—either directly or thanks to the financial contribution of countries that might prefer to pay instead of taking on an obligation to take them, which ought to be based on UN criteria. Finally,

the advantages of trade liberalisation do not extend to trade agreements regulating standards, competition and jurisdictions (Rodrik 2018).

We argued earlier that the trade war started by President Trump is likely to be won by China, as the US trade deficit is bound to continue as long as the policies of fiscal deficit and excess investment over saving continue. But there is also the possibility of persistent selective trade denial on both sides, which would replicate the risks of nuclear armaments escalation and eventually might lead to Mutual Assured Destruction (though fortunately only in strictly economic terms, see Minxin 2018).

In sum, both the desirability of unrestricted globalisation, and the dynamic role of China in its diffusion, should not be taken for granted.

## 10.8 Sustainability: Economic, Social and Political

The economic and environmental sustainability of China's growth should be enhanced by the transformation of its economy from a model based on heavy industry, construction and exports, and a high degree of environmental pollution, to a model focused instead in the development of services and of national consumer demand (which still today represents only 40% of GDP), ecologically more responsible and desirable. However, so far the conversion of the Chinese economy has been accompanied by slower and more variable development, still very creditable and respectable but slower than expected by Chinese leaders, therefore raising problems of political legitimacy and production capacity restructuring.

The sustainability of the Chinese model will depend on the capacity to address and resolve its other many challenges. First of all is the containment of inequality, including the reduction of marked differences between metropolitan and rural regions. Growing inequality has been accompanied by cultural changes that support it and justify it: Milanovic (2018) reports a successful businessman declaring that "Wealth is everything; wealthy people and wealthy countries rule, the others accommodate themselves the best they can." This may well be the case, but this Hayekian attitude might be self-destructive. For a start, "institutional capacity" to

which Popov (2018) attributes a paramount importance for the success of the Chinese model, is significantly reduced by inequality (as acknowledged by Popov 2017).

Polyakova and Taussig (2018) point out that both Xi and Putin, in their quality as long-term autocrats, have to manage "the brutal competition of the elites for loyalty and succession, and balance the growing tensions between the central government and the restless regions", and to this end they will seek to strengthen their position at home by pursuing international policies more and more daring and risky, the failure of which could undermine their power.

Other challenges range from the reduction of private debt of companies and society (increased from 150% of annual GDP in 2008 to 250% in 2017) and the parallel containment of informal credit that circulates in the "shadow" banking system at higher interest rates but with liquidity and stability problems. Budget constraints of state enterprises need tightening, competition between SOEs and private enterprises needs to increase. The Chinese population has started ageing before reaching a high level of income (still at 30% of that of the United States), a problem that has to be addressed. Progress is required also in environment protection and reclamation, as well as in the establishment of trade union and political participation in the formulation of social and economic policies. These are formidable challenges; their economic implications can be partly cushioned off by the past accumulation of reserves by the Central Bank of China and the massive stock of property and FDI held abroad by the Chinese, but even taking these reserves into account China seems to be over-extended, domestically and internationally.

China is massively over-extended, with the OBOR continental investment plan and its financing, as well as the assistance that has been provided with aid, loans and foreign direct investment in Africa and Latin America. Chinese activities have concentrated especially in the extractive industries and in infrastructure facilitating their export to China and the penetration of Chinese exports, raising—rightly or wrongly—suspicions and fears about colonial ambitions, especially in view of its increasing military and naval power and occupation of tiny South China Sea islands to control naval routes. China is bound to suffer greatly from the trade war with the United States. Chinese foreign exchange reserves are large

but will not last forever. Recent scandals, such as that involving the production of substandard vaccines,[5] have hurt the credibility of the Communist Party and the President's standing. The constitutional change prolonging Presidential tenure beyond statutory limits, largely irrelevant because it does not affect Mr. Xi's power as Party Secretary, is a sign of political stability but also of non-contestability of political legitimacy and authority.

Reports of increasing incidence of protest, of mounting official pressure to dispossess peasants of land especially in valuable locations, of re-education camps where actual or potential dissidents are detained, are increasingly disconcerting.

## 10.9 The Non-exportability of the Chinese Model

A frequently asked question in the last Soviet days used to be: "Could the Soviet Union realise a Chinese-style economic system?" and the standard answer was: "No, simply we do not have enough Chinese here" (the same kind of answer, in fairness, used to be given about the possible introduction of a Scandinavian system). This crude dismissive answer is much more serious than it might seem. The model is not exportable outside China, or at any rate outside Asia or the developing countries that already have a system of Weberian "political capitalism". Other populations value too much personal freedoms, political democracy and egalitarian values for them to be willing to sacrifice them for the sake of economic gains—even if the Chinese model was sustainable in all its economic, social,

[5] In August 2018 China experienced its "worst public health crisis in years" ("Editorial: Vaccine scandal and confidence crisis in China", *The Lancet*, 392(10145), August 2018, p. 360). The Chinese vaccine maker Changsheng Biotechnology was found to have falsified records and produced substandard vaccines against rabies, diphtheria, pertussis, and tetanus (DPT), which were administered to 215,184 Chinese children. Another 400,520 substandard DPT vaccines had been produced by the Wuhan Institute of Biological Products and had been sold in Hebei and Chongqing. On July 25, China's drug regulator launched an investigation into all vaccine producers across the country. 15 people from Changsheng Biotechnology, including the chairman, have been detained by Chinese authorities.

political dimensions, and a fortiori when their sustainability is actually uncertain.

In conclusion, the Chinese economic system is indeed a unique system combining elements of both capitalism and socialism:

*capitalism* given the dominance of

- private property and enterprise,
- wage labour,
- market discipline,
- profit making and
- inequality of income and wealth; and

*socialism* given

- the residual importance of public ownership (of land, capital, strategic sectors like banks and energy) and
- the active instruments of economic policy as well as political and administrative intervention.

The system, whether labelled as *political capitalism* as suggested by Milanovic or *Chinism* as suggested by Kolodko, has been supremely successful in the promotion of economic growth in a developing economy with a one-party political system at the cost of corruption and inequality. But it strikes an uneasy and potentially unstable balance between a Hayekian *laissez-faire* economy and an insulated, centralised bureaucracy. President Xi's recently renewed anti-corruption campaign is an attempt at preventing the endemic corruption of the political and administrative spheres. This is extremely hard to do in China and probably even harder elsewhere. When the system gets quite corrupted, it ceases to produce high growth rates and its key attractiveness and rationale vanish.

The system's success as an engine of globalisation and the desirability of globalisation itself should not be taken for granted; its economic, social and environmental sustainability are subject to considerable challenges.

Finally this Chinese model, even if successful and sustainable, is not necessarily exportable to developed countries in the West. China can probably succeed in saving itself, but its system's suitability to "save the world" remains to be proven.

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# 11

# Alternative Pension Systems: Generalities and Reform Issues in Transition Economies

Domenico Mario Nuti

L'Etat c'est *Nous* (paraphrasing Roi Soleil).

A man walked into a restaurant which displayed a big notice: "Come in and enjoy a free meal!" Intrigued, he enquired how this liberality was funded, and was told that the bill would simply be presented—in due course ¬to his children. Thus reassured, the man ate a good meal, thanked and made for the exit, but was stopped by the waiter and asked to pay a large bill. Outraged, the man complained bitterly but was told: "Your meal was free, this is your father's bill …".

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## 11.1 Introduction: Pension Systems and the Transition

Private provision for the needs of the elderly takes two forms: (1) intra-family solidarity, whereby children look after their parents and any other old family members, effectively representing a form of insurance, and (2) individual savings and dissavings over the life cycle, involving life insurance, annuities, as well as any other assets, including saving and pension schemes which may be set up voluntarily by employers and regulated by contract, with contributions which are a form of deferred earnings.

In modern economies the state, in particular of course the welfare state, intervenes in both kinds of private arrangements by introducing elements of compulsion. Namely:

1. typically the state modifies intra-family solidarity by extending inter-generational solidarity from the family to society as a whole, with pensions paid to today's elderly generations over retiring age out of compulsory contributions made by younger generations currently employed.[1] The ratio between the two groups is the elderly dependency ratio (sometimes also taken as the ratio between those over retiring age and the active population). This system is the so-called pay as you go (PAYG), or redistribution, pension system.
2. the state can introduce compulsory or subsidised, regular, individual savings out of income, channelled to a pension funds or to funds, which provide a state and/or a pension additional to any voluntary private provision. This is the so called funded, or capitalisation, pension system.

[1] Strictly speaking the state can also interfere with intra-family arrangements: i) by enforcing direct support of invalid or elderly dependents within the nuclear and even the extended family; ii) by population policy, usually aimed at lowering the birthrate thus reducing this form of old age provision (for instance in China through the one-child-family policy). It has been argued that, on the contrary, the state should encourage population growth precisely to reduce the burden of older generations on those currently employed, treating population growth as a public good—a rather far-fetched view.

A survivor's pension can be treated as an extension of the old age pensioner's life, usually at a reduced pension level. Disability can be regarded as forced early retirement, whether full or (mostly) partial, and can be modelled as an increase in the average dependency ratio under the PAYG regime, while it is covered by private insurance under the capitalisation system. Therefore survivor and disability pensions do not require a distinctive approach.

Naturally, state interference with private provision of resources for the elderly and the disabled has fiscal implications—whether through lower revenues due to tax exemptions on savings for one's old age, or through higher expenditure for direct contributions to pensions or savings under either system. Indeed historically the first pension systems (for soldiers and public officials) were entirely funded out of taxation. Conceptually there is not much difference between compulsory contributions to a PAYG system (by employees and employers) and taxation; however, unlike other income transfers funded by taxation, tax-funded pensions involve not only a current fiscal stance but a multi-annual policy commitment involving obligations and claims vis-a-vis future pensioners and taxpayers.

Directly or indirectly, all pension regimes impinge immediately on fiscal balance, public debt, monetary policy, and ultimately on internal and external balance (on the development and implications of the welfare state see Spulber 1997). However, differences between alternative systems may be reduced by compensating adjustments in fiscal policy in order to achieve a desired fiscal balance (Eatwell 1997).[2] For instance, the desire by the personal sector to run a surplus will—*ceteris paribus*—result in a deficit in the public sector.

In recent years pension systems have gained increasing attention in all market economies, due to the combination of a rapidly ageing population and the need to contain the public budget and both its current and cumulated deficits. The fiscal constraint is particularly strict in all

[2] "The state will need to evaluate the relationship between savings of non-pensioners and the expenditure of pensioners in the light of its desired macroeconomic balance. If those savings and expenditures do not result in the desired balance then the state will need to adjust taxation and/or monetary policy accordingly." (Eatwell 1997).

member states of the European Union seeking to satisfy or approach the Maastricht criteria for fiscal and monetary convergence, regardless of their immediate or delayed prospective participation in the EMU.

In post-communist economies, pensions figure even more prominently in the transition agenda, for the same reasons including in some case a commitment to gain membership of the EU and, eventually EMU—and three additional reasons specifically related to the transition:

1. the switch from a state-run to a private economy, which naturally involves at least a partial switch from state to private provision of pensions;
2. the extended use of early retirement and disability pensions, often on a generous scale, in order to ease the individual cost of down-sizing uneconomic activities in the restructuring that accompanies the transition. In Poland, for instance, from December 1989 to December 1993 the total number of pensioners increased by 28 per cent, from 6.9 to 8.8 million (Maret and Schwartz 1994); the corresponding burden on the state budget was not, therefore, the legacy of the old system but the socialisation of the cost of transition. Paradoxically, contrary to expectations, in 1991–1992 in Poland old age pensioners while suffering a real income decline actually succeeded in improving their position relatively to wages. In Bulgaria the ratio of pensioners to employed workers, which had stood at 58 per cent in 1990, increased to 86 per cent in 1993, which was reflected in an increase in social security benefits from 10.4 per cent of GDP in 1989 to 15.2 per cent in 1993 (Blanchard 1997).
3. the rise of unanticipated and unusual practices and outright abuses, in the course of transition. For instance, in Russia "many observers allege that the pension fund and the social security funds were deposited in local banks in zero-interest deposits" (Warner 1997). In Russia and Ukraine, and in other FSU republics, the combination of non-affordable pensions and unattainable fiscal deficit targets (especially due to reduced ability to collect taxes) has led to large scale pension arrears (as well as wage and inter-enterprise arrears).

As a result of these general and transition-specific processes post-communist economies face the reform or replacement of all or part of their old PAYG system, no longer affordable for a rapidly ageing population in the new environment of ongoing macroeconomic stabilisation or newly found stability.

The comparison of alternative pension systems, and discussions about their reform especially in transition economies, have been guided—explicitly or implicitly—by the following principles:

1. that the pay-as you go or redistribution system, unlike the capitalisation or funded system, is necessarily a net claim on budgetary resources and the ultimate cause of a rapidly mounting fiscal imbalance;
2. that there are additional, clear-cut, net advantages from adopting a funded system, in terms of rate of return, the development of financial markets and corporate governance, and the promotion of domestic savings;
3. that there is a "double cost" of switching from a PAYG to a fully funded system, as the state still has to pay pensioners under the old PAYG regime while no longer receiving the benefit of current employee contributions channelled to pension funds under the new pension regime.

This paper seeks to disprove or significantly qualify these contentions. As a result, the move from PAYG to a fully funded system is seen as politically rather than economically motivated, given the importance implicitly attached to individual choice and risk-taking, to the transparency of individual contributions and entitlements, to state withdrawal from the economy. At the same time, the cost of switching from one to the other system is shown to be:

1. usually overestimated, as it consists not of an additional cost but, instead, of the surfacing of hidden costs already incurred;
2. associated with the adverse time restructuring of existing pension liabilities, which still require current funding and may be made more tractable by a gradual shift;

3. partly unnecessary, to the extent that the PAYG system can be reformed so as to be entirely self-funded and maintained next to funded provisions; or, if it is not entirely self-funded, only its unfunded part needs to be converted into open and funded liabilities.

On all these grounds *only* a *gradual and partial transfer to a funded system* is recommended.

## 11.2 Alternative Systems: Fiscal Implications

*The pay-as-you-go or redistribution system—unlike the capitalisation or funded system—is usually regarded as necessarily involving a net claim on budgetary resources.* The pensions "burden" has been typically associated with PAYG schemes (see Mortensen 1994; World Bank 1994). The reason why it might be so is best illustrated by regarding *PAYG as a Ponzi scheme, or pyramid banking.*

In Boston in 1920 Charles Ponzi sold promissory notes yielding a 50 per cent return in 45 days: at maturity the notes were paid out of the proceeds from the sale of new ones and Ponzi collected almost $10 mn from 10,000 investors before the scheme collapsed. In pyramid banking schemes, old depositors are paid a non-sustainable interest rate out of new net deposits: the scheme has a growing negative present value but is sustainable as long as the interest rate paid out does not exceed the growth rate of net deposits, allowing the promotors to appropriate the difference between the two rates.

Once doubts about the scheme sustainability arise, leading to lower growth of deposits or net withdrawals, the negative present value of the scheme (plus promoters' withdrawals) materialises and falls on all remaining depositors. Pyramid schemes of this kind have mushroomed in transition economies: from Charitas in Romania and MMM in Russia to the schemes that have caused economic and political breakdown and civil war in Albania; see Elbirt 1997.

Similarly, in PAYG schemes, from the very beginning, old age pensions are paid out of the contributions of the currently employed, whose future pensions in turn will be paid out of the contributions of the future

employees. Whether a negative present value develops, and whether nevertheless the scheme is sustainable, depends on the scheme parameters: basically i) the *dependency ratio,* depending on demographic trends (ageing or rejuvenating working population), changes in unemployment and in working and retiring ages; ii) the *replacement ratio* between pensions and wages (their time structure, indexation provisions etcetera); iii) the rate of individual (plus employers' and state) *contributions* over the working life. Political opportunism and populism have led only too often to negative present values of the schemes, mounting over time especially in the presence of adverse demographic factors. Chand and Jaeger (1996) report that for a sample of major industrial countries[3] projections of pension expenditures under the current system reach a negative asset position of a multiple of three to four times yearly GDP in 2050 (section III); the United Kingdom and Sweden show the least deterioration because of relative moderate decreases of support ratios and the combination of pension benefits indexed to the CPI while contributions are geared to nominal wages. Also, in the UK PAYG coverage is much lower than elsewhere, as private funds have been introduced earlier (see Chand and Jaeger 1996; Leibfritz et al. 1995).

While these trends are the direct consequence of running PAYG as a Ponzi scheme, we should also consider that PAYG has a number of special, favourable features which depending on the value of actual parameters make it sustainable. Even for a falling population of employees, there is continuous replacement of generations and therefore—as long as the system is compulsory and centrally run there is always a positive net flow of new "depositors", which makes always possible a positive payout to old "depositors" (i.e. old age pensioners). PAYG is like a pyramid bank where old depositors are effectively captive, as they cannot make withdrawals during their working lifetime; they can make only orderly withdrawals exclusively after retirement; and can transfer little or no rights to their successors after death. These special provisions guarantee that a PAYG scheme can be sustainable, for suitable combinations of parameters such that old age pensioners are not paid more than the current employees' contributions. The present value of the scheme is still negative (unless at

[3] Namely: the USA, Japan, Germany, France, Italy, the UK, Canada, Sweden.

some stage there is a high enough positive residual which earns a high enough interest rate); but *the day of reckoning never comes, whether the economy lasts forever or Doomsday comes unexpectedly.*[4] Therefore the negative present value of a *balanced* PAYG scheme should not be included under government debt, because by its very nature (i.e. its special features as a Ponzi scheme always viable at some positive level of operation) it never actually become payable.

Both pension systems—PAYG and funded—in their *pure* version are equally neutral with respect to the budget. In a *fully and exclusively funded system,* pensioners get contribution-defined pensions, i.e. no more no less than the benefits which can be afforded on the basis of their own and their employers' contributions made over their working life. Equally, we can imagine a *pure pay-as-you-go* system where the present generation of old age pensioners get "benefit-defined" pensions but over their lifetime will have paid contributions at a rate that make the system sustainable with no charge on the state budget. In other words, it is possible for PAYG pensioners to share out no more than the contributions of those in current employment—indeed rather less if the elderly dependency ratio is expected to rise over time and an "advance fund" is built up in anticipation. We could even imagine a PAYG system which at its inception pays out full pensions only to fully paid-up contributors, while those who join close to retirement get only a fraction of full pension entitlements, thus leaving an initial surplus which can be invested, say in government bonds. This would reduce or possibly eliminate the negative present value of the PAYG scheme.

This is not to say that the two systems are equivalent in every respect, though at any given time and for given parameters (e.g. age structure, wage and salary growth, retirement age) individual and employer contributions in the two systems can be adjusted so as to sustain the same current level of pensions. The two systems' behaviour over time of course will vary according to ageing and replacement ratio (i.e. the ratio between average pension and current average wage), and pension contributions

[4] If Doomsday comes after a prior and generally believed announcement, all intertemporal transactions are going to be disrupted and the state will have to recur to direct controls regardless of the pension system adopted.

will have to be continually adjusted in the two systems in order to sustain their equivalence.[5] For a given level of contributions, old age pensioners would be better off in one system or another depending on actual parameters: for instance, average rejuvenation of the population improves the relative position of pensioners who are on a pay-as-you-go system relatively to the unchanged position of pensioners on a fully funded system (and *vice versa* when the population is ageing). *But in their pure form* neither system will burden the state budget.

A fiscal burden arises, *potentially in both systems, once* a *minimum pension is guaranteed by* the state, whether this minimum is geared to the pensioner's last level of earnings achieved, or best average over a specified period of time, or to cumulative lifetime earnings—especially if such level is indexed with respect to the consumption price index or to the current average wage in the economy. *In different, but equally plausible, circumstances a fiscal burden may arise under both systems, possibly to a degree unsustainable in the long run.*

The widespread pay-as-you-go system, which until recently prevailed both east and west, came to increasingly burden the state budget due to (1) high pension levels relatively to past contributions and (2) a worsening dependency ratio between pensioners and employees (due to growing unemployment and falling population growth). A target regime of *fully* funded pensions would not and will not involve such a burden—though it could as soon as it became *partially* funded, say, if the state guaranteed a strong link between pensions and current real wages in an economy with fast growing living standards and low real interest rates.

Pure systems, of course, are unusual, and mixed systems are very similar: once a minimum pension is guaranteed by the state a funded system and a pay-as-you-go system can be equally ruinous for public finances and are virtually impossible to distinguish by an outside observer.

[5] The modalities of introduction differ: PAYG can be introduced instantaneously, paying out pensions from time 0; whereas an FF system initially has to wait before paying out pensions or can be introduced only fractionally.

## 11.3 Other Costs and Benefits of Alternative Systems

A *fully funded system is usually regarded as more efficient than a pay-as-you-go system for four main reasons: (1) pension funds benefit from professional management of their portfolio; (2) the funds' portfolio is invested at the superior longer term return of equity investments, including capital appreciation; (3) funds enhance citizens' choice, which in turn guarantees investors' involvement and the activation of corporate governance mechanisms; (4) their introduction promotes the widening and deepening of financial markets and promotes domestic savings—the last two being advantages particularly significant in* a *transition economy.* The Chilean example is usually quoted as a success story in all these respects.

On reflection, these expectations—as well as the significance of the Chilean case—have been exaggerated:

1. professional management of competing funds involves significant transaction and administration costs, with respect to a centrally-run PAYG scheme. In Chile, where a contribution is made to pension funds of 10 per cent of the wage, their management requires an additional 2 per cent of the wage.
2. the real rate of return obtainable on the stock exchange depends on the starting point and the length of the period considered. Chilean success is due mostly to good timing, as the switch to a funded system was implemented at a time when the stock exchange was undervalued and poised to grow. Other reforms may turn out to be less fortunate in their timing, thus leading to pressures for continued state support. Goetzman (1997) provides estimates of return on capital for 39 markets, with histories going back as far as the 1920s; he finds that the United States has the highest uninterrupted real rate of appreciation of all countries, at 4.3% annually from 1921–1996, but for other countries the median real appreciation rate was 0.80, therefore concluding that the high return premium obtained for US equities appears to be the exception rather than the rule. And insofar as investment in equities confers an advantage, there is a parallel disadvantage: greater

risk and volatility of performance. For instance, in 1995–1996 even the Chilean stock exchange has yielded a negative average rate of return, not to mention the worldwide crisis of the autumn of 1997.

3. choice enhancement was certainly not a significant advantage of the Chilean model. In order to protect investors, it was stipulated that the companies running pension funds should supplement out of their own capital any performance shortfall of over 2%, from the mean rate of return of all funds. This stipulation however led to "herd behaviour", with all funds basically choosing near-identical portfolios (Fazio and Riesco 1997; moreover, in 1996 a concentration and consolidation process led by Chilean banks reduced the range of funds available). Czech investment funds, on the contrary, offer an extraordinary variability of rates of returns—of course at the expense of additional exposure to risk, which if sustained may lead to successful calls for a government guarantee of minimum pensions. The promotion of corporate governance may require—as in Chile—significant regulation activities before materialising at all.
4. reliance on pension funds for the development of financial markets and of domestic savings may also be overplayed. At least some (by all accounts about one half) of the savings imposed by participation in pension funds instead of PAYG schemes simply goes to replace earlier voluntary savings; higher savings than that can only be expected for those who under the PAYG regime had no voluntary savings at all. Moreover, these additional savings may or may not be matched by additional investment activities; especially in a transition economy "Pension funds can only develop as fast as the financial infrastructure" (according to an EBRD official quoted by Benoit and Vipotnik 1997).

In a neo-Keynesian economy closed to outward financial investment, and in the world as a whole, low values of the elasticity of savings and investment with respect to the interest rate lead to a situation in which society as a whole—unlike individuals—cannot gain command over future income by acquiring financial assets; thus the two PAYG and FF systems become fairly equivalent forms of inter-generational transfers,

their differences being attributable to the fallacy of composition (Eatwell 1997).[6]

An important controversy concerns the impact of different pension arrangements on real investment rates and hence on the scale of future income flows. This controversy is unresolved (see Eatwell 1997). Feldstein (1974) argued that PAYG schemes could reduce aggregate savings and investment. However his work was shown to suffer from serious statistical flaws (Leimer and Lesnoy 1982). Nor is it clear that funded schemes result in an improved allocation of savings, or better improved flows of funding to industry (Rosa 1982; Singh 1995).

The greatest advantage of a fully funded system is perhaps that of automatically adjusting to changing exogenous trends, such as demographic trends and above all population ageing. But in view of the arguments indicated above ultimately the choice between the two systems depends on expectation of differential returns, attitudes to risk, and political preferences concerning the role of the state, not on a clear-cut technical superiority of one system (presumed to be the fully funded one) over the other. Automatic adjustment mechanisms could be introduced also in a PAYG scheme, for instance making pensionable age a function of life expectancy. If this principle was applied by sex, it would also put an end to cross-sex subsidisation, seeing that women live longer than men but usually retire earlier.

Some people "may prefer to accumulate pension funds which 'belongs to them' and from which they derive some sense of security, rather than rely on a pension funded from taxation paid by as yet unborn generations" (Eatwell 1997). Others may prefer a claim to a pension scheme unlikely to be sustainable, over a secure fully funded but more modest claim.

[6] A financial asset is simply the claim of one economic subject on another; in the aggregate these claims net out to zero. The acquisition of financial assets today affects the distribution of income in the future but not, in itself, the total flow of income. This cannot be taken to imply that the two systems are otherwise equivalent. Generations are not economic subjects as such: with the capitalisation system there is a transfer from current profits on the basis of entitlements generated by past savings, without levying a burden on the current generation; with the PAYG system there are transfers out of current contributions and taxes. Thus the pure capitalisation system is not a burden on the budget whereas as we have seen the redistribution system is a Ponzi scheme with negative capital, though it is always sustainable on *some* scale.

Moreover, PAYG pensions are defined by political rights, and consequently tend to involve some redistribution in favour of the poor, sometimes to excess, i.e. to a populistic—non-sustainable- extent. Funded schemes, on the contrary, tend to exacerbate the inequality of income distribution of the working population, since poorer workers typically make inadequate provision for their retirement. The argument that funded schemes "reduce the burden of pensions" can be a euphemism for "funded schemes cut the pensions of the poor" (Eatwell 1997); though the rich usually live longer than average, and therefore benefit from PAYG pensions more than the poor (Field 1997).

## 11.4 Open and Hidden Costs of Pension System Reform

*There is a widespread view that the switch from a pay-as-you-go to* a *fully funded system involves a costly transition period: "…* The fiscal costs of undertaking such a shift may be very high" (Chand and Jaeger 1996, p. 2). The argument rests on the obvious observation that initially current old age pensions cannot any longer be paid out of the current employees' contributions, which are now invested into their own pension funds.

The switch can be instantaneous. The contributions of all employees', old and new, suddenly are paid into pension funds, while the government assigns to the pension fund of each past contributor—whether still employed or already retired—a capital lumpsum corresponding to the capitalisation to date of past contributions or, for the retired, of expected pensions. Such capital lumpsum can then be run down gradually while earning interest on the residual or be used to buy an annuity. A massive additional capital expenditure which could correspond to a large share of yearly GDP, or possibly a multiple of it, is instantaneously incurred by the government.

Three observations are in order here. *First,* the *switch from* a *PAYG to an FF system does not involve any additional cost, but it simply transforms a hidden cost into an open one.* The hidden cost is the past accumulation of liabilities towards today's old age pensioners, whose past contributions as

employees had been effectively "borrowed" in the past so as to pay pensions at the time. It is the submerged iceberg of negative present value of the PAYG system viewed as a Ponzi scheme. The new *open* cost is the payment of pension entitlements matured to date, or of their capitalisation, out of budgetary resources or government borrowing.

The switch from PAYG to an FF system is tantamount to the repayment of a hidden public debt.[7] In this respect the operation is very similar to another financial problem typical of the transition, namely the recapitalisation of state enterprises and banks by the government, after the cleansing of their balance sheets through the removal of bad loans. The net wealth of the state does not change as a result of each operation but current resources have to be found to finance hidden state debt repayment. Conversely, as a matter of interest, a hypothetical switch from an FF to PAYG system would be equivalent to hidden borrowing.

*Second, the switch need not be instantaneous, but its burden on the state budget can be diluted over time.* In a gradual switch only the new entrants into employment move into a fully funded system, with all the others continuing to contribute and draw pensions on a PAYG system. Additional government expenditure over and above the previous level is now incurred, for the payment of the same pension flow out of reduced contributions, but the initial imbalance is a fraction of full capitalisation and, though continuing over time, it is gradually reduced to zero on the death of the last PAYG old age pensioner. The PAYG negative present value is gradually run down at the cost of attracting additional interest on its unpaid part—of course presuming that it is being run down faster than interest accumulates. The case for a gradual transition is the exactly the same as that for the rescheduling of external debt, possibly with similar elements of "debt relief" in the form of social recognition for the need to reduce non-sustainable pension entitlements.

[7] It could be objected that, under the pay-as-you-go-system being gradually abandoned, current employees' contributions were effectively being borrowed at zero interest, whereas now government borrowing may be expensive; but in reality under PAYG the prospective pensions of current employees would grow in line with the real wage, i.e. by using their contributions to pay current pensions the state was borrowing at an effective real interest rate geared to the rate growth of wages—hardly a zero cost when prosperity is on the increase.

An intermediate transition path from a PAYG to an FF system could also be imagined, for instance with lumpsum capitalisations paid only to people not yet retired, or still employed but over a given age. A "virtual" capitalisation could be calculated and only symbolically assigned to contributors within the old PAYG system, though this would be purely cosmetic.

*Third, the switch to an FF system need not be total, because a self-supporting PAYG segment can be left in place* and—as noted above—its negative present value need not be included among government debt. Clearly it is desirable for a PAYG system to be reformed and scaled down so as to be made as far as possible self-supporting. But if, for the given contribution and the given replacement and support ratios, the PAYG system exhibits a deficit, this is funded out of current taxation and borrowing; the present value of *these deficits' over time*—and not the entire negative present value of the whole PAYG system—must be matched by open contributions to PAYG funds, whether in cash or in government bonds earmarked for the purpose. Only any such *unfunded* state liability (i.e. over and above current contributions) needs—when the switch to the FF system occurs—to be capitalised and transferred to old members of the system (old age pensioners or employees) as a lumpsum investible in the new pension funds.

## 11.5 Conclusions

*On the basis of these reflections, by far the best evolution for a non-sustainable PAYG system is its scaling down to bring it closer to sustainable levels through reduced benefits and/or raised contributions and/or longer working life (also for* the *sake of inter-generational fairness, subject to social consensus), at which level it can remain in place as a more solid first pillar of the pension system than it would be otherwise;*

1. *if there is a positive political assessment of the net advantages of an FF system, its immediate introduction on a partial basis (in* the *sense of coexisting with a reformed PAYG) for the newly employed—the so-called second pillar.*

2. *the gradual transformation of the remaining unfunded part—if any—of the old PAYG system into government bonds or lumpsums. These would be credited to either* a *single PAYG fund or, if* a *partial FF system is introduced, to individual accounts within the new pension schemes;*
3. *the maintenance of a third pillar of voluntary private savings, preferably with some tax-privileges in order to partially compensate for any initial scaling down of pension provisions with respect to the former PAYG.*

*The end result of these recommendations is* a *potential three pillar system, apparently similar to that advocated by the World Bank* (1994), or being implemented in Poland and in other transition economies. The third pillar of voluntary savings, of course, is always potentially there whatever the pension system and its parameters. There are, however, very substantial differences between the recommendations listed above and World Bank (1994) in that

1. the first pillar is strengthened and maintained in its own right and with its own function, rather than as a monument to existing rigidities and inflexibilities;
2. an FF component is introduced not as a technically superior solution but as a primarily political—though respectable—solution;
3. the switch from PAYG to FF is not instantaneous and total, which would unnecessarily add to public debt, moreover involving a senseless adverse re-scheduling of its regular time pattern otherwise diluted over time.

The above recommendations are also different from the rationale of the Polish three pillar system, which rests on the ground of "Security through Diversity" (as specifically stated in Poland). Diversification is always an added attraction of the three-pillar system, but the underlying case for it, with the more precise modalities and proportions specified here, is much stronger.

The Polish approach has the additional feature of utilising residual state assets slated for privatisation as a way of funding the move from the unfunded part of a reduced PAYG to an FF segment of the new mixed

system. The realisation that the old PAYG system involves a submerged public debt which now surfaces—although its impact can be greatly reduced following the above recommendations—should discourage any suggestion of free (or heavily subsidised) voucher privatisation as irresponsible populism.

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# 12

# "A flat tax is for a flat Earth"

Domenico Mario Nuti

This was my answer to Grzegorz Kolodko, Poland's Minister of Finance and First Deputy Premier for the Economy (1994–1997 and 2002–2003), when in the mid-90s he asked me—his adviser sponsored by the European Commission—for an opinion on the feasibility and desirability of introducing a flat tax. I recommended instead a reduction of indirect taxation and the introduction of a tax on capital gains. To his credit Grzegorz listened to me on the flat tax, he reduced the number and level of marginal tax rates but at the same time he raised public expenditure on investment and on re-distribution, introduced an industrial policy that did not seek to pick winners but promoted high value added and export activities, and his package worked well.

The introduction of a flat tax has become a major issue in the policy discussions on the eve of Italian elections, as it is being vigorously

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propounded by Silvio Berlusconi and the leaders of his right-wing coalition. My views on the flat tax have not changed at all in the the intervening years.

There are two main arguments in favour of a flat tax:

1. the presumed existence of a Laffer curve, whereby government tax revenue is supposed to rise with the increase of the tax rate up to a maximum, beyond which a higher tax rate would actually reduce tax revenue, and
2. lower taxation would encourage the emergence of activities that at present evade taxation, and therefore raise additional government revenue in that way.

According to established legend (Wanniski 1978) in 1974 Arthur Laffer, then a professor at Chicago University, drew the curve named after him, depicting tax revenue as a function of the tax rate, on a napkin at a dinner in a Washington restaurant to illustrate the effects of President Ford's tax cuts. Except that he did not draw it on the basis of empirical evidence, but simply noting that for a zero tax rate tax revenue would obviously be zero, and assuming that for a 100% tax rate there would be a zero revenue because nobody would work or invest for a zero after-tax return. He also presumed that there would be a continuous parabolic shaped curve in between those two points and drew a maximum around a 50% tax rate. Thus you could obtain the same tax revenue with a low tax rate on a large tax basis or with a high tax rate on a smaller basis.

Laffer (2004) acknowledged that already in the fourteenth century the Tunisian philosopher Ibn Khaldun had noticed this possibility, which had also been asserted by many other thinkers including Keynes: "… taxation may be so high … that … a reduction of taxation will run a better chance than an increase of balancing the budget" (quoted by Laffer).

The trouble is that actual empirical estimates of revenue-maximizing tax rates have varied widely, with a mid-range of around 70% (Fullerton 2008, which fits with the "so high rate" stipulated by Keynes), while current tax rates in OECD countries average about half that rate. So much so that the IMF *Fiscal Monitor* of October 2017 actually recommends raising tax rates in a progressive fashion in order to reduce current

excessive inequality of income and wealth, for "There is little evidence that increased progressivity reduces growth".

More importantly, a 100% flat tax rate is plainly silly, for a progressive tax can reach fairly high marginal rates, historically even 90% and higher, without ever yielding a zero tax revenue. Indeed it has been argued that the Laffer curve might well be increasing monotonically, and in any case even a flat tax of 100% might yield substantial revenue in special circumstances like wartime or even in normal times depending on behavioural assumptions.

As for the second argument in favour of a flat tax, there is absolutely no evidence that a low tax rate—flat or not—encourages the payment of taxes otherwise evaded at higher rates. And why should it, as Schumpeter put it there is no good reason for anybody not reaping a benefit just because it is small.

Critics of a flat tax lament its lack of progressiveness. Supporters—such as Berlusconi—are quick to point out that in most OECD countries, including Italy, there already is a flat tax on capital incomes, at a constant rate lower than the higher progressive rates on earned incomes, so that a uniform flat tax levied at an intermediate rate would be more progressive than the current system. And anyway the presence of a tax-exempt threshold maintains a degree of progressiveness, as required for instance by the Italian Constitution, art. 53; "The tax system shall be progressive".

These answers to critics of the flat tax lack of progressiveness are not good enough, because the first comma of art. 53 states also that "Every person shall contribute to public expenditure in accordance with their capability". The progressiveness of a flat tax is minimal, depending exclusively on the size of the tax-free initial threshold, and may be regarded rightly as constitutionally inadequate: the average tax rate rises slowly approaching gradually from below the flat fixed rate on taxable income, and significant progressiveness would only be achieved for extremely large tax-free thresholds, counterproductive for tax revenue. The corresponding reduction in the current progressive tax on earned income would not benefit ordinary workers but only overpaid managers, making after-tax distribution of earned incomes more unequal. While the reduction of current excessively high levels of public debt, as well as the

reduction of excessive degrees of inequality of income and wealth, are best served by a genuinely more progressive tax system of the kind recommended by the IMF (2017).

On 24 January last the *Washington Post* (Selk & Wang 2018) reported that Mike Hughes, a 61-year limo driver from California and a flat-Earth strong believer, has been planning to launch a self-built rocket to propel himself 52 miles into space in order to be able to see for himself that the Earth is flat, for "in many months of research I've not been able to prove otherwise"—he said (Selk & Wang 2018). The trouble is that the project would cost 2 million dollars to finance the building and fuelling of the rocket, a space-suit and a hot-air balloon (Mike Hughes is a bit vague about his logistics), and he was only able to raise $8000 from GoFundMe. As he now has a fellow flat-Earther in billionaire Silvio Berlusconi, it would be best for Silvio to fund the project in exchange for a lift in the same rocket, and all will end well both in California and in Italy, in the best of all possible worlds.

## 12.1 Addendum 1

Trabandt and Uhlig (2010) estimate the Laffer curves for labour taxation and capital income taxation for the US, the EU-14 and individual European countries for 1995–2007. They find that the US can increase tax revenues by 30% by raising labour taxes and 6% by raising capital income taxes. For the EU-14 they obtain 8% and 1% respectively. Germany could raise 10% more tax revenues by raising labour taxes but only 2% by raising capital taxes. The same numbers for France are 5% and 0%, for Italy 4% and 0% and for Spain 13% and 2%. Only Denmark and Sweden are on the "wrong" side of the Laffer curve for capital income taxation.

## 12.2 Addendum 2

In the latest Italian elections the Lega proposed a Flat Tax at 15% over the €7000 tax-free threshold (plus minor further exemptions on households), while Berlusconi proposed its introduction at 23%. According to the

Lega their flat tax would create an initial shortfall of €63 bn (i.e. €103 bn tax revenue from households and €18 bn from companies instead of the combined current tax revenue of €184 bn from IRPEF-IRES).

They propose to cover this shortfall first of all from 25 expenditure cuts and additional taxes (including €5 bn savings on centralised public procurement, €2.5 bn on military expenditure, €5 bn tax increase on gas prospection, €900 mn from abolition of interest charges deduction by banks and insurance companies, €800 mn for official cars abolition for hospitals, €700 mn cuts in "golden pensions" (of dubious constitutionality). The bulk of the coverage would come, however, from the emergence of the black economy, reduced tax evasion, additional VAT and income tax on additional transactions and incomes expected from the tax reduction. Pie in the sky.

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# 13

# The Rise and Fall of Socialism

Domenico Mario Nuti

## 13.1 Socialist Taxonomy

The term "socialism" is relatively recent, appearing for the first time some 200 years ago in 1827 in the Co-operative Magazine in writings by some followers of Robert Owen. Undoubtedly the term was used by Owen in 1835 in the sense of an economic organisation constituted in the interest of workers. The concept of "communism" has more distant origins and a more noble lineage that go back to Plato, Thomas More, Rousseau and

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Fourier, but acquire new strength and substance in the writings of Marx and Engels (notably the 1848 Manifesto of the Communist Party, though still vague about its precise organisational and policy specifications).

Griffiths (1924) collects 199 definitions of socialism supplied by British intellectuals, trade unionists and politicians of his time (including Maurice Dobb, Bertrand Russell and Sidney Webb). Griffiths' Symposium was supposed to celebrate the great debate on "Socialism versus Capitalism" that took place in the House of Commons in 1923, on a motion advocating "the gradual replacement of the capitalist system with an industrial and social order based on public ownership and on democratic control of the means of production and distribution". The motion was rejected by 368 votes to 121. The Symposium also commemorated the formation in 1924 in the United Kingdom of the first Labour government.

Many of these contributions offered sentiments rather than operational suggestions; some saw socialism as an expression of Christian teachings. In Great Britain in the 1920s socialism, to the extent that it was defined at all, was largely interpreted as common ownership of the means of production, without any consideration of the possibility of a mixed economy or a role for markets.[1]

The diversity of possible definitions reflects the multi-dimensional nature of the socialist project. For the purpose of simplification the essential components of socialism can be reduced to four:

A. *dominant public property and enterprise* (state, co-operative or collective, local) or at any rate a substantial public presence at least in the "commanding heights" sectors of the economy;
B. *equality,* associated with a large share of social consumption;

[1] Leaving aside several vague answers, in Griffith's (1924) review out of 199 definitions, 85 saw socialism as common ownership of the totality or the greater part of the means of production; another 7 contemplated the presence of a significant public sector but only 2 proposed the survival of a private sector. For 24 definitions, socialism involved the extension of democracy from the political sphere to the industrial and economic sphere. Nobody indicated any role for markets or competition; 77 stressed cooperation, often specifically juxtaposed to competition; 39 underlined production for use rather than for profit. 25 spoke of greater income and opportunities equality; 8 saw socialism in terms of power to the working class, and 8 underlined national planning. I owe to Geoffrey Hodgson this conversion of Griffiths' text into an interesting opinion poll.

C. *economic participation and democracy* (not necessarily representational political democracy);
D. *effective social control over the main economic variables* (income, consumption, accumulation, employment, growth, internal and external balance). Such control does not necessarily imply centralised "imperative" planning as long as—in the possible case of operational internal and international markets—there are ample and effective economic policy instruments with which the government might exercise effective control on macroeconomic performance. Reliance on effective macroeconomic control seems preferable to a classification based on the relative weight of markets and of administrative instruments (of the type proposed by Popov 2009), since effective control may or may not be present independently of the kind of instruments that are actually used.

If we assign a value 0 to the absence or strong attenuation of each of these four elements, and 1 to its significant presence, 16 alternative models can be generated: some existed only as projects that were never implemented anywhere, others actually existed but no longer exist, others still exist. The simplification proposed here ignores nuances which are often important in the value to be assigned to the various constituent elements; the problem is that even the introduction of a single additional intermediate value of 0.5 would broaden the corresponding taxonomy to 81 possible categories, the majority of which would not correspond to any system, whether ideal or actually implemented in the past or still in existence today. An excessive increase in the number of systems would follow also from the introduction of an additional constituent element with value 0 or 1, which would double the possible systems to 32.

Examples of ABCD (*italics* = never existed, *underlined italics* = existed only in the past, simply underlined = still exist)

(we leave aside utopian systems that never existed):

*1111. Ideal maximalist socialist system; in theory also the Chinese Cultural Revolution (1966–1976);*
*1110. Full communist ideal: collective ownership, from everyone according to capacities, to everyone according to needs; the state "withers away" (Lenin) and the economy of abundance does not need a plan, and*

*1011. The Yugoslav model in theory, with social property, i.e. subject to a right of usufruct by employees on the capital of self-managed enterprises of the kind theorised by Ward (1958), a usufruct non transferable and conditional on their continued occupation.*

*Inequality among regions, sectors, enterprises. Macroeconomic control principally achieved through monetary policy (including access to and cost of credit).*

We are left with five basic models of "realised" or "really existing" (or existed) socialism, an expression coined by Bahro (1977) to indicate the practical realisations of socialism's inspiring principles, not guaranteeing their correspondence with principles but, on the contrary, implicitly stressing their inadequacies with respect to those principles:

*1101. China (1978–end '90s)*: "socialism with Chinese characteristics", "growth and equality", "market socialism", dominant public ownership on the part of state enterprises and territorially based cooperatives belonging to local authorities (Town and Village Enterprises); moderate authoritarianism; in 1997 begin the first privatisations (which will accelerate in 2007).

*1100. The Chinese Cultural Revolution in practice*: loss of control on the part of the state, famines, authoritarianism. Also *Taiwan in the '60s* (60% of GDP in the state sector), and some developing countries.

*1010. The New Economic Policy (NEP) in the USSR 1921–1936*, with the restoration of private ownership and enterprise, internal and international markets, monetary and fiscal balance. *Yugoslavia in practice* (1950–1990), with social ownership subject to employees' usufruct of the capital of self-managed enterprises, inequalities among regions, sectors and enterprises—as in the *1011* ideal blueprint above but with ineffective macroeconomic control of the economy, subject to unemployment, emigration, fluctuations and open inflation.

*1001. Soviet-style central planning (1928/1932–1990),* with dominant state ownership and enterprises, a minor role for cooperatives and local authorities owned enterprises; absent or negligible private property. Low commitment to equality: no wage levelling under Stalin (no

*uravnilovka*); higher wages for shock-workers and the skilled; endemic excess demand at artificially low prices, with higher than equilibrium prices in black markets accessible to those with cash; privileges for the party *nomenklatura*; discretionary incentives awarded by enterprise managers. Democratic centralism, i.e. in practice a communist party political monopoly pervading the state and the economy at all levels, enhanced by the 1921 prohibition of factions. Such a system, successfully transplanted in *Central Eastern Europe and other countries* of the world after the last War, *included Yugoslavia 1945–1950, China 1952–1960 and Albania 1946–1990 (apart from a filo-Chinese interlude in 1960–1978).* Today such a system survives only in Belarus, Uzbekistan, Turkmenistan and Cuba (even in North Korea the greater part of the population is reported to be living on incomes produced in the private sector). Arguably War Communism in 1918–1921 was closer to the full communist ideal 1110 listed above, though lack of macroeconomic control depended on inadequate instruments and war destruction and disruption instead of abundance.

According to our taxonomic criteria, today's China belongs to the same category 1001, starting from the year 2001 when it joined the WTO and therefore has been exposed to the discipline of international as well as internal markets, however subject to effective instruments of traditional economic policy (fiscal, monetary, public enterprises, direct controls) that guarantee control over the management of the economy. Public ownership is still substantial (in spite of the disappearance of Town and Village Enterprises and the apparent dominance of the private sector, except for the dominant state ownership of the banking sector) to the point that it is often classed as a form of state capitalism (Coase and Wang 2012, 2015; Naughton and Tsai 2015). Inequality is very high, with a Gini coefficient (between 0 indicating absolute equality and 1 to indicate concentration in a single individual) of income distribution of 49% in 2012, fallen slightly to 47% in 2015, second only to South Africa and Brazil, compared with a coefficient of 41% in the United States. There are no forms of participation and economic (let alone political) democracy.

1000. Some post-socialist economies in the early years (1990–1993) of their Transition, including Vladimin Putin's Russia today: a dominant residual state sector, often restored after initial privatisations; inequality; lack of participation and economic (as well as political) democracy; high unemployment, inflation and recessions.

The remaining eight economic systems generated by the proposed taxonomy are listed below for the sake of completeness:

0111. Scandinavian type social democracy: private property and enterprise, collectivisation of individual risks (old age, illness, invalidity, large family) and social risks (poverty, unemployment), economic participation and democracy, full (i.e. high and stable) employment obtained primarily through fiscal policies.

0110. A weaker form of social democracy in several European countries, with widespread de-regulation and blander forms of state intervention than those envisaged in the previous ideal 0111.

0101. The Nazi-Fascist model of the economy. Dominating private ownership and enterprise, populism (understood as non-sustainable or outright impossible promises), authoritarianism, widespread and deep state intervention in the economy both at the macroeconomic and the enterprise level.

0100. The Welfare State. The Scandinavian model of social democracy from the end of the 1980s: nominal participation, rising unemployment; the European Social Model of social dialogue, introduced to a varying extent in the European Union in the 1990s and the early 2000s.

0011. Neo-corporatism of Austrian type (1960–1990): dominant private ownership and enterprise, representation of interest groups; a modest commitment to egalitarian policies, prices and incomes policies, Keynesian fiscal policies. The so-called "*stakeholders" economy proposed but never realised by New Labour in the United Kingdom in 1996–1997* (*stakeholders* = bearers of legitimate interests other than those of owners/shareholders, in their role as dependent workers, managers, customers, suppliers, creditors, debtors, local authorities, the environment).

0010. Co-determination (*Mitbestimmung*) typical of post-War Germany, with a minority representation of employees in the Board of Directors of their enterprises, in special sectors; the social market economy understood as a guarantee of competition and social peace. Pay is linked to enterprise results also in Japan, often graded depending on seniority, with a flexibility in the course of the business cycle that is associated with greater employment stability.

*0001. French-type indicative planning*: Macroeconomic and sectoral forecasts, whose realisation is expected to result from the collaboration of social parties (trade unions, employers' federations, regional representatives, consumer representatives, the Commissariat Au Plan, see Massé 1965) that contributed to their preparation and from their consensus—as well as from ordinary and extraordinary instruments of economic policy (including quasi-contracts between government and enterprises reached through fiscal incentives).

0000. The capitalist system pure and simple including many of its variants such as: the mixed economy; the managerial capitalism of large companies and professional managers; the so called Third Way of a bland (or rather perverted, as we shall argue later) version of social democracy, exemplified by the Blair-Brown government in the United Kingdom (1997–2010); and a fortiori the neo- or hyper-liberal model of Reagan-Thatcher in the late 1980s and the 1990s.

In this essay I will deal in the first instance with the Soviet-type model, its rise, evolution and collapse, as well as the general problems of post-socialist transitions. I will then consider the social democratic model of socialism, exemplified by the European Social Model and other capitalist countries pursuing socialist values in a market economy without dominant public ownership and enterprise. Towards the end of the 1990s the social democratic model was perverted by leaders adopting hyperliberal, austerian and globalist capitalism, leading to crisis, unemployment and mounting inequality. In the last few years this deformation of traditional social democracy has met with repeated, resounding electoral defeats, in favour of parties promptly accused of populism but actually expressing popular discontent. A planned sequel to this long essay, already under preparation, will deal with the future of socialism.

*The rise of socialism is rooted in the drawbacks of capitalism*. Therefore the nature, advantages and drawbacks of capitalism must be considered in the next Sects. 13.2, 13.3, 13.4, 13.5, and 13.6 before investigating the rise and fall of socialism.

## 13.2 Capitalism

Capitalism is one of the greatest social inventions of mankind. The combination of private property, free enterprise, market coordination of production and exchange, money, and wage labour was enhanced by the creation of joint-stock companies, fractional reserve banking, the state provision of law and order and public infrastructures, the opening of trade and investment relations between states and the development of financial markets.

The standard wage contract (1) can be terminated at short notice; (2) fixes a money wage per unit of time, with effort guaranteed by penalty of termination and of competition by a large labour reserve army, while capital takes all the residual surplus; (3) gives the capitalist complete discretion to organise production, deciding what and how to produce and sell.

The capitalist system promoted urbanisation, industrialisation, technical progress, economic growth and prosperity on an unprecedented scale: paradoxically the highest praise for capitalism can be found in Marx and Engels, *Manifesto of the Communist Party* (1848): "The bourgeoisie, during its rule of scarce one hundred years, has created more massive and more colossal productive forces than have all preceding generations together. Subjection of Nature's forces to man, machinery, application of chemistry to industry and agriculture, steam-navigation, railways, electric telegraphs, clearing of whole continents for cultivation, canalisation of rivers, whole populations conjured out of the ground—what earlier century had even a presentiment (of) such productive forces… The bourgeoisie, by the rapid improvement of all instruments of production, by the immensely facilitated means of communication, draws all, even the most barbarian, nations into civilisation."

At the same time Marx viewed capitalism as a form of systematic labour exploitation. Primitive societies were not exploitative because they exchanged goods roughly embodying the same amount of labour. Slavery was less exploitative than it seemed, for slaves' consumption allowed them to recover some of their own labour that looked entirely unpaid. Feudalism was openly exploitative, for the amount of work performed by labourers for themselves and for their feudal masters was clearly stipulated and visible; whereas capitalism does not look exploitative at all, since all labour is paid for, but workers perform more work than is embodied in their means of consumption and a surplus of unpaid labour is appropriated by capitalists.

Marx neglects altogether entrepreneurship, uncertainty and risk and their rewards: on that basis a positive share of profits is sufficient to infer exploitation, without the unnecessary detour of his labour theory of value.

The replacement and growth of fixed capital would be necessary in any mode of production (including socialism, Pareto and Lafargue 1880): exploitation should be restricted at most to capitalists' consumption. But Marx regarded all profits, consumed or re-invested, as equally exploitative as originating in "primitive accumulation" ultimately rooted in theft, robbery, war, conquest and other forms of violence.

Inequality of wealth and incomes was recognised as a defining feature of capitalism. Its redeeming feature was the financing of investment and growth: "Accumulate, accumulate! This is Moses and the Prophets" (Marx 1867, *Capital,* Vol. I, ch.24).

Marx modelled intersectoral flows and equilibrium conditions for a stationary and a growing economy in his schemes of simple and enlarged reproduction (with two vertically integrated sectors producing consumption and investment goods respectively). However he exaggerated the instability of a capitalist system by assuming that profits necessarily would have to be reinvested in the same sector in which they originated, while in any capitalist economy re-investment is never subject to such an arbitrary restriction (Lange 1970 amplified unreasonably this presumed instability of the system maintaining this undue sectoral restriction in a multi-sector model).

Marx regarded capitalism as a totally chaotic and anarchic system, naturally generating unemployed labour and under-utilisation of other

resources, as well as costly fluctuations and economic crises. However he neglected automatic processes of economic adjustment, operating imperfectly, often either too fast or too slowly, but typical of the operation of markets in a capitalist system.

These automatic processes are: in the short-term, for a given level of production, the Walrasian adjustment of prices to any positive or negative excess demand; in the medium- term, when production levels can vary, the Marshallian adjustment of enterprise output to price relatively to its marginal cost; as well as the transmission to other sectors of the inputs requirements corresponding to their output change (activating what Goodwin 1948, 1949 calls "the multiplier as matrix"). In the longer term, when productive capacity can vary, there is a gradual adjustment of the actual capital stock to the level desired by enterprises in consideration of the demand level they experience—an upwards adjustment via investment in new capital or downwards through the non-replacement of excess capital. These adjustment processes are rooted in the maximisation of profit on the part of enterprises operating in a system of markets, whose owners appropriate profit to their own advantage. And we need to stress that these adjustment mechanisms auto-regulate production, prices, intersectoral transactions and productive capacity but naturally they do not regulate *themselves as institutions* (in a process that would amount to "autopoiesis"); thus their creation, regulation and guarantee remain fundamental functions of the state even in a fully decentralised market economy.

Goodwin (1947, 1951a and 1953) likens the adjustment mechanisms operated by markets to homeostatic mechanisms, such as for instance a thermostat, that records the actual temperature, compares it to a prefixed desired temperature and automatically activates heating or cooling systems in order to reduce the difference between actual and desired temperatures (see also Leijonhuvfud 1970).

This kind of logic is less cogent and much more controversial in the case of financial markets. Financial intermediation creates value by modifying the size, time horizon and riskiness of assets demand and supply, but their continuous operation is associated to phenomena of both euphoria and panic. Financial markets contribute to economic growth at the cost of a greater vulnerability and potential instability. Keynes believed

that financial investment should be indissoluble like marriage (or better, we should say that investment divorce should be equally costly and traumatic). Derivative products, whose value depends on the value of underlying assets, which they amplify and multiply, can contribute to the increase of total risk instead of its distribution among a large number of agents. This is why Buiter (2009) proposed to reserve derivatives transactions to agents who could justify them on the basis of an underlying insurable interest.

The alternative to markets seen as automatic thermostats is the manual regulation of temperature or of equivalent processes; manual control—in economic terms—corresponds to central planning. The desirability of self-regulating market mechanisms with respect to central planning depends on the speed of reaction of the system, on its tendency to reduce or to amplify the possible divergence between objectives and reality, from the stability or otherwise of such processes. There can be circumstances in which manual control (planning) is preferable to the automatic control (markets). My favourite example, which I used to inflict on my students, is taken from Star Wars: when Luke Skywalker is trying to strike at the heart of the Empire with a single shot, he disactivates the automatic aiming mechanism and choses to do it manually. But he is justified by exceptional circumstances: there is only one target, which he can either hit or miss without intermediate degrees of success, and … the Force is with him.

The automatic adjustment processes discussed here, built into a market system, in spite of their imperfections have made the capitalist system more flexible, at the same time exposing it to the risk of possible episodes of much greater unemployment, instability and stagnation than would have been the case otherwise.

## 13.3 The General Economic Equilibrium utopia

In the popular tradition as well as in lower grade theoretical writings we find a mythical vision of capitalism as a system of guaranteed efficiency. In such an ideal world everybody maximises their own utility subject to budget constraints, equalising substitution rates in consumption goods

to their relative prices; each enterprise maximises profits choosing the output level at which marginal cost equals price and equalising the substitution rates between different inputs to their relative prices. If we rule out some additional difficulties to be discussed later in this section, there derives a general economic equilibrium which enjoys the properties of Paretian efficiency: it would not be possible to produce more of one product without producing less of some other product, and it would not be possible to improve the utility of one economic subject without necessarily worsening the position of another subject.

Unfortunately this kind of economic system is a utopia, in the literal sense of a system that does not exist and could not possibly exist. First of all markets as we know them are incomplete, with respect to those that would be necessary to validate this vision. Missing are intertemporal markets for future goods, except for a small number of homogeneous primary products and domestic and foreign currencies, and mostly for relatively short time horizons. Second, missing are also contingent markets, for goods associated to particular "states of the world", which could eliminate risk (when the probability distribution of future events is known and therefore the risk is insurable) but in any case could not eliminate uncertainty (when the probability distribution of future events is itself not known—an important distinction introduced by Knight 1921).

Third, in order to guarantee the expected efficiency properties, if all of these markets existed they should open, register transactions for all future periods from now to eternity and for all the possible states of the world, and then close without ever reopening again, leaving the contracted transactions to be implemented without fail from now to Kingdom come. If markets reopened, in fact, the purchase of future goods could be delayed into the future, and transactions would be affected not only by current prices and quantities but by the agents' expectations of future prices and quantities prevailing in spot markets in all successive periods, with no guarantee of resulting efficiency (Keynes 1921 and 1936, especially ch. 12, and Goodwin 1947 section IV). In the real world as we know it markets open, close and reopen continuously, indeed in the global economy they rarely close, except on the occasion of universal festivities. Expectations rule, not prices.

Even if, absurdly, all these markets existed and opened and closed once and for all as soon as transactions were completed, nobody could guarantee the execution of contracts, which would restrict drastically the volume of economic activity. And in any case these markets could never involve labour services, without submitting labourers to slavery or to feudal conditions of irrevocable subjection to a master or an enterprise, which in turn would be compelled to employ them. Such a system could be considered as an "exchange economy" (as ambigously called by Debreu 1959, one of the main theoreticians of General Economic Equilibrium) but—most emphatically and incontrovertibly—not a capitalist system where wage labourers are exposed to the risk of sudden dismissal and at the same time are free to leave their current employment at will at any time (restrictions such as those applying to sportsmen and performers rely on professional pride and reputation which do not apply to general labour).

In the Keynesian world in which we live savers do not necessarily need to convert their savings into current demand for future goods, and this is the reason why an excess of savings over investment causes unemployment rather than the desired accumulation of wealth. Wage downwards flexibility may improve or worsen the rate of unemployment, depending on the net result of its impact on net exports (positive in an open economy with import and export demand and supply sufficiently elastic, but necessarily zero in a closed system such as the global economy), the negative impact of the corresponding reduction of wage-earners' consumption, and the uncertain impact on investment (at the same time poised to fall because of the likely reduction of capital intensity but poised to rise because of the likely increase in productive capacity).

For all these reasons the only realistic and rigorous development of the theory of general economic equilibrium has been the "temporary" equilibrium of Hicks (1936), with a sequence of short period equilibria which do not necessarily correspond to agents' expectations and therefore do not necessarily enjoy efficiency properties and therefore corresponds to the Keynesian picture (see Drèze 1999).

Neoclassical economic theory has sought to overcome these difficulties primarily by introducing *ad hoc* hypotheses that substantially neglect their existence rather than resolving them:

1. malleable capital, which at any time could be transformed into an increase of productive capacity, or consumed if excessive; if one adds the hypothesis that the aggregate production function is a Cobb-Douglas (with constant returns to scale, unlimited substitutability between Labour and Capital with constant elasticities with respect to factors, adding up to unity), factor income shares correspond to these respective elasticities and income distribution is determined, in Joan Robinson's words, "by God and engineers". These hypotheses were strongly criticised by Cambridge (England) economists in the controversy on Capital Theory of the 1960s (see Cohen and Harcourt 2003);
2. partial equilibrium by an economic agent with respect to a given single change of price (or of quantity, or of technology), without considering the feedback of partial equilibria changes on the overall system—a feedback of the type investigated by Kaldor (1959) with his representative enterprise (whose demand curve replicates the behaviour of aggregate demand in the whole economy depending on the phases of the cycle, juxtaposed to the equivalent Marshallian enterprise with a given demand curve invariant in the cycle, see also Harcourt 1963);
3. perfect knowledge of the future, which is inconceivable in the case of a plurality of economic subjects who actually determine or influence that future with their own individual actions;
4. the hypothesis of Efficient Markets, in which "prices reflect fully the entire information available" (Fama 1965, Samuelson 1965), including the expectations of all market participants, in which case price variations cannot be anticipated: everybody will exploit the slightest informational advantage (and if you see a $100 banknote on the pavement you should not stop to pick it up because if it were real somebody else would have picked it up already…);
5. the hypothesis of rational expectations (Muth 1961, Lucas 1972), which in truth are nothing of the kind but simply presumed to be correct in the sense of not generating surprises. Although discredited (for instance, disowned even by Muth who had introduced them), rational expectations are instrumental to the thesis that government policy is always ineffective because it is correctly anticipated by the public. Another by-product of this theory is the principle of Central Bank

independence from the government: rational expectations imply a rapidly declining, almost vertical Phillips Curve relating inflation and unemployment (there is a family of Phillips Curves each for a rate of expected inflation, and only the points where actual corresponds to expected inflation matter, designing a steeper "true" Phillips Curve): therefore there is no or little tradeoff between inflation and unemployment, so that inflation targeting can be delegated by the government to an independent Central Banker.

Soviet planners sometimes maintained that their central planning was always necessarily optimal, for if they had known how to do it better, they would have done it. Certainly it should be easier to recognise opportunities for a better allocation of resources on the part of multiple economic subjects engaged in repeated bilateral transactions in a market economy, thanks to the division of knowledge shared out by economic subjects (Hayek 1945) than on the part of a single central planning agency. But plan construction could be decentralised, as envisaged by Lange (1936 and 1937, which is a rebuttal of Hayek 1935 on the alleged impossibility of economic calculus under socialism) or by the planning procedures modelled by Ward (1967). With these decentralised procedures, mimicking markets by trial and error, both Efficient Markets and Optimal Planning would be equally plausible (or rather equally implausible).

Still, from the viewpoint of general economic equilibrium, the efficiency of markets requires various additional strict conditions: (1) perfect competition; (2) lack of increasing returns to scale (which would be incompatible with perfect competition); (3) lack of external economies or diseconomies, which would distort marginal costs; (4) symmetric information shared by all economic subjects; (5) the uniqueness of equilibrium. We know with absolute certainty that none of these conditions is satisfied in any corner of the world in which we live.

The original general equilibrium model à la Walras-Arrow-Debreu was subsequently developed by aggregate macroeconomic models that have little in common with the original approach, except some limited interdependencies among aggregate variables, in order to produce DSGE or Dynamic Stochastic General Equilibrium models. In his answer to

criticisms of their utility in the analysis of the latest Great Depression, Blanchard (2018) recognises that they are "seriously defective, but are eminently improvable and central to the future of macroeconomics" (the entire volume of the journal in which Blanchard publishes these valuations is devoted to DSGE models). *Ai posteri l'ardua sentenza* (future generations will judge).

Even if all conditions for market efficiency were satisfied, there is no reason whatever to believe that markets are actually fair from the viewpoint of income distribution. In fact such distribution depends from the initial distribution of productive factors (i.e. of wealth, including the time which is available to all and which can either be consumed as leisure or used in labour activities transforming it into products or salary), from market determination of products and factors prices, from the preferences of economic subjects, from technology and institutions. Therefore there is no reason whatever why the resulting distribution, depending on cumulative random factors, should be regarded as fair, whether by the majority of economic subjects or by a democratically elected government through which a society expresses its collective values, or in the judgement of representative international organisations (for instance from the viewpoint of the Millennium Goals for poverty reduction and other distributive objectives adopted by United Nations for 2030).

On the contrary, markets may be regarded as doubly unfair, because income distribution depends upon an unequal and arbitrary distribution of wealth which is not democratic (one dollar one vote, as it were, instead of one head one vote) and because this unequal distribution of income is translated into further unequal increments of accumulated wealth. Finally, precisely from the viewpoint of general economic equilibrium, wages should be considered as equivalent to the value of time devoted to work instead of leisure, and therefore strictly speaking should be excluded altogether from national income accounting at least for the purpose of inequality measurement, instead of being treated like the revenue of those rentiers who enjoy as leisure the entire time at their disposal without being forced to transform it into goods or salary for their subsistence.

## 13.4 Capitalism: Inequality, Unemployment, Fluctuations

The high and growing inequality of the capitalist system is well documented by Popov (2017). In brief, in the eighteenth century in various European countries we observed a high Gini coefficient (defined above) in income distribution, of the order of 50%–60%. In the twentieth century the tendency towards increasing inequality in income and wealth distribution was temporarily interrupted in the period 1914–1973: two World Wars and the Great Depression reduced inequality due to the physical destruction of capital and the fall in its value, and also due to the social policies adopted by the United States with the New Deal and in Europe after the last War. These social policies were encouraged among other things by the parallel reduction of inequality in socialist countries, characterised by Gini coefficients of the order of 25%–30% (a cartoon of the 1960s illustrated this phenomenon with a tree planted on one side of a fence that bore fruits only on the other side).

In the 1980s we observe a new increase in the inequality of income and wealth distribution. The countries of the socialist bloc begin to stagnate and decline. The ascent to power of Reagan-Thatcher led to neoconservative and hyperliberal policies, hostile to workers and to redistributive policies, the welfare state was reduced, unemployment rose to levels unprecedented in the previous 50 years, trade unions weakened and the number of their members fell. Taxation, that in the years 1940–1980 in the United States, United Kingdom, France and Germany had reached a progressivity higher than 50% up to marginal rates above 90%, by 2010 was significantly reduced; from 1980–2017 in advanced countries the maximum taxation rate was reduced by 40% (IMF 2017); some countries introduced a low and uniform tax rate (*flat tax*) on all incomes and in indirect taxation, or in any case on all capital income (*unearned*), restricting progressiveness to labour incomes (earned).

Other factors concurred to inequality increase: trade and investment globalisation, which tend to produce positive net benefits but (as we shall argue below) inflicts losses to group of national workers, which in theory could be over-compensated leaving everybody better off but are not; the

nature of technical progress, which tends to raise wages of skilled workers relatively to those of the unskilled; the diffusion of the "winner takes all" principle in the professions, the arts and the sports; the exceedingly fast growth of managerial salaries with respect to wages, due not to market operation but to the semi-feudal character of reciprocal determination of those salaries within the managerial class, as usually happens also within the political caste.

In 2016 the income share of the richest decile of the population was 37% in Europe, 41% in China, 46% in Russia, 47% in Canada, around 55% in sub-Saharan Africa, Brazil and India and as much as 61% in the Middle East (World Inequality Lab 2018). According to Oxfam (2016), in 2015 the 62 richest individuals had increased their wealth by 44% with respect to 2010, matching the same total wealth of the poorest 50% of the world population, which on the contrary impoverished itself by 41% in the same period (in 2010 it took the 388 richest individuals to match the wealth of the poorest 50%). In the United States the income share of the richest 1% went from 11% in 1980 to 20% in 2014, compared to the 13% of the poorer half of the population, moreover in a period in which low productivity growth saw the general stagnation of incomes. Qualitatively similar trends, though less pronounced, are recorded in other advanced countries such as France, Germany and the United Kingdom. In the Eurozone the richest decile commands on average over half of net wealth, with Gini coefficients highest in Latvia and Germany, respectively at 78.5% and 76.2%, and lowest in Slovakia and Malta at 49.2% and 58.6%. Since 2008, the wealth of the richest 1% has been growing at an average of 6% a year—much faster than the 3% growth in the wealth of the remaining 99% of global population: should that trend continue, the top 1% would hold wealth equating to $305tn (£216.5tn)—up from $140tn today (The *Guardian*, 13/4/2018).

At the global level income distribution recorded a small reduction in inequality due to the higher income growth in countries on average poorer like India, China and Brazil, but principally because of the underrepresentation of the richest in household surveys samples and the concealment of their wealth in fiscal paradises. Lakner and Milanovic (2016) note a global Gini coefficient for wealth of about 70.5% in 2008, with a reduction of about 2 points with respect to 1988; however, once

corrected for the concealment of wealth (estimated by Oxfam 2018 at $7600 bn located in fiscal paradises) the Gini is much higher at 76% and the reduction almost vanishes. Between 2005 and 2015 in Europe the income Gini coefficient rose from 30.6% to 31.9% (to 41% in the United States), while income disparity between the top 20% and the poorest 20% increased from 4.7 to 5.2 times (Henning et al. 2018, World Inequality Lab 2018).

Milanovic (2015, 2016) illustrates clearly the inequality in the distribution of income increases, much more marked than inequality of incomes. If one lines up the citizens of the world along the abscissae axis in terms of 1988 incomes in increasing order from the lowest to the highest, and along the ordinates the increment they obtained in 2008 (with the corresponding figures from 1980 to 2016 available on World Inequality Lab 2018, Fig. E4), one obtains a figure that resembles the profile of an elephant: the increment starts at very low levels, rises significantly for the global middle class, which remains relatively poor, and is most impressive for the richest 1% which was already very rich (the elephant's trunk) while lower and middle classes of the richer countries experience stagnation, accompanied by insecurity and preoccupation about their childrens' future. From 1980 to 2016 the percentile that goes from 99% to 99.1%, i.e. the poorest 10% of the richest 1% of the world population, captured 74% of the total growth for the entire period, while the top 1% obtained 27% (for an update of the Elephant Chart see Kharas and Seidel 2018).

Causa and Hermansen (2017) show the effects of measures of income redistribution to working age population in OECD countries over the last two decades, on the basis of family budgets. Personal income taxes, social security contributions and monetary transfers involve a significant reduction of inequality measured by Gini coefficients, which goes from 40% of the market distribution index in Ireland to 5% in Chile. However, this reduction has been considerably weakened on average in the greater part of the countries in the period considered, especially since the mid-1990s—especially for the reduction of monetary transfers, both directly and through redistributive insurance, which are the most important in all OECD countries (naturally if transfers in kind are included the transfer decline is more contained). Income taxes appear to have had a smaller and heterogeneous role (relatively more important only in

countries that do little redistribution, like Japan, Israel, Korea and the USA), while social security contributions have had a weak but non-negligible role in several countries. Sometimes the impact of re-distribution reduction was contained by more targeted interventions but this had not offset the adverse effects of re-distribution decline on inequality. Such decline in re-distribution stopped with the beginning of the 2008 crisis that triggered off re-distribution mechanisms.

Popov (2017) stresses the negative consequences of inequality, from reduced institutional capacity (in terms of rule of law, corruption, effectiveness of government action, ease of doing business) to the incidence of criminality and homicides, the physical and mental health of citizens, and even obesity, besides social goods like life expectancy, education, women's emancipation, social mobility and even the number of patents per head (Wilkinson and Pickett 2010).

In particular, inequality tends to perpetuate itself, raising the probability that individual incomes will depend closely on those of parents (what Krueger 2012 called the Great Gatsby curve), with consequent rigidities in the social and political structure of society. This is due to several mechanisms: the greater propensity of the rich to invest in human capital (education) of their children; the transmission of wealth through donations and inheritance; the mobilisation of personal connections in the search for employment and subsequent career advancement—all facts that produce low social mobility, usually measured by the elasticity of the income level or rank of children relatively to that of fathers.[2] According to Oxfam (2018) two thirds of the wealth of the 2043 dollar billionaires in the

[2] This measurement presents serious methodological problems, such as its dependence on the economy's growth rate, the choice of the age of both children and fathers to be used in the comparison (a low age for children leading to an overestimate of mobility simply because inequality- driving mechanisms have not been set in motion yet); the choice of the appropriate percentiles of income or position (rank). Moreover there is usually a difference between effective mobility and perceived mobility. For instance Alesina et al. (2017) find that US citizens are more optimistic than Europeans (in France, Italy, Sweden, United Kingdom) about inter-generational mobility, and too optimistic about effective mobility. Pessimistic information about mobility raises support for redistribution, mostly in favour of equality of opportunity. Apparently there is a strong political polarisation: left wing persons are more pessimistic about inter-generational mobility, their preferences for redistribution are correlated with their perceived mobility, and they react to pessimistic information raising their support for redistribution; while none of this applies to persons on the right, probably due to their negative approach to government activity.

world are the result of heredity, monopoly and cronyism. The rise to political power of billionnaires also in developed countries—from Berlusconi to Tusk, from Trump to Babiš—is evidence of the corruption of democratic processes caused by inequality.

Inequality reduces social cohesion and is associated to a reduction of an economy's capacity to grow (Berg and Ostry 2011, 2012; Stiglitz 2012). Brückner and Lederman (2017) find that in the 1970–2010 period, on a vast sample of developed and developing countries, on average the increase of one percentage point in the Gini coefficient reduces GDP per capita by about 1.1% over a five years period, with a longer term cumulative effect of about −4.5% (at the same time confirming that in a sample of sole developing countries the impact of increasing inequality on the rate of growth is positive, as already established by Galor and Zeira 1993).

Concern about inequality as a typical feature of capitalism has been tempered over time by several considerations.

1. Persistent inequality has always been an inexorable feature of our past[3] (Scheidel 2017). The only factor capable of offsetting this inexorable tendency towards inequality of all human societies is violence—not that which we meet on daily in life but violence on a large scale (The Great Leveler of his book's title) which causes tens of millions of dead and destroys completely entire economies. These are biblical events of mass war mobilisation, transformation revolutions, state collapse and catastrophic pests—from the disintegration of the Roman Empire to the peasant revolts of the Middle Ages, from the Black Death to the French Revolution, to the decimation of the Americas indigenous populations caused by the diseases brought from Europe, the last two World Wars, the Russian and the Chinese revolutions.

These catastrophes hit to a greater extent the rich, who have more to lose than the others, thus re-establishing the balance between rich and

[3] Scheidel writes that already our ancestors anthropoid monkeys were "intensely hierarchical creatures"; only 8% of the skeletons buried in Neolithic cemeteries were adorned with shells; Sumerian notables commanded 1200 hectares of land; aristocrats of the late Roman empire received incomes of the order of 350mn sestertii, comparable to the income of their Chinese, Ottoman, French, Italian, Gerrman equivalents.

poor until privilege and abuse re-take their course together with the newly found peace and stability. "Today this type of violence seems to have been reduced—Scheidel concludes—which in itself is a good thing but casts some doubt on the perspectives of a more equal future."

2. A conflict is alleged between efficiency and equality, which is deemed to reduce incentives necessary to elicit effort and imagination for the benefit of society—although it remains to be proven that such a conflict exists for any change in any direction moving from any starting position, and to be established whether such a conflict, if any, is macroscopic or negligible.
3. Inequality depends on the phases of capitalist growth, rising with industrialisation then peaking to a maximum and falling at higher levels of economic development (Kuznets' curve, 1955).
4. There is widespread indifference about inequality compared with the much greater concern about poverty: "Poverty bothers me. Inequality does not. I just don't care" (Buiter 2007). And effectively in the last two decades while global population has increased by 1.4 billion the number of people living in extreme poverty (defined conventionally as $1.90 per day in 2011 Purchasing Power Parity) has decreased by about one billion, and the downward trend is the same independently of whether the poverty line is set at $1.90 or $10 per day. The prospect of putting an end to extreme poverty within 2030, which in 2014 was chosen by the United Nations as the first of their Objectives of Sustainable Development, today appears possible to realise, although additional efforts will be necessary in order to avoid the concentration of the poor in 31 small economies suffering from serious structural problems (Gertz-Kharas 2018). In any case it is natural that the increase in global GDP per capita would raise both the poverty threshold perceived by the poor and the propensity of the rich to contribute to its alleviation.
5. Furman (2017) asks "Should Policymakers Care Whether Inequality Is Helpful or Harmful For Growth?" and answers No, because he believes that evidence is mixed, that the real question is *whether inequality reduction policies lower growth*, as he thinks to be the case, and that *if inequality is harmful it is for spurious but controllable reasons*.

The trouble is that the rich save proportionally more than the poor, and inequality sooner or later leads to a mismatch between savings and investment and to secular stagnation (a thesis first formulated by Hobson 1902, re-proposed by Hansen 1939 to explain US stagnation in the 1930s, and revived by Summers (2015) as an explanation of the phenomena that accompanied the global Great Recession that started in 2007 and is still rampaging).

More generally, capitalism is afflicted by at least four different types of unemployment:

- classical, due to the lack of capital equipment with respect to the stock that would be necessary to employ everybody, typically in countries in their early stages of development;
- Keynesian (Keynes 1936 and Kalecki 1933 in his 1971 collection, see Nuti 2004 on the differences between the two), due to a deficit of effective demand amplified by imperfect competition, which induces enterprises to refrain from employing workers even if their wage is lower than their marginal productivity, because they value marginal productivity not at the product price but at its marginal revenue;
- Schumpeterian, due to "creative destruction" induced by technical progress rendering obsolete products and production methods (Schumpeter 1942).
- structural, caused by the mismatching or lack of correspondence between unemployed workers' skills and those required to fill available vacancies.

Economic fluctuations are generated (to name but a few mechanisms) by the interaction of multiplier and accelerator (Harrod-Domar knife-edge growth); Samuelson (1949) actually considered such an interaction to be the only exception to the definition of economics as the science of allocation of scarce resources among alternative ends —which Lange (1963) considered as part of "praxeology", the science of rational human action, whereas he followed Engels (Antiduhring) in defining political economy as the science of the laws that regulate the production and exchange of means of subsistence in human societies.

Another example of economic fluctuations typical of capitalism is the political cycle that compromises fiscal policies of full employment whenever they are attempted (Kalecki 1943); and the double impact of unemployment on wage growth relatively to labour productivity and therefore on the profit share, is always fully employed (Goodwin 1967). Excessive optimism leads to expectations of continuous growing increases in the value of assets, which create speculative bubbles that are non-sustainable and doomed to explode.[4] Minsky (1986) stresses how over time instability can be generated by continuous prolonged stability itself, which ends up creating optimism that raises excessively the value of assets thus compromising their sustainability, up to the moment when financial instability is triggered, which others have called a "*Minsky moment*".

Kornai (2013) regards the surplus of productive capacity and labour typical of capitalism as a major engine of technical progress and innovation, a necessary price to pay in order to avoid the excess demand and therefore the shortages typical of socialism, aggravated by the lack of incentives rewarding innovation in case of success. He recognises the more serious incidence of corruption in a capitalist economy with a large state budget but considers the market as a necessary though not sufficient pre-condition for democracy. However Kornai seems to under-estimate the role of the state in the generation of technical progress (Mazzucato 2013), also because he neglects the role of the military sector and the adverse consequences of excessive protection of patents and intellectual property as a factor retarding innovation. Finally it is highly questionable whether current high rates of unemployment, worsened by the austerity policies enforced by international economic organisations and above all the EU (with the tight constraints of the Maastricht Treaty, the so-called Growth and Stability Pact, and the Fiscal Compact) and concentrated on the younger generations, are really necessary to promote capitalist dynamism and innovation.

[4] See for instance the examples of Dutch tulips in the sixteenth century, the South Sea Bubble in the eighteenth century, the "irrational exuberance" (so named by the then Chairman of the Federal Reserve Board Alan Greenspan; see also Shiller 2000) of the dot-com bubble of the 1990s and the recent bubble of fast appreciation and extreme volatility of the value of bitcoins and other virtual crypto-currencies in 2017–2018.

On the contrary Kleinknecht (2016) finds that wage stagnation due to unemployment actually discourages investment in labour-saving technologies and therefore slows down innovation and productivity increases: in 19 OECD countries over a time span of 44 years a wage increase (reduction) of one percentage point leads to an increase (reduction) of 0.32%–0.44% in the hourly value added per man. Moreover the rapid turnover associated with greater flexibility and precariousness of employment hinders the Schumpeterian innovation mechanism due to "creative accumulation" (the continuous accumulation of small improvements, especially in complex products and services with a high knowledge-intensity), a less known but perhaps more important effect than Schumpeter's "creative destruction".

## 13.5 Modern Capitalism: Doomed, Transformed or Corrupted?

Naturally over time capitalism has changed radically, but current trends have been variously interpreted, as evidence of its being doomed (Mason 2015), or tamed (Kay 2018), or corrupted (Standing 2016).

Mason (2015) argues that new technologies such as internet and the rise of the digital economy "are not compatible with capitalism … Once capitalism can no longer adapt to technological change, PostCapitalism becomes necessary… in short: … capitalism is a complex, adaptive system which has reached the limits of its capacity to adapt" (for a positive review see Gillies, *Real World Economics* n. 73, 2015).

Many consumption goods—all the media, literature, musical scores and recordings, photographs, films, television programmes, reproductions of works of art—and production goods such as software, are digital products, whose price cannot exceed their cost of reproduction which is zero or near-zero. Mason argues that "The rise of information goods challenges marginalism at its very foundations because its basic assumption was scarcity, and information is abundant. Walras, for example, was categoric: 'There are no products that can be multiplied without limit. All things which form part of social wealth … exist only in limited quantities'" (Mason 2015, p. 163).

Gillies (2015) notes that these "areas of capitalism now being eroded are precisely the ones in which great capitalist fortunes were made in the 1980s and 1990s", by owners of software companies and by media tycoons. In theory financing the production of digital goods could be achieved by advertising or by strict enforcement of legal protection of intellectual property, but both methods have limited effectiveness, the first because of its limited size and the second because of widespread piracy. Alternatively, the production of digital goods could be organised "in a decentralized and collaborative way" like Wikipedia, "utilizing neither the market nor management hierarchy" (Mason 2015, p. 129).

Gillies argues that, if groups of workers are going to be paid to produce digital goods, they cannot be paid by the private sector and therefore would have to be paid a wage by the state: PostCapitalism would be a form of socialism, not a traditional bureaucratic and authoritarian socialism but a more egalitarian and libertarian, "networked" version. Gillies expects that the new socialism will be international, and that the same rise of the digital economy that brought about a decline of capitalism will "clearly favour the left in politics".

But there is a more trivial, brutal solution to the effects of the digital economy, namely one in which digital goods, constrained by a zero reproduction cost and price, will only be produced in a much reduced scale within the bounds of voluntary selfless generosity, limited advertising income and ineffective protection of intellectual property. A somewhat impoverished world and a largely unchanged system would be the unattractive but more probable outcome. The digital economy rests on the continued real production of physical goods and their exchange, driven by ordinary markets just as much as any "earlier" capitalist form. Reports of capitalist collapse have been much exaggerated.

Kay (2018) goes as far as writing: "I wish we would stop using the word capitalism". He reminds us that, in nineteenth century capitalism, enterprises and large companies were in the hands of owners-entrepreneurs; in the twentieth century in the UK and the United States the role of entrepreneurs was delegated to professional managers, already in family enterprises and especially on behalf of a multitude of shareholders. More recently the role of shareholders was taken over mostly by pension funds,

by insurance companies and mutual funds, whose investments are handled by professionals specialized in managing their portfolios.

After the last War firms become international and multinational, manage many plants in different countries and operate in a global economy that frees them of many domestic constraints, giving access to mobility of capital and labour, of goods and services. The enterprise is "empty" (generating the hollow company), in the sense of transforming itself into a network of relationships, with a fragmented division of labour worldwide governed by intermediaries organized by markets, rather than by hierarchies as in the enterprise model developed by Ronald Coase in 1937. (Coase had asked why production was organised in firms instead of being conducted by self-employed individuals entering market relations, and why was production not organised in a single giant firm. He found the answer in the transaction costs of market relations versus those of centralised direction by an entrepreneur).

The capitalization of a large company depends on the value of these relationships, which is particularly illiquid: the relationships as such or the brand that represents them cannot be transferred to others without losing much if not all of their value. For this reason the shares of these companies tend to end up in the hands of their managers, as well as of their employees. These companies need a stock exchange listing initially to allow the founders to realize the value they added to their capital, and to reassure shareholders on the value and above all the liquidity of their shares, but otherwise are not financed by the capital market but mostly through reinvesting their profits.

A certain fragility derives from this set up, but also a certain resilience, i.e. the ability to survive a bad management even if their own capital is used inefficiently. According to Kay the enterprise of the twenty-first century—and therefore today's new capitalism—would no longer involve a confrontational relationship between capital and labour, but rather a partnership, an inclusive relationship that merges the interests of managers and employees, of suppliers and customers, while the position of investors is secondary and precarious. A stakeholders' paradise, we might call it. Kay expects that such inclusive character of enterprises should discourage selfish rent-seeking behavior and maintain cohesion, without

endangering the company's external legitimacy through the misuse of the political process, reaffirming their character as social organizations embedded in communities.

The theory that shareholders are not the owners of their company is a Kay hobby horse, oblivious to considerations that: shareholders who disagree with managerial decisions can always vote for the liquidation of the company, sell the shares to anyone with an alternative vision of how to make it more profitable, or simply sell the shares in the stock exchange depressing their price thus making it easier for potential bidders to take over the company.

Marris (1964) tried to build a theory of "Managerial" Capitalism, in which professional managers sacrifice part of the shareholders' value (the maximisation of profit and of capital valuation relatively to capital employed), in favour of higher growth of company turnover, capital and employment, which benefits managers directly and indirectly through their remuneration, social prestige and promotion opportunities. However this profitability reduction is constrained, in Marris' theory, by the danger that the failure to maximise the stock exchange valuation of the company might induce an investor or an alternative managerial team to attempt a takeover bid, which if successful would bring about the dismissal of managers and the rise of profitability also in the interest of all other shareholders. Paradoxically therefore Marris' attempt to theorise the alleged specific difference of Managerial Capitalism led him to confirm its traditional textbook behaviour.

As for the model of the modern enterprise as a network of relationships mediated by markets instead of a centralised command hierarchy, it is easy to understand its greater fragility but not its alleged more inclusive and less confrontational character. On the contrary, the fragmentation of the productive process and the fierce competition among global workers can only intensify conflicts between capital and labour, as confirmed by the continuous decrease of the labour share in national income worldwide.

The capitalist evolution outlined by Kay does not alter at all the system's tendencies towards labour unemployment and unused capacity, economic fluctuations and crises, rising inequality of income and wealth.

"Moving Beyond Capitalism?" No, it might seem more a case of "Back To The Future."[5]

Standing (2016) produces an even worse scenario. With the coming to power of Reagan and Thatcher in the late 1980s and in the 1990s modern capitalism has taken a hyper-liberal route whereby the pretense of promoting competition and free markets has led to the diffusion worldwide of a rentiers-dominated, monopolistic and oligopolistic system totally corrupted by the elimination of competition and free markets.

This hyper-liberal model was developed by the Chicago School of Law and Economics and by the economists of the Mont Pelerin Society, founded in 1947 by Friederich Hayek, Milton Friedman and five other economists all subsequently honoured by a Nobel Prize for economics, as well as 32 other conservative economists such as Eucken, Mises, Roepke. Their agenda proposed—as a reaction to Keynesian, re-distributive and social democratic policies—the promotion of "a market economy and an open society", i.e. liberalisations, privatisations, the dismantling of institutions of social solidarity, the de-regulation of financial markets, restrictive anti-inflationary monetary policies and the down-sizing of the state with the parallel reduction of public debt and fiscal deficits.

Other similar associations involved also political, financial and industrial groups, such as the Bilderberg Group (1954), directed at strengthening "free market" capitalism, with cross participants in institutions such as the US Council on Foreign Relations, the Trilateral Commission (1973, set up to promote cooperation between Europe, North America and the Asia-Pacific region), the Davos Forum circuit and the participation of multinationals and international financial institutions.

All of these institutions controlled generous research funds and therefore could influence and direct research projects, academic publications, university curricula and teaching appointments, affect government policies and the appointments of national and international officials.

This multi-pronged project of promoting the market economy was accompanied by the realisation of a system that on the contrary limited and hindered the operation of free markets. Standing (2016) talks of *The Corruption of Capitalism*, in view of the tolerance of monopolistic and

[5] See also Galbraith (2007) and in particular Jamie Galbraith's foreword to that edition.

oligopolistic situations, the creation of monopolies through the protection of intellectual property (with twenty year patents, extended to forty years for pharmaceuticals, copyright protection for seventy years after the author's death, the patenting of natural products and popular medicines), a system of fiscal privileges and subsidies to favoured private enterprises, the stipulation of treaties for the regulation of trade flows and foreign direct investments that protect investors from the possible negative effects of national policies on their profitability. Far from leading to "the euthanasia of the rentiers" as Keynes (1936, ch. 12) had expected, this hyperliberal capitalist system has boosted rent incomes to the detriment of labour wages and exacerbated beyond measure the capitalist natural tendency towards inequality, unemployment of labour and of productive capacity, fluctuations and crises.

## 13.6 Marx's Theory of Modes of Production

One of Marx's main contributions to political economy is an evolutionary theory ("Darwinist", according to Engels (1883) in his Speech on Karl Marx's Tomb)) of *modes of production*, understood in the modern sense of *economic systems*, as institutional setups that regulate the production and exchange of economic goods.

For Marx labour acting over nature leads to the development of production forces (natural resources, accumulation of physical and human capital, the state of technical knowledge). This development leads to the emergence of contradictions between the productive potential of society and the prevailing production relations (e.g. rules about ownership, production organisation, etcetera). Production relations then are modified as a result, in such a way as to eliminate such contradictions, realising the "law of the necessary correspondence of production relations to the character of productive forces" (Lange 1963, ch. 2).

Further contradictions arise between the economic basis (or production relations) and the *superstructure* of society, understood as the social relations and social consciousness (religion, ideology, culture, etc.; Lange gives the example of the support to capitalism implicit in the protestant ethic), which contribute to the legitimation of the existing mode of

production. Conflicts and contradictions between the various elements of the system and their resolution guide its evolution, according to the "Law of the necessary correspondence of the superstructure with the economic basis". Productive forces and production relations define a mode of production, though at any time a mode of production coexists with residuals of former modes and embryos of the superstructure of future societies (Lange 1963).

In many respects this Marxian theory of the evolution of modes of production is less developed than the theory put forward by thinkers of ancient Greece on the political cycle of a society's governments. Developing Plato's concept of *kyklos (The Republic*, Ch. 8 and 9) Polybious (*The Histories*, book VI, Ch. 9) theorises a cycle of successive forms of government that arise from the degeneration of preceding forms. Thus monarchy tends to degenerate in tyranny, which in turn tends to degenerate into aristocracy, which tends to transform itself into oligarchy, usually brought down by popular movements that establish a democracy. But democracy is doomed to turn into an "oclocracy", i.e. a degeneration of violent demagogy produced by the corruption of atomistic masses by the rich. Out of oclocracy there emerges a stronger leader who re-establishes order with monarchy, and the cycle (*anakyklosis*) repeats itself. The concept of ochlocracy was developed further by Alexis de Toqueville as dictatorship of the majority (*tyrannie de la majorité o des assemblées politiques*, 1981, p. 172 e p. 230), and re-introduced in recent discussions of modern forms of so-called "populism", inappropriately as we shall argue later in this essay.

In his original approach to the evolution of economic systems, in any case, Marx made three major errors: he believed that (1) there would be a final point of arrival for such an evolutionary course, i.e. full communism (with prevailing free goods, distribution according to needs, no state, and abundance of economic goods) without classes and therefore non- antagonistic, under which there would no longer be conflicts and contradictions; (2) there would be a linear progression of economic systems, from primitive societies to slavery to feudalism to capitalism (with a possible diversion represented by the Asiatic mode of production), followed by socialism and full communism; (3) that system evolution would be dominated by an extreme form of dialectical materialism, or economic

determinism, with an exclusive role for economic factors. On the contrary we know today that full communism has always remained an objective never realised; that in the 1990s socialism was re-transformed back into capitalism, and moreover into an extreme form of hyper-liberal capitalism; and that economic factors are only a part, though important, of the multiple causes of system transformations.

Soviet and east-European literature of Marxian inspiration maintained not only the end of conflicts and dialectical contradictions in the socialist economy, given the presumed correspondence between production relations and productive forces, but also the emergence of new "laws" in those economies (for a discussion of Polish literature see Nuti 1973). These alleged "laws" include the "law of the ever-fuller satisfaction of the increasing material and social needs of the population through the continuous development and perfecting of social production" (sic) and the "law of planned proportional development"—vague propositions that are simply a re-statement of the planned nature of the socialist economy. The "law of value", in the sense of market discipline, was believed (Stalin 1951) to continue to hold in a socialist economy at least in the sphere of consumption goods—a simple admission that planning was not omni-comprehensive.

Among these alleged "laws" the most significant in official texts is the so-called "law of the faster growth of the production of means of production relatively to the production of consumption goods", which represents an accurate statement of the accumulation policies actually followed in the Soviet Union and in Eastern Europe except for brief and sporadic periods, but, as we shall see later on, without any rigorous theoretical foundations. To treat this as a law of socialism is only a propaganda attempt at legitimising the policies actually followed. These pseudo-laws have nothing in common with the Marxian law of motion of society, but in Marxian terms could be considered as part of the socialist system's superstructure.

There were, however, at least two serious attempts at formulating genuine laws of motion of a socialist society, by Wlodzimierz Brus (1964, 1965, 1973, 1975) in Poland, and by the already cited Rudolf Bahro (1977) in Germany. Brus states clearly that "socialism does not end socio-economic contradictions" (1973, p. 82) and recognises that "in a socialist

system economic and political factors are inseparable" (ibidem, p. 89). Brus (1964, especially in Ch.1) had already indicated the conflicts and contradictions of socialism: the formation of groups, the weakening of incentives, the monopolistic tendency of enterprises due to industrial concentration, the emergence of imbalances in the consumption sphere, the deterioration of labour discipline and the instability of employment, bureaucratisation—all phenomena that were in conflict with the socialisation of the means of production and the progressive role of economic planning. Brus (1973) underlined that the socialisation of the means of production was a process rather than a single act, and discussed the political premises and implications of planning decentralisation and especially the role of workers' self-government, the impact of central planning on innovation, the technical constraints on political choices, the informatic advantages of political democracy. Brus (1975) developed further this approach and firmly asserted "the necessity of political democratisation" of the socialist economy (p. 207).

Bahro (1977) considers the reform attempts of the previous quarter of a century as an expression of the internal conflict between the two components of socialist bureaucracy, i.e. the central bureaucrats in charge of planning and enterprise managers running production activities. He relates the Soviet model of "despotic industrialisation" to Marx's Asiatic mode of production; he underlines the "proto-socialist" i.e. primitive character of the Soviet model, as well as the connection between state repression and under-development. He sees the Party as a "double bureaucracy" and asserts "the insuperable contradictions between the social function of the Party and the political and organisational form of its existence". His class analysis of Soviet-type societies (part III, ch. 12) leads him to rule out the possibility and the very desirability of a pluralistic political system (i.e. with parties also different from the Communist Party), but expects that socialist societies would evolve following a process of renewal and democratisation of the Communist Party—a prophecy which as we shall see later came true in 1985 with Mikhail Gorbachev coming to head the CPSU, though without saving the system from collapse.

Interestingly, Bahro (1977) noted that in the experience of evolution the new species that emerges and establishes itself is never a mutation of

the most developed species in existence, but rather a manifestation originally less developed and therefore more flexible, a side-shoot, bearer of mutations more appropriate to new circumstances.

The permanence of conflicts and contradictions in the socialist economy is also investigated by Nuti (1979, 1985) who presumes a positive correlation between economic and political centralisation; economic centralisation involves inefficiencies and instability and therefore pressures towards reforms, but at the same time leads to an acceleration of capital accumulation, leading to economic growth and full employment but also, given the systemic commitment to price stability, generates a systematic excess demand and shortages. This excess demand is unduly attributed by Kornai (1980a, 1980b) to the softness of enterprises' budget constraints, that replenish enterprise spending power with subsidies and/or credits in the event of price increases, whereas soft budgets are neither necessary nor sufficient to the presence of shortages, for which it is both necessary and sufficient that prices are kept consistently below their market clearing level (Nuti 1986a).

Excess demand is made worse by wage drift in conditions of full and overfull employment, but is influenced also by exogenous factors that might alleviate or aggravate it. These exogenous factors are the volume of world trade and the country's terms of trade trends, the performance of agricultural production, the availability and terms of international credits, the country's participation in the armaments' race, technical progress and the exhaustion or discovery of natural resources.

Shortages force the authorities to increase economic centralisation. The net effect of pressure to reform, due to systemic inefficiency and shortages, and to centralise in order to prevent the emergence of shortages, is ambivalent: it might lead to a successful reform and therefore a virtuous circle of further economic and political decentralisation, but it can also lead to a lack or failure of reforms which, under the push of shortages as well as instability and inefficiencies of the system, leads to political protest. The impact of protest, again, has an ambivalent impact: mild protest is likely to favour mild reforms, possibly launching a virtuous circle, but there is bound to be a breaking point at which strong political protest unleashes an authoritarian involution, with its

accompanying economic re-centralisation and a consequent worsening of economic performance.

This model is based on the experience of the Soviet Union and the east-European countries of the last post-War; in the following sections we shall consider the evolution of the Soviet- type system, from War Communism to the New Economic Policy, to the centralised planning and the failed attempts at reform, and we will try to exemplify the conflicts of contradictions involved, without adopting or justifying a reductive and deterministic approach to the economic factors behind this evolution.

## 13.7 War Communism (USSR 1918–1921)

Socialism was expected to arise in the most mature, developed and industrialised economies (though apparently Marx required only a large industrial proletariat, in his 1881 correspondence with his influential Russian follower Vera Zasulich). Instead socialism first arose in an underdeveloped economy, labour abundant, with an autocratic, despotic tradition, moreover very large, ravaged by a world war and civil war and operating in a hostile international environment.

In spite of rapid developmemt in 1885–1913 at an average rate of 5,8%, which brought the working class to 2.5 million in 1913, 80% of the population was still made of illiterate or semi- illiterate peasants, half of industrial employment was in the textiles sector, and industrial production was 6.9% and per capita product was 4.8% of the corresponding values in the United States (Nove 1969). The population grew rapidly but capital was scarce; one third of enterprises were in foreign ownership. Foreign trade had the typical characteristics of a backward country: over half of Russian exports were cereals and other foodstuffs; raw materials and manufactured products were over a third of imports (half of which were semi- finished products). Russian dependence from western countries and especially Germany (with which it conducted half of its trade) was such that during the First World War Russia continued to import from Germany chemical products, metals and machinery, specifically exempting them from the prohibitions to trade with enemy countries

(Dobb 1966, p.37; trade among countries at war is not unusual, as it also happened during the Vietnam war with the United States). The war effort and war destructions, aggravated by transport difficulties, led to serious shortages of fuel, materials and foodstuffs.

In these conditions the system established immediately after the October Revolution was principally that of a War Economy: the rapid expansion of state ownership, first spontaneous and then decreed by the government; "all the power to Soviets" (*Vsya vlast' Sovietom*, the workers' councils that Bukharin 1920 regarded as essential); political control over the economy; the militarisation of labour; the compulsory delivery and requisition of the agricultural surplus; repudiation of public debt; demonetisation; the abolition of private trade; compulsory creation of consumption cooperatives; the organisation of the whole economy as centralised barter; an increasing share of free services; the direct allocation of resources to various uses according to a system of priorities (Carr 1952, Ch. 17; Dobb 1966; Szamuely 1974).

War Communism was partly dictated by emergency, partly the deliberate implementation of a previous design. Szamuely (1974) shows that "a centralised subsistence economy, managed with commands, based on egalitarian principles" like War Communism, was the image and operational concept of a socialist economy in the writings of Kautsky, Hilferding, Bukharin, Preobrazhensky, Strumilin, many of the protagonists of the Soviet state administration, and certainly Trotsky and Lenin himself, not only before War Communism but throughout the time of its development. Only once it became clear that the system could not survive the economic and political pressures that it had generated did it come to be considered as "a deviation from the normal course", a "temporary measure" that "was not nor could it be a policy corresponding to the economic tasks of the proletariat" (Lenin, quoted by Szamuely 1974).

War communism was marred by the multiplication of central crucial objectives, all treated as "priorities"; intermittent disruption of supplies among enterprises, grain procurement difficulties, political pressures (strikes, absenteeism, opposition in the factories; the Kronstadt sailors' rebellion, brutally suppressed, etc.). That system achieved its own survival but could not deliver post-War reconstruction, let alone industrialization and growth; it was destroyed by its own contradictions. Bertrand

Russell, who in 1920 visited Moscow and met Lenin with an English delegation, realised immediately that the ideals of freedom and equality had been set aside. Nevertheless War Communism left an important mark on the evolution of socialism, because it was the first socialist model though established in conditions far from ideal, because it provided a guidance for the Stalinist model of another war, the war against backwardness, and because it anticipated several of the economic and political problems of the Stalinist model.

## 13.8 New Economic Policy (NEP, 1921–1926)

Early in 1921 the Tenth Communist Party Congress introduced the New Economic Policy (NEP), with which private production and trade were re-established. A tax in kind in agriculture, with the remaining output allowed to be used and traded freely, was directed at saving the *smychka,* the alliance between workers and peasants, and raise the supply of foodstuffs. The emergence of local trade demanded the re-creation of monetary means of payments and credit, leading to reopening of the Central Bank (Gosbank) in October 1921. A process of de-nationalisation began, with leasing of publicly owned plants to national and foreign entrepreneurs, often including former owners dispossessed during War Communism; new private enterprises were allowed to employ up to 20 wage-employees (besides family members). Ordinary monetary flows were re-established, the budget was balanced, the currency was stabilised and made convertible; foreign capital was granted concessions; foreign trade increased and the economy recovered (see Dobb 1966; Nove 1969; Carr 1952, 1954, 1958.)

The superstructure rapidly adjusted to this new economic basis: economic liberalization brought about complete political centralisation. Fearing the danger of capitalist restoration, all political parties other than the Bolsheviks were finally banned and, at the same tenth Congress that introduced the NEP, Lenin's (secret) proposal that organized groups or factions within the party itself should be banned, under threat of expulsion, was approved and immediately acted upon; workers' councils were sidestepped (Deutscher 1954, p. 519 and ff.). Subsequently the

prohibition of factions became the foundation of the "leading role" of the Communist Party, inserted in the Stalinist Constitution of 1936 (art. 126) and in later constitutional documents (for instance the Soviet Constitution of 1977 and the Constitutions of other socialist countries in the last post-War period). This leading role will survive until the post-socialist transition of the 1990s.

A further adjustment to system superstructure took place with what Szamuely (1974, ch. 4) calls the NEP "theoretical revision": already in the autumn 1921 Lenin formulated the three principles underlying NEP: (1) personal incentives; (2) the introduction of cost accounting and autonomy principles in state enterprises (*khozraschot*); and (3) the maintenance of commercial and monetary relations during the period of socialist construction. At the eleventh Party Congress of 1922 Lenin "called competition with private capital in the internal and international market 'the pivot of the NEP', 'the quintessence of Party politics', 'the crucial test', 'the last and decisive battle' from which the future of socialism would depend" (Szamuely, cit. pp. 77–78). From Lenin's writings it appears that not only did he accept the idea that state enterprises should follow the market economy, but that he considered a mixed economy as a way of realising a plan, especially in association with material incentives (ibidem, p. 79).

NEP was the kind of mixed economy which today would enjoy IMF blessing. It delivered reconstruction, which depending on the criteria adopted was completed at some point between 1926 and 1928. Growth however was based mostly on the reactivation of existing unused capacity and the re-absorption of available factory labour; but gross investment was barely above depreciation levels (Nove 1969).

'Socialism in one country'—not as a desirable chosen strategy (which Trotsky had considered as "a narrow and reactionary dream") but as a fact of life, given the failure of European revolutions—precluded any extensive use of foreign capital to finance capital accumulation. The Soviet Union had accumulated a substantial external debt, whose cost of interest and amortisation was mounting; terms of trade were unfavourable; agricultural exports were languishing.

The tax in kind having been replaced with a money tax, the realisation of agricultural surplus had to go through the market; the deterioration of

agriculture's terms of trade had led to supply difficulties (the 'scissor crisis' of rising industrial prices and falling agricultural prices in 1925, and similar subsequent difficulties).

An additional problem was that of generating capital accumulation *within the socialized sector* (the 'primitive socialist accumulation' of Preobrazhensky 1924). The expropriation of peasants and thriving Nepmen would have undermined the very foundations of the NEP; while the use of price incentives to obtain a higher marketed surplus would have led to the further development of a *kulak* class of rich peasants and the abandonment of the idea of using agriculture to finance primitive socialist accumulation. Either the living standards of workers in the socialized sector had to be compressed; or accumulation would have had to proceed at a slow pace, which would have caused the permanence if not the increase of labour unemployment, that had arisen and fluctuated already during the NEP.

Ultimately there arose a contradiction between the maintenance of the NEP mixed economy and the simultaneous achievement of economic growth, of GDP and of the socialized sector, and minimum standards of socialist distribution. Therefore NEP was discarded in favour of state ownership and central planning, and collectivisation of agriculture.

Land collectivisation involved immense economic and human costs. One hundred million of Russian peasants were deprived of the land that they had acquired in the previous century and lost their independence becoming state employees. The mass expropriation was bitterly resisted, causing the destruction of harvests and the butchering of animals (of the order of half the horses, cattle and pigs in existence), causing the death by starvation of a number of people estimated at around 5.5–6 million. There was also a resulting drastic fall in natality, involving by the beginning of 1935 a demographic loss of about 18 million of which two thirds consisted of unborn children. Repeated attempts at adding to these costs the political victims of Stalinism have met extremely complex methodological problems, divergences between archival sources and partial episodic evidence, the common treatment of simple criminals and political dissidents, the classification of famines and the liberation of prisoners no longer capable of productive work. Rather than attempting here a debatable synthesis we refer to the treatment of these problems by Ellman (2002a, b).

Undoubtedly agriculture collectivisation and forced labour contributed to the war preparations that made possible the Soviet victory over Hitler; at the same time it must be recognised that German and Soviet communists have also contributed to Hitler's ascent to power.[6] In 1925 German communists, diverting onto their own losing third candidate sufficient votes to prevent the victory of the centre-social democratic party, had been instrumental in the presidential election of the monarchist Paul von Hindenburg, who in 1933 appointed Hitler as Chancellor. And in 1928–1933 Comintern adopted an extreme left-wing policy that treated the social democrats as their worst enemy, thus weakening the anti-Nazi forces in Germany. Finally, news of mass deportations and famines in the Soviet Union during the collectivisation of agriculture undoubtedly shifted votes from the German left towards the Nazis as reliable anti-communists.

In the second half of the 1920s there was an intense discussion on the nature of planning and on investment policy (Erlich 1960; Spulber 1964; Carr-Davies 1969; Dobb 1960, 1965, 1967). On economic planning two schools emerged, genetic and teleological (Charemza and Kiraly 1990). The genetic school (e.g. Groman, Kondratieff, Bazarov) viewed planning as an extrapolation of past trends, subject to objective constraints including pre-War productive capacity; they viewed the plan as a forecast and attached importance to balanced growth.

The teleological or purposeful school (e.g. Strumilin) on the contrary stressed the planner's wide discretion, especially in the long run and at the cost of accumulation; planning was conceived as a deliberate act of change, of mobilization of physical and personal resources, an act of war even, aimed at changing the structure of the economy, which might necessitate unbalanced growth.

Shanin maintained the necessity of a development sequence in which priority should have gone first to agriculture, then to light industry following the expansion of demand in the agricultural sector, then to heavy industry only after the growth of the first two sectors had given rise to a sufficient demand for capital goods. The left opposition, represented above all by Preobrazhensky, instead assigned priority to heavy industry,

[6] I am indebted to Michael Ellman for a discussion of these issues.

whose growth would have led by itself to demand for capital goods (see Preobrazhensky 1965 and the collection of the most important contemporary contributions in Spulber 1964).

Feldman (1928) developed Marx's schemes of enlarged reproduction into a model of growth acceleration in a closed economy characterised by abundant labour and scarce capital, moreover specific in its capacity to produce consumption goods or capital goods (indifferently between the two kinds until they were actually made). The key to growth acceleration was the choice of which investment fraction (stipulated as constant) should be devoted to the sector producing capital goods. A zero fraction would correspond to a constant absolute increase of the production of consumption goods[7] (under the simplifying assumption of infinite lifetime and constant productivity of those capital goods). A positive fraction would have reduced the production capacity of consumption in the short period, but making it grow faster in the course of time; both the temporary reduction and the successive acceleration would have been greater the larger the fraction allocated to the production of capital goods. For a maximum investment share (i.e. equal to unity) to be devoted to the production of capital goods, consumption would have stagnated during all the time in which such investment policy was followed but, at any time subsequently, if that investment share was reduced consumption increases would be obtainable, higher than if less ambitious policies of a fraction lower than 1 had been chosen. The longer investment was reserved to capital goods production, the larger the consumption increase.

The Feldman model was simplified and improved by Domar (1957); a similar model was developed by Mahalanobis (1953) to explore the implications of growth acceleration in the Indian economy in equivalent circumstances, and supplied the theoretical foundations of the Indian second five-year plan that began in 1956, was modified in 1958 due to inflationary pressures and external imbalances with monetary reserve losses, abandoned and replaced in 1961.

[7] In the event of infinite durability and constant productivity of capital; otherwise consumption stagnation would require capital replacement at the end of its useful life, devoting to the production of capital goods an investment fraction equal to the inverse of capital duration.

Just as Feldman (1928) argued the virtually unlimited growth capacity of a socialist economy that wanted to implement it, in the last post-War period Michal Kalecki (1969) theorised, on the contrary, the limits to the feasibility and effectiveness of such a policy. The continued acceleration of growth through capital accumulation required a practically unlimited labour availability. But sooner or later, for growth rates that exceeded the natural growth rate (of population increase plus labour productivity increase rates) full employment of labour would be reached. At that point growth would require necessarily a greater increase of capital per unit of additional product: the cost of development, in terms of the share of investment in national income, would increase because of the need to replace the missing labour with more capital. Similar cost increases limit sustainable growth because of the need to cultivate less productive land or exploit less accessible mines, and the necessity to balance foreign trade with less competitive exports or at increasing transport costs for more distant destinations. At some point the burden of higher investment required to keep growth above the natural rate becomes heavier than its positive impact on growth: a policy of accelerated growth actually reduces instead of raising sustainable consumption per head—a proposition equivalent to the so-called "golden rule" of accumulation, whereby the growth rate should equal the rate of return on investment (Nuti 1986b).

## 13.9 The Development of the Soviet-type Model (matured in 1928–1932)

By 1926–1927 there is evidence of a tendency towards re-centralization of the economy, with the preparation of sectoral balances, material and financial, and "control figures", from which Vassily Leontief (1966) developed input-output tables of intersectoral transactions (on the relation between those tables and the actual and possible planning procedures see Montias 1962 and Ward 1967). In that period there were a number of plans, but no overall consolidated macro-economic planning of the whole economy.

(1) In 1928 the first Five Year Plan was launched, together with shorter operational plans, of great ambition and encompassing the entire economy, for the accelerated industrialization of the country by means of massive capital accumulation. Plans were designated in the literature as tight or taut, associated with a set of priorities for key products (the 'leading links') representing bottlenecks; the emphasis was on physical magnitudes, prices had a simple role of aggregation (Carr-Davies 1969).
(2) The forced collectivisation of agriculture is realised at the enormous human cost mentioned above but in such a way as to raise the availability of wage goods, without the cost that otherwise would have been involved by the necessary improvement of terms of trade for foodstuffs which would have reduced capital accumulation. Land collectivisation also raised labour supply and generated opportunities for both import substitution and greater agricultural exports (Ellman 1975).
(3) The centralisation of inter-enterprise transactions is improved, by means of a sectoral structure, with the reorganisation of the High Council of the National Economy (Vesenkha) into three Commissariats or Industrial Ministries. Their departments (*glavki*) take on functional aspects (finances, deliveries, investiment). The number of Ministries (at the republican level and for the whole Union) and their subdivisions, the specific tasks of the Planning Commission (Gosplan) for instance between short versus long period, vary greatly over the course of time, but their structure will remain unchanged until the regional de-centralisation of 1957 (with Sovnarkhozy or regional councils). The number of Ministries is usually taken as a good proxy for the current degree of centralisation.
(4) 'Control by the rouble' was established, i.e. central control was reinforced by the financial monitoring of plan implementation. Lenin had always regarded banks as major institutions for the management of the socialist economy; in 1930–1932 the Central Bank Gosbank acquired also the monopoly of short-term lending, enforced with the prohibition of direct financing of firms by suppliers and clients. Thus money and credit were to provide the payment

flows corresponding to planned physical flows. Financial flows belonged to two separate circuits, one of cash for the payments of wages and the purchase of consumption goods on the part of the population (and naturally for the transactions among households and in private sector trade), the other of bank money for purchases and deliveries of goods between enterprises (Nuti 2013c).

(5) The principle of economic accounting (or *khozraschot*) introduced under the NEP was retained, i.e. costs plus a planned profit (or loss) had to be covered by receipts in autonomous state enterprises. Any additional profit would be syphoned off into the state budget by a turnover tax (practically a tax by difference, indistinguishable from profit); investment funds and most of the working capital were obtained either from retained profits or as free of charge allocations from the state budget (subject to the observance of official rules concerning the choice of techniques and amounting to a shadow capital charge). The retention of profit by enterprises was governed by, and did not govern, the rate of accumulation.

(6) Prices or price-fixing criteria were decided centrally; production goods were available to enterprises at those prices via direct planned allocation (the *documonetary* economy described by Berliner 1957); consumption goods were available to consumers at those prices within the narrow limits of their availability. Normally persistent and endemic shortages of consumption goods developed, leading to retrading if technically feasible, at higher, black market prices. Shortages were due to overambitious targets difficult to realise and often unrealisable, to priority given to heavy industry or to the production and import of investment goods; but principally shortages were simply due to official prices being fixed at levels lower than those which would have cleared markets, matching demand and supply.

(7) One-man management (*edinonachalie*) was established, in theory ending in the late 1920s, in practice much later—then in practice a 'triangle' made by the union, the party cell and the manager. The director and other managerial officers received not only a salary but also performance-related progressive bonuses for the fulfilment and over-fulfilment of various indicators, mostly expressed in physical

units, in terms of gross output (*kult vala*), except for the use of constant (rather than actual current) prices for the aggregation of heterogeneous products of the same enterprise.

(8) Trade Unions are transformed from organs for the promotion of workers' class interests into institutions concentrating on the implementation of production plans, with a limited role in the fields of welfare and social security, and totally subservient to government objectives to the point of being defined as "transmission belts" of these objectives.

(9) The commitment to egalitarian principles was weakened: wage-levelling (*uravnilovka*) was rejected by Stalin; other material rewards were added, especially in favour of scarce skilled labour; there was privileged access to consumption goods for selected categories; piece-rate payment systems were widespread. There were also non-material incentives relying on 'socialist emulation', shock workers,[8] and other initiatives for the mobilization of labour and working effort.

(10) Capital accumulation continued and was undertaken on an increasing scale, with priority granted to industry over agriculture, heavy over light industry, sectors producing production goods rather than consumption goods. "'Accumulate! Accumulate!': the maxim that Marx had associated with capitalism, became the maxim of those who claimed to be his followers" (Hicks 1966).

In the Soviet Union the rapid increase in investment began in 1928, and continued up to 1936 with only one year of relaxation in 1933. Abram Bergson's calculations of the share of accumulation in national income (including services) at current prices came to 23% in 1928, 21%

[8] Shock workers, or *stakhanovists*, were named after Alexej G. Stakhanov, a miner of the Don basin famous for his exceptionally high productivity associated with a technique of his own invention for the utilisation of digging equipment and division of labour with numerous collaborators, which enabled him in 1935 to produce a record of 14 times the standard quota. The privileged treatment of *stakhanovists* was resented by their colleagues, as effectively shown by Andrzej Wajda in his film "The man of marble" (*Człowiek z marmuru*) of 1976: a mason, whose exceptionally high productivity is celebrated by the statue mentioned in the film title, is attempting to break a record in the fast construction of a wall, but a mate passes on to him an incandescent brick, that burns him severely and ruins his life.

in 1937, 23% in 1950 and 24% in 1955. The measurement of Soviet growth has been the object of lengthy debates but, even setting aside official statistics, independent western estimates indicate an impressive threefold increase of industrial production in 1928 to 1937 (of which a doubling from 1932 to 1937) and a further increase of about two and a half times from 1937 to 1955 (Bergson 1961; Nutter et al. 1962; Treml-Hardt 1972). This rapid industrialisation was accompanied by unprecedented urbanisation, the increase in active population of both genders and the achievement of high standards of education. However Soviet households' real consumption per head actually declined from 1928 to 1940 at a yearly rate of 0.6%, increased at a modest rate of 1,9% in the 1940s and did not begin to increase significantly until the 1950s, at a yearly rate of 6.7% (Bergson 1961).

(11) In foreign trade, ease of plan implementation naturally led central planners to favour autarkic or quasi-autarkic structures. In the process of plan construction, first the necessary import requirements of planned levels of gross output were estimated by commodity groups, then export plans were adapted to foreign currency requirements of the import plan. If a deficit emerged, over what could be financed out of reserves or fresh borrowing, and if import substitution could not fill the gap, output plans were scaled down.

In this system exports are regarded as a "necessary evil", as a withdrawal from the domestic market. Planned trade is undertaken through large import-export state enterprises, specialised by commodity groups thus enjoying very strong market power, that act on their own account and not on behalf of producers, who remain fairly insulated from the objective stimuli of international markets.

The economic achievements indicated above, to which one should add victory in war and survival in a hostile international environment, were accompanied by increasing problems, rooted in the centralised structure described above. To some extent these problems were the same as those encountered during War Communism, but others derived from the permanence of central planning over time, because of opportunistic behaviour patterns acquired by the participants in the planning process, and

because of the cumulative nature over time of some of the problems involved. As a result the system's economic progress suffered.

The first official admission of these problems is contained in the report by Soviet Premier Nikolai Bulganin to the CC of the CPSU in July 1955. Bulganin lists: (1) the autarkic tendencies of sectoral Ministries, which tried to secure the availability of their requirements of intersectoral inputs through a costly vertical integration; (2) the delay with which enterprises received their plans; (3) the structural under-utilisation of plants due to irregular deliveries of intermediate products; (4) the neglect of product quality and of the introduction of new products, due to the purely quantitative nature of planning methods and of plan implementation verification; (5) the systematic lack of correspondence between production assortment and demand structure especially for consumption goods, due to the systematic over- and under-realisation of plans on the part of enterprises; (6) the '*petty tutelage*' exercised by Ministries and Party organs over managers, whose powers were reduced to the detriment of their initiative; (7) the cyclical nature of production, with its concentration and correspondent quality reduction towards the end of the plan period (*shturmovchina*); (8) the emergence of regional imbalances.

In order to alleviate these problems Bulganin in his report suggested the introduction of greater material incentives, greater managerial autonomy, and greater reliance on foreign technologies. But there were also other problems, reported in the press and debated more and more frequently by economist and engineers: (9) gross, sometimes grotesque distortions in the use of inputs or in the quality of products due to the physical and gross indicators employed, and the corresponding *kult vala* already mentioned; (10) the concealment of productive capacity reserves by managers wishing to fulfill and over-fulfill their plans without effort, and the associated managerial reluctance to overfulfill plans for fear that the centre would raise targets systematically above the best past achievements (the ratchet effect); the managerial attempts to negotiate lower targets and higher inputs allocations for both fixed and circulating capital, with respect to what was really technically necessary.

Popov (2007, 2010 and 2014) wonders why the Soviet system, that had been catching up with the west until around the mid-1960s, in the following years started to fall behind, with labour productivity growth

rates of 6% in the 1950s to 2% in the 1960s and 1% in the 1980s. He suggests the existence of an Investment Life Cycle in Centrally Planned Economies: the initial acceleration of investment around 1928 led naturally to a necessary replacement cycle about twenty years later, but the persistent endemic shortage that plagued central planning diverted investment resources to new capacity creation rather than replacement, while maintaining in use increasingly obsolete equipment also to reduce shortages. Labour productivity fell as a result.

This is a plausible explanation, but it clearly depends on failure both to minimise costs (by equalising operating costs on old plant and full costs on new plants) and to raise prices to market-clearing levels (which would have reduced shortages without postponing replacements). Investment was also wasted in the production of excess inventories of unwanted goods surplus to requirements, such as bicycles, sewing machines and traditional cameras. In addition, the central planning drawbacks mentioned among others by Bulganin 1955 were becoming more serious because of both their cumulative nature and by opportunistic behaviour spreading among actors of the planning process. Basically the policies that had served well Soviet conditions of the 1930s–1940s became inappropriate to the more mature and complex Soviet economy of the 1950s.

## 13.10 Central and Eastern Europe

In spite of all the defects illustrated above, the basic Soviet model of central planning was exported, without significant modifications, to other countries that took the road to socialism after the last World War, in Central-Eastern Europe and in Latin America, Asia and Africa, encompassing up to one third of world income and population in the 1970s.

In many ways the conditions of the new socialist countries were similar to those of the Soviet Union that had benefited from the centralised planning model. Many of the new members of the socialist bloc were underdeveloped, mostly agricultural and with abundant labour. The only exceptions were Moravia in Czechoslovakia, the Silesia region in Poland and East Germany, that had already reached a significant degree of industrialisation; however they were less developed than Western Europe and

all had suffered war devastations and had to undertake post-War reconstruction. With the exception of Czechoslovakia, they did not have much experience of parliamentary democracy; in the period between the two World Wars most east European countries had been subjected to national or foreign dictatorships. Like the Soviet Union the new members of the bloc operated in a hostile international environment: effectively there is little difference between socialism in ten contiguous small countries and socialism in a single enormous country.

In several other respects, however, these new socialist countries did not conform to the conditions of the Soviet mode of production or to its Stalinist superstructure. Brus (1975) lists several of these specific conditions: (1) not only the higher level of development but also the greater social diversity with respect to pre-revolutionary Russia, so that the drawbacks appeared sooner and the benefits were felt less by their populations and therefore were politically less effective; (2) although their democratic institutions were not very developed, the new countries lacked the autocratic Soviet traditions, there was "a higher level of civility in interpersonal relations", as well as stronger links with the West; this weakened the role of Soviet ideology and caused a greater awareness of "the disparity between ideals and reality"; (3) the weakness of the internal roots of the socialist revolutions made socialism be perceived as an imported product, although made more acceptable by agrarian reforms (but in Czechoslovakia the Communist Party had obtained nearly 40% of votes cast in the free elections of 1946, and in Yugoslavia socialism emerged from the revolution of Tito's partisans during the last World War); (4) "the *de facto* domination of the Soviet Union over the so-called People's Democracies, amplified in many cases by psychological and historical factors (above all in Poland) made it difficult to use nationalistic ideologies as instruments for the political attraction of the masses", although the German question provided a certain nationalistic support for the leading role of the Soviet Union (Brus 1975, Ch. 2, section 2).

These circumstances ruled out a return to the origins of Leninist Soviets; and moreover Bahro's (1977) considerations on system evolution, mentioned above, indicate that even if the Soviet system had been at the peak of pre-War socialist achievements, its improvement would have depended on the emergence of a more flexible system, more suitable

to the conditions of central-eastern Europe after reconstruction, starting from a lateral mutation. Nevertheless, except for minor variations, the Soviet model imported into central-eastern Europe remained virtually unchanged—with the exception of the "associationist" model of market socialism adopted by Yugoslavia, after its break with Moscow in 1948 (see Uvalić 1992, 2017, 2018), which however did not turn out to be a superior mutation.

The same accumulation policy was followed by the new members of the bloc: Soviet and Eastern European investment share in their net national material product (which differed from Western conventions mostly because of the exclusion of services and the inclusion of inputs used in the provision of so-called material services) was for so long within small margins of 25 per cent, that United Nations sources refer to this regularity as a 'pragmatic rule' (UN-ECE 1967, ch. 11).

A socialist trade block—the CMEA or Council of Mutual Economic Assistance (SEV in Russian, also called Comecon but only in Western literature, which omitted the reference to Mutual Assistance)—was founded in 1949 by the Soviet Union, Bulgaria, Czechoslovakia, Poland, Romania and Hungary, with the rapid addition of Albania and East Germany, and successively the association of Mongolia, Cuba and Vietnam. Initially economic integration was very limited, except for the practically free circulation of intellectual property among CMEA members. There were complaints of Soviet exploitation of satellite countries, for instance by the importation of Polish coal; subsequent studies have found that terms of trade within the bloc were very close to those of world trade, but that exploitation may have taken the form of the imposition of products and quantities being traded, which were different from those that satellite countries would have voluntarily decided to trade.

Only after Stalin's death did attempts begin at coordinating national five-year plans. Until the end of the 1960s the emphasis was on cooperation, only later did it shift to integration. Permanent sectoral commissions were set up; the "transferable ruble" was introduced as a virtual unit of account for the reckoning of bilateral trade imbalances. In 1962 Khrushchev proposed "a joint planning organ" but met the

opposition of Czechoslovakia, Poland and Hungary and above all of Romania, that resisted its proposed specialisation in agricultural products. Within CMEA trade flows tended to be compensated bilaterally (moreover also within commodity groups considered hard and soft in world markets). There was no common currency; national currencies were not convertible into commodities (outside the sphere of national consumers' purchases), let alone convertible into other currencies. Exchange rates had a purely accounting role, variable taxes and subsidies were used to make all planned exports equally profitable like national sales for producers, and imports competitive with domestic substitutes if they were available.

Trade balances between CMEA countries were expressed in terms of so-called "transferable rubles", a purely accounting unit that was not convertible into Soviet products nor transferable to other countries without the express agreement of trade partners; balances were cumulated over time, at a purely symbolic interest rate, in the expectation that balances would be re-equilibrated through subsequent compensations.

Intra-CMEA prices were generally indexed to an average of international prices in convertible currencies, first to a moving average calculated every five years (the Bucharest formula), then on a yearly basis (the Budapest formula). The rise in the price of oil and raw materials that took place in the 1970s, from 1974 therefore applied to Soviet exports to the other CMEA countries with a significant delay, though one decreasing over time. This delay therefore amounted to an involuntary subsidy—which derived from past contractual arrangements for price determination, and was not a benefaction—on the part of the Soviet Union, that towards the mid-1980s was estimated at a cumulative amount of over $60 billion. The same delay in the transmission of price trends to intra-CMEA trade towards the end of the 1980s was reversed to raise the price of Soviet supplies above international prices (on foreign trade issues see Lavigne 1991).

On the whole, foreign trade transactions of CMEA countries were determined administratively and there was no automatic mechanism able to transmit to national producers the signals and stimuli of commercial opportunities and to induce them to profit from such opportunities.

## 13.11 Expectations and Achievements

The system described above was expected to offer *ex-ante* coordination of economic decisions (i.e. equilibrium, "before imbalances are solidified into reinforced concrete", as Joan Robinson used to say in her Cambridge lectures), greater efficiency, economic growth and full employment of labour and capital without inflation, greater equality.

As we have already noted economic growth was very impressive in the USSR from 1928 until about 1960, and in East-Europe from the completion of post-war reconstruction around 1950 to the mid-'sixties, at a cost of large and rising shares of capital accumulation in national income. In 1956 Nikita Khrushchev could afford to tell at a meeting with western ambassadors "We will bury you!", clarifying on a subsequent occasion that he meant that the capitalist working class would do it (echoing a statement of the Communist Manifesto that "the bourgeoisie produces its own gravediggers"). However, economic growth later slowed down significantly, fluctuations and actual falls of income appeared in spite of the continuation and even the acceleration of capital accumulation, increasingly financed by foreign loans. According to Maurice Dobb, compound interest (i.e. economic growth) was the principal force of socialism: eventually this force not only vanished but its place was taken by compound interest on the bloc's foreign debt, with which socialist countries had tried to alleviate the consequences of growth slowdown, and which had been readily granted by western leaders using with great foresight foreign loans as an economic weapon, the rope with which socialist countries would hang themselves.

Tight/taut planning never allowed the achievement of *ex-ante e*quilibrium. Internal and external imbalances have been typical phenomena of the system. During War Communism inflation was deliberately employed as an instrument of expropriation of financial wealth, "the machine gun… that would have hit in the back the bourgeoisie through its monetary system" (Preobrazhensky 1920, cited by Ellman 2018). During NEP prices were stabilised, but from 1926 onwards inflation was never eliminated, except for a short period after the last War in the 1950s, characterised by price stability and slight deflation. Beside official inflation there were widespread phenomena of hidden inflation (in the form of

officially underestimated or unrecorded price increases) and repressed inflation (in the form of persistent and endemic excess demand and accompanying shortages both of consumption and production goods). It was estimated that towards the end of the 1980s in the Soviet Union every year some 35mn man-years were lost in queueing for purchases.

Full employment was realised in the Soviet Union by 1928–1929 through mass mobilisation of labour and its redistribution independently of competences and status of the employed. Labour was often underemployed, or hoarded within enterprises in case of need, but the universal picture in the Soviet Union and in Eastern Europe has been one of labour shortage and not of unemployment (apart from seasonal or frictional unemployment especially in the Asian republics). Presumably full employment continued to be an important objective for planners, but it was obtained as a byproduct of ambitious capital accumulation and growth policies, without having to sacrifice other objectives, by default or—according to Phil Hanson—by serendipity (i.e. by a happy accident).

Equality was effectively higher than that typical of capitalist systems, in spite of its overestimate in the presence of privileged access to deficit goods at artificially low prices—like meat, caviar, motorcars, durable goods, medicines and medical care, education, foreign currency and foreign travel. We can actually argue that sometimes equality of monetary incomes was excessive, in view of the disincentive to invest in human capital and to take risks.

Until the late 1960s observers of this system spoke of microeconomic inefficiency being offset by macroeconomic rationality. Inefficiency soon became recognised by native economists and politicians even more clearly and forcefully than by Western critics.

Basically the system, ignoring or distorting prices and production costs, neglected all opportunities for substitutability in the structure of consumption and in the choice of production techniques, as well as in the structure of foreign trade. For instance, material intensity and especially energy, that was reduced significantly in capitalist economies following their price increase in the world market, in the socialist economies continued to increase, completely wasting their relative richness in this area. Investment gestation periods were excessive by western standards. Many investments, including costly imported machinery, were already

obsolete by the time of their installation or remained idle for shortages of labour or other inputs. There were absurd biases in the quality and assortment of output due to indicators expressed in physical units or gross value instead of net value.

Hare and Hughes (1991) showed that, on the eve of transition in Czechoslovakia, Hungary and Poland, between a fifth and a quarter of manufacturing production exported exhibited negative value added at world prices (using 1988–1989 input-output data and exchange rates). Japan used to buy Soviet machinery for scrap, and aluminium from the socialist bloc was sold internationally at less than the international price of the energy it embodied.

Health and environmental standards were high but unobserved. Feshbach and Friendly (1992) talk of a Soviet "Ecocide": 103 cities with a population of 70 million inhabitants had a level of atmospheric pollution higher than five times the safety levels; 70% of surface water was contaminated, great rivers like the Don and the Volga were reduced to chemical sewers, two thirds of the Aral sea was desertified and the ecosystems of the Black and Caspian seas were damaged probably irredeemably.

The system that had emerged as victor in the Second World War, conquered space, shortened its distance from advanced capitalist countries, became incapable to provide for the basic needs of the population for food, clothes and shoes, elementary products like pizza, hamburgers, jeans and soft drinks, let alone motorcars, consumer durables or high technology products. The growing inadequacy of the Soviet model of central planning to the USSR conditions at the turn of the 1960s, and even more so to the conditions of Central-Eastern Europe after post-War reconstructions, generated growing pressures for political and economic change.

## 13.12 Reform Attempts and Their Failure

Tatu (1987) argues that the Soviet-type system was constructed "not to change [but] to resist any imaginable social, technical or human pressure, both internal and international", … "it is so perfect that it is impossible

to remove a single stone without destroying the whole system". Yet—beside Yugoslavia's associationist market socialism—after Stalin's death from 1953 onwards there were countless attempts at reform. They begin with Soviet 1957 regional decentralisation, though Nove defined it as "not a step forward but a sideways step" (Nove-Nuti 1972), because it replaced localism or *mestnichestvo* for the costly sectoral self-sufficiency of Ministries. Other reform attempts abound: the GDR vertically integrated sectors already in the 1960s; economic and political reform in Poland in 1956; reforms in Hungary in 1956 and Czechoslovakia in 1968, both militarily repressed by Warsaw Pact troops; the large corporations (WOG o *Wielkie Organizacje Gospodarcze*, see Nuti 1977) in Gierek's Poland; the New Economic Mechanism of post-19689 Poland, dubbed "Goulash socialism"; the reforms of self-managed enterprises proposed by *Solidarnosc*' in Poland in 1980–1981; the *Perestroika* and *Glasnost*' (restructuring and transparency) introduced by Gorbachev in 1985–1990, right up to the Russian 500-days plan proposed *in extremis* by Shatalin in 1990.

In addition there were countless experiments: confiscatory currency reforms, reducing excess cash in the hands of the population through diversified, progressive conversion rates between old and new currencies (in the 1950s in the Soviet Union, in several East European countries and in China); the use of mathematical methods of *input-output* in planning, combined with linear and non linear programming techniques (Ellman 1973); dual pricing at free and administered levels; the introduction of wholesale trade in the allocation of raw materials, machinery and semi-finished products; the promotion of new private enterprises and especially cooperatives, with partial subletting to them of parts of state enterprise activities; material incentives geared to enterprise revenue and profits;[9] introduction of shadow prices in the valuation of otherwise free resources or distributed below cost; administrative quality control and certification; public auctions of foreign exchange and extensive use of international prices.

[9] According to Domar (1974) this formula, introduced with Kosygin's reforms of 1965, through successive trial and error approximations was capable of pushing enterprises to equalise marginal cost and price as if they had operated in conditions of perfect competition.

All these numerous, repeated and often radical reform attempts failed for various reasons:

- they were piecemeal improvements, that did not amount to an overall systemic change;
- they were resisted by managers and party officials for fear of losing economic power and political control; and above all,
- their effectiveness was hopelessly handicapped by widespread and endemic excess demand and shortages which paralysed the functioning of market elements as they were introduced.

Substantial resources would have been needed to restore market-clearing prices, reduce external debt and finance capacity restructuring. Unfortunately Gorbachev's efforts clashed with the record low price of Soviet oil and gas exports. The old system suffered from the lack of democratic verification, even more important in a planned economy where the public of consumers and workers cannot transmit to the leadership signals through market prices, for instance pushing for more consumption and less investment than planned. But Gorbachev introduced political liberalisation ahead of economic liberalisation (a sequencing opposite to that adopted by China), thus unleashing opposition to economic reforms and to the very integrity and unity of the Union. Time was short; in his visit to Berlin in August 1989 Gorbachev declared that "History punishes those who are too late", thus dictating his own most appropriate epitaph.

## 13.13 The Original Sin of Socialism: The Violation of Economic Laws

Without doubt socialism suffered enormously from the original sin committed by Nikolai Bukharin, Rosa Luxemburg, Rudolf Hilferding and the greater part of Bolshevik economists for whom "socialism would mark the end of political economy as a science" (Brus 1973). Of political economy there would remain "only technical problems, the laws of material budgets of production, the science of rational organisation of productive forces" (ibidem).

For Bukharin, "As soon as we take an organized social economy, all the basic 'problems' of political economy disappear: the problem of value, price, profit, and the like. Here 'relations between people' are not expressed in 'relations between things', and social economy is regulated not by the blind forces of the market and competition, but consciously by a … plan. Therefore here there can be a certain descriptive system on the one hand, a system of norms on the other. But there can be no place for a science studying 'the blind laws of the market' since there will be no market. Thus the end of the capitalist commodity society will be the end of political economy" (from Bukharin 1920; cited by Cohen 1980, p. 93).

Rosa Luxemburg writes: "If political economy is a science that deals with the particular laws of the capitalist mode of production, then the reasons for its existence and its function are confined to the period of life of the latter, and the political economy will lose its basis as soon as that mode of production will have ceased to exist" (Luxemburg 1925, in Waters 1970, p. 244). "Consequently, the end of political economy as a science represents a historical world task" (ibidem, p. 248).

Also Rudolf Hilferding forcefully expressed the idea that "Centralized control of the economy on a national and eventually an international scale would allow for conscious social regulation of both production and distribution and create the objective conditions for a planned economy no longer subject to regulation by the law of value" (Mattick 1983; see also Howard and King 2003).

Moreover Hilferding appeared to believe that economic laws can be already suspended in the political struggle for socialism. According to Breit and Lange (1934), he "invented a theory of so-called political wages, arguing that, using its political strength in the democratic state, the working-class movement imposes on capitalism higher wages than those resulting from the capitalist laws of supply and demand. It turns out that this took no account of the nature of capitalist ownership. It is not possible to impose in a capitalist economy a distribution of income that is different from that determined by the automatic operation of the laws governing the capitalist economy, the laws of supply and demand and competition."

Magdoff (1985) asks whether there exist economic laws under socialism, and underlines that the idea that objective economic laws are not

present in a socialist economy was, in fact, orthodox doctrine in the Soviet Union up to the early 1950s, when Stalin (1951), of all people, maintained that planning must respect economic laws. However Stalin's "laws" were nothing but slogans and pious wishes, as has been illustrated above, towards which even an orthodox communist such as Magdoff holds evident reservations. However Stalin recognizes that the so-called "Law of value", otherwise known as the market, continues to hold under socialism to the extent that commodities continue to exist: this, heavily disguised, is the true and belated innovation of Stalin's text, however contradicted and nullified by the endemic and permanent repressed inflation that blocked all market-oriented reforms attempted after his death, and therefore eventually led to The Fall.

The delusion of the end of political economy in the socialist economy, socialism's original sin, is the foundation of decisionism and voluntarism typical of the economic (or rather the un-economic) management in the Soviet Union and the countries that later adopted its system, and eventually brought about its fall. It is the foundation of the already mentioned victory of the teleological school of planning as an act of war, of Stalin's favourite slogan "there is no fortress that a Bolshevik cannot conquer", of the planner's arithmetic 2 + 2 = 5 (the first five years plan was realised in four years, without considering the cost). And still in the 1970s in Gierek's Poland realised socialism boasted that "*Polak wszystko potrafi*" (a Pole succeeds at everything).

Aiming at overambitious, even impossible targets, one might occasionally achieve better results than obtainable otherwise, but defying the laws of physics is by and large a losing strategy: aiming at the Moon it is more probable that one might miss desirable objectives that would have been within reach if one had aimed at them directly.

Here, too, is the foundation of the system of priorities of investment over consumption, industry over agriculture, investment in heavy over light industry, so as to produce steel to produce more steel and ever more steel, regardless of the needs of the population. Priority is assigned to many objectives in conflict with each other, and as a result no single objective obtains an effective "priority" (Dobb 1966 notes that at some point towards the end of War Communism priority was extended to the production of pen nibs).

*Priorities* in the plural are a pernicious oxymoron: priorities mean that the actual or opportunity costs of alternative targets are ignored or neglected: an uneconomic system is built on ignoring any trade-off between alternative targets in economic choice.

In its most spectacular and damaging form, the violation of economic laws in the socialist system consists in adopting the target of maintaining low and stable prices, impossible while goods are available in quantities lower than those necessary to validate such prices given the liquidity of households and enterprises and their demand at those prices. Hence the inevitability of shortages, queues, waiting lists, black and variously-coloured markets—which impeded the introduction of market elements in the numerous reform projects of the socialist bloc. When the immovable stable price targets meet the irresistible force of inflation, the system is crushed. And when reality could not be forced to comply, change was faked: thus fake genetic miracles were claimed; fake plan realizations announced.[10]

## 13.14 The Fall: Sudden, Fast and Contagious

The fall of Berlin's Wall (9/11/1989) is usually taken as the icon and the date of the collapse of the Soviet-style political and economic system.

In truth the beginning of the end can be dated 6 February 1989, when the Round Table of representatives of the Polish government and the Solidarity opposition first met in Warsaw. At the beginning of April 1989 this joint commission agreed to hold the first contested elections in the whole eastern bloc since the end of the last War. On 4 June the government coalition partners—the Communist Party and the Peasants Party—suffered a resounding defeat, obtaining necessarily the 60% of parliamentary seats, reserved to them in the lower Chamber, but not a

[10] In the villa in which Ceaucescu took shelter in January 1990 before his arrest, there is a gym in which he used to exercise; in a visit made shortly afterwards a guide showed visitors the actual weights that Ceaucescu used for weightlifting, markedly lighter than the weight imprinted on those weights; if his courtiers lightened his weights in such a way just to humour him, one can imagine what they must have done with statistics.

single contested seat in that Chamber nor in the Senate where they did not have reserved seats.

By September 1989 Tadeusz Mazowiecki had established the first non-communist government in post-War Eastern Europe, undertaking a radical transition process to a market economy, with private ownership and enterprise, open to international trade and investment.

Within three-four months a domino effect made other Soviet type regimes in Eastern Europe fall, bloodlessly except for a brief episode in Romania. They fell "like rotten apples off a tree" as Marie Lavigne observed at the time.

German reunification (*de facto* on 9 November 1989, *de jure* on 3 October 1990) was accompanied by other disintegration and re-integration events: within two years Comecon and the Warsaw Pact had disintegrated; after the failed *putsch* of August 1991 the USSR disintegrated in December 1991. Yugoslavia disintegrated unleashing a conflict (Uvalić 2010) and in 1993 the Czech and Slovak Republics agreed on a peaceful split. East European countries were reintegrated into the world economy and especially Europe, becoming EU members in several waves (2004, 2007 and subsequent rounds). NATO enlarged to the East, violating the commitments taken by Bush with Gorbachev at the time of German reunification; in 1991 the European Bank for Reconstruction and Development was founded to facilitate the Transition, it operates today in 29 countries (also outside the former socialist bloc).

The process was unexpected, fast and accelerating. An International Herald Tribune cartoon showed a man watching the news on TV, who exclaimed: "Gosh! I must have pressed Fast-Forward!"

Nobody had anticipated the speed, depth and breadth of these processes, let alone its possible timing. Presumptions and anticipations have been dubbed "accidental prophecies" (Laqueur 1996), without scientific foundations, based on wrong premises. Amalrik (1970) had forecast the USSR dissolution to happen in the Orwellian 1984, as a result of social and ethnic conflicts and war with China. Todd (1976) based his forecast on Soviet adverse demographic trends such as the increase in infant mortality. Carrère d'Encausse (1978) announced the end of the USSR at an unspecified date as a result of the high birth rate in the Islamic republics of Central Asia. Levin (1993) claimed to have predicted in 1977 the

Soviet collapse for 14 July 1989, amazingly accurately to within a couple of weeks; but he simply had added precisely two centuries to the day the Bastille was taken in the French Revolution, thus still formulating a wholly accidental prophecy.

In June 1981, at a seminar of the Birmingham Centre for Russian and Eastern Studies, I prospected a serious economic crisis in Eastern Europe, but I was severely criticised by colleagues who accused me of unduly generalising to the whole bloc what were essentially Polish problems. To a question on how crisis would manifest itself in the Soviet Union I specifically named its disintegration. But in truth I was so unsure of my conjecture that I did not submit that lecture for publication until over three years later.

The only prophetic but improbable premonition of what actually happened in 1989 was published by an Italian satirical weekly, *Il Male (Evil)*, in two issues in 1980 (Vincino 2007):

- a *Pravda* spoof, with prophetic news of Soviet disintegration ("*No more Union, no more Soviet, no more Socialist, only republics*"), the fall of the communist regime and the restoration of capitalism, with political and religious freedoms, the return of old aristocratic and royal families, the restitution of nationalised assets to their legitimate owners including the Church, privatisations;
- a *Bild* spoof, which actually anticipated the then unlikely German re-unification.

Only the fervid imagination of satirists was capable of not so much forecasting but even imagining what really happened in 1989.

## 13.15 Transition and its Debacle

It was widely expected that the post-socialist transition would lead to early significant improvements in the level and growth of people's consumption and income. This was a plausible expectation: the new system would generate market-clearing prices in domestic and international transactions, revive the incentives to follow them thanks to the

maximisation and appropriation of profits by owners of private enterprises, and at the same time mobilise and discipline entrepreneurship.

Few practitioners of the transition contemplated the possibility of income falls, but anticipated at most a one-digit modest and temporary decline, followed by accelerated growth that would have allowed catching up with other market economies. Instead the transition process was accompanied by a deep and often protracted 'transformation recession' (Kornai's label). Only Laski (1990) had anticipated with great precision the Polish recession.

Poland experienced the shortest and smallest fall in income (17% of 1989 GDP in just under three years) recovering its 1989 level by 1996 and moving rapidly ahead, while Georgia had the largest and most prolonged fall (75% by 1994 before reversing, but in 2017 still below the 1989 level) —leaving aside the transition countries that experienced war (with Bosnia-Herzegovina at a GDP loss of over 80% and still not fully recovered).

This unexpected statistical record provoked three contrasting reactions among observers: disbelief to the point of its denial, acceptance both of the recession and its necessity, belief in the recession coupled with rejection of its necessity.

The initial response was that the transformation recession was to a large extent a statistical illusion, due to changes in statistical conventions and enterprise behaviour (Åslund 2000). In the old system there was universal compulsory reporting by all enterprises that had an incentive to exaggerate gross production achievements, in order to avoid penalties involved in failing to reach planned targets and to reap the bonuses deriving from plan fulfilment and over-fulfilment. In the new system there was incomplete sample coverage of producers, who in any case had an incentive to under-report their net results in order to avoid tax. A significant amount of production took place in the black or grey economy, simply going unreported. And people benefited from an increase of their consumer surplus, from having access to a broader range of goods, while price increases were to some extent justified by quality improvements.

All these considerations cannot be dismissed but can easily be overplayed. There was already an illegal grey/black economy under central planning but it was illegal; in the transition its newly-found legality led

to at least some of it surfacing, thus unduly boosting the performance of the new system by recording an improvement that in reality did not exist.

Consumer surplus is not and has never been included in national income accounting anywhere in the world, and there is no reason to begin accounting for it in the transition.

Parallel price and quality increases were not necessarily an improvement for all. The availability and quality of public services plummeted. Transition performance was boosted to a great extent by the growth of quantities and prices in the service sector, formerly underprovided and underpriced, and by real revaluation of the national currency initially vastly undervalued. A single very long queue of unemployed workers waiting for jobs replaced the former many queues for the purchase of goods. Inequality and poverty increased considerably.

The second response to the transformation recession was that it was indeed real, but unavoidable. The transition was likened to 'turning a fish soup back into an aquarium'; in Poland it was likened to 'turning vodka back into potatoes': attempting such impossible processes had to be costly.

Others referred to the recession as a form of Schumpeter's 'creative destruction'. In truth in the transition there was destruction of old type organisational capacity without a new replacement, while any innovation demands a reorganisation of productive processes in the enterprise and in the whole country. However the transition was not accompanied by actual capacity destruction as in wartime, nor by the obsolescence of products and of productive methods due to competition by new investment, also in view of the lack both of investments and of competition. On the contrary, destruction of value-subtracting activities should have boosted national income instead of reducing it.

Shleifer and Treisman (*On the Road without a Map*, 2000) justify the recession as due to the unprecedented nature of the transition. It is true that on uncharted territory we can all easily get lost, but we all knew very well the starting point, and all the conceivable advantages and drawbacks of the Soviet-type system; we knew what was going increasingly wrong with that system; we had—unlike any earlier systemic transition—complete and detailed maps of the alternative points of arrival of the transition, i.e. the various versions of available models of capitalism.

Therefore we knew precisely what had to be changed to implement the transition from our starting point to the target model. What we did not know was the desirable speed of the transition and therefore, in case of a non-instantaneous transition, the appropriate sequencing of the necessary changes.

In one respect, however, transition politics rather than economics necessarily involved disruption. International trade was greatly disrupted by the economic and monetary disintegration associated with the transition. Comecon disintegration (*de jure* from September 1991 but *de facto* by the beginning of 1990) involved a switch to trade payments in hard currencies and therefore, in view of their scarcity, to the drastic reduction of trade volume to bilateral balanced trade. The USSR split into its 15 component Republics (1992) led to 15 republican currencies, issued first as rouble substitutes then as proper domestic (inconvertible) currencies, without the buffer of inter-republican transfers and with a relative prices shock. Mundell (1997) attributes much of the unprecedented recession to monetary disintegration. (A similar effect, on a smaller scale because it would not involve the transition to a different economic system, might happen as a result of Eurozone complete or partial disintegration).

In the states that had undertaken the post-socialist transition the different models adopted as targets, the diversity of the stages already reached or foreseen of their realisation, rendered practically impossible the preservation of Comecon, the USSR, the CSSR and the Yugoslav Federation.

If the transition recession was slightly exaggerated by statistics and to some extent was due to monetary disintegration, its main thrust was due to the adoption of inappropriate economic policies.

First there was the uncritical acceptance of a particular and controversial model of capitalist market economy, namely the Reagan-Thatcher hyper-liberalism prevailing at that time. Under the strong influence of this ideology, the instigation of most foreign advisors, the conditionality imposed by the IMF and the World Bank, and the acquiescence of the European Union, the most widespread model in the transition was a hyper-liberal model that was more fundamentalist than any modern capitalist model in existence, including American capitalism.

The hyper-liberal character of the post-socialist transition model is confirmed by the dominant adoption of the following policies:

immediate unilateral opening of foreign trade, frequently reversed and therefore demonstrably premature; exceptionally rapid liberalization of capital flows, in contrast to the experience of other European economies after World War Two; an unprecedented mass privatization (a notable exception was Hungary), through the distribution to the population of free or symbolically priced vouchers, convertible into state assets or shares in state enterprises—a macroscopic experiment in social engineering of dubious effectiveness; the demotion of the state, that led to delays or gaps in market regulation, especially in financial markets (see the disastrous diffusion of banking pyramids in Russia, Romania, Albania, Serbia, Macedonia and elsewhere), for the protection of shareholders and more generally for corporate governance; the dismantling of the welfare state, which in these economies was to a large extent the responsibility of state enterprises, without reconstructing it at the central level; a costly reform of the pension system from a Pay As You Go, defined benefits, distribution system (whereby pensioners are funded by the contributions of current employees), to a capitalization, defined contributions or funded system (with pensions paid out of the revenue earned on accumulated past contributions);[11] a low and uniform rate of direct taxation (flat tax), therefore only mildly progressive, on households and companies, mostly without taxation of capital gains but with high indirect taxation; "state desertion" of public enterprises and more generally of building market institutions; weak trade unions and enterprise level contracts prevailing over collective bargaining; direct controls on wages, often subjected to punitive taxation (the so-called *popiwek* in Poland) in case of increases exceeding modest prefixed limits; absence of consultation and concertation institutions between social partners and the government; a central bank not only exceptionally independent but also not subject to political

[11] In theory the capitalisation pension system is self-financed, though in practice it still requires state contribution in case of a financial crisis depressing the value of pension assets. However, even if it was preferred to a PAYG system, the transition from PAYG to a capitalisation system has a huge cost, as the changeover makes the debt towards future pensioners, no longer financed from the contributions of current employees now going to finance their own future pensions, emerge in public accounts. The maintenance of PAYG instead would preserve the purely virtual character of that debt, and the return to a PAYG system from a reformed capitalisation system would reinstate the fiscal space otherwise lost in the earlier reform. Recently Poland and Hungary have reinstated the old system obtaining a greater fiscal flexibility as a result. See also Montes and Riesco (2018).

control and without any coordination with fiscal policy, with restrictive policies of inflation containment and high interest rates, positive in real terms in spite of the appreciation of domestic currency initially undervalued (a policy unnecessarily costly in terms of both overvaluation of the exchange rate and the sterilisation of the resulting reserve increases); in general, a dominant weight of markets with respect to institutions (Nuti 2013a, 2013b).

The second category of inappropriate policies that contributed to the transition recession is the adoption of the policies of the Washington consensus, applied with some success in Latin America in the 1980s (liberalisation of prices and of international trade, privatizations of state enterprises and other assets) to reduce hyperinflation, promote trade and discipline the management of state enterprises. These policies were inappropriate to the transition economies, in which inflation was repressed, state enterprises lacked the experience and the incentives to operate in international markets and privatisations took place without a prior regulation of company governance and of financial markets, and only after having pulverised with transition hyperinflation the liquid savings of the population.

The third form of policies inappropriate to transition economies is the excessive reliance on the benefits of the so-called shock therapy with respect to gradualism (Kolodko 2000). In fact there are measures that can and should be introduced instantaneously and simultaneously, such as: raise prices to market-clearing levels; legalize private ownership and enterprise; allow all economic subjects—individuals and enterprises—free access to international trade; eliminate quantitative restrictions on imports and exports; unify exchange rates; establish convertibility for current account transactions (not immediately for capital account transactions) by residents.

All these changes can and should be made by decree, literally from one day to the next, at a stroke. Temporising is counterproductive. At the other extreme there are measures that need time for their realization and therefore they should be given all the time that they reasonably require. Such measures include: (i) drafting and introducing legislation; (ii) establishing a properly functioning legal/judicial system separated from politics; (iii) breaking-up monopolies and establishing competition; (iv)

restructuring productive capacity; (v) creating financial markets; and (vi) establishing relations of reputation and trust between government and private sector agents. It does not make sense, indeed it is counterproductive, to pretend that these changes could be accelerated, let alone be instantaneous.

The cases where there is a possible choice between shock therapy and gradualism can literally be counted on the fingers of one hand, namely: trade liberalization; the elimination of subsidies; privatization; convertibility on current account; and, especially, dis-inflation. I consider this an exhaustive list of policy areas where there is no absolute superiority of either gradualism or shock. Their relative merits depend on their respective costs and benefits, i.e. the trade-offs that the economy offers between government objectives, and the actual government preferences between those objectives.

The relative success of early recovery and fast growth in Poland, in spite of the rhetoric of its celebrated shock therapy, in truth is due to the slow pace of its dis-inflation, that took over a decade to come down to one digit inflation, to a fiscal policy that did not neglect public investment, to the accidental slowness of its mass privatisation (due to the indirect and complicated method eventually selected after long and heated discussions) and to the adoption of an industrial policy (initially dismissed by the earlier government by saying that "the best industrial policy is no industrial policy"; see Kolodko and Nuti 1997).

## 13.16 Social Democracy and the European Social Model

The label of *social democracy* applies to a fully capitalist economy with an active economic policy of the government, a significant though not necessarily dominant public sector, with price and investment policies of state enterprises used to promote government targets, monetary and fiscal policy used to raise investment and employment, the use of direct controls if necessary, the responsibility of the welfare state for health, education, pensions and the availability of housing at accessible prices, with measures of income redistribution in order to alleviate poverty and

inequality. These measures are based on a political and moral imperative—although similar policies and achievements must be credited politically and morally also to conservative or liberal governments, from Bismarck to Macmillan, in order to ensure social peace in an antagonistic capitalist system.

Social democracy has also suffered, albeit to a lesser extent than socialism, from the pretence that economic laws could be suspended or ignored. This is true both for the extreme Left—for instance with Potere Operaio in Italy recommending to workers the strategy of "refusal to work", as if all could enjoy the condition of *rentiers*, or with the Paris May 1968 slogan "*Soyez réalistes, demandez l'impossible*"—and for social democracy. For instance, at the Labour Party Conference in Blackpool in 1949, Aneurin Bevan declared that "*The language of priorities is the religion of socialism*", confirming the confused thinking and the abandonement of a correct economic valuation of strategic alternatives on the part of social democratic leaders.

For a long time, until New Labour came to power in the United Kingdom (1997), rarely did social democrats ask themselves whether there might be feasibility limits to the welfare state or consider the possibility and implication of opportunistic behaviour (so-called *moral hazard*). Or whether a capitalist economy might prosper and grow without profit margins sufficient both to finance and to encourage investment. Whether an economy open to international trade and investment should not worry about its own international competitiveness. Whether or not there might be limits—though flexible, but precisely because of their flexibility also dangerously uncertain—to public expenditure, whether financed through inflation or the rise of public debt. Whether public enterprises have a role in growth promotion not only in strategic sectors like energy or steel or the development of new technologies, but also in sectors like food or textiles.

Trade Unions, that are a driving force of social democracy, are in manifest conflicts of interests with the rest of the population, in that they represent only a part (continuously falling) of dependent workers, mostly males. When strikes interrupt the production of goods that continue to be available to the public out of existing inventories, strikers inflict a loss on their employers, thus raising their probability of victory in a conflict;

but when strikes concern essential services (transport, trade, health, education) most of the damage is inflicted on service users (travellers, shoppers, the sick, students), and therefore strikes are counterproductive, alienate the public and necessarily must be limited and regulated.

It is true that sometimes trade unions have recognised that there are limits to the compatibility of wage claims with the fight against inflation and the promotion of employment and growth: for instance many Italian unions have recognised that the wage is not an "independent variable" of the capitalist economy but it is subject to consistency with other objectives. More often however Unions set themselves impossible objectives, like the preservation of jobs in enterprises facing bankruptcy or in crisis situations, although they ought to realise the economic implications of their negotiating positions.

In spite of all of these limitations, the social democratic model has been realised on a large scale and has had some considerable success in various countries of western Europe, in a form that was designated as the European Social Model (ESM). The Treaty of Rome (1956) did not contemplate social developments; successively the coordination of the systems of social security of member countries was neglected or blocked by United Kingdom opposition, including the blocking of the *espace social europeen* sought by Jacques Delors. Only in 1989 was a Charter that guaranteed minimum social rights established, under guise of a political non-binding declaration (Vaughan-Whitehead 2003).

A document of the Nice European Council (2000) states that "The Social European Model, characterised in particular by systems that offer a high degree of social protection, by the importance of social dialogue and by services of general interest that cover activities essential to social cohesion, today is based, beyond the diversity of social systems of single Member States, on a common core of values" (para 11, p. 4; see Giannetti and Nuti 2007). This characterisation was underlined in the Barcelona *summit* of 2002 and in many other occasions, for instance in the European Parliament (2006).

A lucid characterisation of the ESM-European model of social dialogue and the American model is provided by Freeman (2005). In some respects the two economies are like "two peas in the same pod": advanced capitalist systems, abiding by the rule of law, protecting private property,

guaranteeing freedom of association, with various degrees of social security and welfare systems, combining "institutional regulations and markets to determine economic outcomes. The difference is in the weights they place on institutions versus markets, not the qualitative differences that divided capitalism from communist state planning" (Freeman 2005, p. 3).

For Freeman (2005) the US economy, in its idealised form, conforms to the neoclassical theory of markets "where the Invisible Hand of exit and entry determines outcomes" (p. 3). Trade Union membership has declined to a low level and wages and employment have become largely market-driven. Firms' employment policy and wages policy do not have to be negotiated with employees, who can take it or leave it. Product markets are little regulated and firms can enter and exit easily. Employment is the primary form of social protection, including access to health care. University activity and funding are geared to the demands of business communities.

The EU system, instead, "relies more on the non-market institutions of 'voice' to determine outcomes, particularly in the labour market" (ibidem; the reference to 'voice' is taken from Hirshman 1970). The EU requires dialogue between social partners at the company level, through the Works Councils (EC 94/45/EC), at sectoral and inter-professional level through sectoral and Social Dialogue Committees, at the aggregate level through the Standing Employment Committee, and Advisory Committees (e.g. on social security); there are also Occupational Health and Safety committees. Wages are determined by collective bargaining through agreements between federations of employees and employers applying also to firms that are not party to the agreement. Firms entry and closure, and employee lay-offs, face greater administrative obstacles in most EU countries. Welfare state financing requires higher taxes. Higher education is funded and run by the government, with lesser concern for and support by business circles. Judt (2005) maintains that the European Social Model is "what ties together the Europeans": "we are so engaged in remembering all that states do badly, that we have forgotten what they do well… The Anglo-American model with its privatisation cult is not only ethically dysfunctional, but will soon be recognised as economically dysfunctional".

A major problem in system comparison is to what extent performance differences can be attributed to institutional differences (Freeman 2005). However Freeman points out that the US outperformed the EU in the 1990s up to the mid-2000s, but some of the smaller EU social dialogue countries, like Ireland, Austria, the Netherlands and Denmark, had an exemplary performance in the same period, while the EU outperformed the US from the 1950s through to the 1990s. Eichengreen (2006) also stresses that relative EU and US performance depends strictly on the periods selected. "Since the turn of the century, the euro zone has created more jobs than the United States" (The Economist, 27 January 2007; the position was reversed in subsequent years, primarily because of different policies adopted to deal with the Great Recession and because of the Euro crisis). Income inequality is lower in the EU than in the US, also, and with better universal health care at lower cost in the EU than in the US.

The European Social Model has been subjected nevertheless to particularly strong criticism. Goodin (2003), for instance, claims that all Coordinated Market Economies "are naturally doomed to extinction", because non-market co-ordination takes a long time to build and can be disrupted very fast; the system is vulnerable and unstable. "Liberal Market Economies ultimately [will] prevail". Shackleton (2006) considers the model "not so much as a descriptive category, more as an aspiration" (p. 46), a criticism justified by the fact that the model's features have never been part of the *acquis communautaire*, i.e. the statutory obligations of Member States. However at the same time Shackleton deems the ESM as responsible for EU slower growth, slower job creation and higher unemployment (looking only at 2003–2005), attributed primarily to labour and product market rigidities, higher levels of government spending and taxation and social partners involvement; the model "is in crisis" and has no future.

In reality the European Social Model came to fade and practically vanish as a general tendency because of other reasons: its optional, non-statutory nature already mentioned, the dilution of the model through Union enlargement to the hyper-liberal countries of post- socialist transition from 2004 onwards; the reduction of workers contractual power as a result of globalisation, that raised global labour competition through migrations, de-localisation of production and above all through foreign

trade; the progressive diffusion of hyperliberalism and austerity in the EU, and the Great Recession that began in 2007 and is still in operation.

From time to time, intermittently, European institutions reaffirm vague principles that correspond to the original design of a European Social Model. For instance, on 17 November 2017 the European Parliament, the European Council and the European Commission proclaimed a *European Pillar of Social Rights* in Gothenburg. The basic idea of this initiative was that Eurozone stability required an effective capacity of stabilisation in any of the states that belong to it: to begin with, generous unemployment subsidies, the end of labour market segmentation (between fixed term precarious employment and indefinite labour employment), the activisation of the unemployed; the re-insurance of national insurance systems against unemployment. At the same time the presence of an externality was recognised: a country that insured itself against unemployment would benefit also neighbouring countries.

Officially the extremely ambitious 2017 *Pillar* should "realise new and more effective rights for citizens"; European Commission President Juncker requested its approval "to avoid social fragmentation and social dumping". However there is no coherent design for a European Social Union, no project for European obligatory legislation; thus all these beautiful principles remain the individual and voluntary responsibility of Member States.

## 13.17 Perverted Social Democracy: Globalist, Austerian, Unequal

Towards the end of the 1990s the fall of the Berlin Wall and the victory, seemingly definitive at the time, of hyper-liberalism, provoked a late and exaggerated conversion of social democracy to hyper-liberalism.

This happened first in the transition countries on the part of right and left governments alike (as we have seen earlier), then in western Europe under the leadership of Tony Blair's New Labour and his Third Way, replicated by the German *Neue Mitte* of Gerhard Schroeder. By the end of 1998 13 out of the then 15 EU members (except for Ireland and Spain) had social democratic or left-wing coalition governments; social

democrats also held a dominant position in the European Parliament, which they promptly lost in 1999. A similar strategy can be found in the policies followed by President Bill Clinton in the United States (Meeropol Michael 1998).

Blair and Schroeder (1999) reaffirm their commitment to uphold traditional socialist values: "*Fairness and social justice; liberty and equality of opportunity; solidarity and responsibility to others: these values are timeless. Social democracy will never sacrifice them*".

However their social democrat project differed drastically from traditional social democracy in three major respects.

(1) The acceptance of the primacy and desirability of internal and international markets, fully recognising their global nature in the modern world. "*The market is part of the social organisation we desire, not just a necessary means which we reluctantly admit that we need, and need to master*" (Karlsson 1999). Thus they were oblivious to the national and global adverse distribution implications of market allocations. In 1998 Peter Mandelson—Business Secretary in the Labour government and European Commissioner for Trade—declared: "We are intensely relaxed about people who become filthy rich—as long as they pay their taxes", although in 2012 he admitted that he would not have repeated such "spontaneous and unthoughtful" statements, because "globalisation has not generated rising incomes for all" (Guardian 26/1/2012). In fact international trade liberalisation undoubtedly involves net benefits, but at the same time it inflicts gross losses on some of the national subjects affected. The possibility of an overcompensation of losers on the part of the gainers is not sufficient to declare an improvement in general welfare, because actual overcompensation is essential for that purpose. And precisely at an international level the practical possibilities of overcompensation are limited by the lack of supernational governance organs with redistribution functions. Moreover such overcompensation, even if it were possible, might involve inegalitarian transfers from poor gainers to relatively richer losers. Finally, the advantages of trade liberalisation do not necessarily extend to the liberalisation of financial capital movements and labour migrations, nor to agreements regulating standards, competition and jurisdictions (Rodrik 2018a).

(2) The rejection of public ownership and enterprise, in support of private entrepreneurship and a decisive and continued privatisation of state assets. "*The government does whatever possible to support enterprise but does not believe that it can substitute it … we want a society that celebrates successful entrepreneurs as it does artists and footballers—and appreciates creativity in all spheres of life*" (Blair e Schroeder 1999). Privatisations have involved the abdication of the entrepreneurial role of the state in research and innovation (Mazzucato 2013), the neglect of essential public services and the diffusion of PPP *public private partnerships* that collectivised risk and privatised profit, the destruction of building societies and of the entire mutual societies sector through the privatisation of capital that belonged to its members and was not for the government to dispose of. All these distortions have soon demonstrated the limits and drawbacks of privatisation. Finally, the promoters of the Third Way insisted on:

(3) Affordability, in the sense of fiscal discipline and a restrictive monetary policy, rejecting therefore both Keynesian policies of public deficits financed by debt, and inflationary monetary expansion. "*A healthy public finance should not be a reason of pride for social democrats". "… deficit expenditure cannot be utilised to overcome the structural weaknesses of the economy which are an obstacle to faster growth and higher employment. Social democrats, moreover, should not tolerate excessive levels of public debt, which imposes an excessive burden on future generations and could have other undesired distributive effect. All the money spent for the service of a high public debt is not available for other priorities [sic] among which an increase in investment in education, formation or transport infrastructure*". (Blair and Schroeder 1999). These astounding propositions rule out anti-cyclical interventions regardless of the phase of the business cycle, take for granted intergenerational effects that are inexistent or exaggerated or at the very least questionable, they confuse objectives with "priorities" and presume that the most important objectives should necessarily be sacrified to fiscal and monetary discipline.

Such fiscal restraint initially found strong support in two strands of economic theory that appeared in the 1990s and 2000s, on presumed

"expansionary fiscal consolidation" (for instance Giavazzi and Pagano 1990, 1996) and on the alleged existence of a public debt threshold of 90% of yearly GDP, beyond which debt would exercise a negative impact on GDP growth (Reinhart and Rogoff 2010).

Fiscal consolidation—the reduction of public deficit via expenditure cuts and/or higher taxes—would promote private sector-led growth through a reduction of crowding out private expenditure, the expectation of lower future taxes (due to Ricardian equivalence of borrowing and taxes in funding government expenditure), confidence improvements, lower interest rates, net exports promotions via a weaker currency. Except that by 2012 IMF researchers revised estimates of fiscal multipliers, generally assumed to be around 0.5 in OECD countries for the previous twenty years, to values in the range 0.9–1.7, due to the recession, exchange rate rigidities especially in the Eurozone, and simultaneous fiscal consolidation occurring in a large number of countries (IMF 2012, Blanchard and Leigh 2013).

This meant that the cost of fiscal consolidation has been grossly underestimated. Moreover Nuti 2013b shows that, if the fiscal multiplier is greater than the inverse of the Public Debt/GDP ratio, fiscal consolidation necessarily raises instead of lowering the Public Debt/GDP ratio with respect to what it would have been without consolidation. This appears to be the case for all or nearly all of advanced countries, assuming national multipliers equal to the IMF newly revised average. Fiscal consolidation reduces the Public Debt/GDP ratio only in the least indebted countries that do not need such a reduction. Consolidation makes debt less rather than more sustainable, consequently making necessary further fiscal consolidation, activating a vicious circle. Finally, the maintenance and growth of a gap between potential and effective income discourages investment and slows down both potential and actual growth.

The notion of a threshold to public debt was based on a new dataset of forty-four countries spanning about two hundred years, incorporating "over 3,700 annual observations covering a wide range of political systems, institutions, exchange rate arrangements, and historic circumstances"; Reinhart and Rogoff found that "the relationship between government debt and real GDP growth is weak for debt/GDP ratios below a threshold of 90 percent of GDP. Above 90 percent, median growth rates fall by one percent, and average growth falls considerably more."

However Herndon et al. (2013), who replicated Reinhardt's and Rogoff's analysis using the original data, found that they selectively had excluded available data for several Allied nations—Canada, New Zealand, and Australia—that emerged from World War II with high debt but nonetheless exhibited solid growth. And summary statistics were all weighted equally regardless of the duration of high debt and growth performance. Herndon et al. (2013) conclude that "… when properly calculated, the average real GDP growth rate for countries carrying a public-debt-to-GDP ratio of over 90 percent is actually 2.2 percent, not 0.1 percent as published in Reinhart and Rogoff". It turns out that "average GDP growth at public debt/GDP ratios over 90 percent is not dramatically different than when debt/GDP ratios are lower."

Unfortunately such an amazing, cumulative and final discrediting of both expansionary fiscal consolidation and the associated 90% threshold to debt sustainability, does not appear to have had much impact on actual policies, above all by EU and especially Eurozone countries.

The supporters of the Third Way claim to uphold the values of social democracy but—apart from the spectacular reversal of social democracy's pacifist traditions in Iraq—take away from government every single traditional instrument of economic policy needed to implement social democracy: fiscal policy is constrained by balanced budgets, monetary policy is delegated to a Central Bank that is not only independent of the government but is totally disconnected from fiscal policy; privatisations remove the government ability to influence distribution and growth through the price and investment policy of public enterprises; direct controls are replaced by market parameters. In practice the only instruments left to government economic policy are so-called "reforms", and in particular the alleged "structural reforms" (IMF 2015).

A reform by definition should be a change for the better, and a structural reform an embedded significant change for the better, which therefore would have to be unanimously accepted and not politically controversial. The problem is that there is not and there cannot be a total agreement on the desirability of any given reform, in view of its redistributive effects. And in any case any positive effect of implemented reforms, even if present, would only take place in the longer period (five or ten years), with likely strong negative effects in the short period. In

other words, even successful reforms are a form of investment, whose return even if positive may not necessarily be sufficiently high for it to be wholly desirable or accepted.

In truth reforms, whether structural or not, are only an offensive and misleading euphemism for what characterises the precarious nature of employment (Standing 2009), the facility to dismiss dependent workers even without just cause, the continuous and profound dismantling of the welfare state. The IMF has confirmed the ineffectiveness of these measures for the purpose of relaunching the economy, but nevertheless hyperliberal governments—whether or not social democratic—have adopted such instruments with an enthusiasm worthy of better causes.

The 1996–1997 the Labour Third Way project proposed also the realisation of an economy of stakeholders, understood as bearers of legitimate interests different from those of enterprise owners/shareholders, in their capacity as employees, managers, customers, suppliers, creditors and debtors, local authorities and communities, and the environment. The sheer multiplicity of enterprise stakeholders makes the resolution of their inevitable interest conflicts an extremely difficult and practically impossible task. It is no accident that the proposal rapidly petered out and vanished.

A decentralised solution of stakeholders' conflicts might arise from the voluntary recognition on the part of enterprises of their social responsibility, sacrificing profit maximisation to the achievement of social peace and consensus. However there is no reason why enterprise managers taking this course should really sacrifice their long term profits, presumably they would sacrifice only a small part of their short-term profits which they would convert into greater social peace, without resolving the fundamental problem of conflicts among stakeholders and between them and shareholders, which by its own nature cannot be resolved (Nuti 1998).

Another example of an apparently innovative Labour Third Way policy, which turned out to be simpleminded and ineffective, is the concept of "pre-distribution", introduced by Hacker 2011 and re-launched by Ed Miliband (in an interview with the *New Statesman*, 6 September 2012) while Leader of the Opposition. According to this approach the state, instead of reducing inequalities by redistribution through taxes and transfers after inequalities have already occurred, should prevent them before they happened.

The reduction of market inequality could be achieved in many ways: raising the productivity of lower-paid workers by training them, and generally facilitating investment in human capital; improving childcare facilities thus improving parental access to work; reducing the gender wage gap; facilitating employment of disabled and older workers. At the same time excessively high salaries can be reduced, together with unjustified wage differentials and obstacles to competition. The role of trade unions in protecting the lower paid and their work conditions could be strengthened; workers' participation in company governance can be introduced. The markets for consumption products and capital, and especially energy, can be made more competitive thus promoting employment. Finally, local authorities should be given greater discretionary resources for the construction of low-rental housing. A favourable treatment of early successions might improve access to capital on the part of the young.

It is hard to disagree with the desirability of all these measures: everybody would want a *high skill high wage* economy, just as everybody loves motherhood and apple pie. But these pre-distribution measures are complementary and not substitutive of traditional redistribution interventions; there is nothing miraculous about them since they equally require scarce resources, an enormous administrative capacity and a strong political determination. Thus the pre-distribution strategy had an ephemeral life and was immediately liquidated in a Labour Party publication as "a meaningless formula in place of real policies" (Hatwal 2012).

At the same time the Third Way supporters did not move fast enough or far enough on the road they had chosen: they still talked of "priorities", proposed the reduction of the working week to 35 hours without corresponding wage reductions, wanted to reduce pensionable age in an ageing society, proposed a Tobin tax on financial transactions unenforceable without its universal adoption and virtually impossible in the cyber age. They all went much too far in endorsing hyper-liberalism (see Nuti 1999), and unconditional globalisation including free movement of capital and labour in a world without borders, unleashing in 2007–2008 the worst economic, financial and political crisis in the modern age, whose disastrous effects we are still suffering today.

In the last few years this perversion of the social democratic project has been rejected by the electorates of a large number of countries, from the United States with Donald Trump's election as President, to many European countries independently of their EU membership (as in Germany, Sweden, France, Spain, Austria) and in Commonwealth countries (the UK, Australia, New Zealand, Canada). In the 15 countries of post-communist Europe, today seven have "populist" parties in power, two have them as members of a coalition, and in another three they are the major opposition force. Hodgson (2018) speaks of *Wrong Turnings—How the Left Got Lost*; Kennedy and Manwaring (2017) ask '*Why the Left Loses*'. There are multiple causes: the reduction of the electoral base of industrial and manual workers; the emergence of parties more committed to the left (for instance *Die Linke*) or to the right (like the *Front National* or the AfD); the increasing lack of confidence in political parties, often leading to electors' abstensionism; the discontent and disaffection due to economic crisis. Significantly, the phenomenon is particularly marked in countries governed by social democrats in a coalition with the right,[12] characterised by high immigration, the reduction and worsening of social services and the welfare state, and more generally the absolute or relative impoverishment of the middle classes (see Pauly 2018, from which the two following graphs have been taken; the picture has been made worse in the spring of 2018 by the results of both Italian and Hungarian elections, which are not in the graphs).

Often the loss of electoral consensus on the part of social democratic parties is attributed to "populism", in a pejorative sense. Rodrik (2018b) distinguishes between political populism, that compromises pluralism and the liberal democratic rules, and economic populism which on the contrary finds justification in the policy failures of governments, including progressive ones, and can be a necessary and sometimes be the only way to avoid political populism.

[12] The September 2017 electoral losses of the SPD, following participation in the Grosse Koalition with the CDU and CSU, have continued in opinion polls with a reduction of support from 20.5% to 16% after the announcement of the coalition renewal, in spite of considerable SPD gains in both economic policies and key ministerial posts.

In general we can define as populism the promise of impossible or non-sustainable policies, accompanied by the appeal to selfish sentiments of the electorate. In truth this populism is indistinguishable from democracy, being simply the expression of electoral dissent from government policies even if supported or tolerated by social democrats, and even when it encourages unjustified but legitimate prejudices of the electorate (for instance xenophobia, which as simple fear of the foreign or the different is an inalienable citizen right). This populism might be stirred up or literally bought with concessions and promises by unprejudiced political leaders without falling into the danger of the "oclocracy" described by Polybius or of the majority dictatorship feared by Toqueville (see Sect. 13.6 above); its threat cannot be avoided without limiting democracy or destroying democracy outright.

Piketty (2018) notes that in the 1950s and 1960s the Democratic Party in the United States and Europe's social democratic parties (though his European data refer mostly to the UK and France) were supported by voters of all genders with low education level and low income. Globalisation (raising a division between internal and external inequality), and education expansion (generating inequality of education as well as of wealth) have created new, multi- dimensional conflicts about inequality and re-distribution. Why have democratic regimes failed to reduce inequality? Because—according to Piketty—"without a strong egalitarian and internationalist platform it is difficult that voters of low education and low income would vote all for the same party. The division between racism and nativism is a powerful force that divides the poor when a strong unifying platform is missing. Politics has never been a simple conflict between the poor and the rich; it is necessary to look with greater attention to political cleavages".

Starting from 1970s–1980s a political system would have been created that juxtaposes two transversal coalitions one against the other: the intellectual *élite* of left-wing "Brahmins" against the business *élite*/mercantile right, both dividing among themselves the support of a working class whose interests are radically different and do not find expression in political parties; a similar thesis is put forward by Rovny (2017). Clearly there is some truth in these propositions, but both authors neglect the difference between the USA and Europe, the differences among European

countries, and between the relevant periods, as well as the civic roots of the welfare state evolution attributed to socialism.

The current *debacle* of social democracy is not due to the refusal of the social democratic model as such but to its perversion in following hyper-liberal, austerian and globalist tendencies, not only in trade but also in capital movements, foreign direct investments, production de-localisation to low-wage emerging economies, and labour migrations. These tendencies favour large multi-national companies, dry up fiscal revenue by encouraging fiscal competition between states, facilitate fiscal avoidance and evasion with the proliferation of fiscal paradises and greatly reduce the policy space of national governments. This is the perverted social democracy that today has lost electoral consensus in the greater part of the whole developed world (see Figs. 13.1 and 13.2).[13]

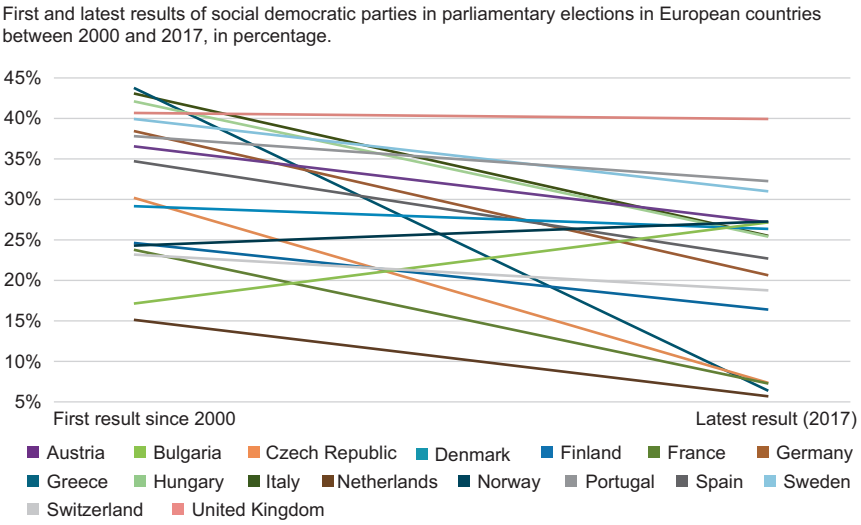


**Fig. 13.1** The decline of Europe's social democrats

[13] The Italian elections of 4/03/2018 have marked an even heavier social democratic defeat, with the two "populists"—the 5Star Movement and the Lega—taking more than the absolute majority of the electorate and of the seats.

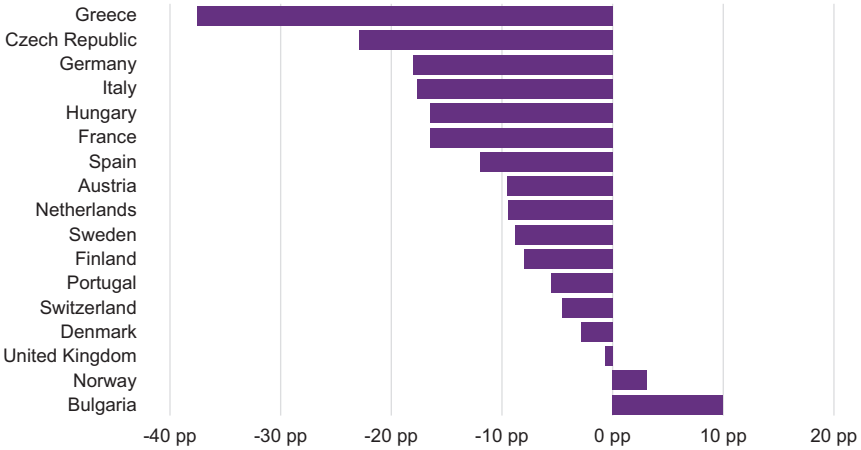


**Fig. 13.2** Difference between first and latest result of social democratic parties in parliamentary elections in European countries between 2000 and 2017

## 13.18 Some Conclusions

The rise of socialism was rooted in the drawbacks of capitalism, which mobilised human labour and imagination bringing about unprecedented prosperity but also generated unemployment of labour and productive capacities, fluctuations and crises intermittently, but with increasing frequency and on increasingly large scale, thus creating over time an ever-increasing inequality especially in the last post-War period.

The construction of socialism in a backward, labour abundant, vast and despotic country affected the development of centralised planning in the USSR, with its own conflicts and contradictions aggravated by lack of political democracy and the belief that economic laws would not operate at all in the socialist economy (Luxemburg, Bucharin, Hilferding and other Bolshevik thinkers). The Soviet-type system was impressively successful in realising the industrialisation, urbanisation, accelerated growth, rearmament and victory in a World War; in conquering space and raising standards of education, health and greater equality than obtainable in capitalist economies. However, it suffered from authoritarianism,

repression of basic freedoms and lack of political democracy. It also failed to adapt to the challenges raised by its own achievements, and eventually was brought down by its inefficiency, instability, internal and external imbalances, leading to a crushing debt and loss of popular support.

The transition to open market economies with private ownership and enterprise, in turn, was expensive—with a few exceptions—because of the shock therapy approach adopted, the unavoidable shocks of economic and monetary disintegration and the hyperliberal institutions that prevailed in the transition.

In the last post-War a social democratic model, pursuing socialist values in a market economy without dominant public ownership and enterprise, was implemented in Scandinavia and in other capitalist countries, exemplified by the European Social Model in the EU, and served the countries that adopted it. Towards the end of the 1990s the social democratic model was perverted by its political leaders adopting a hyperliberal, austerian and globalist capitalism, leading to crisis, unemployment and mounting inequality. In the last few years this deformation of traditional social democracy has met with repeated, resounding electoral defeats, in favour of parties promptly accused of populism when they are expressing popular discontent.

A sequel to this long essay, under preparation, will deal with the future of socialism. The Chinese model of a market economy under state capitalism is considered and rejected due to its authoritarian nature. The Yugoslav model of associationist market socialism is also considered and rejected as inegalitarian and tendentially inefficient. Other forms of grafting socialist institutions on to a capitalist model are also considered and found of positive but limited help in the design of a social democratic alternative.

Popov (2017) visualises the possibility of the successful creation of a "new socialism", with the realisation of more egalitarian policies on the part of some market economies, adopting income redistribution, greater regulation and a heavier fiscal burden, and with greater emphasis on public ownership in a mixed economy. The reduction of inequality and its adverse impact on social tensions would make these more egalitarian economies more competitive internationally with respect to their less enlightened competitors. I follow Popov's approach, while dismissing the desirability of greater equality achieved through unrestricted migrations in a world without borders.

The new socialism, beside controlling and managing migrations, needs to face the challenges of the management of globalisation, reducing its adverse distributive impacts, handle the unemployment and distributive implications of robotization and Artificial Intelligence; deal with climate change and resource conservation. The difference with respect to existing capitalism will be primarily a difference in policies, but these required policies demand fundamental differences in the economic policy instruments available, which make up a very different system from really existing capitalism.

*Dixi et salvavi animam meam* (Marx 1875). Florence, 16 April 2016.

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# Part II

## Economic Democracy

### Foreword to Part II: Economic Democracy

Saul Estrin and Milica Uvalic

This section includes papers related to economic democracy, another major area of Mario Nuti's interests and research. Mario explored the benefits and drawbacks of various forms of enterprise that provide workers' participation in decision-making, enterprise results (profits) and/or ownership, representing organisational alternatives to the traditional profit-maximising firm in which the owner hires labour at a fixed money wage. The inspiration came from workers' cooperatives where decision-making is usually based on the principle of one-man one-vote; forms of profit-sharing that enable workers' participation in profits, as known from the practice in France, UK and other European countries; systems of co-determination (*Mitbeststimmung*) in Germany, Denmark and other countries; and the system of workers' self-management in post-1950 Yugoslavia. Related forms provide employee participation in enterprise property in Western market economies, such as those emerging during Mrs. Thatcher's privatizations in the 1980s that were to create a "property-owning democracy", or Employee Stock Ownership Plans (ESOPs) sometimes introduced in US companies. In East European countries, the extensive privatizations of enterprises during the 1990s very frequently resulted in employee share-ownership, though the holdings were usually

highly dispersed. These forms have inspired an enormous theoretical and empirical literature on the labour-managed firm, to which Mario Nuti also actively contributed from the early 1980s onwards. Mario regarded them "a form of *microsocialism*", not in a derogatory sense but simply to emphasize the presence at the microeconomic level of the standard socialist premises—democratic planning, egalitarianism, social ownership of the means of production—in an environment that otherwise could be indifferently capitalist, market socialist, or centrally planned (see Chap. 15, this volume).

The first three chapters (Chaps. 14, 15, 16) in this section are dedicated to the definition of various forms of economic democracy, discussing their advantages and alleged economic drawbacks, also on the basis of the rich literature on the labour-managed firm. Chapter 14 provides a classification and definition of participatory forms—including traditional cooperatives/the Yugoslav labour-managed firm, codetermination and profit sharing—indicating their interdependence and relating them to Weitzman's proposal on profit-sharing advanced in the early 1980s. Mario puts forward arguments against Weitzman's claims that profit-sharing can be a solution for long-run full employment. The conceptual issues of the cooperative enterprise are elaborated in greater detail in Chap. 15, particularly the theoretical drawbacks of the cooperative enterprise, drawing on James Meade's work both from the early 1970s and the 1980s. Mario's admiration of Meade's work did not preclude criticism, so he questions the viability of the proposed model and suggests alternative solutions that would eliminate the lamented inefficiencies of the traditional cooperative. A criticism of Martin Weitzman's Share economy is elaborated in Chap. 16, which draws important conclusions about the impossibility for profit-sharing to lead to full employment.

The remaining chapters in this section are dedicated to forms of employee participation that emerged with the start of the transition in Eastern Europe (Chaps. 17, 18, 19). Within the intensive debate on privatization that took place in the early 1990s, Mario wrote a number of important papers on the advantages and drawbacks of alternative privatization models (see Volume 1, Chaps. 18, 19, 20), but he also made concrete contributions to explaining the implications of widespread employee ownership. Employee share-ownership emerged "by default" in

privatization of enterprises in many East European countries, as illustrated on the example of Poland in a paper published in 1997 (Chap. 17). Already then, Mario draws some predictions about the labour-controlled firm drawing from the theoretical literature on employee ownership, and reviews their verification in the Polish case. Some of these arguments rest on earlier work, a paper written in 1995 that was published in 1997, where Mario raised his voice against simplistic generalizations regarding the negative implications of employee share-ownership, formulating the conditions under which the expected adverse effects would be avoided—something that came to be known as 'employeeism' (Chap. 18). Mario correctly anticipated that enterprises in which insiders hold a controlling interest would probably be institutionally unstable, as many employee-owned firms in the region indeed did not survive, closing down or ending in the hands of outsiders. The last Chap. 19 in this section, a contribution to a *Festschrift* in honour of the Yugoslav economist Branko Horvat published in 2000, provides a synthesis of Mario's reflections about conceptual issues regarding forms of employee participation. The paper reviews the traditional taxonomy of enterprise types according to degree of employee participation in enterprise returns and control rights and proposes an alternative classification, also taking into account the decade-long experience with privatisations in Eastern Europe and more recent contributions to the literature, such as Meade's *Agathotopia* (first published in 1989).

Mario made other important contributions to this area of research, not included in this volume. His research projects on Italian workers' cooperatives and the labour-managed firm at the European University Institute in Florence in 1984 and on the Promotion of Employee Participation in Profits and Enterprise Results in 1989–1991 have influenced extensive research on economic democracy worldwide. Mario actively participated in preparing an Experts Policy Report on Employee ownership in Central and Eastern Europe sponsored by the Budapest office of the International Labour Organization that led to a joint publication (see FitzRoy et al., 1998 in Selected Bibliography of Domenico Mario Nuti at the end of this volume). Nuti also provided an extensive analysis of conceptual issues of economic democracy in a 116-pages essay prepared for the IRTI-Islamic Development Bank, published in the Eminent Scholars' Lectures

Series in Jeddah (Saudi Arabia) in 1995. In Italy, Mario was involved continuously, for many years, as policy advisor on participatory forms in various institutions, including the main cooperative association, *Lega Nazionale delle Cooperative*, the major trade union *Confederazione Generale Italiana del Lavoro* (CGIL) and the Italian Ministry of Labour, offering advice on economic reforms in Italy.

# 14

# Codetermination, Profit Sharing and Full Employment

Domenico Mario Nuti

## 14.1 Introduction

The contract regulating labor employment by capitalist firms usually embodies three basic elements: a fixed money wage rate per unit of time, the subjection of workers to the employer's authority in the workplace, and the short-term nature of the hiring commitment. Explicit or implicit departures from this standard can be observed; they are the result of individual or collective negotiations in the labor market, which balance out their advantages and disadvantages for each party, either directly or through accompanying changes in other parameters of the labor contract. Government legislation and economic policy set limits or fix actual

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values for some of these parameters and stipulations; within these bounds the market determines the rest.

Long tenure, i.e., the employee's option on continued employment, like all options has a value (for the employee) and a cost (for the employer), which is matched by correspondingly lower pay than that associated with shorter-term contracts. The partial and delayed indexation of money wages to a consumer price index for the period between successive rounds of wage negotiations favors employees when inflation decelerates and employers when it accelerates. Piece rates, i.e., wages related to *individual* performance, give employees a short-term reward (penalty) for effort supply higher (lower) than that which otherwise would be contractually fixed, as well as automatic participation in productivity gains due to learning by doing, subject to a ratchet effect on the determination of subsequent rates; employers save on the costs of recruitment, supervision, and contractual enforcement, lose short-term productivity gains but can use more fully their contractual power in exacting effort and speeding up progress when rates are reviewed. Government policy directly or indirectly influences market choice, in the pursuit of policy targets such as distributive fairness, employment, price stability, efficiency, and growth.

The same combination of private interest and government policy determines the degree of workers' participation in decision-making processes (codetermination) and in the performance (profit sharing) of enterprises (for a bibliographic survey, see Bartlett and Uvalic 1985).

## 14.2 Codetermination

Employee participation in enterprise decision making in cooperatives amounts to full entrepreneurship through participation in assemblies, the election of representative organs, and involvement in the appointment of managers. In other enterprises it takes the form of access to information and right to consultation, participation in decisions on conditions and organization of work and on internal social questions, through a workers' council or similar organ—ranging right up to minority (or even parity) participation and vote in the board of directors of a joint-stock company

(as in German *Mitbestimmung;* see Nutzinger 1983), with a possibility of influencing decisions about employment, the level and structure of investment, and other crucial factors should the other board members be sufficiently divided.

The effects of codetermination are threefold:

1. Reduction in labor disutility obtainable when workers have a say in the division of labor and work organization, since enterprises may neglect workers' preferences about the specific uses to which their labor is put or at any rate respond to the needs of a hypothetical average worker: if the number of enterprises is not large enough, workers' control is necessary to reduce disutility and alienation. The effect of workers' control on productivity has an indeterminate sign (Pagano 1984).
2. Reduction of the number and intensity of conflicts in the workplace, in general, and more likely acceptance by workers of unpopular decisions by management, in particular, when workers receive detailed and credible information and participate in decision making, identifying themselves partly with the enterprise and above all lengthening their time horizon in view of continued participation in decision making (Aoki 1984; Cable 1984; Fitzroy and Mueller 1984). Of course, conflicts within the firm are made more tractable by the *introduction* of codetermination but *afterwards* are bound to reappear over time (Furubotn 1985); also there remains a basic conflict between employed and unemployed workers which may even be exacerbated by the employment protection policies conceivably encouraged by those already employed in their exercise of codetermination.
3. Greater correspondence between workers' powers and responsibilities, codetermination being the counterpart of workers' exposure to enterprise risks. The very fact that workers, unlike capitalists, cannot diversify between different enterprises when selling their services exposes them to an employment and income risk which induces them to make a claim to control—a claim which up to a point the employer may prefer to accept instead of granting higher wages or longer tenure.

## 14.3 Profit Sharing

In precapitalistic systems workers' participation in the results of their enterprises took the forms—now little used—of sharecropping in agriculture and of sliding scales (indexing wage rates to the price of the product), for instance, in British coal mines. In modern capitalism such participation—for which *profit sharing* is a shorthand label—takes the form of cooperatives' net revenue sharing, production prizes based on group or overall performance, participation in gross/net revenue/profit, share options, participation in investment funds, and pay increases graded according to productivity growth.

The effects of an element of profit-sharing in labour earnings are threefold:

1. An expected increase in labor productivity. This is not due to workers gaining from the product of *individual* extra effort (as in the case of piece rates) since each of n workers employed will only get 1/n of the product of his/her own extra effort (Samuelson 1977) and on the contrary may *reduce* effort if he can, being exposed to only 1/n of the output loss from his/her own lower effort. The productivity gain can be expected from workers, costlessly to themselves, gaining from intelligent and effective use of any given individual level of effort, from cooperating with other workers and management, and from monitoring and supervising each other's effort, efficiency, and cooperation (Reich and Devine 1981; Fitzroy and Kraft 1985).
2. Cyclical flexibility of labor earnings and therefore greater stability of profit levels and rates. Employment will not be stabilized during the cycle by labor earnings flexibility obtained through profit sharing because the marginal cost of labor to firms, i.e., the fixed component of pay, does not vary automatically. Workers, who are normally risk averse, will prefer a fixed sum of money to a profit-sharing formula of equivalent amount, whereas employers, who are normally risk lovers, may or may not prefer greater stability of profit rates (according to their actual attitude to risk and the alternative cost of reducing risk through diversification) to the point of granting higher average earnings on a profit-sharing formula than a fixed wage to mutual advan-

tage. Therefore profit sharing is favored primarily in risky ventures; otherwise, on this ground alone, profit sharing would be favored by firms only in a recession (when workers would only accept it as an alternative to a permanent wage cut) and by workers only during a boom (when firms would only accept it as an alternative to a permanent wage increase).

3. Higher level of labor employment, for a given level of labor earnings with respect to a fixed wage regime, due to the lower marginal cost of labor to profit-sharing firms. Vanek (1965) finds that higher employment will be associated with higher aggregate income, lower prices (because of higher output), higher export volume and domestic import substitution (with undetermined effects on the balance of payments depending on price and income elasticities), lower after-tax and after-labor-share profits, and higher labor share in national income.

Rediscovering Vanek's macroeconomic benefits from profit sharing (though not its impact on net profits and relative income shares), Weitzman (1983, 1984) claims that these benefits are neglected by individual firms, as in other instances of "public goods," "externalities," and "market failures," therefore necessitating public policy measures. However, there is no reason why a firm should object to granting a given increase in earnings under the guise of a profit share instead of an equivalent fixed amount unless that represents forced insurance against profit variability; and there is no reason why workers—at least at the level of nationwide collective bargaining—should not take into account the potential employment and price stability benefits of this formula and offset them against the greater variability of their earnings in between negotiations, due to both cyclical factors and random factors affecting their firm's performance.

Contrary to Weitzman's belief, in fact, profit sharing is not absolutely superior to wage contracts. For workers, profit sharing transforms the probability distribution of uncertain employment at a fixed and certain income into a probability distribution of employment with a higher mean (because of lower marginal cost of labor) but no less variable over the cycle, at a more variable income (both over the cycle and for other factors affecting dispersion of enterprise performance) and at a higher

(real) mean. For firms, profit sharing transforms a more into a less variable probability distribution of nominal profit rates around the same mean (or a lower mean if workers are protected from actual losses; the effect on real profit rates depends on accounting conventions and choice of *numéraire*). In the pursuit of greater employment and price stability, of course, a government may grant tax relief to shared profits, just as effectively and with just as much reason as it may subsidize the marginal cost of labor to firms under a wage regime. Otherwise there is no reason why profit sharing should be forced upon unwilling workers and firms by well-meaning reformers beyond the extent they are prepared to consider in their market transactions. These propositions are developed in the rest of this paper (see also Nuti 1985, 1986).

## 14.4 Interdependence Between Codetermination and Profit Sharing

The respective effects of codetermination and of profit sharing are not independent. The productivity increase expected from profit sharing can be raised by workers having collective discretion over the organization of labor; or the productivity fall which might derive from workers' control over labor organization might be tempered by profit sharing. Greater variability of earnings—during the cycle and across firms—strengthens under profit sharing the case for codetermination already present in workers' exposure to employment risk in the wage regime. The income premium required by risk-averse workers to replace some of their fixed wage with a variable profit share can be reduced by their involvement in the decisions which expose them to income variability in the first place. The reduction in conflict frequency and intensity expected from codetermination is enhanced by profit sharing because for each worker it partly internalizes the conflict between "us" and "them" otherwise manifested and enacted externally; in any case it is a requirement of any effective incentive system that power and responsibility should not be separated.

The quantification of degrees of "codetermination" and to a lesser extent of "profit sharing" raises conceptual and practical difficulties (however, see Cable 1985). By and large, we can observe a certain correlation

between the two: both codetermination and profit sharing are zero in the pure capitalist enterprises and unity in cooperatives and other forms of partnerships of capital and labor; minor forms of codetermination (or conversely of profit sharing) tend to go hand in hand with minor forms of profit sharing (or of codetermination); a high degree of one without the other is virtually unknown.

The combination of 100 percent codetermination (=self-determination) and 100 percent profit sharing (=net revenue sharing) obtained in cooperative firms, according to the conventional literature, is subject to economic stimuli of a somewhat "perverse" kind. These are primarily the following: restrictive employment (=membership) policies; destabilizing and Pareto-inefficient reactions (or at best inelasticities) to price changes and technical progress; and a low propensity toward self-financed investment (Ward 1958; Vanek 1970). In empirical studies of cooperative firms there is no incontrovertible evidence of these phenomena, which are probably partly offset by other economic (job security, growth-mindedness, etc.) and non-economic stimuli; but there is a presumption that—albeit in a weak form—the same tendencies and, in particular, employment restrictive policies might be associated with codetermination. We can also presume that workers' eagerness to press and ability to assert demands for codetermination, as in the case of other demands, increase as unemployment diminishes. Hence the employment-generating benefits of profit sharing can be at least partly offset by restrictive employment policies possibly associated with codetermination brought about by profit sharing and by greater proximity to full employment. Recent empirical studies suggest modest but sizable improvements in economic performance from codetermination and profit sharing (Cable and Fitzroy 1980; Estrin et al. 1984) when and where they occur, but there may have been costs that remained unobserved and, in any case, the improvements cannot be generalized.

## 14.5 Markets and Policy

Degrees of codetermination and profit sharing may well be regarded as desirable on "political" (as opposed to "purely technical") grounds such as equity and social peace. They may also be the best policy instruments in

the pursuit of public objectives such as stability, employment, and growth, in the sense of having the least cost in terms of public funds or offering the most attractive trade-offs between alternative targets. Otherwise, as Jensen and Meckling (1979, p. 474) argue for codetermination and one can also argue for profit sharing, if it were truly beneficial to both stockholders and labor no laws would be needed to force firms to undertake reorganization. Yet renewed and insistent calls for public intervention in favour of *profit sharing without codetermination* have been put forward by Weitzman in recent writings (1983, 1984, 1985a, b, 1986). The proposal has been enthusiastically received in certain academic and political circles and hailed as a breakthrough in the specialist press.

Weitzman's novelty, the foundation for this renewed fascination with profit sharing, is the rash assertion of two propositions. First, he propounds that long-run full employment equilibrium under profit sharing is associated with permanent but noninflationary excess demand for labor, which cushions off the economy from contractionary shocks and gives new dignity and status to labor. In adman's language we are told, for instance, that "[a] share system has the hard-boiled property of excess demand for labor, which turns into a tenacious natural enemy of stagnation and inflation. The share economy possesses a built-in, three-pronged assault on unemployment, stagnant output, and the tendency of prices to rise. This is a hard combination to beat" (Weitzman 1984, p. 144). Second, he asserts that even in the short run the share economy can achieve and maintain full employment. For instance: "The share system … has a strong built-in mechanism that automatically stabilizes the economy at full employment, even before the long-run tendencies have had the chance to assert their dominance …. [A] share economy has the direct 'strong force' of positive excess demand for labor … pulling it towards full employment …. [T]he strong force of the share system will maintain full employment" (1984, p. 97).

Were these claims well founded, an enlightened government possessing these truths would be justified in forcing profit sharing onto a yet unconverted and disbelieving public, thus achieving full employment, price stability, and growth at a single stroke. Unfortunately such miracles exist only for the uninformed and the faithful but do not bear the weight of sober scrutiny. First, excess demand for labor at full employment

cannot be sustained and can only be a temporary disequilibrium. Second, permanent excess demand for labor is inconsistent with lack of codetermination, and when this is introduced restrictive employment policies will alter the picture. Third, and most important, there is no guarantee that full employment can necessarily be achieved. Without these benefits the alleged "public good" merits of the sharing contract disappear.

## 14.6 Can Excess Demand for Labor Persist at Full Employment?

Suppose that the share economy reaches a state of full employment. Weitzman maintains the presence and persistence of excess demand for labor in long-run equilibrium on the basis of the following argument:

$$\text{labor total pay} = \text{marginal revenue value of labor productivity at full employment} \tag{14.1}$$

because long-run equilibrium must be full-employment equilibrium and because of the underlying homomorphism of profit-sharing and wage contracts in long-run equilibrium (Weitzman 1983). By definition of profit sharing

$$\text{labor total pay} = \text{fixed pay} + \text{share of net profits} \tag{14.2}$$

where fixed pay is greater than or equal to zero, and the share of net profits is greater than zero. It follows from (14.1) and (14.2) that

$$\text{marginal revenue value of labor productivity at full employment} > \text{fixed pay} = \text{marginal cost of labor to firms} \tag{14.3}$$

i.e., firms will wish to employ more workers than are available. A permanent state of excess demand for labor will exist that will protect full employment from contractionary shocks as long as shocks do not reduce

the marginal revenue value of labor productivity at full employment below the fixed element of pay, in which case the maintenance of overfull employment requires a reduction of the fixed element without cutting earnings as much as necessary in the wage regime.

There are three grounds for refuting this syllogism:

First, firms should be well aware that, whatever their pay formula, they can only attract workers by offering the going rate for labor (i.e., total pay) and should regard this, and not the fixed element of pay, as the marginal cost of labor. If firms behave as they should, excess demand for labor disappears.

Second, if firms regard the fixed element of pay as the marginal cost of labor, they should find its being lower than the marginal revenue value of labor productivity disquieting enough to experiment with alternative combinations of pay parameters without raising total pay above labor productivity. Risk-averse workers preferring fixed pay to potentially variable earnings of identical mean, risk-neutral, or risk-loving employers will reduce their labor cost by raising the fixed element of pay at the expense of workers' profit share; even without taking into account attitude to risk, it is plausible to expect managers to experiment with alternative pay parameters and not to rest until they have equalized their marginal cost and marginal value of labor:

$$\text{marginal revenue value of labor productivity at full employment} = \text{fixed pay} \tag{14.4}$$

which can only be reconciled with the definition (14.2) of a profit-sharing contract if the workers' share of net profit is zero: with the sharing component of earnings, the "share economy" also vanishes and reverts to the fixed wage economy without any excess demand for labor.

Third, workers perceiving excess demand for labor are likely to reduce their supply of effort and/or increase turnover—as they do in the only known instances of permanent excess demand for labor, i.e., Soviet-type economies (see Lane 1985)—if not right down to the point where their marginal product equals fixed pay, at least as close to that level as they are allowed to get by monitoring and supervising arrangements. This is

another mechanism which can reduce and eliminate excess demand for labor if it has occurred.

## 14.7 Can Codetermination Be Excluded at Over-Full Employment?

The lack of codetermination is an explicit precondition of Weitzman's claims[1] (though not of Vanek's, who does not claim full and over-full employment of labor and does not need this restriction). We know that it is possible to exclude workers from codetermination in the presence of persistent unemployment; such exclusion might be difficult at full employment, and it would certainly be very difficult with excess demand for labor, but the *persistent* state of excess demand for labor postulated by Weitzman should make the exclusion of codetermination, whether or not employment questions are directly involved, impossible without an authoritarian or military regime. This is not a moral, or legal, or legalistic proposition; it is a question of "practical politics."

Once workers have a say on output, employment, and pricing and related questions (investment, innovation, etc.), they will try and resist the very possibility of dilution of their own shares just as shareholders usually resist the dilution of share capital; for better or worse, such workers are likely to adopt, or will be tempted to adopt, other things being equal, restrictive employment policies in the possibly misguided and self-defeating purpose of raising or maintaining individual earnings. This is not a case *against* profit sharing, but rather an argument

[1] In the earlier version of his analysis, Weitzman takes a sanguine view of the possibility of keeping codetermination in check: "the bargaining power of labor unions is not a natural right…" (1984, p. 109); "the decisions on output, employment and pricing are essentially made by capitalists" in his model (p. 132); "I can see no *compelling* reason why a capitalist firm should be more prone to allow increased worker participation in company decision making under one contract form than under another" (p. 133; emphasis added). His latest version is more open-minded: workers' participation in decision making becomes not only possible but desirable as "a question of justice and practical politics" as long as it excludes *employment* decisions (1986; emphasis added). It is extremely hard to imagine *any* major decision, in which workers might have a voice that would *not* directly or indirectly also affect employment. Either this limitation or workers' participation would have to give way.

for not expecting that over-full employment, if achievable, can be sustained necessarily, i.e., an argument against the plausibility of Weitzman's model (see Nuti 1985).

## 14.8 Can Profit Sharing Guarantee Full Employment of Labor?

The foundation of Weitzman's claims on behalf of profit sharing is the assertion that, even in the short run, the share economy "delivers" full employment of labor.[2]

For a share economy to "deliver" full employment, three necessary conditions must be satisfied simultaneously:

1. The physical marginal productivity of labor at full employment must be positive.
2. The marginal revenue obtained by firms from that physical marginal product of labor must also be positive.
3. The fixed element of pay in share contracts must be flexible enough to fall down to the level of the marginal revenue product of labor at full employment, positive as it may be.

The first condition rules out the possibility of *classical* unemployment, i.e., due to lack of equipment, land, or other resources in the quantities necessary to employ all workers efficiently. Yet, after over a decade of deep and protracted recession, deindustrialization, and decapitalization, even advanced industrialized countries such as the United Kingdom or France cannot today be expected to be able to satisfy this condition as a matter of course, not to speak of Italy or, say, Spain, or of less developed countries. In his formal model Weitzman (1985b) postulates constant physical productivity of labor; this is a plausible assumption *up to near-full*

[2] "Resources are always fully utilized in a share system" (Weitzman, 1985b, 949). Real-world frictions, inertias, and imperfections are mentioned only to be exorcised and to reassert the full employment claim at least as a "natural tendency" (pp. 949, 952) of the share economy which, we are told, "delivers full employment" (1986). See also Weitzman (1984, p. 97).

*capacity,* but Weitzman gives no reason why capacity should be constrained by labor instead of other resources.

The second condition rules out the possibility of *Keynesian* unemployment, i.e., aggregate demand constraints making the marginal product of labor valueless before full employment is reached. Even if the first condition were satisfied, imperfect competition—which in all of Weitzman's work provides the environment in which the share contract is to operate—provides an excellent reason why firms might not give to additional physical products a positive value. Weitzman can assert that "a 'pure' sharing system not having any base wage would possess an infinite demand for labor" (1985b, p. 944), implying positive marginal revenue for any level of output because of the very special assumption that the elasticity of substitution among all goods is *greater than unity* (p. 938), which makes demand curves absurdly and indefinitely elastic even for imperfectly competitive firms. This proposition cannot have any claim to general validity.

Even if demand for labor *were* to be infinite in the pure share economy, i.e., with a zero fixed element of pay, it would not necessarily be infinite, or even large enough to reach full employment, for a positive fixed element of pay. Weitzman neglects the determination of the relative weight of the fixed and variable components of the share contract but recognises the impossibility of total dependence of pay on profit; yet he takes for granted, for no good reason, that the fixed element of pay can be compressed down to whatever is the full employment marginal revenue product of labor, which we do not even know for sure is positive.

It is a noncontroversial feature of the sharing contract, known from Vanek (1965), that the replacement of part of the wage by a profit share of identical average cost to firms will lead to greater employment, higher output, and lower prices—in the absence of large enough adverse feedback on investment (which Weitzman recognises as a possible short-run effect of the introduction of sharing) and in the absence of large enough feedbacks of accompanying codetermination on firms' employment policy. But there is a world of difference between higher employment and full employment, and another world of difference between full employment and persistent over-full employment; no serious work can afford to switch indifferently and cavalierly from one to the other.

## 14.9 Is the Share Contract a "Public Good"?

If the share economy could really guarantee, as general and necessary consequences of its establishment, the achievement and stability of full employment without adverse drawbacks, there would be a case for public policy treating the share contract as a "public good" to be pressed willy-nilly on an unenlightened public still largely unaware of potential benefits, as in the case of safe vaccination against infectious disease. The case for the share economy would not be much greater than that for enforced wage flexibility, which would also guarantee full employment and stability under the same circumstances. A downward flexible wage would not deliver excess demand for labor, but this would be a questionable achievement and would not be necessary to absorb contractionary shocks if wages were flexible; downward flexible wages would also require a greater fall of money earnings to achieve full employment in the short run and might be more likely to bring about adverse effects on aggregate demand. Otherwise, there would be little to choose between the two, except for the lower degree of public resistance that could be expected for share contracts with respect to wage cuts.

In fact if the share contract could really deliver and maintain full employment, while a wage economy could not, the greater variability of workers' earnings associated with profit-sharing over the cycle would disappear and, between firms, could be eliminated by labor freely redeploying itself at will across labor-hungry firms; the variability of employment would also disappear; workers would have de facto free access to a job in any firm of their choice, as in forgotten utopias (Hertzka 1890; Chilosi 1986). Thus it could be said that "a move towards profit sharing represents an unambiguous improvement for the working class" (Weitzman 1985b, p. 945). But we have seen that profit sharing cannot guarantee full (let alone over-full) employment. Without full employment, the higher variability of earnings associated with profit sharing remains and it may or may not be compensated by the higher mean value of employment probability and perhaps real earnings. Outside over-full employment, in fact, the share economy is just as vulnerable to contractionary shocks as the wage economy because, in spite of flexibility of labor

earnings in the share regime, the marginal cost of labor to firms (which is the fixed component of workers' pay) remains constant just as does the wage. Thus the higher stability of employment to be found in Japan simply cannot be the result of profit sharing, as Weitzman firmly believes, seeing that Japan has never known a state of over-full employment; higher employment stability would require workers' shares in gross national product (GNP) instead of their enterprise's profits.

The fact that the adoption of a share contract, without the guarantee of stable full employment, has a cost for workers eliminates the necessity, but not the possibility, of the share contract having "public good" features. A vaccine may be somewhat unsafe, its degree of unsafety being acceptable to all if vaccination is universal and all benefit from reduced exposure to infection, yet individuals can benefit from free-riding strategies and the enforcement of universal vaccination as a "public good" can still be beneficial to all. If labor contracts were negotiated exclusively at the level of individuals or firms, the external beneficial effects of the share contract might be lost from sight; but these external benefits—unlike the case of genuine "public goods"—are completely internalized in nationwide negotiations between associations of employers and employees. Admittedly the benefits, such as they are, of profit sharing may be still unknown to the public at large and deserve wider publicity. But it is counterproductive to foist a good medicine on a skeptical public by claiming that it can guarantee longevity or immortality. At the first signs that such excessive claims are unfounded, the medicine may be thrown away despite its real lesser benefits.

## 14.10 Conclusions

Codetermination and profit sharing are departures from two standard features of labor contracts: workers' subjection to employers' authority, and a fixed money wage for labor time. These departures have positive and negative implications for employees and employers who are interdependent and—within the limits set by government in its pursuit of policy targets—are balanced out directly or through compensatory adjustments

in other parameters of the labor contract by market transactions determining the actual degree (if any) of codetermination and profit sharing.

Codetermination reduces labor disutility from work, the frequency and intensity of conflicts, and workers' exposure to risks outside their control. Profit sharing raises labor productivity through workers' cooperation and collective supervision, stabilizes profitability at the expense of greater variability of workers' earnings, and, above all, raises employment and output levels for a given level of workers' earnings while reducing inflation. The benefits from profit sharing, known from Vanek (1965), have been oversold in recent literature through claims that, in the absence of codetermination, profit sharing necessarily delivers full employment and persistent excess demand for labor, with the side-benefits of improved labor status, resilience of full employment in the face of shocks, and growth. These alleged benefits being external to firms, the sharing contract is regarded as a "public good" (Weitzman 1983, and elsewhere, cited above).

Closer scrutiny shows that excess demand for labor cannot persist at full employment due to short-term adjustment of pay parameters and/or effort supply as well as to the firm's perception of the labor constraint. Lack of codetermination is inconsistent with full and persistent over-full employment, and its introduction would alter labor demand through restrictive employment policies preferred by employed workers. Profit sharing cannot guarantee full employment of labor unless classical and Keynesian unemployment are specifically excluded and the fixed element of pay is sufficiently flexible. It follows that there is no guarantee of greater stability of employment and earnings; the profit-sharing contract is not absolutely superior to the wage contract, and it is up to contracting parties to consider and weigh the advantage and disadvantage in degrees of profit sharing and of codetermination which, to some extent, will be associated with it, in individual and national negotiations between employers, employees, and their associations in the labor market.

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# 15

# On Traditional Cooperatives and James Meade's Labor-Capital Discriminating Partnership

Domenico Mario Nuti

## 15.1 Introduction

The traditional cooperative enterprise—whether in Yugoslavia or France, Italy, or Britain—presents three main distinctive features:

1. *self-management:* Members have exclusive participation in decision-making, on equal terms (i.e., one man-one vote), directly or through

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representative organs, on all medium- and long-term issues such as labor organization, employment (i.e., size of membership), income distribution, investment levels, and finance; only day-to-day management is left to executives, who simply implement these decisions. A circular structure of authority (from members upwards to representative organs and managers and downwards again on members as employees) replaces the hierarchical structure of the capitalist enterprise. Thus members have the decision-making powers of entrepreneurs.

2. *Income-sharing:* Members participate in the distribution of net income (defined here as net value added less capital rentals and interest on loans), also on equal terms except for the quantity and quality of labor services contributed by members, and their relative contribution (if any) to enterprise capital. Thus members draw an entrepreneurial income, that is, a residual income after contractual fixed obligations have been met. Together, self-management and income-sharing give members the exclusive role of entrepreneurs, though possibly an incomplete entrepreneurial role in view of the social character of cooperatives' capital (see next point).
3. *Social capital:* There are usually restrictions on the distribution of capital to members, at least for internally financed capital accumulation [which in Yugoslavia is termed "members' past labor," including investment in other enterprises; see Uvalic (1987)]. These are often accompanied by restrictions on the payment of interest on members' capital contributions when they exist. These restrictions originate in the historical roots of cooperatives as mutual societies providing a service to members on more competitive terms than otherwise available: hence the implication that profit should not exceed the interest rate so that if, after members' capital contributions have obtained an interest, there is any internal capital accumulation it should be for the general benefit of future members or for the whole society. The restrictions are also rooted in the works of early nineteenth century utopians, such as Robert Owen, Charles Fourier, Comte Henri de Saint-Simon, and especially Philippe J.-B. Buchez, a catholic Saint-Simonian who regarded a cooperative more like a monastic order

than as an enterprise.[1] In Yugoslavia these restrictions are reinforced by the obligation of the enterprise to maintain the capital initially conferred by the state at the time of changeover to the new system; initially state capital was subject to a rental-like tax—first eroded by inflation then abolished outright—however, compensated since 1975 by an obligation to maintain also the real value of subsequent increments in net capital of the enterprise. In capitalist countries the social connotations of cooperative enterprises lead also to restrictions on their activity (often limited to services to members) or the acceptability of the profit motive (excluded, for instance, by the Italian constitution, art. 45). These restrictions are usually compensated by lower tax rates than for traditional enterprises; this in turn discourages the development of more capitalistlike cooperatives even when they are allowed by legislation—a development usually opposed both by representatives of capitalist firms for fear of competition and by radicals committed to the social-solidarity ideals of early nineteenth-century utopians.

There are differences, of course, between different regimes, on issues such as whether and on what scale nonmember workers can be hired at a fixed wage; statutory limitations on the distribution of net income (more liberal in Ireland and Holland, for instance, than in other countries); extent of members' participation in the capital of cooperative enterprises [which is greatest in Mondragon cooperatives (see Thomas and Logan 1982; Wiener and Oakeshott 1986) and zero in Yugoslavia]. However, these general features, in one form or another, are typical and amount to what could be called a form of *microsocialism,* not in a derogatory sense

[1] Charles Fourier intended to limit the profit share in value added to one-third; Henri de Saint-Simon wished to abolish profit altogether and opposed inheritance; Robert Owen's enterprise also limited profits; for an extensive survey and references, see Landauer (1959, Vol. 1, Ch. 1, pp. 21–71). Philippe Buchez (1831) envisaged a workers' cooperative reinvesting 20% of net income, the resulting acumulation belonging not to members but to the cooperative, considered as "indissoluble, not because individuals would not be able to detach themselves from it, but because this association would be made eternal through the continuous admission of new members. Thus this capital would not belong to anybody, and would not be subject to inheritance laws." This is precisely the dominant cooperative regime today; see the extensive introduction to Morley-Fletcher (1986).

but simply to emphasize the presence at the microeconomic level of the standard socialist premises—democratic planning, egalitarianism, social ownership of the means of production—in an environment that otherwise could be indifferently capitalist, market socialist, or centrally planned.

Cooperative enterprises, beside the nonconflictual implementation of widely shared social-democratic and almost philanthropic values, are expected to provide self-help in the fight against unemployment, enhance downward flexibility of incomes and therefore facilitate adjustment to exogenous shocks, harness entrepreneurship, sharpen competition, improve labor relations, and raise work satisfaction and productivity.[2] The early and excessive claims of cooperative enthusiasts such as Charles Gide were sharply rebuked by Maffeo Pantaleoni (1898; encouraged by Vilfredo Pareto, see Morley-Flecher 1986, pp. 56–57), who saw no difference between cooperative and conventional enterprises—a view that is now restricted to the comparison of long-run equilibria (see Morley-Flecher 1986). Modern economic analysis, on the contrary, while not denying the possibility of nonquantifiable major or minor gains from participation in income and decision-making, has been quick to identify a considerable number of at least potential drawbacks, consisting in various forms of inefficiency and instability in the short and medium run. Most propositions about the drawbacks of cooperatives are drawn from theoretical analysis, rather than direct observation; indeed the cooperative enterprise is very much like the bumblebee: in theory it should not be able to fly, but then bumblebees are not the most successful examples of flying machines; there is a lot of room for improvement in their design, as there is in that of cooperatives.

[2] An additional advantage is suggested by Jacques Dreze (1985), who expects cooperative enterprises also to provide their members—by choosing an output mix of contingent goods different from that of a capitalist firm—with insurance against otherwise uninsurable (or only more expensively insurable) risks. As an example, we may think of cooperative farmers choosing, like sharecroppers do, a greater diversification of output than dictated by maximization of average profits over the years, in order to reduce the downside risk of food scarcity otherwise resulting from greater specialization, moreover, in cash crops subject to price fluctuations. However, it is hard to think of other relevant examples, especially outside agriculture, that might make this an important and distinctive factor of cooperative enterprise behavior.

This paper reviews the drawbacks of traditional cooperatives, labeled after Benjamin Ward and Jaroslav Vanek for their pioneering work (Sect. 15.2); illustrates James Meade's analysis of the alleged ultimate source of most of these drawbacks, namely, the egalitarian foundations of cooperatives (Sect. 15.3), and his proposals for an inegalitarian cooperative (Sect. 15.4) and a labor-capital discriminating partnership (Sect. 15.5) expected to eliminate the economic disadvantages of cooperatives. I will then criticize—apart from the unlikely rejection, by current and prospective cooperative members, of the long-established principle of "same pay for the same work"—the suggested mode of operation of Meade's institutions and their suitability for realizing their purposes (Sect. 15.6) and propose an alternative solution to the same problems (Sect. 15.7).

## 15.2 The Theoretical Drawbacks of Ward—Vanek Cooperative Enterprises

In the last thirty years a vast theoretical literature (reviewed by Hill et al. 1981; Pettman 1978; and Bartlett and Uvalic 1986) has discussed seven main alleged economic drawbacks of cooperative enterprises. It is necessary to review them here because their persistence is affected by the alternative distribution arrangements discussed in the following sections:

1. The unsuitability of cooperative enterprises outside labor-intensive sectors. This is due to worker-members' lack of substantial own capital (otherwise they would not have to work) to invest or to be used as collateral against loans or rental contracts (for instance, see Meade 1972).
2. The unsuitability of cooperative enterprises for risky ventures (for instance, in sectors subject to sudden large fluctuations) in view of their inability -being tied to one or at most a couple of enterprises—to diversify risk (for instance, see Meade 1972). These two factors reinforce each other: lack of capital makes cooperative workers particularly vulnerable to risk and therefore risk averse; this vulnerability makes potential lenders all the more unwilling to lend and keeps cooperatives out of capital-intensive sectors. These

first two propositions correspond to uncontroversial direct observations: nobody expects oil tankers or steel mills to be operated by cooperatives.

3. In competitive conditions, restrictive employment policies on the part of any cooperative enterprise paying out incomes per member higher than the supply price of labor outside the cooperative. This is due to presumed maximization of net distributable income per member: thus employment will always-be equal to or lower than that provided in the same conditions by a capitalist enterprise, since a cooperative enterprise can pay no less then that supply price or members would leave, but it can pay more, in which case it would operate at the (lower) level of employment than the capitalist firm would offer at an equivalent wage. This proposition is one of the set pieces of self-management literature ever since Benjamin Ward (1958) first drew the implications of cooperatives' self-centered behavior. Implicitly this analysis rests on labor market clearing: if wage earners are "rationed" in their ability to sell their labor at the going wage, cooperative enterprises might provide greater employment than their capitalist counterparts because of the greater downward flexibility of their members' incomes and their ability to operate in conditions where a capitalist enterprise would fail (see Meade 1982). This qualification is demonstrated by employees threatened by plant closure often offering to keep the plant open by taking it over collectively; but if cooperative enterprises were only an instrument for enforcing labor income discipline in a recession they still could not claim general viability.[3] The incentive to behave as predicted by Ward must be there, even if it is resisted or weakened, or even overcompensated by other considerations.
4. More restrictive monopolistic behavior than in the case of capitalist firms, due to maximization of monopoly profit per person instead of total profit. In fact, in the neighborhood of maximum profit a small output fall would have no effect on profit but would perceptibly reduce labor inputs, thereby raising profit per person. This tendency makes cooperatives most unsuitable to operate public utilities. More generally cooperatives, while unable to exercise inflationary pressure

[3] See Morley-Fletcher (1986).

through wage claims, would naturally exercise inflationary pressure directly on prices, so that they would have to be restrained by competition more than their capitalist counterparts (see Meade 1982). Jaroslav Vanek thought this condition would be fulfilled given the smaller size expected of cooperatives, but there is no evidence of cooperatives being significantly smaller than other firms in their sector of operation; indeed the contrary is true in Yugoslavia, where firms on average are larger than their counterparts in capitalist countries (see, for instance, Sacks 1983).

5. Inefficient allocation of labor in the short run, which rather overshadows the possibility of obtaining the same long-term competitive equilibrium—mutatis mutandis—as any market economy. This Pareto inefficiency is due to perverse response to changes in product price, technology, and capital rental. In fact, for a cooperative in membership equilibrium:

$$\frac{\text{total revenue} - \text{fixed charges}}{\text{membership}} = \text{marginal revenue product of labor}$$

If the left-hand side (average earnings) were lower than the right-hand side it would pay to expand membership, while in the opposite case an increase in earnings would result from a smaller membership. Now, starting from this equilibrium position a product price rise, an equivalent Hicks-neutral rise in labor productivity (i.e., at the same rate regardless of the capital/labor ration), or a decrease in capital rental all raise average net income per person relative to marginal product, because the fixed charge is not indexed to the price of the product. This provides an incentive further to raise average earnings per member through a reduction of membership size if at all possible, instead of encouraging greater employment and output in the short run, in response to the improved relative conditions of the sector in question; the opposite happens for a product price fall and capital rental rise; either way, short-term adjustment leads to Pareto inefficiency. This is another set piece of Ward-Vanek analysis, illustrating the necessary implications of income-per-person maximization in the one-product-one-input-other-than-labor case; Pareto-inefficient adjustment may but does not necessarily happen in the

many products and/or many-inputs case (Vanek 1970), but even if then membership changes are in the right direction, they will be smaller than employment changes in an equivalent capitalist enterprise.

Instability may ensue from this perverse adjustment process if the resulting downward-sloping supply curve is less steep than the demand curve, demand increases raising prices and inducing a fall instead of a rise in supply (in which case the reverse would happen for demand falls). In any case any move toward a new equilibrium has to take place through the withdrawal or the birth of new enterprises, instead of through adjustments within existing enterprises.

The macroeconomic implication of this drawback is the ineffective and inflationary nature of aggregate demand management in an economy dominated by cooperative enterprises, and its greater price fluctuations as a result of given fluctuations in monetary expenditure, though this is partly compensated by a greater resilience of full employment if it were to be reached; while a minority cooperative sector behaving anticyclically will function as automatic stabilizer. Another implication of short-run maximization of income per person, neglected in the literature [except for Bartlett (1987), at least partly], is the failure of domestic currency devaluation as a policy instrument for improving the trade balance and its inflationary impact, due to supply rigidities with respect to prices in the short run.

6. The inefficient use of capital in the medium run, due to bias in project selection, that is, the possible rejection of investment projects having a positive present value (at the supply price of labor) if they lower average earnings, and the possible acceptance of negative-present-value projects if they raise average earnings (Vanek 1970). Positive-value projects may be rejected if preinvestment income per member is greater than the supply price of labor, and the positive present value is obtained only for lower earning levels though no lower than the supply price of labor; this happens when an employment-expanding project involves a membership increase proportionally greater than the associated increase in the present value of expected total earnings. Conversely, a negative-present-value project will be attractive to a cooperative if it involves a membership decrease proportionally greater

than the decrease it causes in the present value of expected total earnings. The difference with respect to capitalist firms can be summarized thus:

| | | | | |
|---|---|---|---|---|
| *PV* at the supply price of $L$ | $>0$ | $>0$ | $<0$ | $<0$ |
| Employment growth | $>g$ | $<g$ | $>g$ | $<g$ |
| Capitalist enterprise | Yes | Yes | No | No |
| Cooperative enterprise | No | Yes | No | Yes |

(where $PV$ = present value of the project; $L$ = membership; $g$ = associated growth in the present value of expected total earnings).

This involves a bias against the generation of new employment through investment in existing firms, contrary to what is expected of the growth of the cooperative sector. The most attractive investment for a cooperative enterprise is financial, because it does not generate any employment at all; hence the built-in tendency, or at least temptation, for a cooperative to degenerate into a financial holding. Indeed, in the absence of other constraints, this degeneration process if unimpeded would lead eventually to a one person financial holding: as income from financial assets replaces income from production, further opportunities are created of raising net income per member through a reduction of membership parallel to the disinvestment in production activities.

7. Even in the absence of such distortions in the selection of investment projects, a bias against the reinvestment of net income can be expected, since a cooperative member is entitled to the current benefits of a project only for the duration of his or her membership and does not participate in subsequent benefits or in the residual capital value of the investment (including its possible appreciation due to success greater than expected, or simply to inflation) at the time of his or her departure for whatever reason.

Comparing the reinvestment of a unit of net income within the enterprise at an internal rate of return $r$ or its distribution to members who can consume it or place it in savings deposits at a lending rate $i$, the

cooperative member of expected tenure $T$, unless swayed by other considerations, will be in equilibrium when

$$r = i + a$$

where $a$ is the percentage annuity obtainable from investing today the present value of a unit in $T$ years. But then

$$i + a > i$$

and therefore

$$\mathrm{r} > \mathrm{i}$$

If $i$ is also the cost of credit finance to the cooperative, reinvestment will fall short of the optimum level corresponding to its opportunity cost to members. Hence the occurrence of underinvestment out of self-finance to an extent governed by the age structure of members, undue preference for borrowed funds, and the particular importance of financial intermediaries to avoid the possibility of underinvestment in the whole economy [see, for instance, Pejovich (1976) and Furubotn (1985)].

These contentions can be weakened, but seldom eliminated, by introducing further qualifications. The restrictive bias in membership recruitment may be offset by solidarity with the unemployed, pressure from local authorities, or political interference. Perverse response to output price, technical progress, and capital rental is constrained by the tenure of members and (as mentioned above) reduced by substitutability in both output mix and choice of inputs, though rigidities would still result. The birth of new cooperative enterprises attracting structural profits away from existing ones, and labor redeployment through mergers (Nuti 1986a), will reduce the short-term inefficiency of the cooperative sector; anti-reinvestment bias will induce greater interfirm mobility of funds, though the possibility of capital goods in turn being produced by cooperatives amplifies short-term instability (Meade 1982). Growth-mindedness will induce cooperative managers, like their capitalist counterparts, to push for reinvestment; concern for enterprise safety and employment prospects may induce members to support reinvestment in

spite of shorter-term benefits from paid-out income. The possibility of borrowing on cheaper terms if there is own collateral and self-finance will induce at least some reinvestment; loans to firms are usually more expensive than the interest on households' saving deposits, narrowing or even reversing the gap between interest on individual savings and rate of return requested by members on self-financed enterprise investment; but then the increase in the value of assets if investment is successful is not fully (if at all) distributable and cannot be included in the rate of return.

While there is little or in any case inconclusive empirical evidence of many of the alleged drawbacks occurring in practice,[4] there can be no doubt that their danger, at least as a tendency admittedly partly or fully compensated or even possibly overcompensated for, has been well substantiated and cannot simply be dismissed (see, for instance, Horvat 1986b) by appealing to the lack of sufficient incriminating evidence. One way of eliminating these drawbacks is Weitzman's proposal of income-sharing without self-management or job security (and implicitly without the social restrictions on the distribution of capital and profits; Weitzman, 1983, 1984, 1985a, b, 1986). Weitzman's claims and overclaims have been discussed elsewhere (see Nuti 1986b, 1987a, b, c) and will not be considered here. The other is Meade's proposals for introduing inequality among members in both decision making and income-sharing.

## 15.3 James Meade's Diagnosis

Meade (1972, Section III) is intrigued by what causes the restrictive employment policy, monopolistic bias, and perverse responses of cooperative enterprises. He suggests three main causes:

1. The fact that in the cooperative the variable factor hires fixed factors, instead of the other way round as in the capitalist firm. This puts the

[4] Empirical evidence from Yugoslav and other labor-managed enterprises confirms phenomena such as high capital intensity, preference for credit finance, and inflation acceleration at times of recession, which are consistent with theoretical predictions; however, these may or may not be the direct consequence of self-management and are consistent with other hypotheses [see, for instance, the exchange between Horvat (1986a) and Madzar (1986)].

burden of adjustment to change on medium-term capital accumulation instead of short-term changes in labor employment; a cooperative of machines, as it were, could not adjust machine membership as easily and quickly as workers' membership can be changed, and would adjust the hiring of workers to work with them immediately, without perverse responses in the short run.

2. The fact that the cooperative maximand is not an absolute magnitude (profits, or their present value) but a *ratio* calculated per unit of input. A capitalist firm maximizing the rate of profit per unit of capital employed, or an imaginary cooperative of machines maximizing profit per machine would be as monopolistically restrictive as the workers' cooperative. However, the capitalist firm does not maximize the profit rate; it can be said to do so for a given capital, when it coincides with total profits maximization; but the capitalist firm does not (certainly should not) choose its investment so as to maximize its overall profit rate. Nor does the joint-stock company maximize profits per machine, as a hypothetical cooperative of machines; it maximizes profits per share.[5] In order to maximize profits per share not only is labor hired when its marginal-revenue product exceeds the wage, but machines are bought or rented as long as they contribute a positive profit, even if this lowers the average return per machine or the average profit rate on investment in machines. The joint-stock company is inegalitarian-Meade argues—because "while all shareholders are treated equally, not all shareholders 'own,' as it were, the same number of machines per $100 suscribed in money capital" (1972, p. 420). This observation leads Meade to the ultimate cause of the peculiar expected behavior of cooperatives, namely:
3. Income equality among cooperative workers, with newcomers being given a share equal to that of older members, as opposed to the inequality of profits per machine in the joint-stock company when a decision is taken to rent or buy a new machine. Also, in the joint-stock

[5] The essential significance of this difference apparently struck James Meade while he was lying sleeplessly in bed one evening in India, just in time to correct the next morning an assertion to the contrary he had made the previous day at a seminar at the Delhi School of Economics (see Meade, 1972, p. 418, footnote).

company there is inequality between the profit share earned per unit of financial investment by older shareholders with respect to the terms offered to new shareholders brought in to finance investment in machines that earn a lower rate of profit than machines already installed. Ultimately, Meade argues, what saves the joint-stock company from the kind of problems arising in a cooperative enterprise is inequality between machines, and the parallel inequality between profit shares per unit of investment enjoyed by different shareholders according to the success of the venture at the time of their joining.

This diagnosis leads to a natural cure: the introduction of a similar inequality in the cooperative enterprise. Two kinds of new institutions are thus generated: the *inegalitarian cooperative* (Meade 1972) and, more generally, the *labor-capital discriminating partnership* (Meade 1982, Ch. 9 and Appendix E, 1986a, b).

## 15.4 The Inegalitarian Cooperative

James Meade proposes a labor partnership differing from the traditional cooperative in the inequality of members depending on the conditions prevailing at the time of their joining the cooperative. Founders presumably stipulate equal shares, but new members are hired at an income equal not to current average earnings per member but to the value of labor marginal-revenue product, that is, new members are given a number of "shares" such as to guarantee that level of current income, and are exposed to its fluctuations per share for the rest of their membership.[6]

The object of the cooperative now becomes the maximization of income per share. At the cost of income inequality between members,

[6] Meade's inegalitarian cooperative might be regarded as similar to the models of cooperatives with hired labor discussed by Ben-Ner (1984) and Miyazaki (1984), with the difference that Meade's cooperative offers a continuum of earnings from the highest to the lowest paid, while Ben-Ner and Miyazaki divide workers into two types only, that is, members and nonmembers. However, the total absence of hired labor is an important distinctive feature of Meade's cooperative, sufficient to differentiate it radically from labor-hiring cooperatives. Moreover, hired labor is somewhat anomalous for a cooperative, in the sense of being a partial regression to the capitalist enterprise.

and the inequality of voting power involved in unequal shares, most of the drawbacks of cooperatives are eliminated: unsuitability for (1) capital-intensive and (2) risky ventures, and (7) reinvestment aversion, remain, while

3. Restrictive employment policies end. Any worker whose supply price is no higher than the marginal-revenue product of labor will be offered employment; the system produces the kind of labor income flexibility that to mainstream economic literature is a precondition of full (or fuller) employment.
4. The overmonopolistic bias of cooperatives ends, again because total earnings of existing members are maximized, not earnings per person, seeing that new members do not get more than their contribution to additional monopoly profits.
5. When a rise in product price lifts average earnings more than labor marginal-revenue product, the partneship will recruit new members instead of seeking to reduce its size—at an income lower than that of existing members but higher than offered before the price rise. Hence no perverse or rigid response ensues. The same will happen with technological change, or rental change. There will be none of the macroeconomic implications of perverse responses, nor any need to rely exclusively on the birth of new firms to move towards equilibrium.
6. There will be no labor-saving bias in the selection of investment projects, since lower than average earnings can be offered not just for the current period but for the rest of new members' working life within the unequal partnership (though Meade has never shown awareness of this kind of problem arising, asserting instead the equal attraction of credit-financed investment even in the traditional cooperative enterprise).[7]

[7] See, for instance, Meade: "The purchase of a new machine by a cooperative should be to the advantages of all the members if the discounted cash flow from the machine (using the rate of interest at which it could borrow funds) were greater than the cost of the machine" (1972, p. 217). As we have seen above (Section 2, point 4) a positive present value at the supply price of labor is neither necessary nor sufficient for cooperative investment.

Meade advocates provisions for workers leaving the partnership: they may be "bribed" to leave voluntarily, to the benefit of all parties, if their marginal revenue product becomes lower than their average earnings (as would result from a product price increase); they may also, however, have to compensate those who remain, if their departure leads to a fall in average earnings per member and jeopardizes the cooperative's ability to repay loans or pay fixed charges. This penalty on departure goes both against the notion of limited liability, presumably not ruled out by cooperative membership, and against the basic freedom of labor mobility that workers have always enjoyed since the advent of capitalism. There seems to be no need for members to take on more personal responsibility for their cooperative's loans than is the case for joint-stock-holders and, in any case, this can be stipulated at the time loans are taken. Unless at the time of joining members have specifically taken on personal responsibility for the cooperative's liabilities, if one member's departure makes the cooperative insolvent and the member cannot be replaced, the cooperative simply will have to go into liquidation.

The removal of the remaining drawbacks can be obtained by what Meade calls the labor-capital discriminating partnership (already outlined in the 1972 article and developed in subsequent work), which generalizes the system to members contributing capital, including the recognition of capital contributions of member-workers in the form of self-financed investment (Meade 1982, Appendix E, 1986a, b).

## 15.5 The Labor-Capital Discriminating Partnership

A process of instant transition from traditional capitalist firms to labor-capital discriminating partnerships is described thus (Meade 1986b, Section 7). Each factor is offered, instead of the income it would get under current arrangements, a number of shares such that the same income level is obtained under the guise of dividends out of the firm's net income. Two types of share certificates are envisaged: capital shares to those who would have received profit, rent, interest (i.e., a kind of

"debt-for-equity swap") and labor shares distributed to employees, pro rata so as to exhaust all of the enterprise revenue (after-tax net value added). All shares carry an entitlement to the same kind and amount of dividend. There would be no immediate effect on income, but subsequently all—including former recipients of contractual income—would participate in the success or failure of the enterprises. However, capital shares would be like ordinary shares, freely tradable on the stock exchange or elsewhere, while labor share certificates would be tied to the individual employee and surrendered and canceled at retirement or voluntary departure. Labor shares would be retained by redundant workers until they found suitable alternative jobs as long as they remained available for work, a provision guaranteeing income if not employment. The scheme therefore differs radically from employee share ownership plans (ESOPs), where typically part of employee earnings are paid into a trust fund used to buy the company's shares and to hold them either to pay cash benefits to all employees therafter or to distribute them to employees after a period of time or upon retirement (see Meade 1986a, pp. 116–117).

The employment of new workers or additional capital would be covered by additional issues of the appropriate share certificates, which would only be agreed upon by current shareholders if it added something to dividends per share. The problem would still arise of the riskiness of labor share certificates, but risk-averse workers could reduce this by settling for part of their income to be contractually fixed, as for other current inputs.

The usual reinvestment aversion would be avoided by issuing either free debentures (Meade 1982) or free capital shares corresponding to self-financed investment, prorata to all labor and capital shareholders (Meade 1986a), or at least to capital shareholders, while labor shareholders get their share of profits in cash (as in Meade 1986b). Debentures would also have to be issued to members in lieu of dividends for the part of income consisting of capital gains, if these were included (as in theory they should be) in the definition of income; but then capital losses would also have to be taken into account and be offset against dividends. A competitive periodic revaluaton of capital [such as that proposed by Nuti (1988a) for a socialist economy lacking developed financial markets, especially secondary markets] would be helpful in trying to calculate profits correctly by

adding the change in net capital assets to distributable income; though Meade (1986b) at most regards real capital gains as part of distributable profits, so that this indexation of capital shares gives them a questionable extra protection not enjoyed by labor shares.

In the discriminating partnership, capitalists could contribute risk capital in the amounts required by the capital intensity of output, seeing that they would have a voice in the management of assets; they would also lend more readily than to ordinary cooperatives. All the residual problems of traditional cooperatives left open by the inegalitarian cooperative would be disposed of and none of the other problems would reappear.

There would be a few minor new problems. Meade envisages the possibility that, in case of losses, labor share-holders may have to pay a net amount before they can leave, if the burden of losses on retiring workers exceeds what they are owed by the enterprise on other grounds; apart from the objections raised above for the inegalitarian cooperative, we can observe that if this case occurs the net assets of the partnership must be negative and, therefore, it must go into liquidation rather than rely on retiring workers to pay off their share of net liabilities.

Workers might deliberately work badly to make themselves redundant, or genuinely redundant workers may claim that they cannot find a comparable job; provisions stipulating continued availability to refill the same post should take care of this. There would be a remaining conflict at the time of switching over to the new system, to freeze the shares at a given level, but this would "involve a once-for-all conflict" (1986b, p. 48). Another conflict may arise over enterprise liquidation being variously attractive to capital and labor share-holders; compensation to workers may have to be paid, unless they have been given capital shares for their past participation in self-financed investment. Investment in social amenities may remain controversial, but their provision would probably raise productivity and the conflict is probably neither sharp nor large. Promotions of deserving workers through higher fixed payments or new share issues also may be a bone of contention, but Meade expects consensus to arise from the overall benefits obtainable from such promotions. The intermittence, variability, and unpredictability of workers' dividends could be dealt with by frequent fixed payments subject to yearly

adjustments (as in Yugoslavia, the weekly or monthly advance, *akontacija),* through some kind of dividend equalization fund.

Meade is untypically sanguine about systematic gains from the new institution: "If … there was a substantial shift from fixed wage to partnership shares, the advantages of the new organisation could be very substantial. Many basic conflicts of interest between labor and capital in reaching decisions about employment and investment would be resolved. Decisions to expand employment so long as there were available unemployed workers would not be impeded by the need to negotiate a reduction of pay for existing workers" (1986b, p. 42). Some residual conflict might remain over self-financed accumulation, over indexed capital shares, or over the possible payment of dividends to workers in the form of securities, but the progress would be undeniable.

The purpose of the scheme is not that of "promoting a property-owning democracy" but to make "workers become risk-bearers together with the entrepreneur capitalists" if they wish (1986b, pp. 54–55); in order to induce them to accept risk, tenure is attached to labor employment. "Any reduction in demand for the product of the industry would be met not, as in a Capitalist Wage Economy, by a reduction in employment and growth of unemployment but by a reduction in prices and in the dividends payable to all workers and capitalists" (1986b, pp. 42–43). This is Weitzman's ideal of flexible incomes and stable employment, without his overclaims and without taking away from workers their voice in enterprise management or job security. Like Weitzman, Meade invokes externalities to justify initial government subsidization of the proposed institution: the necessity of its introduction on a large scale to stabilize employment and reduce individual risk, the need to encourage firms that have a large share of intermediate inputs in the value of output; and the diffusion of the burden of adjustment through income flexibility over a large number of firms (1986b, pp. 56–57). If the promises of this institutional engineering could be fulfilled, the scheme would certainly be worthy of public support, especially as part of the package including also a socially guaranteed minimum income financed out of state capital, put forward by Meade (1988) in his project for the "partnership economy."

## 15.6 Viability and Effectiveness of the Proposed Institutions

There is a simple—though no less insurmountable for that—criticism to Meade's construct, namely, that workers are unlikely to reject the long-established principle of "same pay for the same work".[8] While Meade himself readily formulates and accepts this criticism, when new institutions are proposed their clash with established customs and ways of thinking cannot be regarded as a final objection if these institutions can offer tangible net improvements in other ways. Such improvements may be partly offset by the adverse effects, on productivity and labor peace, of a system perceived to provide "unequal pay for equal work," whereas the separation of labor pay and dividends makes inequality of income more acceptable if it derives from the number of shares held and associated claim to profits. However, this objection is simply a way of putting a price tag on those old ways and customs, and asking whether they are worth preserving at that price. Hence it is a subjective ground for criticism, not a final argument against the proposed innovation. Effective criticism requires arguments against either the suggested mode of operation of the proposed institutional innovations, or their suitability for achieving their purposes.

Meade's fundamental propositions about the inequality of joint-stockholders and the machines/workers analogy neglect *the real difference between cooperative workers and either machines or joint-stock-holders: the time horizon encompassed by contracts.*

Machines are bought or rented on predetermined terms over a long period of time—a difference in practice close to but not identical to that between fixed and variable factors, for variable factors other than labor can be acquired on a long-term (future or forward) contract, while labor cannot. The capital contribution of initial stockholders is forever (or until

[8] This is the issue, rather than inequality as such. In fact, here with respect to the traditional cooperative system there is greater inequality within the enterprise, but potential inequality between cooperative enterprises is probably reduced by greater mobility of labor across enterprises; in any case it does not necessarily follow that there will be more inequality, however measured, in the discrimination partnerships economy, where there may be more sources of inequality but not necessarily more unequal distribution of income.

liquidation) incorporated in their shares; initial shareholders can recover some of their capital, or even more than they have put in, by selling their share if they find a buyer who takes their place on the same terms; if there is no buyer, shareholders have to keep their shares or can just throw them away. Workers are seldom offered long-term contracts and never have to fulfill them; they cannot be incorporated in shares in the same way as capital because this would imply an obligation—for them and their successors forever or until liquidation—to work as well as a right to a dividend, and they could only get out by paying a substitute to take their place. Yet in order to construct cooperatives really equivalent to a mirror image of joint-stock companies, workers would have to enter a contract of precisely that kind, while capital was provided only on short-term loans at a spot interest and fixed capital on short-term leases, both funds and fixed assets remaining liquid and free to leave at any time though possibly with the option to stay at predetermined conditions.

The implausibility of this construct should highlight the true and inescapable difference between the position of capital and labor, whether in joint-stock companies or in discriminating partnerships. Once the feudallike compulsion to supply serf labor is removed from it, however, we could have workers supplying their own labor without the risk of having to work against their wishes (like privileged shareholders not risking their capital), able to transfer their jobs (i.e., their membership and the associated obligation to work) at a price to others. This institutional setup has been investigated by Schlicht and von Weiszacker (1977) precisely in this context, that is, in a search for viable risk-financing provisions in labor-managed enterprises. Jobs in this setup are bought by workers from other workers or from expanding firms: “These tradable job rights are the precise analogue of tradeable shares in a capitalist environment” (Schlicht and von Weiszacker 1977, p. 60). An analogous proposal is put forward by Sertel (1982, Ch. 2, on "a rehabilitation of the labor-managed firm"). This system may be unpalatable or at any rate unrealistic as a possible arrangement for industrial labor in large-scale production, but is not all that absurd: it is, after all, the system prevailing in professional partnerships, and even in conventional cooperatives sometimes there is a de facto, if not de jure, ability to nominate a successor or to transfer one’s job to a relative.

Schlicht and von Weiszacker presume that "holders of these job rights will make decisions in accordance with the long run interest of the firm, because they want to maximize the present market value of their tradable job rights" (1977, p. 60; a similar claim is made by Sertel 1982, Ch. 2, relying on a market for workers' partnerships). This is not so; here these authors make precisely the kind of mistake carefully avoided by James Meade: maximization of return *per job,* that is, per physical unit of input, is not the same as profit (or present-value) maximization (see Sect. 15.3). The value of a job right must be equal to the present value of expected job differentials over time, with respect to the supply price of labor at the same times; this is maximized by maximizing net income per person, which takes us back to the Ward-Vanek problems, except for the anti-reinvestment bias (investigated in Sect. 15.2, drawback 7) which here disappears due to members' time horizon becoming virtually infinite.

Beside throwing light on the ultimate differences between cooperatives and traditional enterprises, the short-run nature of workers' necessary association with enterprises of whatever kind has three destructive implications for Meade's labor-capital discriminating partnerships. As workers can freely leave, the continued existence of these partnerships requires that worker-members' income should continuously match their outside opportunities.

Meade only looks at the short period, immediately before and after a new member is hired; he neglects what happens in a sequence of such moves, apart from the necessity to revise periodically the share of old members in order to promote—if it is in the interest of all—those who deserve it. But when a partnership made up of individuals each with a possibly different number of shares giving claim to current enterprise income continuously negotiates with newcomers, presumably each member will also reconsider his or her own position and how his or her number of shares compares with that which would give his or her opportunity earnings outside the partnership. Also, these earnings will be varying over time and with the position of newcomers, while newcomers will take into account not just their current income deriving from the shares attributed to them but also the implications of such remuneration scheme for their future earnings. In practice, newcomers benefit—proportionally to their number of shares—from improvements in labor average productivity

relative to the initial position; *however, no newcomer can be offered better terms than any of the existing members (who otherwise could leave and turn themselves into new members).* Thus anybody hired in the boom at a lower share than the others will have to be given more shares in the recession, therefore shortening the distance from the other members. No existing members can be given less than their opportunity earnings or they will leave the partnership. It follows that:

1. At any time the size of a member's share is always directly related to the length of his or her membership; the Meadean system would not be all that different from a wage economy with employment security and substantial seniority bonuses, with some profit-sharing and some codetermination.
2. Current members, knowing that the number of shares of newly hired members is not really fixed but can vary only upwards, will be naturally reluctant to hire new members even if their marginal-revenue product is higher than their dividend on the initial number of shares issued to hire them. Thus there would continue to be a restrictive bias of the same kind as that of the Ward-Vanek cooperative.
3. Because of continuous renegotiations with newcomers, there would be permanent conflict instead of the abolition of conflict. The system amounts to marginal-product spot-pricing of labor services at the margin, that is, exclusively for newcomers (and members considered for promotion), while average product affects inframarginal pricing of the labor of existing members, except for possible successful renegotiations on the part of the less favored among existing members. But the very possibility of renegotiating one's share at any time, or at least when promotions or new members are considered, would lead to a permanent state of strife. Strikes, for instance, would no more be prevented by the involved loss of income than they are in a conventional wage economy by the loss of the strikers' wage. Would strikers instantaneously lose their job? If not, there is no built-in constraint to a Meadean partnership's ability to water its capital, that is, to dilute the amount of capital underlying each share through the issue of any number of additional shares under the recurring threat of this group or another within the firm—it being in the interest of all that the

threat of temporary withdrawal by a particular group of workers should be removed by the granting of new shares up to the amount of potential loss they can inflict. A conventional joint-stock company has a monetary budget constraint and at some point has to resist concessions to groups of workers under the demonstrable threat of insolvency and bankruptcy; the Meadean partnership is not constrained by the number of shares it can issue, and permanent share-inflationary conflicts are bound to afflict and disrupt the Meadean economy. If strikers were made to lose their membership and job, this would be a rather drastic and possibly counterproductive way of ending conflict; in any case the possibility of working to rule or withholding effort creates a sufficient threat for conflict to reappear occasionally or frequently, unbounded by budget constraints.

## 15.7 An Alternative Solution

On these counts, the labor-capital discriminating partnership is bound to disappoint. Yet Meade's analysis provides two valuable contributions: (1) disregard of the microsocialist commitment of the more traditional cooperative enterprises—though he takes inequality too far, to include "unequal income for equal work"; (2) the idea of issuing bonds or capital shares also to workers in recognition of their contribution to self-finance (which here we understand in the broadest sense of any contribution to the increase in value of the partnership capital assets, whether due to reinvestment, inflation, or improvement of profit prospects). If one retains this kind of share and bonds issue, adding a modified distribution of capital and labor shares, and furthermore a suitably modified version of tradable job rights, an alternative solution can be constructed with all the advantages and none of the drawbacks of the discriminating partnership.

Microsocialism within the traditional cooperative enterprise takes the form of internal equality of income, equality of access to capital and to its fruits, democratic planning, and self-management. But what is the point if the outside environment—whether in Yugoslavia or in capitalist economies—is one where there is wage labor, inequality of incomes (especially

the inter-cooperative gross inequality caused by the very principles of cooperative income-sharing)[9] inequality of capital ownership and access to capital, unearned as well as earned income, and lack of participation not least on the part of unemployed or emigrated workers? Let us take from Meade's discriminating partnership the idea of inequality of individual shares and incomes, retaining, however, equality for *type* of individual income. Thus let the number of labor shares corresponding to one job be the same for all workers, except for differences due to the type of labor (according to a job valuation system as highly developed as in Yugoslavia) and for a different mixture of fixed and participatory elements in workers' incomes. Thus workers could choose, at the time of joining, how many hours of their working week should be paid at the going (spot) wage rate and how many hours should be paid through profit-sharing; they would be given a number of shares equal to the same fraction of the shares corresponding to a totally participatory job. Wageworkers could be hired and would have no shares. In recognition of wageworkers' exposure to entrepreneurial risks—even in the absence of profit-sharing in their income—through the nondiversified commitment of all of their labor services to a single enterprise, both member-workers and nonmember workers might be given an equal vote on every question except the reinvestment of income, on which members would have an exclusive voice.

Let us then retain Meade's provision for the issue of bonds and shares to all shareholders, including workers, prorata of the number of labor shares held, in recognition of self-financed investment and capital gains (conversely, shareholders would be exposed to capital losses, though presumably only to the extent of their participatory income).

[9] That labor income differentials are blatantly large across Yugoslav cooperatives, in different sectors and regions as well as in the same sector and region, is well documented (see Estrin, 1979; Rivera-Batiz, 1980; Stallaerts, 1984). An international comparison by Estrin (1981) shows that income dispersion in Yugoslavia was higher than in other countries and it was higher during the period of market self-management than during the planned period. There have been debates on whether this dispersion is due to the lottery of unequal access to capital per person in different enterprises and sectors (as maintained by the so-called "capital school"; see Estrin and Bartlett, 1982), or to the failure to adjust membership to external shocks in the short period (the "labor school"). These debates have been inconclusive, but the cause of dispersion is immaterial: the very fact of income inequality across enterprises undermines inexorably the case for equality within the enterprise.

Now, let job rights (and attached work obligations) be transferable to outsiders, who could buy them from existing workers or from the enterprise. If hiring a new person, issuing to him or her the same number of labor shares owned by those already employed, lowered net income per head of the employed, that job can be sold at a positive price, and those already employed would lose nothing since they would get additional capital shares (like all other shareholders, perhaps not instantaneously but once a sufficient number of small adjustments like this have taken place so as to make an additional share issue worthwhile) to compensate exactly the drop in dividends per labor share following employment expansion.[10]

However, there is implicit inequality in a system in which people have to pay for jobs, and different amounts at that; also, it may be difficult for everybody involved to agree on the correct valuation of job rights. But suppose each enterprise is given an obligation to hire more people as long as its jobs are demanded at a positive price. This should ensure, at the same time, that anybody who can make a net positive contribution to the enterprise profits is hired and that all existing shareholders benefit from that positive net contribution through their participation in the enterprise capital value increase. Thus job rights are tradable only to have an automatic check on the enterprise employment policy, but should never be so valuable as to generate active trade. Of course, the enterprise can avoid being forced to hire more labor by skimming off current profits to current shareholders (including labor shareholders) by issuing them additional capital shares, while lowering the dividend per share to the point that makes its jobs worthless to transfer. Thus the scheme proposed here has nothing to do with Hertzka's (1891) "free access" of workers to the enterprise of their choice, since additional workers can joint the enterprise only at an income lower than the previous average income per

[10] Referees have expressed the concerns that (1) issuing new shares may be opposed by existing members, whose per share dividends will drop; (2) the rapid decline in the firm's dividends per share may deter outside investors from supplying risk capital to the firm. However, existing shareholders (whether workers or outsiders) would be myopic if they looked at cash dividends per share instead of looking at their natural total earnings (cash dividends plus free issues) on those holdings; potential investors also should be looking at current yield of shares (i.e., including free issues) and should not be discouraged by the proposed practice.

worker (i.e., in accordance with Meade's discrimination principle, but without violating at any given time the principle of equal pay for equal work).

This alternative scheme corresponds to wage labor plus workers' participation in a fixed share of profits, paid out as capital shares. In addition, however, workers also get dividends on their capital shares, of which each worker holds a different amount according to seniority, thrift, and enterprise performance. This differs from ESOPs because these shares are paid out at fairly frequent intervals and are immediately available to workers, who can declare their own dividends by selling them if they need cash, instead of having to wait until departure or retirement, or having to surrender their capital rights and only enjoy dividends for the duration of their employment with that particular enterprise. It should be noticed that the issue of capital shares (or bonds) to absorb all profits (broadly defined as any income net of contractual payments—including fixed wage components—including as income also any change in the value of enterprise assets) may be difficult to measure, but any measurement error will affect uniquely distribution of new assets between shareholders according to the time of the assessment, but not the viability of the enterprise via-à-vis third parties, nor the distribution between workers qua workers and capitalists.

The result of this exercise in consistency is that if we want labor to share fully or to a prefixed degree in enterprise risk, this can be done without violating "equal pay for equal work" in a strict sense, since here all workers get the same fixed wage per unit of time for the portion of their pay consisting of a wage, and the same dividend for labor share for the portion of their pay consisting of participatory income. At the same time, this system allows for different labor income due to different combinations of fixed and participatory elements, predetermined in individual contracts; it also allows for different income per worker (i.e., including his or her income on capital shares and bonds distributed to labor shareholders plus or minus subsequent investment or disinvestment), reflecting fairly and fully the past history of the enterprise, the full contribution that the worker's "past labor" has made to capital formation in the enterprise for the precise duration of the worker's association with that enterprise, and his or her own thrift.

In a Yugoslav-type system, the proposed combination of job tradability (only to ensure a zero price) and shares/bonds issues against capital increases, revolutionary as it might seem, would not be as much a departure from the Yugoslav system as the Meadean discriminating partnership. In the absence of a secondary market where capital shares might be traded, issues to workers would have to consist of bonds—as an adjustable recognition of "past labor." There would be no shareholders, but somehow one would have to take into account the "original" or "primitive" accumulation of the Yugoslav enterprise, that is, the initial contribution by the state at the time of changeover to the new system or at the time of foundation of the cooperative enterprise. Suppose enterprise capital could always be overbid out of its hands by other enterprises unless actual rentals (of capital goods received from the state) or imputed rentals (on its own capital) are raised to the highest level offered by outside bidders (à la Liska 1963; see also Barsony 1982), with higher imputed rentals added to distributable income, all income being distributed either in cash or in bonds. This arrangement would suit all: the state, whose initial contribution would be continuously revalued and recognized; workers' collectives, who could still retain the profit of any above-marginal effort or ability they might apply to the capital goods in their use, as well as benefitting from a higher market valuation of their own assets if they are forced to surrender them; individual workers, who would benefit from any reinvestment or revaluation of their "past labor," with equality in labor incomes tempered by inequality of capital incomes justified, however, by the acquisition of bonds under uniform rules. Anybody leaving the enterprise would be clutching bonds corresponding to that part of enterprise capital financed by his or her efforts or revalued by the rentals market during his or her association with the enterprise since joining, and would not lose by leaving anything behind. None of the drawbacks lamented would remain.

If capital shares were issued in a Yugoslav-like system, there might be methods of valuing enterprise assets and therefore the capital value underlying a share even in the absence of a developed capital market. At first, capital shares may be made tradable among members of the cooperative; it may be stipulated at foundation that any member can offer his or her shares for sale to the other members according to the following rules. If

the shares are not taken up at the offer price, he or she is entitled to buy up to the same amount of shares from the other shareholders at that price; conversely, the member can offer to buy shares up to the amount he or she already owns at a given price, but if this offer is not taken up, the other shareholders must—if he or she wishes—buy at that price, pro rata up to the amount initially demanded, his or her own shares. This provision generates a kind of forced liquidity of capital shares. Alternatively, a competitive rental or price determination under the scheme outlined in the previous paragraph may provide the foundation of a periodic valuation.[11]

Thus the alternative cooperative proposed here—with minor modifications for Yugoslav-type systemic constraints—is simply an association of members conferring labor services and/or capital, without limitations as to the nature and purpose of its activity, ability to hire the labor of nonmembers on a codetermination but not necessarily profit-sharing basis, the recognition of capital contributions by members at the time of foundation and/or through reinvestment of profits (including any appreciation of enterprise assets), the ability to distribute profits proportionally to capital and—according to a conversion rate fixed at foundation—labor membership, the liquidation of the cooperative and distribution of capital among its members. Worker-members' shares are made as permanent (thereby protecting tenure) and transferable as those of capital-members, but with a built-in safeguard in order to avoid restrictive employment policies and to make the position of each worker as close as possible to that of a wage earner in the direct return to his or her labor, while enriching the worker through the issue of bonds or shares to reflect the success of the enterprise for the duration of his or her employment.

[11] It has been suggested by a referee that the implementation of the proposed scheme in the Yugoslav economy would be strongly opposed by the government and, perhaps even more, by workers. In fact the current employment policy in Yugoslavia is an element of social policy: enterprises are not free to employ new workers as they please, since they have to abide by the social compacts, according to which employment priority is to be given to those unemployed who have spent the longest time searching for a job. Undoubtedly this kind of opposition remains a strong possibility, though it is bound to be weakened by current trends toward privatization and shareholding in Yugoslavia (see, for instance, the Mikulic Commission Report of August 1988) and even elsewhere in Eastern Europe (see Nuti, 1989). It seems unjustified, instead, to fear opposition to job tradability on the grounds that good jobs would go to the richest, since the proposed scheme should lead to a near-zero price for all jobs and, on the contrary, would lead to greater equality of pure labor incomes.

None of the lamented inefficiencies discussed above (Sect. 15.2) for the traditional Ward-Vanek cooperative would derive from the proposed arrangements: capital membership could be offered on terms sufficient to attract funds to capital-intensive as well as labor-intensive activities; wage labor and the free issue of job rights should get rid of temptations to restrict employment, to behave over-monopolistically, to respond perversely to change; the same investment projects would pass a viability test—as in the capitalist firm, reinvestment of income would not be penalized. At the same time, worker-members would have not only tenure but transferrable rights to the fruits—if they are there—of successful entrepreneurship; workers' participation in decision-making would be as wide as compatible with these provisions, vastly greater than in the conventional firm, as well as enhanced by the prospect of a permanent connection and the possibility of continuing to participate even after the cessation of the work relationship.

After removing the social constraints that, in the present-day cooperative everywhere, usually affect membership, use, and recoverability of capital, a case could still be made for the maintenance of the favorable fiscal treatment presently enjoyed by cooperatives with respect to capitalist enterprises, for three reasons:

1. Greater risk: For dividends to worker-members and to wage earners, the indivisibility of risk for labor as opposed to the possibility of risk spreading for capital; for dividends to capital-members, the greater risk associated to the reduced voice that capital has in cooperatives compared to joint-stock companies.
2. For dividends to worker-members, a favourable fiscal treatment is justified by their representing "earned" labor income, which is or should be treated less harshly than unearned income, because it involves a loss of leisure not required by unearned income. For dividends to capital-members, a residual commitment to solidarity beyond the limits of current membership would have to be maintained, devoting a statutory part of enterprise profits and/or capital at liquidation to social purposes (such as an investment fund for setting up new cooperative enterprises; see Nuti 1988b).

3. Finally, there is a Proudhonian argument in favor of encouraging associated producers to work for each other instead of for a master, especially if wage-labor is on a small scale and has the option of eventually gaining full membership, and if the cooperative has extensive links with other cooperatives. Without going back to Proudhon, the "mutual-help" commitment of the early days of the cooperative movement could be regarded as satisfied by the persistent adoption of less conflictual strategies than can be found in capitalist firms and by the less conflictual environment that would be generated as a result.

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# 16

# Profit-sharing and Employment: Claims and Overclaims

Domenico Mario Nuti

It has long been argued that pay formulas containing an element of profit-sharing have noninflationary employment promotion properties (Vanek 1965), except in self-managed enterprises (e.g., Vanek 1970). Recently Weitzman (1983, 1984, 1985a, b, 1986) has promoted economy-wide profit-sharing, combined with workers' strict exclusion from employment decisions, as a scheme guaranteed to achieve a blissful state of non-inflationary excess demand for labor, absorbing all or part of possible deflationary shocks. Weitzman's proposal is reminiscent of the set-up in *Catch-22*, where a wheeler-dealer retrades and speculates with army supplies originally meant for the soldiers, who are supposed to benefit instead from their share in the profit of his operations; everybody has a share, nobody has a say, and the main beneficiary of the scheme is its proposer.

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The purpose of this paper is to separate the beneficial effects of profit-sharing—which are neither new nor controversial—from Weitzman's propositions, which I argue are overclaims. Vanek's analysis provides the framework used here to evaluate the employment effects of profit-sharing. I show that Weitzman's system is unstable because excess demand for labor, if it exists, is eliminated by an increasing wage component as the profit component of pay shrinks. The employment-promoting effects of profit-sharing are due to its role as a wage subsidy of employment rather than to the pay formula itself. While profit-sharing may bring about some positive gains, it cannot itself achieve noninflationary full employment.

## 16.1 The Employment Promotion Effects of Profit-sharing

Jaroslav Vanek (1965) first noted the employment promotion effects of profit-sharing. He evaluated the macroeconomic effects of replacing a given fixed wage rate with a lower rate plus a compensatory profit-sharing agreement that leaves unchanged each worker's money income for a given number of hours worked. The new arrangement has the same effects as a lower money wage, except for the additional employment effects on aggregate demand that result from the postulated higher propensity to consume out of profits distributed to workers than out of residual profits. Further, it can be shown that the effects of a lower wage with or without compensatory profit-sharing are the same and depend on the behavior of prices.

If prices fell in the same proportion as money wages, the real wage would remain unchanged, and therefore the marginal physical product of labor and the employment level would be unaffected; any profit shared by workers would come from what previously accrued to entrepreneurs. If prices remained unchanged, the real wage would fall in the same proportion as money wages, and employment would expand until the marginal physical product of labor fell to match the full reduction of real wages; only the profits shared by the newly employed affect the profits previously accruing to entrepreneurs. Neither extreme position of constant or fully flexible prices, however, is a possible equilibrium for an unchanged

quantity of money. If prices remained unchanged, a higher real output would require a higher quantity of money. Without this increase, there would be no effective demand for the additional output and, therefore, prices would be under pressure to fall. If prices fell proportionally as much as wages, an unchanged real income would require a decline in the quantity of money. Without this decline, effective demand would drive up prices and erode some of the price decrease. An unchanged quantity of money, which Vanek calls "neutral" monetary policy, would achieve real and monetary equilibrium at a price level lower than before, though higher than if proportional to wages, and at an employment level higher than before, though not as high as that corresponding to constant prices.

*Vanek's hypotheses*. Vanek infers from his model that the replacement of a given wage rate by a lower rate plus a fully compensatory profit-sharing arrangement will have the following effects under a neutral monetary policy: (i) a higher level of labor employment in the economy; (ii) a higher real income; (iii) lower prices; (iv) an expansion in the volume of exports because of greater international competitiveness made possible by lower prices; (v) lower import propensity due to import substitution at lower domestic prices; higher or lower volume of imports, according to whether or not the import substitution effect is larger than the import requirements of additional output; a probable improvement in the balance of payments, as long as the combined effect of import substitution and export promotion through lower prices is sufficient to offset the import requirements of additional output; (viii) a reduction in corporate profits after taxes and after labor-share disbursements because the contribution of the newly employed to profits is less than what they receive as their profit share; (ix) an indeterminate effect on the state budget; since the tax rate applicable to workers' incomes is lower than that previously applied to profits, the government will lose some revenue, but a smaller or higher amount of additional tax revenue (and unemployment benefits saved) will accrue to the government because of the higher level of activity; and (x) workers' share in the national income will necessarily increase because of the positive change in income and the negative change in the amount of profits going to entrepreneurs.

Alternatively, the government could decide to prevent prices from falling as a result of the new arrangement and follow a policy of price

stability. This would amount to monetary expansion to raise aggregate demand and enable firms to sell the additional output they wish to produce at a lower real wage without lowering prices. In that case, Vanek's predictions are altered in the following respects: (i) stronger employment effects from profit-sharing; (ii) stronger real income effects; (iii) no longer holds by assumption; (iv) exports remain unchanged; (v) import substitution does not occur; (vi) imports increase; (vii) the balance of payments deteriorates; (viii) corporate profits do not change; and (ix) and (x) continue to hold.

In addition to these effects, Vanek expects that the higher income and resulting fuller utilization of existing capital equipment, in the absence of a systematic effect on the interest rate in either direction, would promote capital formation and technical change, thus raising the economy's growth rate.

## 16.2 The Employment Subsidy Effects of Profit-sharing

Vanek attributes considerable advantages to profit-sharing, but it is not a pay formula incontrovertibly superior to the fixed wage. Within Vanek's framework, profit-sharing will not be introduced by firms unless total pay per worker is lower than the alternative fixed wage, to compensate for the (predicted) lower profits and profit share. A lower pay per worker would sacrifice employed workers in favor of those unemployed who would benefit from the employment generated by profit-sharing. The same kind of trade-off between individual real pay and total employment is possible under a fixed wage system, however. It is true that with profit-sharing a given cut in real pay per worker generates more employment (because the marginal cost of labor is by definition lower to employers), but the additional employment effect is paid for by employers getting lower profits than if the same pay was made up of a fixed wage (as Vanek notes, point (viii) above).

If employers could be persuaded or forced (through taxation) to subsidize employment to the same extent, the effect would be exactly the

same. *It is the implicit subsidy on employment, and not the pay formula as such, which generates beneficial effects*. Imagine a situation where the government has already subsidized all it considers worthy of subsidy and has already taxed the public sufficiently to offset these subsidies and its other expenditures, there then would be no room for improvement through pay reform other than sheer benefaction on the part of employers or of those already employed. Alternatively, if an expansionary monetary policy accompanies the introduction of profit-sharing, the necessary deterioration in the balance of payments would deter the government from promoting profit-sharing or from undertaking the equivalent policy of employment subsidization financed by taxes on profits. Thus, Vanek not only provides an analysis of the possible effects of introducing profit-sharing but, indirectly, he also suggests a reason likely to prevent its introduction.

Vanek's analysis is inadequate in two major respects. He claims that his conclusions hold even if only a part of the economy changes to profit-sharing, the degree of the different effects varying with the relative size of the profit-sharing sector. His analysis, however, contains no elements for explaining the actual extent to which profit-sharing might be introduced spontaneously in the economy. He also claims that the output of the profit-sharing sector will expand while the nonprofit-sharing sector will contract; but the very coexistence of profit-sharing and fixed-wage formulas is hard to explain without introducing additional factors into the model. Within Vanek's framework, either pay or profitability can be the same in the two sectors, not both; but then what makes entrepreneurs or workers in some sectors and not in others accept lower rewards than available elsewhere? Profit-sharing cannot be discussed without reference to its impact on the uncertainty faced by workers and firms.

## 16.3 Profit-sharing and Uncertainty

Alternative pay formulas imply different probability distributions and, therefore, different expected values and measures of dispersion (such as standard deviation) for the profitability of firms and for both

unemployment risk and workers' pay, thus defining trade-offs for the consideration of both firms and workers.

Let us compare a fixed pay $y$ with a profit-sharing scheme offering a fixed element $a$ and profits $h$ with a given probability distribution whose expected value is $E(h) = y - a$ and standard deviation $s(h) > 0$. By definition, $s(y) = 0$; thus, workers will prefer $y$ to $a + E(h)$ if they are risk-averse—as usually they are assumed to be. The probability u of unemployment, however, is different under the two arrangements, namely its expected value under fixed pay $u_y$ is greater than under profit-sharing $u_h$. The dispersion of unemployment risk is not affected because neither the fixed wage nor the fixed component of mixed pay is flexible during the cycle. The lower is $a$, the lower is expected unemployment but the higher is the dispersion of workers' earnings $a + E(h)$. Whether or not any of the infinite combinations of parameters $a$ and $E(h)$ adding up to $y$ is preferred to $y$ by workers will depend on their preferred trade-off between job security and income security.[1] The most attractive profit-sharing formula might be more, less, or equally attractive than a fixed wage equal to their combined expected value.

For firms, a profit-sharing arrangement involves cyclical flexibility of labor costs and therefore greater stability of profit levels and rates (i.e., $s(r_y) > s(r_h)$). Entrepreneurs are usually thought to be risk lovers or at most risk neutral, but their "failure aversion" and concern to stay well within a "solvency threshold" (Malinvaud 1986) is bound to set limits to their love of risk or their neutrality; they may or may not be induced to regard greater stability of profit rates as an advantage. The attraction of a profit-sharing scheme will depend on the entrepreneurs' attitude toward risk, the actual probability distributions of $r_y$ and $r_h$, and the cost of alternative ways of reducing risk (through diversification of assets, etc.) available to them.

*Resistance to profit-sharing*. For part of a fixed pay to be replaced by a profit share, the terms must be advantageous to both workers and firms. It may be that workers are so job-security conscious and gain so much

[1] Alternatively, we could incorporate unemployment into an income probability distribution as the probability of zero income and treat the choice by workers as one between expected value and dispersion of earnings under the two regimes; this would be tidier but would oversimplify the alternatives, given the discontinuity in employment/unemployment status.

additional security by accepting greater earnings dispersion that they are prepared to accept a lower average pay than the going fixed rate associated with high unemployment risk. Or it may be that entrepreneurs are so close to their solvency threshold that in order to stabilize profits they are willing to pay out profits whose expected value is higher than what would make up the difference between the fixed component of pay and the going fixed rate. More often than not, risk-averse workers and risk-loving entrepreneurs will go for a fixed rate, as we know from observation.

There are two other reasons, however, why profit-sharing arrangements are not widespread. First, when part of a fixed pay is replaced by a profit share regarded as equivalent by workers, the employment effect of this change and the consequent necessary dilution of the profit share must be weighed by the workers already employed. These employees need information about demand and technology to find what fraction of profits can be regarded as equivalent to the part of their fixed pay that is being replaced; or they need assurances that there will be no dilution (i.e., no employment effect); or, even better, they need a certain amount of control over decisions directly or indirectly affecting employment. In the latter case, however, the employment creation effect will be at least partly lost. This is one of the reasons why profit-sharing arrangements are often associated with forms of workers' participation in decision-making.

Second, after the introduction of a profit-sharing pay formula, a firm employing workers up to the point where labor's marginal product equates the fixed element of pay will soon realize that it could raise profits by switching back to a fixed wage and reducing employment, unless one of the following conditions obtains: (i) the firm is close to its solvency threshold and is so anxious to stabilize profits that it will accept the loss involved in employing some workers at an average cost higher than their marginal product; (ii) existing workers are tenured in law or in practice and a profit share is paid to them in lieu of an increase in fixed pay; (iii) the introduction of profit-sharing lowers average pay with respect to the alternative fixed wage; or (iv) profit-sharing raises labor productivity so that either lower average pay or a productivity increase compensates for the hiring of workers at an average cost higher than their marginal

product. Condition (iii) is unlikely, in view of workers' risk-aversion; the other conditions explain why profit-sharing is often introduced in firms close to a financial crisis (where the risk of unemployment for workers is also greater) or in firms where productivity effects are expected from profit-sharing.

## 16.4 Profit-sharing and Productivity

Vanek (1965, p. 212) had little doubt about the effects of profit-sharing on productivity. He asserted that "… there is a strong presumption that profit participation in itself would improve the quality and efficiency of labor, and make workers more concerned about the success of their enterprise." He did not himself discuss these points, however subsequent literature has developed his suggestions.

An improvement in "the quality and efficiency of labor" cannot come from individual extra effort (as it does under a piece-rate system) since each of n workers employed will only get at most a fraction 1 / *n* of the product of his own extra effort (Samuelson 1977). In fact, the individual worker may *reduce* effort (if he can get away with it) since he is exposed at most only to *1/n* of the output loss deriving from his own lower effort. However, a productivity increase can be expected (at no cost to the workers) as a result of intelligent and effective use of any given individual level of effort, cooperating with other workers and management, and monitoring and supervising each other's effort, efficiency, and cooperation (Reich and Devine 1981; Fitzroy and Kraft 1985).

Workers' "concern about the success of their enterprise"—deriving directly from profit-sharing—is bound to reduce the number and intensity of conflicts in the workplace in general, making workers identify somewhat with the enterprise and lengthening their time horizon. This effect will be stronger if it is accompanied by forms of workers' participation in decision-making, such as occur in German-style *Mitbestimmung* (Aoki 1984; Cable 1984, 1985; Fitzroy and Mueller 1984; on *Mitbestimmung*, see Nutzinger 1983). When workers receive detailed and

credible information and participate in decision-making, they are more likely to accept unpopular decisions.[2]

The viability of profit-sharing—other than as a crisis management instrument—depends in large measure on these productivity-enhancing effects. This has been demonstrated to be true both historically and empirically. Mitchell (1985) notes that workers' participation in enterprise revenue or profit has been introduced in modern capitalism, historically, as "a way of putting the employee on the side of management, thereby boosting production and efficiency" and as "a way of building employee loyalty, thus avoiding industrial unrest and unions" (Mitchell 1985, p. 38). Little wonder that profit-sharing is not usually popular with unions. Recent empirical studies suggest modest but sizeable improvements in enterprise economic performance from co-determination and profit-sharing (Cable and Fitzroy 1980; Estrin et al. 1984) when and where they occur, though there may have been costs that remained unobserved and the improvements cannot be generalized.

## 16.5 Co-determination and Employment

Co-determination can be expected to accompany profit-sharing: "As best existing practice shows, companies which share profits also share information and indeed some areas of decision-making" (*Financial Times*, May 13, 1986). "Decision-sharing is not an optional extra," the same source continues, "the measurement of profits—especially in large groups where the profit-sharing group is likely to be a division—is likely to be contentious unless very full information is available. … Where information is shared, decisions are bound to be discussed" (*ibid.*). Even without profit-sharing, workers are subject to the consequences of enterprise decisions that affect their job security. Unlike capitalists, workers cannot reduce this risk through diversification. They therefore have a moral/political claim to participation in decision-making; when their income is also directly affected, this claim becomes stronger.

[2] However, conflicts rendered more tractable by the introduction of codetermination inevitably reappear over time (Furubotn 1985).

While co-determination strengthens the productivity gains deriving from profit-sharing, it reduces its employment generation potential. Pursuing maximum income per employee, those already employed may encourage or adopt employment production policies in their exercise of co-determination. The enterprise type which is characterized by 100 per cent profit-sharing and 100 per cent self-management—i.e., the cooperative enterprise—is expected to adopt employment-restrictive policies and respond "perversely" (or at any rate, inelastically) to output price changes or capital charges, and to shy away from self-financed investment.[3] Empirical studies of cooperative firms show no evidence of restrictive employment policies and perverse response, or even of under-investment from self-finance (Uvalic 1986); probably these tendencies are partly offset by other economic (job security, growth-mindedness, etc.) and non-economic stimuli (Nuti 1986c; Horvat 1986). But there must be a presumption that—other things being equal—an employment restriction tendency might be associated with co-determination. We can also presume that workers' eagerness to press and ability to assert demands for co-determination, as in the case of other demands of theirs, increase as unemployment diminishes. Hence, the employment-generating benefits of profit-sharing can be at least partly offset by the restrictive employment tendencies possibly associated with co-determination brought about by profit-sharing and by greater proximity to full employment.

## 16.6 Profit-sharing as Miracle Cure: The Weitzman Proposal

Thus far the analysis suggests that profit-sharing is a pay formula which, for unchanged productivity and average pay, reduces profit dispersion for firms and raises workers' chance of continued employment at the expense of higher dispersion of earnings. The trade-off may be somewhat

[3] Ironically, the theory of labor-managed enterprises where profit-sharing is accompanied by employment-restrictive policies has been developed and promoted by the same person who first pointed out the employment-promotion properties of profit-sharing in isolation (Vanek 1970, who developed the approach initiated by Ward 1958).

attractive to both parties if workers are sufficiently worried by unemployment and firms by insolvency. The replacement of a fixed market wage with a profit-sharing formula having the same average pay will induce firms to expand employment, but if this expansion occurs, workers will find that their pay has fallen. Thus, a higher profit share has to be chosen to ensure that pay per worker remains unchanged by employment expansion. In these circumstances, however, the firm would reduce its profits as a result of profit-sharing because the given pay is higher than the marginal product of the additional worker. Consequently, the firm will grant a profit share in lieu of a wage increase only if existing workers have tenure; or if the profit loss is fully compensated by greater profit stability; or if the profit-sharing formula has a sufficiently lower average value to prevent a profit fall with respect to a fixed wage (which is unlikely); or if labor productivity increases sufficiently as a result of profit-sharing (which is more likely). Profit-sharing may raise labor productivity in some enterprises through collective monitoring of efficiency and effort and through the reduction of conflict. Co-determination is likely to accompany profit-sharing, reinforcing its productivity-enhancing effects and weakening its employment-promotion effects. It is for firms and workers to consider the costs and benefits accruing to them from a profit-sharing formula, just as they assess the effects of other parameters of the labor contract (e.g., tenure, co-determination, frequency of payment, indexation). There is no reason why profit-sharing should be forced upon unwilling workers and firms by well-meaning reformers (see also Jensen and Meckling 1979; Nuti 1986b).

*Weitzman's view of profit-sharing*. Martin Weitzman (1983, 1984, 1985a,b, 1986) has challenged the collective wisdom regarding profit-sharing. He maintains that generalized profit-sharing would guarantee not only a noninflationary increase in employment, but the achievement of full employment, a noninflationary permanent excess demand for labor and, therefore, the maintenance of full employment in the face of deflationary shocks. These benefits are not realized automatically only because the pay formula is a public good—hence the necessity of an educational campaign and tax incentives. Weitzman's zeal has spread to others (e.g., to Solow, Meade, and Roemer, judging from comments printed on the cover of Weitzman 1984), and his ideas have received wide press

coverage (e.g., *Financial Times, Time Magazine, Wall Street Journal, New York Times, Economist*) and attention in political circles (e.g., among social democrats and Tories in Britain and republicans in Italy).

Weitzman has the great merit of stressing the high private and social cost of unemployment, which others dismiss as a mere byproduct of investment in search activities or wage reservation, if not a fashion for leisure. Moreover, he has drawn attention to an important area of research which had been eclipsed by the literature on cooperatives with which it partly overlaps. Unfortunately, his "miracle cure" for stagflation cannot possibly work.

Let us consider the changes Weitzman proposes in the assumptions made and the arguments developed in the previous sections. These alterations are: (i) imperfect competition; (ii) marginal revenue product at full employment being both positive and higher than the minimum fixed element of pay acceptable to workers; (iii) persistence of profit-sharing at full employment even in long-term equilibrium; (iv) perception by firms of the fixed element of pay as the marginal cost of labor in spite of excess demand at the going average rate of pay; and (v) no workers' involvement in enterprise decisions affecting employment.

(i) Imperfect competition is a welcome extension of Vanek's original framework: it implies that firms equalize the marginal cost of labor not to the physical marginal product of labor valued at current prices, but to the marginal revenue product of labor. It follows that the replacement of a fixed wage with an equivalent formula containing an element of profit-sharing will reduce both pay (because of dilution after employment expansion) and profits (because of new workers adding to profit less than their profit share) in money terms. The effects on pay and profits will be less in real terms, however, if the profit-sharing arrangement is introduced on an economy-wide scale and all firms lower their price to sell the additional output. Hence, an element of externality and public good appears in the pay formula. Under the same assumptions, exactly the same argument could be applied in the short run to a generalized money wage reduction, matched by a profit tax used to finance tax relief on workers' incomes. In the long run a wage reduction would achieve full

employment on the same conditions and for the same real level of earnings as a profit-sharing formula. From this perspective, a low wage is as much of an externality or a public good as a profit-sharing formula.

(ii) Unlike Vanek, who expected higher employment from profit-sharing but did not mention full employment, Weitzman is certain that the introduction of profit-sharing can achieve full employment. This requires not only that the physical marginal product of labor should be positive at full employment,[4] it also requires that a positive physical marginal product of labor should be associated with a positive marginal revenue. This condition, made more difficult by imperfect competition, is satisfied in Weitzman (1985b) by assuming isoelastic demand functions of elasticity greater than unity (i.e., ones very different from the conventional imperfect competition demand functions of Chamberlin or Robinson) or by other ad hoc assumptions, such as sale of the physical marginal product of labor in an international market at a fixed price (as Weitzman stipulated at a Conference at Cornell University, April, 1986). Moreover, for this positive marginal revenue product of labor to ensure full employment, it has to be lower than the minimum fixed pay acceptable to workers. Nowhere does Weitzman justify his confidence that the necessary conditions might be satisfied. Without these conditions Weitzman's results are no different from Vanek's: no miracle cure for stagflation is available.

(iii) If full employment is reached, the long-term equilibrium of a profit-sharing economy should be, *ceteris paribus*, identical to that of a wage economy, i.e., the same real average pay accrues to workers in either case, equal to the marginal physical product of labor. Weitzman takes for granted that a sharing formula can persist in long-run full employment equilibrium and infers from the presence of a sharing element that the marginal cost of labor (= the fixed component of pay) is lower than the marginal product of labor (= the fixed plus the

[4] This is implicit in Vanek's model (which he presents in diagrams) though not in his argument. The physical marginal product of labor may not be positive at full employment, however, after a protracted worldwide recession such as that recently experienced.

sharing components of pay). That is, there is a permanent state of excess demand for labor at full employment which is not inflationary because firms cannot raise average pay above the marginal product of labor. As I have pointed out (Nuti 1985, 1986a), this inequality should induce firms to experiment with alternative pay formulas amounting to the same total pay, especially if they can gain from workers' risk-aversion, and not to stop until they have equalized their marginal cost and marginal value of labor, i.e., until the workers' share of net profits is zero and profit-sharing comes to an end.

(iv) In any case firms should be well aware—especially at full employment—that whatever their pay formula, they can only attract workers by offering the going rate for total pay and they should regard this, and not the fixed element of pay, as the marginal cost of labor. If firms behave as they should, excess demand for labor disappears and with it the claimed resilience of full employment with respect to deflationary shocks.

(v) The lack of workers' participation in decision making in any area affecting employment (therefore in all areas of any importance) is a specific precondition of Weitzman's claims. We know that it is possible to exclude workers from co-determination in the presence of persistent unemployment. Such exclusion might be difficult at full employment, and it would certainly be very difficult with excess demand for labor. The persistent excess demand for labor postulated by Weitzman suggests that the exclusion of co-determination would be impossible without an authoritarian or military regime. This is not a moral, or legal, or legalistic proposition; it is a question of practical politics. Once workers have a say on output, employment, pricing, and related questions (investment, innovation, etc.), they will try to resist the very possibility of dilution of their own shares, just as shareholders usually resist the dilution of share capital. For better or worse, workers are likely to adopt, or be tempted to adopt, other things being equal, restrictive employment policies in the possibly misguided and self-defeating purpose of raising or maintaining individual earnings. This is not a case against profit-sharing. It is an argument for not expecting that full employment—let alone overfull employment—is achievable and maintainable (see Nuti 1986c).

If full employment and, *a fortiori*, over-full employment could be guaranteed, profit-sharing would be like a public good to be provided by a central government through tax incentives and propaganda. Sadly, profit-sharing can provide no guarantee of either the achievement of full employment or of its stability. In the long run, the claims put forward by Weitzman can only damage—through skepticism and disillusionment—the chances of reaping from profit-sharing the modest gains which it appears capable of providing.

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# 17

# Employee Ownership in Polish Privatizations

Domenico Mario Nuti

## 17.1 Introduction

Large-scale privatization of state assets is the distinctive feature of the recent transformation of Central East European economies, with respect to all earlier attempts at reforming the Soviet type system (Nuti 1991). Poland was among the first in announcing it (September 1989) and launching it (with the Act on the Privatization of State Enterprises, 13 July 1990); Hungary's earlier initiative (1988) was designed to regulate spontaneous private appropriation by insiders rather than to radically transform the system, while Yugoslavia's 1989 privatization law applied to a different ownership regime. On the eve of transformation Poland already had a significant private sector, not only in agriculture but also in

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non-agricultural sectors. In 1989 private agriculture amounted to 75 per cent of the land, about 10 per cent of GDP and 21 per cent of employment (Rapacki and Linz 1992); in the 1980s non-agricultural private activities trebled to about 10 per cent of GDP and employment, including manufacturing as well as traditionally private activities such as trade, catering and services.

In 1990-95 the Polish private sector expanded fast, reaching over 60 per cent of employment, but primarily through what has been variously called 'organic growth' or 'grass-roots privatization', that is, the growth of existing private activities and the rise and growth of *de novo* firms, rather than through the fast transfer of state assets to private new owners, domestic or foreign. In many ways such transfer has followed a different course from that originally anticipated.

First, the privatization process has been *slower* than planned. The early 1990 target of privatizing 50 per cent of state enterprises by the end of 1992, later moved to the end of 1995 (Rapacki 1995, p. 57; Monkiewicz 1996), has not been achieved. By end-1995 there were still over half of the initial state-owned enterprises (4,563 out of 8,453), not to count wholly Treasury-owned joint-stock and other limited liability companies *(jednoosobowa spolka Skarbu Panstwa,* or jsSP) and incomplete privatizations; completed privatizations amounted to only about one fifth (Table 17.1). The market value of the residual state sector is controversial, but its book value is of the order of 75 billion zlotys;[1] in 1995 among the 100 largest Polish enterprises, 19 were state owned, 35 were wholly Treasury-owned joint-stock companies, and 17 were mixed ownership companies with dominant state ownership (OECD 1996).

Second, privatization has followed a *multi-track course* through the accretion of new methods adopted to overcome unexpected difficulties as they arose. Initially the dominant method was to be a Western-style 'indirect' or 'capital' privatization, involving open sales of shares and the search for a strategic outside investor. This proved to be slower, costlier and harder than anticipated: in the words of Janusz Lewandowski, twice Minister for Privatization, 'In the transition, privatization is a process

[1] All zloty values given here are in post-denomination units, i.e. pre-1995 zlotys have been divided by 10,000.

**Table 17.1** Progress of ownership transfer, Poland 1990–95 (cumulative number of enterprises at the end of each year)

| | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 |
|---|---|---|---|---|---|---|
| Total number of state-owned enterprises | 8 453 | 8 228 | 7 245 | 5 924 | 4 955 | 4 563 |
| Liquidation | | | | | | |
| Started | 49 | 989 | 1 576 | 1 999 | 2 287 | 2 507 |
| Completed | 0 | 201 | 561 | 893 | 1 248 | 1 450 |
| Article 19 of the SOE Law | | | | | | |
| Started | 18 | 540 | 857 | 1 082 | 1 845 | 1 358 |
| Completed | 0 | 19 | 86 | 186 | 303 | 396 |
| Article 37 of the Privatization Law | | | | | | |
| Started | 31 | 449 | 719 | 917 | 1 042 | 1 149 |
| Completed | 0 | 182 | 475 | 707 | 945 | 1 054 |
| Converted into joint-stock companies | 38 | 260 | 480 | 527 | 723 | 958 |
| Capital privatization | 6 | 27 | 51 | 99 | 134 | 160 |
| Public offerings | 5 | 11 | 12 | 15 | 19 | 22 |
| Trade sales | 1 | 16 | 39 | 81 | 110 | 132 |
| Mixed methods | 0 | 0 | 0 | 3 | 6 | |
| Total | | | | | | |
| Started | 93 | 1 276 | 2 107 | 2 625 | 3 144 | 3 625 |
| Completed | 6 | 228 | 612 | 992 | 1 382 | 1 610 |
| Income from privatization (flows)[a] | - | 170.9 | 484.4 | 780.4 | 1 594.8 | 2 641.7 |
| Leasing and sale of liquidated assets[a] | - | 46.4 | 171.8 | 287.0 | 322.9 | 406.2 |
| Capital privatization[a] | - | 124.5 | 308.7 | 439.4 | 846.7 | 1 714.2 |
| Bank privatization[a] | - | 0.0 | 3.9 | 54.0 | 425.2 | 521.3 |

[a]Million zlotys.
*Source:* Ministry of Ownership Transformation. From OECD 1996.

whereby assets whose real owners are not known and whose real value is uncertain are sold to people who do not have the money to buy them'. To resolve the problems of lack of liquid savings—vapourized by high inflation at the inception of the Polish transformation—and of asset valuation, a mass privatization scheme was devised, which technically is another form of 'capital' privatization. This track was held up by political and technical delays (Nuti 1994, 1995), launched by the *Act on National Investment Funds* (NIFs) and their privatization (30 April 1993), and

implemented in 1996. It involves the distribution to adult Poles, on request and for a token payment, of certificates in 15 NIFs, to which 60 per cent of the shares of 512 'commercialized' state enterprises have been allocated (OECD 1996, Annex IV).

Meanwhile, many insolvent state enterprises were being closed down and sold off to private buyers, as a whole or in bits and pieces, according to Article 19 of the old *Act on State Enterprises* of 25 September 1981.[2] Other, economically viable state enterprises were being sold or leased, also as a whole or in parts, to private buyers and consortia of buyers, with priority granted to new companies formed with employee participation; this was allowed by the 1990 Privatization Law, Article 37 (enterprise assets could also be contributed to a new company, without preference for employees). The two processes reflected radically different, indeed opposite, underlying economic situations; however, they had in common the so-called 'liquidation' of state enterprises, in the literal technical sense of their cancellation by the Tribunal from the registry of state enterprises. This is why these two forms of 'direct' privatization are often lumped together in Polish classifications.[3] A significant difference between the two kinds of 'liquidation' is the much higher rate of completion for Article 37 privatization (92 per cent versus 29 per cent of Article 19 procedures, Table 17.1).

Further channels of privatization were opened by the Law on Financial Restructuring of State Enterprises and Banks of 3 February 1993,[4] which leads to privatization through debt-equity swaps, often as a pre-condition of access to central funds; technically this is yet another form of 'capital' privatization. An Act on the Commercialization of State Enterprises, involving their generalized transformation into joint-stock companies,

[2] Insolvent state enterprises can also be made bankrupt (Article 24 of the Act on state enterprises) on the basis of bankruptcy procedures (Decree of 24-10-1934 of the President of the Polish Republic). Article 19 liquidation differs from bankruptcy procedures primarily because it can only be applied if there are 'grounds for stating' that liquidation net revenues are sufficient to satisfy all creditors' claims.

[3] By the end of 1995, out of all enterprises privatized under Article 37, 18.8% were sold (mostly quick sales of bad enterprises otherwise subject to Article 19 liquidation); 5.6 % were contributed to new companies; 68.6% were leased and the remaining 7% used a mixture of these methods.

[4] At the initiative of either creditors or the debtor enterprise, in case of actual or prospective inability to service outstanding debt.

regardless of their privatization prospects, has had a difficult course and by mid-1996 is not yet operational: approved by Parliament, hit by a Presidential veto overturned by Parliament, successfully denounced to the Constitutional Tribunal, this law is to be reconsidered in a new draft.

In Polish practice, state enterprises 'involved in ownership transformation' are defined to include those registered as jsSPs, those whose Article 37 liquidation has been initiated (regardless of approval by the Ministry for Ownership Transformation or MPW), and those whose Article 19 liquidation has been initiated by their Founding Organ. At the end of 1995 the relative weights of the three categories was 26.8 per cent, 33.2 per cent and 40 per cent (see also Table 17.2, from MPW, 1996, whose data have been slightly revised by the Ministry with respect to those in Table 17.1).

Third, *all Polish privatization tracks involved some form, often very significant, of employee ownership.* This unexpected and important feature of privatization in Poland, replicated almost everywhere else in transition economies except for the Czech and Slovak republics, is the object of this chapter, reviewing the modes and reasons for employee ownership (Sect. 17.2), the implications predicted by theory (Sect. 17.3), actual performance (Sect. 17.4) and problems and prospects (Sect. 17.5).

**Table 17.2** Enterprises involved in ownership transformations by sector, Poland, end-1995, and their growth rates in 1995

| | Total | | Article 19 Liquidation | | Article 37 Liquidaton | | jsSP | |
|---|---|---|---|---|---|---|---|---|
| Sectors | No. | growth (%) | No. | growth (%) | No. | growth (%) | No. | growth (%) |
| National economy | 3 465 | 15.1 | 1 358 | 9.1 | 1149 | 10.3 | 958 | 32.5 |
| Industry | 1 594 | 19.5 | 411 | 3.8 | 388 | 10.9 | 795 | 35.2 |
| Construction | 861 | 10.2 | 367 | 15.0 | 383 | 5.8 | 111 | 11.0 |
| Agriculture | 340 | 12.6 | 270 | 9.8 | 67 | 24.1 | 3 | 50.0 |
| Forestry | 18 | 5.9 | 9 | 0 | 6 | 0 | 3 | 50.0 |
| Transport | 175 | 9.4 | 126 | 2.4 | 30 | 30.4 | 19 | 35.7 |
| Communic. | 1 | 0 | 0 | - | 1 | 0 | 0 | - |
| Trade | 311 | 12.7 | 99 | 8.8 | 189 | 10.5 | 23 | 64.3 |
| Other | 165 | 18.7 | 76 | 24.6 | 85 | 13.3 | 4 | 33.3 |

See text for the definition of headings.
*Source:* MPW 1996.

## 17.2 Employee Ownership: Modes and Motives

Employees of enterprises privatized following the 'indirect' or 'capital' track were offered 20 per cent of capital equity at half price, subject to a maximum of one year's wage; this was later transformed into a 10 per cent free share, subsequently raised to 15 per cent. Moreover, four such enterprises were the object of managers' and employees' buy-outs (MEBOs). In general 15 per cent of the capital of state enterprises privatized through mass privatization, as well as other commercialized enterprises, is reserved to employees (and in some cases also to farmers and fishermen who had a contractual relation with the enterprise).

'Direct' privatization, sometimes called 'restructuring' privatization, also led to employee ownership. By the end of 1994 nine enterprises were sold/leased to employees and managers under Article 19 liquidation, but the most common channel for employee ownership was Article 37 liquidation, which turned out to be the single fastest privatization track (Gomulka and Jasinski 1994). Typically these MEBOs were management-led, rather than pure employee or management buy-outs (Filatotchev et al. 1996, p. 68). Out of a total of 140 enterprises sold under Article 37, employees became sole owners of nine enterprises and dominant shareholders in another 20 (Filatotchev et al. 1996, p. 72). Mostly, however, MEBOs took the form of a lease-purchase agreement, or rather a lease with an option to purchase, by a company established by at least 50 per cent of employees; ownership would be transferred after cumulative rentals matched the stipulated capital value and interest. 'Being the least conflictual, this [employee leasing] was the most frequent form of direct privatization. To the end of 1995 788 enterprises followed this track, corresponding to 68.6 per cent of directly privatized enterprises' (MPW 1996, p. 24).

The most significant aspect of these MEBOs is credit, both by 'Founding Organs' agreeing on delayed payments, and by others for the provision of employees' initial downpayment of 20 per cent of the book value of the enterprise. Apart from employee savings, this downpayment was financed from a variety of sources: banks and non-bank financial

intermediaries (such as venture capital firms), credit from enterprise own funds, special enterprise funds set up to support employee ownership.[5]

In general, the sectors more significantly affected by MEBOs and other forms of employee ownership have not been those which required restructuring most badly, such as mining, metallurgy and power generation, but instead those more traditionally favourable to employee ownership and participation, such as construction, trade and services (Jarosz 1994a, 1994b; Table 17.2 also provides some indication of sectoral trends, incomplete due to excessive aggregation of the industrial sector).

Polish experiences with employee ownership match those of most transition economies. The last thing that the new post-communist leaders everywhere —from Balcerowicz to Gaidar—wished to promote was precisely the emergence of significant forms of employee ownership. This was reminiscent of Yugoslav self-management, Western socialist programmes and the search for a 'Third Way'—intermediate between straight capitalism and the old Soviet-type system—which they firmly rejected. Thus in 1990 the Polish Privatization Minister Krzysztof Lis actually wrote to the British Embassy complaining that the support given by the British Know How Fund to employees' companies was against Polish government policy (Kowalik 1994). In June 1991 Leonid Grigoryev and Evgeny Yasin regarded the birth of an employee-controlled economy as one of the dangers of voucher privatization (quoted in Sutela 1994). The Russian Privatization Minister Anatoly Chubais (1993) stressed that the Russian government was strongly opposed to any privatization procedures that would imply a give-away of enterprise shares to insiders. At the Davos Forum of March 1994 Grigory Yavlinsky could refer to Russian mass privatization, dominated by employee and managerial ownership, as 'a form of socialization'.

After all, wage employment—as opposed to workers' ownership/entrepreneurship, whether full or partial—was one of the few features of a market economy that was already in place under the old system. All that

[5] Apparently 30 per cent of initial finance came from such special funds (Filatotchev et al. 1996, from a study of 142 companies reported in *Zycie Gospodarcze,* No. 14, 1994).

was needed to turn the existing near-market for labour[6] into a genuine market was to remove de-facto 'job rights protection' (entitlements to existing jobs, which were never a legal right and therefore could be removed without any change in legislation) and create large-scale unemployment in order to discipline wage demands and introduce flexibility in labour redeployment. In spite of free trade unions, collective bargaining, income policies and social pacts, sooner or later this was done, or is being done, practically everywhere.

Yet significant, large-scale, unexpected forms of employee ownership emerged in the transition, with few exceptions such as the former Czechoslovak Federal Republic—in spite of its pre-War tradition and the impressive intellectual input of Jan and Jaroslav Vanek.[7] Partly this unexpected development was the result of public policy measures forced on the new governments by the need to implement a quick and smooth transition, partly it happened by default (for employee ownership in the transition, see Smith 1993; Schaffer 1996).

Employee ownership had to be introduced for a variety of reasons:

i. To reverse the effects of earlier attempts at reforming the old system that had introduced employee self-management, notably in Poland and to a smaller extent in Hungary (of course in addition to Yugoslavia; in Romania self-management had been formally introduced but had gone nowhere).

   Paradoxically these earlier attempts at reform became an obstacle to subsequent transition, which could only be overcome by convert-

[6] Even at the height of Stalinism state enterprises had to offer a wage level and structure matching their labour demands; they were subject to wage-bill ceilings but had a fair amount of flexibility in their wage policy, through the grading of jobs and of employees and through fringe benefits as well as in wage-fixing. The difference with respect to capitalism was primarily in the state of the labour market, i.e. the full and often over-full employment which prevailed in the centrally planned economy. While undoubtedly consistent with government policies, this was obtained as a by-product of 'tight' or 'taut' planning, i.e. endemic excess demand for goods and services at administered prices fixed below market-clearing levels, rather than as a result of specific measures of employment creation and protection. Apart from full/over-full employment, the wage contract in the traditional Soviet-type economy was basically the same as in the market economy.

[7] See Kotrba, Chapter 4 in this volume. On general trends in other transition economies see the other contributions to this volume; see also Estrin et al. (1994), and particular chapters by Gomulka and Jasinski (1994) on Poland, Carlin on Germany, Ben-Ner and Montias (1994) on Romania, Canning and Hare (1994) on Hungary, Bim et al. (1994) on Russia; see also Lissovolik (1995) and Earle and Estrin (1995).

ing self-management into co-ownership. Privatization of state enterprises with self-management provisions required employees to surrender their 100 per cent entitlement to, say, 20 per cent of property rights (that part of property rights that involved the right to appoint and dismiss managers, to use and control capital, and the right to appropriate some of the results). For them to do so willingly employees had to be given instead, say, 20 per cent of full property rights (including the entitlement to any increase in capital value and the free disposal of capital, which they did not have before).

ii. As a natural consequence of transition, employee ownership was also introduced with the transformation of former pseudo-co-operatives (public sector co-operatives) into genuine co-operatives run by elected officials and independent from central organs; this was an early development in the Polish transition (which are not considered here).

iii. To win over employee support for the transition in spite of concern for its short-run adverse effects on real wages and on mass unemployment.

In addition, unintended employee ownership also happened, by default, given:

a. the low and often negative value (at the ruling fixed wage rates but not for more flexible participatory earnings) of some state enterprises for which there could not have been other takers. In Polish parlance this is the case of enterprises 'liquidated' under Article 37 of the Privatization Law, which, otherwise, would have been liquidated for insolvency under Article 19 of the old Act on State Enterprises.
b. the shortage of domestic capital, which placed employees (especially in view of their inside information) in a good position with respect to domestic outsiders, while alternative external buyers frequently evoked xenophobic reactions; and
c. employees' and managers' natural inclination, in the absence of information about other enterprises and other localities, simply to automatically select the one which they knew best and was most important for their livelihood, or, at most, enterprises in the same locality—what Peter Murrel (1994) calls the 'balkanization of ownership'. In

Poland this was a much less important factor than in those transition economies—like Russia—where mass privatization vouchers could be used to buy an interest in one's enterprise on privileged terms.

## 17.3 Theoretical Predictions

From theoretical literature on various forms of employee ownership a number of ready-made predictions can be drawn which will be listed here before reviewing their verification in the Polish case (Sect. 17.4).

In general the acquisition of a non-controlling interest by managers and employees in their own enterprises can be regarded as a positive development which encourages productivity, better labour relations, economic democracy; the diffusion of employee ownership is encouraged in the European Community (Uvalic 1991). The acquisition of a *controlling* interest, however, is capable of having devastating effects on earnings, employment, efficiency and restructuring.

First, employees may use their controlling power to maintain employment levels higher than those compatible with profit maximization at the going wage rate. When this happens workers will be dismissed only if their wages are higher than the value of their average product, not necessarily if wages are higher than the value of their marginal product. On the positive side, there will be a lower unemployment level than otherwise, as a result of what is effectively a form of work-sharing within employee-controlled enterprises. On the negative side, such work-sharing at the microeconomic level will be less efficient than economy-wide work-sharing, because there will be no tendency for the value of labour's marginal product to be equalized throughout the economy; indeed employees might be kept on even when their marginal product is negative.

Second, employees may use their controlling power to raise earnings (including fringe benefits in kind, both individual and collective) above the going wage rate to the point of bringing profits down to zero or even incurring losses, eating up equity capital right down to the point of bare solvency, that is, of zero capital value of the enterprise—even if budget constraints are hard (if they are not, losses may be inflicted also on suppliers). Other shareholders can be effectively disenfranchised and

expropriated. No additional equity capital will be available from outside on that basis; the enterprise will have to rely on internal finance for its growth, and naturally its viability will be limited to the sectors or techniques with less than average risk, size or capital per man.

Capacity restructuring, if any, will be much slower than otherwise, in the short run because of obstacles to labour shedding, in the medium to long run because of lower self-financed investment, lower access to loans and no access to external equity capital. If the resulting trade-offs between employment, efficiency and capacity restructuring—which ultimately involve a trade-off between lower short-term social costs and higher cost and longer duration of necessary restructuring—were actually acceptable to governments, all would be well in the best of all possible worlds. The trouble is that such trade-offs are uncontrollable and unpredictable, and therefore unlikely to coincide with government preferences; they are the result of an *absence* of government policy, without the justification of a laissez-faire approach, because such phenomena are policy-induced and interfere with market processes rather than being their natural result.

The probability of such adverse implications of employee ownership is not an increasing function of the degree of their ownership and/or control. Nuti (1995) has shown that such adverse implications are the 'catastrophic' consequence of *a controlling interest being exercised—whether individually or collectively—by those employee-shareholders who individually hold a share of equity capital smaller than their share in wage labour.* Only those employee-shareholders, in fact, gain more as employees from higher wages and continued employment than they lose as shareholders; other employee-shareholders have no incentive to behave any differently from other shareholders.

Predicting what might happen in a given enterprise with employee ownership thus meets considerable difficulties. First, whether or not a given share of the votes is a controlling interest is not always known a priori: over 50 per cent of the votes may not be enough if the vote is dispersed among disinterested holders, while considerably less than 50 per cent may be sufficient to exercise control when the rest of the votes are dispersed or disinterested; in other words, a potential controlling interest may remain unused. Second, available information about share distribution is never related to earnings distribution, in the only way that would

indicate whether employee ownership can make a difference, even potentially. As far as one can see, no empirical investigation to date—East or West—has collected information about the relative size of individual employee shares in equity and in earnings. *For both reasons, we should expect empirical studies of enterprises with significant employee ownership to be fairly inconclusive.*

In these conditions the best we can do is to venture some plausible conjectures. First, since as a rule managers are bound to hold higher individual shares than other employees, and enjoy incentives unrelated (or indeed negatively related) to the level of earnings of other employees, managerial holdings are best excluded from aggregate employee shareholdings for the purposes of assessing whether they can amount to a controlling interest diverting the company away from profit maximization.

Second, more generally, the higher the concentration of employee share ownership, the less likely it is that an enterprise with substantial employee ownership will behave differently from otherwise equivalent enterprises.

Third, in the course of time the employee-controlled enterprise is bound to easily revert to an ordinary company, when a sufficient number of employee-shareholders raise their equity stake over their share in total earnings, or cease to be employees, or shareholders.[8]

It should be stressed that the problems that might arise with an employee-owned enterprise are the same that would arise with shareholders who have another stake in the company other than equity, for example as suppliers, buyers, creditors, debtors, competitors, etc. (see Nuti 1995). At the same time, such problems should not be confused with those of the standard cooperative or self-managed firm, where members are not full co-owners but only share the right to use enterprise capital and to appropriate net value added. The only features co-operatives and employee-owned enterprises have in common are a greater suitability to activities characterized by a lower than average capital intensity, riskiness and enterprise size, and a restricted access to risk capital. Otherwise employee-owned enterprises, unlike co-operatives or self-managed enterprises, do not have an incentive to restrict employment, to

[8] Unless employee-shareholders happen to sell their stock to employees who still fail to reach an equity stake at least as high as their share in earnings—a fairly contrived supposition.

over-exploit a monopoly position, to respond sluggishly and possibly 'perversely' to price changes, to distribute rather than reinvest profits or to exhibit a bias for labour-saving projects (see Nuti 1992).

## 17.4 Actual Performance

Evidence on the impact of employee ownership on actual enterprise performance in Poland is practically limited to MEBOs, since other forms of privatizations have led to weaker forms of employee ownership, fairly uniformly distributed among privatized state enterprises at the time of privatization and not yet sufficiently diversified. Neither standard Polish classification (exemplified in Tables 17.1 and 17.2), nor major studies of Polish privatization such as Belka et al. 1994, single out enterprises characterized by significant employee ownership. Nevertheless a number of empirical studies are available on Polish MEBOs: Jarosz 1994a, 1994b; Szomburg 1994; Estrin et al. 1994 (a comparative study of an enterprise sample from Poland, Hungary and Czechoslovakia); Rapacki 1995; see also Estrin 1996; Filatotchev et al. 1996; Woodward 1996.

Profitability of Polish MEBO enterprises appears to have been relatively better (though not very significantly) than that of other enterprises, whether otherwise privatized, or still in Treasury ownership, or in the traditional state sector. Thus in 1994 MEBOs recorded a profit rate on current costs of 7.4 per cent as opposed to 7.2 per cent for capital privatization, 6.2 per cent for Treasury-owned enterprises and 5.1 per cent for the public sector as a whole. Net profit margins bear identical relationships, correspondingly 3.7 per cent, 2.9 per cent, 2.8 per cent, 2.5 per cent (Rapacki 1995).

It would be premature to conclude, from these data, that Polish employee-owned firms are more efficient than residual state enterprises or traditional private firms. First there is generalized consensus that the higher margin is due not to MEBOs' better performance but to the fact that MEBOs were self-selected by employees precisely on the basis of their prospective cash flow being sufficiently attractive (Rapacki 1995; Estrin 1996; Filatotchev et al. 1996). Indeed, gross mark-ups differ significantly, being much higher for MEBOs, presumably in order to enable

them to bear the burden of lease/purchase costs. Second, on average the performance of MEBO companies deteriorated over time; the number of loss-making enterprises rose from 4.4 per cent in 1991 to 13.2 per cent in 1992 (see Filatotchev et al. 1996). Third, there was considerable variability in such firms' performance, from the four very successful firms now listed in the Warsaw Stock Exchange to seven leased firms which went bankrupt before the end of 1994. By and large the more successful have been medium-sized (over 300 employees) industrial enterprises less exposed to competition, whereas small firms (under 100 employees) operating in a very competitive environment such as trade have experienced severe difficulties (Filatotchev et al. 1996; Jarosz 1994a, 1994b; Szomburg 1994; on the employment size distribution of privatized enterprises, see Table 17.3).

In the MEBO samples available, wages appear to have initially risen faster than in similar firms, only to be more contained than average in subsequent periods. Contrary to expectations, employment has been considerably more flexible than in other state firms, whether privatized or not, and in the economy as a whole, also falling faster than prior to privatization (although often employment fell significantly immediately before privatization). The highest wage increases have been obtained in the enterprises that experienced the largest employment decline (Jarosz 1994a, 1994b; Filatotchev et al. 1996). This combination of

**Table 17.3** Ownership transformations according to privatization method and employment size at end-1995, Poland

| | | jsSP | | | | Liquidation | | |
|---|---|---|---|---|---|---|---|---|
| Number of employees | Total | Total | Art 5 | Art. 6 | Art. 7 | Total | Art. 37 | Art. 19 |
| Total | 3 465 | 958 | 387 | 230 | 341 | 2 507 | 1 149 | 1 358 |
| Up to 50 | 299 | 1 | 0 | 0 | 1 | 298 | 52 | 246 |
| 51-200 | 1 495 | 42 | 16 | 0 | 26 | 1 453 | 597 | 856 |
| 201-500 | 663 | 184 | 77 | 19 | 88 | 479 | 309 | 170 |
| Over 500 | 1 008 | 731 | 294 | 211 | 226 | 277 | 191 | 86 |

*Source*: MPW 1996.

Note: Wholly Treasury-owned joint-stock companies (jsSP) have resulted from Articles 5 and 6 of the July 1990 Act on the Privatization of State Enterprises, and from Article 7 of the Act on National Investment Funds. 'Liquidation' took place under Article 37 of the July 1990 Law (restructuring privatization) and Article 19 of the old Act on State Enterprises of September 1981.

employment, wage levels and trends, suggests that budget constraints have hardened just as in other privatized firms (which is not a surprise because they have hardened also in state enterprises, see Belka et al. 1994); that causality may have gone from labour shedding to higher wages, rather than the other way round; that employee control—if present —has not dominated wage and employment policy, apart from a possible initial over-generosity which may have been due to an accommodating managerial attitude rather than to opportunism by employee-shareholders.

Investment in the MEBO enterprises was generally lower than in similar enterprises, due to the burden of lease payments, high interest and the inability to offer enterprise assets as collateral before the ownership transfer (see Jarosz 1994a, 1994b). Financial institutions appear to have been aware of the greater risk of lending to enterprises controlled by insiders (see the previous section): apparently the nine main Polish commercial banks usually rated exclusive insider ownership as a greater risk than partial ownership with foreign or other outsider participation (Solarz 1994).

## 17.5 Problems and Prospects

Unresolved problems of employee ownership in Poland, especially for its stronger version of MEBOs, include governance conflicts, financial constraints to growth, institutional instability. Prospects for a further growth of employee shareholding in Poland are poor.

Governance problems here concern not so much, or not only, owners' control over managers, but the resolution of possible conflicts between those shareholders who are also employees or managers and other shareholders who are not. The government, even when retaining an interest as lessor, seems unsuitable to resolve these conflicts, since the lease or sale has occurred precisely because of its earlier inability to exercise effective control. The best solution is perhaps the reduction of the total share held by small insiders; a recent proposal to make at least 20 per cent of the capital to outside investors (Filatotchev et al. 1996, p. 82) is a move to add an external voice and reduce the weight of all insiders, but does not discriminate between small and large inside shareholders and, consequently, does not go far enough.

Access to finance, both for funding a MEBO and financing subsequent investment, is particularly difficult and costly. From the point of view of externally financing a MEBO, 'the appropriate candidate for such a transaction is an enterprise in a mature industrial sector, with stable and significant cash flow and with low investment needs' (Filatotchev et al. 1996, p. 79); other enterprises are much less attractive candidates. Internal investment finance is greatly squeezed by the financial burden of leasing, exceptionally heavy in spite of privileged interest rates, owing to the exceptionally high, nominal and real, basic interest rates in the transition in general and in Poland in particular (see Nuti 1996). External finance—as noted above—is discouraged by the inability to offer enterprise assets as collateral before the ownership transfer which only occurs at the end of the purchase-lease agreement. Here it should not be difficult to transfer ownership after cumulative payments have covered, say, half of the enterprise capital value, after which point the value of employees' equity stake should be sufficient to raise and secure a matching amount of external finance (a MPW proposal reducing to one third the minimum repayment sufficient to transfer ownership should be enacted in the near future).

There is not only an a priori presumption (noted above in Sect. 17.3) but also empirical evidence, that a controlling employee ownership is a tendentially unstable institution. Table 17.4 for Poland and, even more so, Table 17.5 for Russia, clearly demonstrate how the pattern of ownership both shifts from insiders to outsiders, and becomes more concentrated among insiders. As small employee-shareholders cease to be small (relatively to their share in labour earnings), or employees (through retirement or turnover), or shareholders (through sales to outsiders), the employee-controlled enterprise will tend to behave as an ordinary capitalist enterprise with only the small though non-negligible net advantages from employee

**Table 17.4** Change in ownership structure in Polish enterprises leased by employees

| Type of owner | Average holding end-1991 (%) | Average holding mid-1993 (%) |
|---|---|---|
| Employees | 75.4 | 66.9 |
| Managers | 9.8 | 12.0 |
| Outside investors | 14.8 | 21.1 |

*Source:* Jarosz 1994b; from Filatotchev et al. 1996.

**Table 17.5** Shareholders by ownership type in Russian joint-stock companies (per cent of equity, 1994–95)

| | April 1994 | Dec. 1994 | March 1995 | June 1995 | June 1996 forecast |
|---|---|---|---|---|---|
| Insiders (total) | 62 | 60 | 60 | 56 | 51 |
| of which: | | | | | |
| employees | 53 | 49 | 47 | 43 | 35 |
| directors | 9 | 11 | 13 | 13 | 16 |
| Outsiders (total) | 21 | 27 | 28 | 33 | 45 |
| of which: | | | | | |
| large | 11 | 16 | 17 | 22 | 32 |
| small | 10 | 11 | 11 | 11 | 13 |
| Government | 17 | 13 | 12 | 11 | 4 |
| Total | 100 | 100 | 100 | 100 | 100 |

*Source*: RF State Committee for Property Management 1995; from Mizobata 1996

participation. Partly these trends are affected by limitations to share tradability, with pre-emption rights by insiders and the need for transfers to outsiders to be approved by managements and other enterprise organs; but share liquidity naturally increases with the termination of employment. Ultimately, '…buy-outs, which have been a highly pragmatic means of effecting initial privatization, increasingly need to be viewed as a *transitory form of organization*' (Filatotchev et al. 1996, emphasis added).

From several view points—suitability for external financing of MEBOs, sectoral and size suitability—employee ownership does not appear to be a universal solution, in Poland as anywhere else. The downside of its high initial incidence and rate of completion in Poland is the current low rate of new starts; potential candidates and takers have been virtually exhausted. The direct privatization track in general and MEBOs in particular are now regarded in Poland as a 'dead end' (Monkiewicz 1996). More promising developments in current privatization policies in Poland are represented by generalized commercialization, debt-equity swaps, linking privatization with pension fund reform, raising revenue for the state budget (which in the past has meant capital privatizations with increasing participation of foreign buyers)[9]—rather than the further development of MEBOs and other forms of employee ownership.

[9] On the increasing importance of privatization revenue see Table 17.1. In 1995 two-thirds of such revenue came from foreign buyers (see OECD 1996).

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# 18

# Employeeism: Corporate Governance and Employee Share Ownership in Transitional Economies

Domenico Mario Nuti

A number of countries have embarked on a program of privatization using vouchers, establishing a form of people's capitalism. Here my advice is a word of caution, one that most of them have already taken to heart: *Beware of the corporate governance problem.*

Joseph Stiglitz[1]

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[1] Stiglitz (1994, p. 262); emphasis added.



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What's happened so far is not privatization, it's collectivization, which puts the workers and managers in charge of enterprises. Their interest is in increasing wages, not investment. This is a new problem created by this style of privatization.

Grigory Yavlinsky [2]

I'm the man who makes the decisions.

Viktor Kozeny[3]

## 18.1 General Issues

Under the heading of "corporate governance" we include problems arising when an enterprise is owned by more than one owner and managed by a hired managerial group, and also the rules and incentives appropriate to make it function as efficiently and impartially as if it were owned and run by a single owner-entrepreneur. Throughout this essay we shall refer to co-owners as shareholders, thus implicitly referring to joint stock companies; unless otherwise stated, decisional (voting) powers are presumed to be distributed in proportion to ownership. Mutatis mutandis, identical considerations apply to any form of enterprise co-ownership and attribution of decisional powers.

Two basic classes of problems arise in joint stock companies: (i) establishing shareholder control over managerial discretion; (ii) avoiding or resolving conflicts between groups of shareholders that may occur when a controlling interest is vested in shareholders who also have a stake in company activity in another capacity. *Stakeholders* include employees,

[2] At the Davos Forum, March 1993. The quote is from de la Camara Arilla (1994).

[3] Founder, manager, and 25% owner of HC&C (Harvard Capital & Consulting Investment Fund, Prague); cf. George Soros's dictum, "A company is not a democracy" as quoted by Kozeny (*Financial Times*, 3 April 1995).

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managers, suppliers (including creditors), customers (including debtors), competitors, local authorities, the state, or any economic subject otherwise exposed to external economies or diseconomies related to enterprise activity (including environmental effects).

In transitional economies, the direct privatization of small establishments—the so-called small privatization—has resulted in a large number of small (up to 50 employees) and indeed "micro" (up to five employees) enterprises that are directly managed by a single owner and therefore do not raise these kinds of problems. However, privatization of large state enterprises, which accounts for the bulk of privatized output and employment, typically has involved precisely the patterns of ownership and management associated with corporate governance problems: *multiple ownership* and *delegation of managerial functions* to professional executives.

We *exclude* from a strict definition of corporate governance those issues that arise not only in corporate structures but in any type of enterprise, that is, such issues as: competition;[4] hard budget constraints (i.e., depoliticization, market-assessed performance and incentives, credit discipline, bankruptcy and liquidation procedures); law and order and contract enforcement; minimum regulation of financial institutions; accounting and financial standards;[5] and minimum protection of stakeholders—or, more generally, the design of rules and incentives that might induce an enterprise to behave in the interest not only of ownership but of a broader group, possibly extending to the government or society as a whole. These issues are certainly relevant for corporate governance, especially in transitional economies (see Sect. 18.7), but only indirectly; they are essential components of a market environment and are therefore of more general interest for the whole systemic transition. We also exclude issues specifically arising in the runup to privatization.[6]

This essay first outlines the general problems of corporate governance and their possible resolution in market economies, including transitional

[4] "I view competition as far more important than privatization" (Stiglitz 1994, p. 261).

[5] These have received much attention in Great Britain with the 1993 Cadbury Report, due for reassessment in 1995.

[6] These may range from concealment of profit to deliberate loss making or rapid disinvestment; see Aghion et al. (1994) and Cornelli and Li (1994).

economies. It then concentrates on a particular form of intrashareholder conflict—namely, that which may arise when employees, whether individually or collectively, own enough shares to control company activities.

The interest of this particular case is threefold. First, contrary to intentions and expectations,[7] the sale, lease, or gift of state enterprises' capital to their employees has turned out to be an important channel of privatization in all transitional economies with the exception of the Czech Republic—indeed, the most important in many cases (e.g., Russia, Mongolia, Romania, and Poland). Hence the use of the label *employeeism.*[8]

Second, the implications of employee ownership have been grossly neglected, particularly in view of the inordinately massive literature devoted to employee self-management and value-added sharing from Ward (1958) and Vanek (1970) to date. Indeed, employee ownership lends itself to being confused, and often is, with self-management, which is fundamentally different. The employees of Ward's "Illyrian" firms (or of traditional cooperatives or Yugoslav enterprises) hold *ephemeral rights of use,* which are not transferable to others and moreover are *conditional on continued employment* (or on continued connection, as with e.g. an old-age or invalidity pensioner). Since there is no such a thing as a nontransferable or conditional property right, the problems associated with Ward-type self-managed enterprises are, on the contrary, precisely those of employee *non*ownership.

On the one hand, when employee ownership is properly modeled, it is expected to produce beneficial effects on labor productivity—and therefore indirectly on employment also—through the exercise and mutual monitoring of labor effort and the avoidance and resolution of conflicts.[9] On the other hand, when employees have a controlling property share they are automatically expected always to choose higher labor earnings and higher employment levels than prevailing in nonemployee-controlled

[7] Proposals for employee ownership in the transition, by Ellerman (1990) and Weitzman (1991), are notable exceptions.

[8] This term is borrowed from Miyazaki (1993), who used it—with much less reason—with reference to Japanese enterprises.

[9] For instance, Alchian and Demsetz (1972) see employee ownership as a way to overcome the incompleteness of labor contract specifications and the difficulties of monitoring labor effort. See also Jensen and Meckling (1976), Conte and Svejnar (1990) and Hansmann (1990).

enterprises (Blanchard et al. 1991). As we shall show, this argument needs strong qualifications.

Third, it turns out that when a conflict *does* arise between employee shareholders and other shareholders, the mechanisms that can usually be relied upon to resolve stakeholder-shareholder conflict are not applicable to this special case. Other safeguards must be introduced. Otherwise, the company is bound to suffer from biases (toward higher wages and higher employment than in otherwise equivalent companies) that are bound to prevent access to outside risk capital; moreover, the company is likely to become institutionally unstable. Yet, even economists who regard socialist ideology as officially dead (Stiglitz 1994, p. 279) still believe—with good reason—that "there remains scope for further experimentation. For instance, we need to study forms of economic organization involving more worker participation and ownership" (p. 277).

## 18.2 Shareholders' Control Over Managers

Traditionally, the study of corporate governance has emphasized the separation between enterprise ownership and control, that is, the delegation of managerial functions to a professional executive (or group of executives treated as a single unit).[10] Professional managers always have some discretion, which they may use to pursue their own interests instead of simply maximizing the market valuation of the enterprise as a going concern in the best interests of ownership. Thus managers will also be interested in other targets to which their earnings and other rewards (status, fulfillment, self-esteem) are frequently related—for instance, enterprise size (whether measured by employment, output, or capital) or growth. A principal-agent problem arises of how to induce a manager to behave as

[10] See Berle and Means (1932). Some authors define corporate governance exclusively in terms of shareholder-manager relations: "Corporate governance is the arrangements by which shareholders hire and fire managers and monitor and reward them so that they optimally serve the shareholders' interests" (Bergstrom 1994, p. 19). Gray and Hanson define corporate governance as "shareholder monitoring [of] managerial behavior" (1993, p. 1).

if he or she were the enterprise owner.[11] However, in a single-owner enterprise the separation between control (delegated to a professional manager) and ownership does not in itself create significant problems. The single owner directly stipulates hiring conditions, hires and fires managers, and has both the opportunity and the incentive to closely monitor enterprise activities.[12]

The problem arising in this case, as well as its solution, have both been known since time immemorial. For instance, in the parable of the unjust steward, the manager is threatened with loss of employment;[13] in the parable of the talents, the master switches assets from the zero-rate-of-return agent to the profit-maximizer.[14] As the old proverb goes, "L'occhio del padrone ingrassa il cavallo" [A horse flourishes under his master's eye].

Industrialization has made owner control over managers actually easier, by concentrating activities in a smaller space (the factory floor) than in such territorially diffused activities as agriculture. In the Soviet-type system, state enterprises seemed to suffer from the separation of ownership and control in spite of there nominally being a single owner—the state. However, their problems derived primarily from the lack of a market environment (i.e., *all* enterprises were state enterprises). Moreover,

[11] A contrary view holds that governance by independent management is a necessary condition of enterprise success, especially in multinational companies and in capital-intensive sectors (see Chandler 1977, 1990). This view is backed neither by convincing theoretical arguments nor by specific empirical evidence.

[12] Indeed, we could argue that separation between ownership and control is neither sufficient nor necessary for corporate governance problems to arise. We can easily imagine a jointly owned enterprise managed directly by the owners (i.e., without such separation) and yet subject to possible conflicts of interest between owners if they are also stakeholders.

[13] "Once there was a rich man whose agent was reported to him to be mismanaging his property. So he summoned him and said, 'What's this that I hear about you? Give me an account of your stewardship—you are not fit to manage my household any longer.' At this the agent said to himself, 'What am I going to do now that my employer is taking away the management from me?" (Luke 16: 1–4). Although the "rascally agent" who used his master's money to make friends for himself was actually praised for this by his master (Luke 16: 8–9), this attitude was clearly considered atypical: "the Pharisees, who were very fond of money, heard all this with a sneer" (Luke 16: 14–15). All references herein to the Gospels are from Phillips (1972).

[14] "And throw this useless servant into the darkness outside, where there will be tears and bitter regret" (Matthew 25). Another illustration can be found in the parable of the wicked husbandmen (Luke 20 or Matthew 21).

ownership in practice was not really vested with any particular state agency: often ownership belonged to all and therefore nobody was owner.[15]

In reality, issues of corporate governance are due not to separation between ownership and control per se but rather to *multiple* ownership. Compared to a single owner, multiple owners have lower incentives and lower opportunity to monitor and control managerial activities. Any individual part owner would only appropriate a part of the benefits of such monitoring while incurring all of its costs (otherwise, monitoring efforts might be duplicated); thus, free riding is encouraged. Such incentives and opportunities are all the lower, the higher is the degree of ownership fragmentation; this dilutes owners' potential control over managers: "wider ownership dispersion leads to greater shareholder passivity" (Gray and Hanson 1993, p. 7). This is a *principal-agent* problem.

Economic literature usually relies on two possible ways of resolving this question (see e.g. de Cecco 1989; Corbett and Mayer 1991; Gray and Hanson 1993; Jackson 1994). The so-called German–Japanese model of corporate governance relies on the *actual* presence of one or of at most a very few major shareholders (e.g., 80% of joint stock companies in Germany have at least one shareholder with at least 25% of the voting shares), and on a formal or informal role for banks and other financial institutions as shareholders and as depositories of shares (entitled to exercise the underlying voting powers on behalf of share depositors). Such concentration of share ownership and voting power establishes a degree of control over managerial discretion, as well as incentives to exercise such control, that are comparable to the case of a *single* enterprise owner.

The Anglo-Saxon model relies on the discipline imposed by the *potential* emergence of a dominant shareholder: for well-functioning financial markets, an underperforming managerial team is always exposed to the challenge of hostile takeover bids, with successful bidders gaining from

[15] Kornai (1992, pp. 110–30) investigates managerial motivation under the old system: political and moral conviction, identification with the job, power and promotion, prestige, material benefit, a quiet life, fear of punishment. "The official ideology suggested that every functionary would manage his activities 'like a proprietor', but there were no incentives that could inspire the managers to develop a truly proprietory motivation since the gains from doing better would not end up in their pockets. Risk taking was for the same reason avoided, since successes from new technology or other innovations never paid off" (Bergstrom 1994, p. 5).

dismissing existing managers and raising enterprise performance, to the advantage also of all other shareholders (Marris 1966; Auerbach 1988; Jensen 1988; Lazonik 1992). The effectiveness of such challenges depends on the development and depth of the financial markets that provide capital for potential bidders; on legal or customary obstacles to successful bidding by outsiders; on possible limitations built into company statutes;[16] on other defense mechanisms set up against potential challengers (e.g. contingent liabilities placed upon successful bidders—so-called poison pills—or defensive cross-shareholding of and by other companies, as in the Japanese *keiretsu).* The takeover mechanism is far from perfect,[17] but the risk of takeover undoubtedly places some restraint on managerial discretion. (For a comparison of the two mechanisms, see Franks and Mayer 1990, 1992; on the specific problems of transitional economies, see Frydman et al. 1993).

Some transitional economies have deliberately selected one of these models. Poland seems to have selected the German–Japanese model: financial restructuring of enterprises and banks has led to frequent debt-for-equity swaps that give banks a share in their debtor enterprises; in the Polish mass privatization program, each enterprise taking part in the scheme has a special relation with one particular national investment fund, which is supposed to hold no less than one third of the shares and play a significant part in enterprise fundraising and management. The Czech, Slovak, and Russian mass privatizations, on the contrary, impose maximum ceilings on any investment fund's holdings of any company's shares (as a proportion of both the fund's and the company's assets). Russian voucher investment funds, for instance, sell certificates for vouchers or for money which they use to buy shares, but are forbidden to invest more than 5% of their capital in any one firm, or to hold more than 10% of a given firm's shares (see Bornstein 1994). These provisos

[16] For instance, some Dutch corporations belong to foundations rather than to shareholders, who are mostly holders of nonvoting stock. The bulk of voting shares in the Dutch company Phillips, for instance, is owned by a foundation that is effectively controlled by managers. One cannot buy voting shares in the Amsterdam market. As a result, managers do not necessarily behave in the interest of shareholders, although they are still bound by efficiency considerations because they must still make enough profit to pay interest on company loans.

[17] See Stiglitz (1994) for a strong criticism.

suggest a reliance on an Anglo-Saxon-style discipline of financial markets through potential takeovers.

The problem with investment funds, as with all holding companies, is still one of incentives—now, once-removed. As Stiglitz (1994, p. 189) puts it, "Who will monitor the monitors?" (An identical question is raised by Coffee 1994, p. 8). In Poland, as in the Czech Republic, the fees earned by investment fund managers are geared only to portfolio value and not to *changes* in that value (Coffee 1994, p. 75), thus grossly attenuating—if not altogether removing—incentives to raise portfolio performance.

For the Czech case, Coffee (1994, p. 60) recommends elimination of the 20% ceiling on the equity share of a single company that an investment privatization fund (IPF) may hold. However, such funds are often, in the Czech Republic, to a large extent owned by banks. In principle this could be beneficial:

> Banks may exercise more effective control than do shareholders, or bondholders for that matter, a point made long ago by Berle (1926). For banks the costs of intervention and the free-rider problems will be less severe than for shareholders. Because most bank lending is short term, banks can quickly withdraw their funds if they believe the firm is misbehaving. (Stiglitz 1994, p. 189)

However, "the relationship between Czech banks and their IPFs is obscure… Whether IPFs will develop into active institutional investors or passive agents of their indirect banking parents remains unresolved" (Coffee 1994, pp. 94–5). Meanwhile, Czech banks are still largely in the hands of the state. The combination of company shares still held by the state property fund, those controlled by banks directly or indirectly (through their shares in investment funds), plus other cross-shareholdings, still give the state "at a minimum…a very substantial potential voice in corporate governance, even if the current administration (whose free market preferences are beyond dispute) declines to exercise that voice" (Coffee 1994, pp. 5–6). State failure to exercise such power simply allows other shareholders to yield a voice disproportionate to their holdings, and facilitates the kind of shareholder-stakeholder conflict discussed in the

next section. More generally, banks in transitional economies are usually burdened with bad loans and—precisely as stakeholders—may have a vested interest in not precipitating a company crisis by calling their loans or initiating bankruptcy and liquidation procedures.

Notwithstanding government intentions, it would seem that in all transitional economies neither the German–Japanese nor the Anglo-Saxon mechanisms of corporate control are yet fully at work. Company ownership is mostly too fragmented to allow for a controlling interest to emerge and to restrain managers in the interest of all shareholders. Yet markets are too thin and undercapitalized to allow potential takeover bidders to come forward with a credible chance of success, especially since many shareholders (in particular, employees) are often subject to considerable restrictions on the immediate marketability of their shares. "The market does have some instruments such as takeover mechanisms—which socialist economies do not have" (Stiglitz 1994, p. 195). Hence the widespread feeling that in spite of the quick development of financial markets and of rapid privatization, including mass privatization, managers still enjoy discretionary powers greater than would be compatible with the proper functioning of a market economy. Transitional economies can expect, at the very least, the same kind of problems experienced by the less developed (e.g., Italian) European financial markets.[18]

## 18.3 Shareholding Stakeholders

Multi-owner enterprises—of which joint stock companies owned by shareholders are the most general and diffused form—have voting rules linking control rights to property; however, these rules are not in themselves always sufficient to obtain the same results of single ownership and entrepreneurship. Shareholders who are also stakeholders (as defined in

[18] "In Italy the reallocation of ownership and the opportunity of access to enterprise control meet with severe obstacles, which contribute to constrain enterprise growth and explain the adjustment lags and restructuring jolts typical of our economic development" (Barca 1994, p. 6).

Sect. 18.1) might acquire control and exercise it to the undue detriment of other shareholders.[19]

Consider, for instance, a controlling interest held by a shareholder or group supplying an input to the company. Suppose shareholding suppliers were to force a higher quantity of, and/or a higher price for, their sales to the company. All shareholders without exception would suffer a loss, but those shareholders who happen to supply enterprise inputs at the higher price will also have gains. Similar examples could be easily constructed for other stakeholders: shareholding lenders forcing a higher interest rate on their loans to the company; shareholding borrowers forcing a lower interest; shareholding buyers forcing a lower output price; and so on, always with respect to market conditions.[20]

It would be wrong, however, to think that a controlling interest by one group of stakeholders will necessarily lead to exploitation of other shareholders. In all these cases, shareholding stakeholders may be losing more as shareholders than they gain as stakeholders (e.g., as suppliers or buyers) depending on their share in enterprise yield (dividends and capital gains, assumed here to fully reflect profits and be proportional to equity) *relative to* their share in total supplies or sales (or, in the case of other stakeholders, in their share of whatever transfer is being forced from the company to stakeholders). Thus an individual who holds an ownership stake such that his share of enterprise yield is lower than his share of enterprise purchases (or sales) will gain more as a stakeholder than lose as a shareholder from higher input prices (or lower output prices). If such shareholding stakeholders collectively happen to hold a controlling interest in the company, even without collusion they have an incentive to exercise their power to manipulate input and output prices to their own advantage. This is not a principal-agent problem but rather a *principals-principals* problem.

[19] Pyramid control of companies (whereby a company A controls a larger company B, which in turn controls an even larger company C, and so on) provides an opportunity for leveraged control (Berle and Means 1932), thus allowing control by shareholders directly owning much less than a majority of shares. A similar result derives from cross-shareholding. Here we refer to a "controlling interest" regardless of how this may be obtained.

[20] On the state as stakeholder, see Cusan (1994).

It should be noted that the root of the problem is not the presence of a concentrated controlling interest (as with the German–Japanese model), but rather an inequality among shareholders in the ratio between shareholding and stakeholding (appropriately defined). If 100% of the shares were owned by suppliers or buyers in exact proportion to their share of supply or purchase, then no problem would arise. Although concentration may facilitate the rise of a controlling interest, the conflict between stakeholders and other shareholders can arise through sheer pursuit of self-interest by group members, even for a dispersed ownership within the group and in the absence of collusion.

Consider, for instance, a company renting homogeneous land from a group of shareholders who, collectively, have a controlling interest in the company. Before rushing to conclude that those landowners have an interest in pressing for a high land rental to be paid by the company, it is essential to consider the relative distribution of shares and of the land leased to the company. Take the *i*th shareholding stakeholder supplying $L_i$ of land out of a total quantity $L$ leased to the company, and holding $K_i$ shares out of a total of $K$. A price $h$ that is higher than the market rental $w$ will lead to a gain of $(h - w) \bullet L_i$ as supplier and a loss of $(h - w) \bullet L \bullet K_i/K$ as shareholder; that is, a net effect of

$$f = (h - w) \bullet (L_i - L \bullet K_i / K), \tag{18.1}$$

which, since $(h - w)$ is assumed to be positive, will be a net gain as long as

$$L_i / L > K_i / K \tag{18.2}$$

In fact, any landowner who has a greater share in company equity than in the lease of land to the company will lose more as a shareholder—from an above-market rental of land to the company—than gain as a landowner.

A similar proposition may be put forward for a possible oversupply of a homogeneous input $L$ sold to the enterprise by controlling stakeholders, over and above the quantity $L'$ at which the value of its marginal productivity equates supply price w. Call $y'$ the value of the marginal product yielded on average in the company by excess units $(L - L')$, where

$y' < w$ and $c$ is the opportunity cost of $L$. Continued oversupply yields, to each stakeholder supplying a quantity $L_i$, a gross gain $(L-L')\bullet(w-c)\bullet L_i / L$ and a gross loss $(L-L')\bullet(w-y')\bullet K_i / K$. Let us assume (i) identical opportunity cost of the input inside and outside the enterprise (i.e., $c = y'$); (ii) identical probability of each unit of $L$ being made redundant if supply is cut down to $L'$ and overuse ceases; and (iii) indifference to risk of redundancy for parity of expected earnings. The net effect $g$ of $L$ overuse is then

$$g = (L-L')\bullet(w-c)\bullet(L_i / L - K_i / K). \tag{18.3}$$

For assumed positive overuse $(L - L')$ and excess price over and above opportunity cost $(w - c)$—without which overuse is not damaging—$g$ remains positive so long as (2) is satisfied. Again, those stakeholders who hold a smaller share of enterprise capital $(K_i/K)$ than of supply $(L_i/L)$ will have an interest in continued oversupply. Thus, the risk of intrashareholder exploitation, in the form of excess price and/or excess use of inputs supplied by shareholders, arises only when a controlling interest is exercised by stakeholders each of whom individually has a lower share of company equity than of input supply (or other relevant stake).

If we call a *balanced equity share* one that is equal to the share of input supplied to the company, then in general the shareholder-stakeholder conflict arises not from stakeholders' control, or even from stakeholders' majority holding of company shares, but more precisely from control being in the hands of stakeholders who individually own less than a balanced share. When this happens, there is no need for prior collusion on the part of less-than-balanced shareholders; they need only to be active and to exercise their vote in their self-interest. Therefore, the problem is not due to share ownership concentration, which on the contrary reduces the chances for collusion—another advantage of the German–Japanese model. The problem arises because of inequality between individual relative positions as shareholder and stakeholder (see the diagram in the Appendix).

All formal or informal limitations on the power of shareholders and/or managers that might survive during the transition are bound to interfere with standard mechanisms of corporate governance. In particular, the

presence of nonvoting shares raises the probability that less-than-balanced shareholders might be able to exercise control. However, nonvoting shares must be included in $K_i$ for the purpose of comparing $K_i/K$ and $L_i/L$, duly weighted for the possible difference in the relative impact of an economic decision on the gain or loss of different categories of shares. (Nonvoting shares usually yield a more secure and less variable return.)

In turn, intrashareholder exploitation by stakeholders raises the profitability of mergers between the company in question and stakeholding enterprises, as well as the profitability of their joint takeovers by third parties. By eliminating such internal transfers, the new unit gains more than the shareholding stakeholders lose; the probability of intrashareholder exploitation can thereby be reduced or eliminated. Conglomerate mergers with output buyers or with input suppliers, or horizontal mergers with competitors, can fully internalize stakeholders' external effects and therefore ensure that noncontrolling shareholders do not suffer from inefficient company operations. In transitional economies, however, there seems to be no evidence of significant company mergers or of shareholder-stakeholder conflicts except for extensive employee ownership.

## 18.4 Employee Ownership and Control

In general, the acquisition of a noncontrolling interest by managers and employees in their own enterprises can be regarded as a positive development that promotes productivity, better labor relations, and economic democracy; the diffusion of employee ownership is encouraged in the European Community (see Uvalic 1991). The acquisition of a *controlling* interest by less-than-balanced shareholders, however, is associated with potentially adverse effects.

Employees constitute a special category of stakeholders: when they are controlling shareholders *and* potential net gainers from raising earnings above the market rate, they are not subject to the discipline of takeovers and mergers discussed previously. Labor is ultimately supplied by individuals, not by companies; even companies that specialize in hiring and reselling labor services cannot own or hire labor as if it were machines or land. Employees (and managers) cannot individually merge or be taken

over; hence their possible exploitation of other shareholders cannot be eliminated by the takeovers or mergers. If less-than-balanced employee shareholders have a controlling interest then there must be at least a strong temptation to pay higher earnings and/or force overemployment; the only objective constraints will be those of bankruptcy and of the minimum investment required to maintain viability.

The first constraint does not prevent employees' appropriating company present value, effectively expropriating and disenfranchising other shareholders. The investment constraint may ensure the maintenance of some minimum positive capital without, however, preventing capital consumption above that minimum. This is one of the main reasons why worker ownership and control, while perfectly legal in market economies, are the exception rather than the rule. (There are other reasons: lack of capital and collateral, as well as double exposure to risk both for income and capital and therefore limited access to credit; see Nuti 1995).

In the case of employee shareholding, an essential distinction must be made between employees and managers. First, the same problem applies to managers when they can determine managerial rewards, but they are unlikely to have a controlling interest on their own. Managers usually influence their own salaries collectively, across and not within companies, by tacit collusion (ruk rukà in Russian; *una mano lava l'altra* in Italian). Otherwise shareholding managers, while still pursuing their own objectives, behave more like a single owner as their share holdings increase. Indeed, managerial ownership of shares (and in particular of options) is extensively used precisely in order to ensure that managers will behave in the interest of shareholders. This aspect of managerial motivation may be particularly important in transitional economies, where the imperfection of markets for managerial skills (Jones and Kato 1994)—and managers' resulting lack of concern for their reputation—may encourage predatory behavior (Cusan 1994).[21]

[21] Recent disquiet in the United Kingdom about excessive payments to managers in the form of options is due to the fact that normally managers benefit from any growth trend in the stock exchange, and not just from the above-average performance of their shares. Equivalent disquiet over fast-rising managerial salaries in privatized state companies, especially former public utilities, is due to the fact that higher salaries have normally been granted to the same managers whose earlier lower salary was judged by them and the market as an equilibrium, and not to new managers who had been commanding such higher salaries in the marketplace. Britain's Greenbury Committee is attempting to establish a code of practice on top executive pay.

Second, managerial salaries may be totally unrelated to wage levels within the enterprise, in which case managers would behave as outsiders (unless they had some control over their own salaries as a result of their managerial position and not of their shareholder status). Third, if a component of management salary were directly related to the company average wage by a formal or informal coefficient, then only that coefficient could be regarded as the managerial $L_i/L$ for the purpose of comparison with managers' $K_i/K$. Managers are likely to be larger-than-average shareholders, and therefore likely to own a greater share of company equity than the share of their wage-related component in the total wage bill (including such components). It follows that any risk of overpay or overemployment depends not on a controlling interest vested jointly in managers and workers, but on a controlling interest vested in those workers who hold a less-than-balanced share.

However, there may also be an advantage in employee shareholding. Shareholding employees may be willing to accept less than the going wage—for different reasons, according to whether or not they are less-than-balanced shareholders. If condition (2) is not satisfied, then they may expect to recover their current lost revenue directly through higher future dividends and capital gains than would otherwise be the case. If condition (2) is satisfied and the enterprise is on the verge of bankruptcy, shareholding employees may expect to recover their lost current revenue indirectly through higher future earnings and/or employment—which they might be able to enforce if they have a controlling interest. Here employees choose to postpone the exercise of their power, thus enhancing short-term employment. The result may seem identical to flexibility of earnings (as suggested by Layard 1995), but there are differences. Here the result is enterprise-wide work sharing, with high countrywide dispersion of earnings. We have not wage flexibility but rather employment rigidity—an obstacle to labor redeployment and thus a potential inefficiency.

Hansmann (1990) attributes great importance to labor heterogeneity and to possible conflicts between employees due to heterogeneous skills, age, seniority, blue/white collar status, interests and abilities, and attitudes toward effort; he concludes that employee ownership would work better for small enterprises with homogeneous labor. Such labor

heterogeneity may explain why some employee-owned enterprises are effectively controlled by managers. This is not a problem but instead the solution to the corporate governance problems associated with employee ownership—as long as managers are also shareholders to the extent of being motivated primarily by enterprise economic performance rather than the pursuit of their other individual interests.

However, when a conflict arises between shareholding employees and other shareholders, other instruments are needed for avoiding intrashareholder exploitation. One simple remedy may be the stipulation that, in order to be a shareholder, any employee must hold a share *at least as high* as his or her share in the total wage bill (defined as including all payments related to a basic or average wage, i.e., possibly also for managers). In other words, condition (2) must *not* be satisfied. A move in this direction is exemplified by the recent case of Rhone-Poulenc privatization, where senior managers were asked to buy at least a year's salary worth of company shares.[22]

This provision may not be sufficient to avoid overemployment if any of the following conditions obtain: aversion to risk of dismissal for unchanged expected average earnings; concentrated probability of dismissal in particular groups; and, in particular, higher opportunity cost of labor inside the enterprise than outside. A positive balance of these factors may lead to the maintenance of excess employment even when condition (2) is not satisfied. In that case, another stipulation is necessary—namely, that redundant workers enjoy a continued right to an income *supplement* that brings their income outside the enterprise (whether employed elsewhere or unemployed) to the same level they would have enjoyed had they remained in the enterprise.[23] In transitional

[22] Although the Rhône-Poulenc rule does not in principle guarantee that employee holdings are sufficiently large to rule out a conflict with other shareholders, the arithmetic of the relevant variables (company capital value per employee, managerial salary, relation between wage-related component of managerial salary) is such as to induce one to expect that managers (almost certainly) and other employees (normally) would not clash with other shareholders.

[23] Income (instead of employment) protection is the solution proposed by Meade (1993) for his own version of a fully participatory enterprise, with complex alternative provisions for retired employees. However, in Meade's participatory enterprise, employee conflicts with other shareholders—which are likely to occur in view of Meade's proposed distribution to employees of an initial equity stake proportional to their initial share in value added—are resolved by arbitration.

economies, a major implication of this provision must be continued access of redundant workers to the exceptional welfare facilities (canteens, housing, holidays, health, education) traditionally provided by the enterprise to its employees. Such largesse may be costly, but so is continued overemployment. At least this provision will raise overall labor mobility and therefore contribute to labor redeployment and reduced unemployment—if not immediately then in the long run.

Suppose that, despite these considerations, employee ownership of a kind adverse to corporate governance prevails in a particular country. What then? There is a basic institutional instability in this kind of employee-controlled enterprise, which could be regarded literally as a transitional form of ownership that is bound to disappear fairly quickly. *Either* less-than-balanced shareholding employees cease to combine these prerogatives (i.e., they leave the enterprise, and/or sell their shares to other employees, who thus cease to be less-than-balanced holders, and/or sell their shares to nonemployees) in numbers sufficient for residual shareholding employees to collectively lose a controlling interest; *or* the company loses all outside shareholders and so reverts to a form of cooperative; *or* the company shrinks for lack of new risk capital and of unsecured loans. Thus, *the employee-owned enterprise, unless tamed, is bound to be literally a transitional form of enterprise, whether in transitional economies or in standard market economies.*

## 18.5 Employee Ownership in the Transition

The last thing that the new postcommunist leaders—from Balcerowicz to Gaidar—wished to promote was the emergence of significant forms of employee ownership. Yet employee ownership emerged almost everywhere. In part this was the result of public policy measures forced on the new governments by the need to implement a quick and smooth transition; in part it happened by default.

Employee ownership became necessary for a variety of reasons (see Nuti 1994):

(1) to compensate employees for the loss of self-management (notably in Yugoslavia and Poland and to a smaller extent in Hungary);

(2) as a result of the transformation of former public-sector cooperatives into enterprises run by elected officials and independent from central organs—if the transformation was accompanied by the distribution of shares to employees; and
(3) to win employee support for the transition in spite of concern for its short-run adverse effects on real wages and large-scale unemployment.

Unintended employee ownership also happened by default, given the following factors:

(1) the low and often negative value (at the ruling fixed wage rates but not for more flexible participatory earnings) of some state enterprises for which there could not have been other takers;
(2) the shortage of domestic capital, which placed employees (especially in view of their inside information) in a good position with respect to domestic outsiders, while alternative external buyers frequently evoked xenophobic reactions; and
(3) employees' and managers' natural inclination, in the absence of information about other enterprises and other localities, simply to automatically select the one which they knew best and was most important for their livelihood—the "balkanization of ownership."

In Poland, managerial and employee buyouts turned out to be the single fastest privatization track, with about 1,500 buyouts by mid-1994 via so-called liquidation privatization (applicable to viable enterprises, and not to be confused with liquidation of insolvent enterprises). Other state companies privatized through this channel were sold mostly to foreign buyers.

Buyouts were an important element of privatization in Ukraine and especially in Romania, where MEBOs (management and employee buyouts) accounted for about 98% of all the privatizations of state-owned companies to mid-1994. In Hungary, about 5% of the estimated value of socially owned capital stock is to be given to employees under the various schemes in operation.

Mass privatization—outside the Czech Republic—was instrumental in the promotion of employee ownership, either as a result of investment decisions by voucher holders (even in the absence of favorable terms for

the purchase of employee shares) or as a result of government policy. In Mongolia, insiders ended up owning 45% of enterprises. In Russia, the mass privatization program gave every adult the chance to become a shareholder; under Option 2 of state enterprise privatization, up to 51% of the voting shares could be purchased by employees and by managers at a price corresponding to 1.7 times the enterprise book value, which—in view of rampant inflation—was usually a most generous concession despite often inappropriate productive capacity.[24] It is reported that this option was exercised in over 80% of Russian privatizations (Ash and Hare 1994)—prompting Grigory Yavlinsky's comment quoted at the start of this chapter.

The Russian Option 2, by granting over 50% equity to virtually all employees, was bound to create precisely the kind of stakeholder-shareholder conflict discussed here, owing to a controlling interest in the hands of less-than-balanced shareholders—unless managerial holdings plus additional acquisition of shares reduced the number of less-than-balanced shareholders below that required to exercise a controlling interest. It is no accident that the state property committee favored Options 1 and 3, fearing precisely that an employee majority of voting shares would lead to excessive wages and lower reinvestment while outsider investors would be reluctant to invest in a employee-controlled firm (Chubais and Vishnievskaia 1993). Apparently Option 2 was preferred by managers who expected workers would vote with them, and by workers who thought they would protect employment, fearing outside control. Option 1 was preferred by managers when they feared that workers would not support them, and by workers when the enterprise was relatively capital-intensive and/or unprofitable.

[24] Shares could be paid for partly in money and partly in vouchers (up to 50%, later raised to 80%). Option 1 was the concession of 25% free shares, nonvoting unless and until sold, plus an option of a further percentage of voting shares (10% for workers and 5% for administrative officers) at a 30% discount. Option 3 was only for medium-sized firms with more than 200 employees and fixed capital between 1 and 50 million rubles. Subject to the approval of at least two thirds of the workers' collective, a group of workers and managers would undertake, with the appropriate property fund, to restructure the enterprise in a year according to a plan specifying which level of employment would be preserved. If successful, the group would obtain 20% voting shares at book value, while all workers and managers could acquire a further 20% of the shares at a 30% discount. With all three options, the rest of the shares were to be sold at public auction to nationals and foreigners.

## 18.6 Empirical Evidence

Empirical evidence on ownership and performance of enterprises in transitional economies is still scant but is steadily accumulating. Much of it reflects concern about relative economic performance of different types of enterprises, including employee-owned enterprises as compared to state, state-privatized, and private enterprises; for Poland, see Pinto et al. (1993); for Russia, see Boeva and Dolgopiatova (1993), KPMG-CERT (1993), and Bergstrom (1994). These are extremely valuable studies, often focusing on employee ownership in the transition (see e.g. Earle and Estrin 1995), but are not directly concerned with questions of corporate governance.

Data about ownership structure and in particular about employee share ownership tend to lump together employees and managers (e.g. Ash and Hare 1994 on Russia). In any case there is a tendency to look at the implications of a controlling interest by managers and/or employees without checking whether a controlling interest is held by less-than-balanced holders on their own.[25]

The fact that data do not come in the form required to rigorously investigate issues of corporate governance is partly due to objective difficulties. It is hard enough to distinguish between employees and managers as shareholders, let alone to check and compare individual relative shares in enterprise capital yield and in wage-related payments. Moreover, whether a given total holding by less-than-balanced shareholders is or is not a "controlling interest" depends on share distribution among shareholders, degree of activity, perception of self-interest, and so on. There is no minimum threshold, since even a majority of shares may not be enough in the face of apathy by shareholding employees. The most we could realistically expect is a truthful answer by managers to the question of whether or not their decisions are constrained by employee shareholdings, in order to then perform a comparison between the performance of the two resulting classes of companies (with respect to employment,

[25] For Russia, see Bergstrom (1994), Blasi (1994), Linz (1994), and Earle et al. (1995); for Hungary and Poland, see Takla (1995); for Hungary, Poland, the Czech Republic, Romania, and Russia, see Earle and Estrin (1995); for Mongolia, see Korsun and Murell (1994a, b).

earnings, investment, restructuring, etc.). If even these data are not available, it is probably because of the typical but unhelpful classification of companies simply according to degree of employee ownership, rather than the necessary discrimination between a controlling interest by less-than-balanced shareholding employees versus all other cases. Thus, inferences that may be drawn from available data are very scant; unsuitable data is the likely cause of the often inconclusive nature of such inferences.

In Russia, "Closed subscription by employees followed by an open voucher system has given insider stakeholders—workers and managers—shares in newly privatized Russian firms. On average, … insiders gain 60–70% of a privatized enterprise's equity under alternative options" (Lieberman and Nellis 1994). Bergstrom (1994) reports that, according to official documents of the Russian state committee for management of state property (GKI), "on average insiders [employees and former employees] hold 56% of shares in the enterprises studied"; 78% of total privatized enterprises chose Option 2, averaging 61% of the voting stock. (In only four cases did insiders not buy additional stock at voucher auctions, because they were outbid by outsiders.) In one case, the general director declared a holding of 38%; in other cases, management personnel held 5–23%; and in a number of cases the largest outsider investor did not hold more than 1–2% of total stock. The largest stake of a single outside investor was 31%. Voucher investment funds held 1–8% of total stock.

Pistor (1993; quoted in Earle et al. 1995) reported on a sample of 36 Russian companies privatized in late 1992 and early 1993, finding that employees received an average of 61.8% of all shares (57% of voting shares); outsiders had 19% on average, and the state property fund retained 19.1%. No data were provided on the distribution of ownership among insiders. Earle et al. (1995) also cite a World Bank survey from October of 1993. For 92 privatized firms in the Moscow and Vladimir oblasts, managers secured 17% and workers 61% of total shares (including nonvoting shares).

Blasi (1994) reported on a survey of 127 Russian privatized firms, of which 90% had majority employee ownership, corresponding to an average of 65% for all insiders (60% median; i.e., few firms had low insider ownership). Top managers had an average of 8.6% (5% median) of all shares, including nonvoting shares.

The Czech Republic is one country where employees and managers were given hardly any incentive to acquire shares in their own companies. In Hungary, opportunities for employee ownership were created by the June 1992 law on ESOPs (employee stock ownership plans; MRP in Hungarian) and by the "self-privatization" program. There were 184 MRP privatizations by the end of September 1994 (involving at least 40% of employees), and 187 enterprises out of 435 in the self-privatization program were estimated to have resulted in dominant employee stakes. However, it is believed that most of these MRPs and buyouts actually led to dominating managerial ownership or control.

In Poland, about three quarters of the enterprises privatized by "liquidation" were under employee control, with an average of 50.8% held by employees and managers (see Earle and Estrin 1995). Takla (1995) reported on a World Bank survey of 200 Hungarian and Polish firms. In (respectively) 2.6% and 5.7% of the cases, employees owned all the shares; in 8.4% and 5.7% of the cases, employees owned between half and all the shares; and in 23.9% and 8.3% of the cases, employees owned some shares but less than half the total. However, ownership pattern did not appear to make a significant difference in enterprise performance.

In Romania, a program to accelerate MEBOs was launched in early 1993 by the Romanian state ownership fund; by mid-1994, nearly 600 companies had been privatized, most of them 100% to their employees. A CEU survey of 66 of these companies reported that, on average, the employees owned 96% of the shares in the 58 companies for which information was available, though ownership distribution among employees showed considerable variance. In MEBO privatized companies there are significant limitations on the tradability of shares—but only until these have been fully paid (see Earle and Estrin 1995).

The maintenance of employment has been found to rank very high in privatized Russian enterprises: "Very few had so far made a reduction of the working force… [E]mployees now have a considerable potential influence over the direction of the business through their ownership of shares. Privatization in this sense may simply have delayed rather than facilitated the restructuring of enterprises which needs to take place" (Ash and Hare 1994, p. 631). This may well be the case, but does not necessarily follow from the evidence provided by Ash and Hare, who take for

granted that a controlling interest by employees—whom they lump together with managers—will always result in overemployment and above-market wages.

In Russia, both privatized and remaining state enterprises generally exhibit relatively high employment levels (as compared to necessary restructuring) accompanied by low average and marginal pay (although Linz 1994 reports higher provision of social services the higher is employees' total equity). It remains to be seen whether this particular employment-wage tradeoff is the consequence of a deliberate unconstrained choice by controlling employee owners or rather the result of controlling managers choosing this tradeoff in order to reduce social opposition to their actions. In either case, it may be a consequence of prevailing near-bankruptcy conditions (as suggested by generalized lack of investment; see Ash and Hare 1994).

Boeva and Dolgopiatova (1993) studied ten enterprises employing between 200 and 1,200 persons during the autumn of 1992; the sample included some state enterprises. The authors found that, in the majority of cases, managerial priority was given to the preservation of employment, money wages, and other benefits (housing, privileged loans, etc.), often financed through asset stripping. One of the managers was reported to have said: "One has to let people live."

## 18.7 Conclusions

We have defined corporate governance in terms of two issues arising in modern enterprises from the delegation of managerial functions to professional executives and from multi-ownership, features that are typical of joint stock companies (hence co-owners are labeled shareholders). The first issue is shareholder control over managerial discretion; the second is resolution of conflicts between shareholders who are also stakeholders (i.e. employees, managers, suppliers, buyers, borrowers, lenders, competitors, the environment, local communities, the state) and the rest of shareholders. These general problems have been reviewed from the perspective of transitional economies, concentrating on the stakeholder-shareholder conflict with special reference to employee share ownership.

In general, a conflict arises not from stakeholders' majority holding of company shares, or even stakeholder control, but more precisely from control being in the hands of stakeholders who individually own less than a "balanced share." This is defined as a share in company capital (or, strictly speaking, in company capital *yield,* i.e. dividends plus capital gain) equal to their share of explicit or implicit company transfers to that particular category of stakeholders (in the case of employees, their share of company wages and wage-related payments to employees). When this conflict arises, it may lead to above-market transfers from the company to controlling stakeholders. In the case of employees or of any other company supplier, the conflict is bound to take the form of overemployment and overpay beyond the levels dictated by profit-maximizing behavior at market prices. The stakeholders in question may thereby appropriate the entire present value of the company, or at any rate any excess over the minimum necessary to maintain its viability, effectively disenfranchising outsider shareholders. This very possibility is bound to preclude access to risk capital, or even to unsecured credit.

With employee shareholding, an essential distinction must be made between managers and other employees. First, managerial salaries may be totally unrelated to wage levels within the enterprise; in this case, higher managerial holdings imply greater incentives for managers to behave as outsiders (unless they have a significant say on their own salaries, in which case the reasoning must be repeated for managerial labor). Second, even if a component of their salary were directly related to the average company wage, managers are likely to hold considerably more equity than average shareholders, and therefore are likely to own a greater share of company equity than the share of their wage-related component in the total wage bill (including such components). For both reasons, when classifying enterprises according to the degree of employee ownership, it seems best to exclude managerial shares.

Typically, employee ownership creates a problem for corporate governance when employees (on their own, not counting managers) have a controlling interest that is diluted among a greater share of employment than of capital. The Russian Option 2, granting over 50% equity to virtually all employees, was bound to create precisely this setup—unless managerial holdings plus subsequent share transactions reduce the number of

less-than-balanced shareholders to a level below that required to exercise a controlling interest. There is no need for prior collusion on the part of less-than-balanced shareholders; they only need to be active and to exercise their vote in their interest.

For shareholding stakeholders other than employees, the possible conflict with other shareholders is expected to be resolved through the profitability of merging the company in question with a company providing or taking over the function of those stakeholders. However, the personalized nature of labor services, unlike that of other intermediate inputs, prevents this kind of conflict resolution for shareholding employees.

There is a simple solution to this problem: namely, the stipulation that stakeholders who are also shareholders must hold a minimum share in company equity no smaller than the share of their stakeholder interest in the whole of that interest. For instance, employees should hold a share of company capital, if any, at least equal to their share in the company wage bill.

A company controlled by employees who are also less-than-balanced shareholders is subject to inherent institutional instability. Their control ceases as shareholding becomes more consolidated within the company—as shareholding employees cease to be employees (through retirement and voluntary or involuntary quits) and/or cease to be less-than-balanced shareholders (i.e., selling their holdings to nonemployees, or to other employees who thus acquire, or already hold, a more-than-balanced share). Alternatively, the enterprise, without access to risk capital, eventually is likely to enter into liquidation.

Beside ownership patterns, there are other major factors that affect corporate governance. Direct constraints on company decision-making, inherited from the old system, may block shareholder power or managerial power over enterprise employees (see Takla 1995). There are frequent and large-scale fraudulent cases, such as pyramid banking (MMM in Russia, Charitas in Romania) and the disappearance of many Russian voucher investment funds, made easier by the lack of transparency and disclosure (see Bornstein 1994).

Among recent cases of gross—indeed, outlandish—malpractice by Russian company managers, widely reported by the financial press in 1995, are the following. The oil company Komineft secretly issued free shares to only some of its shareholders. The Krasnoyarsk aluminum

company's managers simply deleted from its shareholders' registry a British shareholder of 20% of company equity. Managers of Primorsky, one of the largest Russian shipping companies, doubled the number of its shares outstanding and sold them to its subsidiary PriscoStocks, which was under their direct control, for 0.5% of market price. (The subsidiary bought the entire share issue—equivalent to a 50% stake in the company—for $90,000, while the firm's market value was $36 million). Apparently, "Unauthorized stock issues are a growing method among some directors to regain control of their newly privatized companies. So far, these share issues have been deemed legal" *(Wall Street Journal,* 4 April 1995).

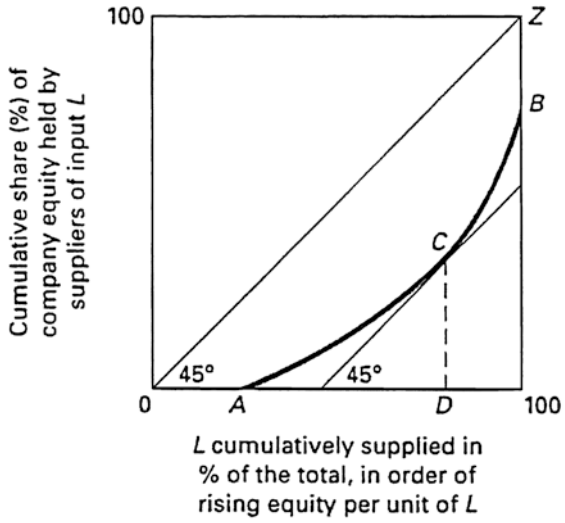
These practices—much more blatant and spectacular than insider trading in standard market economies—are clearly lethal for the establishment of corporate governance. However, rather than a point of debate within the scope of corporate governance, such issues are part and parcel of a much wider problem for transitional economies: the establishment and maintenance of law and order, the protection of contracts, and the fight against organized crime.

## Appendix

Here we offer a diagrammatic illustration of the possible conflict between stakeholding shareholders (who here are also suppliers of input $L$) and other shareholders (see diagram below).

If input $L$ is not homogeneous then qualities are weighted by their prices, which are presumed to move all together. We set:

$OA$ = percentage of $L$ supplied by nonshareholders;
$BZ$ = percentage of equity not held by suppliers of $L$;
$K_i/K$ = individual share in company equity;
$L_i/L$ = individual share in supply of input $L$;
"balanced share" if $K_i/K = L_i/L$;
$AD$ = percentage of $L$ supplied by shareholders holding less than their balanced share (by construction); and
$DC$ = percentage of equity capital held by suppliers of $AD$.




If *DC* turns out to be a *controlling* interest, then suppliers of *AD* have an incentive to exercise it and force the company to pay a higher price for *L* than the market rate, since they would lose less as shareholders than they would gain as suppliers. Hence the company will employ more *L* than is profitable. This may eliminate profits or actually induce losses, financed through capital consumption. All other shareholders are damaged (suppliers of *L* holding more than a balanced share will reduce their shareholdings down to a "balanced" level). There will be no incentive for risk capital to acquire shares. Restructuring will be held up.

If *L* stands for land, lathes, leather, or lorries, then suppliers may internalize potential efficiency gains by forming a company that would merge with the customer company to mutual advantage. However, if *L* stands for labor then this is not possible, because companies can neither own labor nor hire it on the same terms as machines.

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# 19

# Employee Participation in Enterprise Control and Returns: Patterns, Gaps and Discontinuities

Domenico Mario Nuti

## 19.1 Introduction

This paper reviews and attacks the standard classification of enterprise types by degree of employee participation in enterprise returns and control rights, an approach exemplified by the work of Ben-Ner and Jones

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This paper originated in a discussion on employee ownership at an ILO seminar held in Budapest in February 1997. I owe much to the seminar participants and in particular Felix FitzRoy, Derek Jones, Mark Klinedinst, George Lajtai, Niels Mygind, Charles Rock, Milica Uvalic, Daniel Vaughan-Whitehead—though many of them should be credited with views different, sometimes opposite, to those expressed here. While my views on employee participation, over time, have diverged from those of Branko Horvat (as exemplified, for instance, in Horvat 1982) and other staunch supporters of self-managed and worker-owned enterprises, I still share Branko's values and I regard him as an important intellectual stimulus and source of inspiration. I therefore hope that he will accept this somewhat heretical text as a token of esteem and affection.

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(1995). This is conceptualized as a continuous spectrum of combinations of different degrees of the two forms of participation, with continuous though non monotonic effects on productivity.

An alternative approach is developed in which, unlike that of Ben-Ner's and Jones's:

1. Returns may include not only net profits but also the net increase in enterprise capital value.
2. Control is divided between industrial democracy and entrepreneurial control.
3. Employees' dominant entrepreneurial control is split into two radically different cases according to whether control is exercised by employees individually holding a smaller share of equity than of labour, in which case the possibility of employee exploitation of other shareholders arises (a possibility which lies outside the Ben-Ner and Jones framework).
4. Some combinations of the two forms of participation are shown to be impossible or at any rate unstable, such as dominant control without profit participation, or substantial participation in returns without substantial control rights.
5. James Meade's (1993) Agathotopian model is included in the taxonomy.
6. Classification discontinuities and gaps are revealed by this approach. These are shown to have significant implications for the impact of participation on productivity and other aspects of enterprise performance. The case for public policy support for participation is accordingly much weakened, if not altogether destroyed.

## 19.2 Employee Participation: The Standard Framework

In a conventional capitalist enterprise all rights to entrepreneurial control and returns belong to the firm's owner or owners, or to shareholders in the case of a joint-stock company. Departures from this benchmark, in the guise of various degrees of employee participation in enterprise control and/or returns, occur frequently for different reasons, such as

paternalism, profit maximization especially in the long run, inducements or obligations set by public policy. Traditional taxonomy of enterprise types according to degrees of employee participation envisages a continuous field of variation for both forms of participation in control and/or returns. In its most developed form, this approach is exemplified by the work of Ben-Ner and Jones (1995), who use it as a theoretical framework to investigate the continuous (though not necessarily monotonic) impact of both forms of participation on labour productivity.

Ben-Ner and Jones place types of enterprises on a grid by increasing degrees of participation (see Table 19.1). Their grid is limited to a 4 × 4 size only by practical constraints; employees' control rights go from zero to participation in control, sharing of control, and dominant control; return rights go from zero to small, moderate and majority degrees. However, the idea is that of a continuous spectrum of actual or possible enterprises graded by the intensity of both participation forms. Ben-Ner and Jones (1995) distinguish between participation's impact on individual and on organizational productivity—a distinction which we neglect here in looking at the overall impact regardless of sources.

On its own, employee participation in enterprise returns is believed, by Ben-Ner and Jones, to have an uncertain impact on labour productivity. Employees are exposed only fractionally to the consequences of increasing or decreasing their own work effort; the increase in income uncertainty might bring risk-averse employees below the efficiency wage[1]; managers might be induced to neglect control in presence of employee participation in returns. In their view, these negative effects might reduce or even more than offset the direct positive impact of participation in returns.

Employee participation in control, again on its own, is believed by Ben-Ner and Jones likely to have a small positive effect when it affects employees' immediate work environment, with an otherwise uncertain impact for power sharing, and a negative impact when employees' voices become dominant.

[1] For instance, if total earnings of risk-averse employees remained unchanged and a part of them was now volatile (though even that may be at least partly offset by a higher probability of continued employment).

**Table 19.1** Traditional typology of employee ownership according to control and return rights and examples

| Control rights held by employees | | | | |
|---|---|---|---|---|
| Return rights held by employees | None | Participation in control | Sharing of control | Dominant control |
| None | OA1<br>Conventional firms | OA2<br>Quality circles involving majority of workers | OA3<br>Employee representation on board of directors | OA4<br>British Industrial Common Ownership; e.g. Scott Bader |
| Small | OA5<br>Profit sharing: ESOPS; eg., Occidental Petroleum; Kimberly Clark | OA6<br>Profit Sharing with participation programs | OA7<br>Co-determination with another program; e.g., in Sweden co-determination sometimes exists with convertibles | OA8<br>British Retail Coops[a] |
| Moderate | OA9<br>ESOPS;[b] eg, Proctor and Gamble;<br>Corning Rucher Plans | OA10<br>Scanlon Plans; John Lewis; Lincoln Electronics; Polaroid; Japanese Mfg. | OA11<br>Producer Cooperatives:[c] e.g. U.K. Clothing Denmark | OA12<br>Producer Cooperatives;[d] e.g., U.K. footwear |
| Majority | OA13<br>ESOPS; e.g., Vermont Asbestos; Harcourt, Brace and Ivanovich; Lincoln S & L. | OA14<br>ESOPS; e.g., Brooks Camera; Hyatt Clark; Ruddick | OA15<br>ESOPS; e.g., Weirton Steel; Rath; French building PCs | OA16<br>Producer Cooperatives; e.g., Mondragon; Italy; French Consulting; U.S. Plywood |

[a]In some cases, workers constitute a majority of the decision-making board and employees have tiny amounts of profit sharing and ownership. See Jones (1987)

[b]Information on ESOPS is largely derived from Blasi and Kruse (1991: 14–10, and chap. 4) and Rosen et al. (1990)

[c]Workers share control and other organizations, such as labour unions and consumer cooperatives

[d]Workers have majority control of decision-making bodies, but modest amounts of profit sharing and/or individual ownership

*Source*: Ben-Ner and Jones (1995)

The combination and interaction of both forms of participation, however, is believed to produce productivity effects which exceed the sum of the separate effects and may even be of the opposite sign. In particular, with the parallel rise of participation in returns, dominant employee participation in control reverses its effects from negative to positive, indeed to highly positive, in what turns out to be a superior organizational alternative: 'On balance, we expect that the organizational productivity of employee-owned firms will exceed that of firms with other ownership arrangements' (Ben-Ner and Jones 1995, p. 547). Before we reach this peak, along the diagonal in Table 19.1 the commensurate rise of both control and return rights is presumed to have positive though less strong effects, although the complex balance of individual and organizational productivity effects may cause the relationship between participation and productivity to be non-monotonic (this is what Ben-Ner and Jones mean though they call it non-linear instead).

Using zero, (+) and (−) for small positive and negative effects, up to +,++, +++ and down to −, the productivity impact of the participation schemes outlined in Table 19.1 according to Ben-Ner and Jones can be summarized thus:

| | | | |
|---|---|---|---|
| 0 | (+) | + or − | − |
| + or − | ++ | + | + |
| + or − | + | + or − | + |
| + or − | + | + | +++ |

If this were the case, Ben-Ner and Jones would have provided, without realizing it, an exceedingly strong case for treating employee participation in control and returns as a public good worthy of government education campaigns, direct subsidy and/or fiscal support. Without such support, enterprises experimenting with participation formulas, either only in control or only in returns, or with some forms of participation in both, might experience a negative impact on productivity or, at best, weak net benefits; participation is needed in both dimensions, and with a critical mass, before its full benefits can be reaped.

This paper takes the Ben-Ner and Jones framework as a useful point of departure but it introduces drastic changes in both the analytical approach and the conclusions reached.

## 19.3 Minor and Major Objections

A number of minor and major objections can be raised against this formulation. First, it is questionable that participation in returns on its own might have negative effects. Presumably, mutual monitoring of employee effort (which Ben-Ner and Jones confuse with 'emulative behavior') gets rid of individual incentive to slack; profit-maximizing enterprises would not allow incomes to fall below the efficiency wage through higher uncertainty; it is not at all clear why managers should reduce their monitoring efforts simply because of employee participation in returns (presumably it is a matter of indifference to managers whether they share the product of their monitoring with owners or with other employees). The productivity impact of employee participation in returns may not necessarily be large enough to induce companies to introduce it, but is unlikely to be negative. At the same time, there is no reason why voice—beyond industrial democracy which might decrease productivity—should necessarily enhance the impact of participation in returns: quite the contrary, a great supporter of profit sharing such as Weitzman (1984) specifically rules out any form of participation in entrepreneurial control, in order to prevent insiders from keeping out outsiders *a à la* Ward (1958).

Secondly, there can be no difference between 'participation in control' and 'sharing of control' seeing that neither are 'dominant'. We propose a distinction instead between control over work organization, that is, 'industrial democracy', and entrepreneurial control—whether in a minority or dominant position—over basic decisions such as those on price, output, employment, wages, investment, finance.[2] Effective industrial democracy will have an indeterminate impact on productivity; the impact may be negative, as employees may be 'feather-bedding' their jobs more than is justified by accompanying productivity increases. Participation in entrepreneurial control, unless dominant, will be largely ineffective; if dominant, it will sooner or later lead to participation in returns, whether informally through salaries and employment higher than is compatible with profit maximization, or formally through the introduction of participation in enterprise returns; enterprise owners will be unlikely to

[2] This distinction is recognized, but not used, by Ben-Ner and Jones (1995).

allow employee dominant participation in control. It follows that enterprises with dominant employee control and zero or little participation in returns can only exist, if at all, as a transient phenomenon.

Thirdly, strictly speaking, what matters is not whether employees have 'dominant' control, in the sense of a majority position, but whether they have 'effective' control. This may require more than 50 per cent of the votes plus one, if employees are absent or intimidated, while substantially less than 50 per cent of the votes may yield effective control if a sufficient number of other shareholders are absentees. In order not to complicate matters, we retain the notion of 'dominant control'—understood as 'effective control'. The only significant difference is that the point beyond which control is effective will vary from one enterprise to another, according to the degree of dispersion and involvement of its shareholders.

Fourthly, it is immaterial whether or not employees obtain a 'majority' share in enterprise returns. While a majority voice in enterprise control makes a world of difference, it makes no difference at all whether employees have somewhat more or somewhat less than majority returns. Moreover, presumably, the same share in return may be high or low according to capital intensity of output.

Two aspects of participation in returns, on the contrary, make a vital difference:

1. It matters a great deal whether returns are simply a share of current profits (or even current dividends), in which case employees will have a short time horizon and a justified reluctance to reinvest, or whether returns also include the increase in the capital value of the enterprise as a going concern due to its success.[3] It is, in any case, inconceivable that there could be substantial participation in returns (especially if they include capital gains) without substantial control rights.

[3] Participation in profits includes deferred distribution of profits accumulated over time as in Mondragon cooperatives. The distinction between return as net profits and as capital gains escapes Ben-Ner and Jones because they do not include among ownership rights the right to transfer; they talk of temporary or contingent property rights—in which case, of course, temporary or contingent owners cannot cash in any of the increment in enterprise value. But this is wrong both in law and economic conceptualization: there is simply no such thing as a temporary or a contingent property right. Usufruct is a part of a property right, not a temporary property right.

2. It also matters a very great deal, when employees have dominant control, whether such control is in the hands of individuals holding a smaller share of equity than of labor supply. In such case employees stand to gain more from higher wages as employees than they stand to lose as shareholders. Therefore they will have an incentive to decide higher wages, or to sustain higher employment, than would be warranted by profit maximisation in the same market conditions. Such case lies outside the Ben-Ner and Jones framework (see Nuti 1997). (The same opportunity to exploit other shareholders arises also for stakeholders other than employees, when shareholders who have an individual share smaller than their proportional stake have a controlling interest.)

## 19.4 An Alternative Framework

The minor and major objections raised in the previous section, plus some additional considerations developed below, are summarized in Fig. 19.1. This figure also visualizes a pattern of enterprise types that emerges from the proposed conceptualization of participation schemes. Enterprises are bunched into distinct groups which are strictly separated from each other. In Fig. 19.1, employee participation in control along the horizontal axis goes from zero to industrial democracy to entrepreneurial control (non-dominant control becoming dominant beyond a point which is enterprise-specific). The top left hand cell contains the traditional capitalist enterprise (OA1 in Table 19.1); on its right, up to the threshold between non-dominant and dominant control, we find Mitbestimmung and equivalent arrangements (0A2 and 0A3). The top right cell is labeled 'desert' to stress the non-sustainability of dominant entrepreneurial control and lack of participation in returns (see above).

Notes (Fig. 19.1):

1. This involves, exclusively, decisions about labour organization and work conditions.
2. Participation through shareholding means that participation in results is normally no greater than participation in enterprise equity; it can be

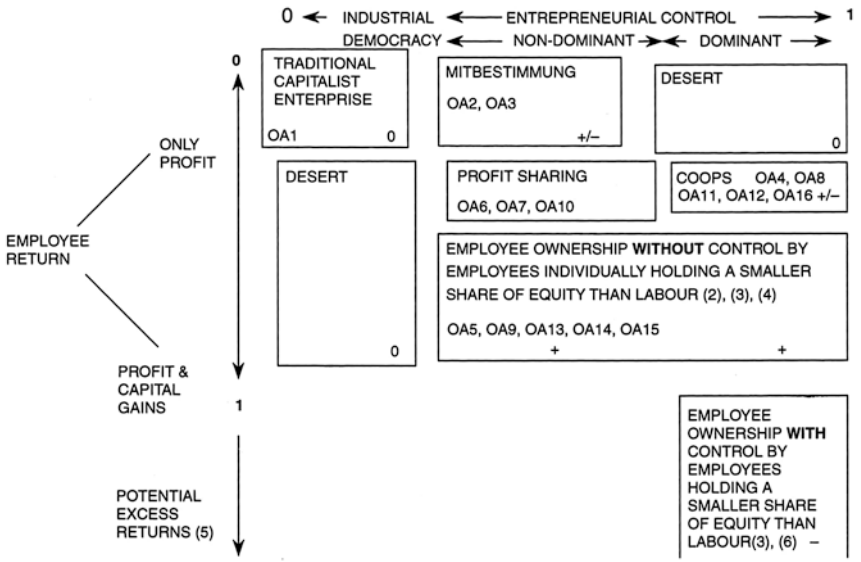


**Fig. 19.1** An alternative view of employee participation in enterprise control and returns

less if there is profit sharing with non-shareholding employees; hence this area ought to have a triangular shape, with the 90 degree angle at the top right end. Here, the area is drawn as a rectangle to allow for the possibility that some of the company shares may be privileged, that is, non-voting.

3. James Meade's Agathotopia (the 'Good Place' not shown in any map) is not represented here either; it can be imagined as a segment within an area beyonded by the diagonal sloping down from the top left end to the bottom right end corner. In Agathotopia, employees share net value-added and capital gains; their share is exactly proportional to their total shares (of both labour shares and, possibly also, capital shares)—hence the location along the diagonal.
4. Russia lies across the two areas of employee ownership.
5. That is, potential expropriation of other shareholders.
6. Probably institutionally unstable, as shareholding employees cease to be employees or shareholders, or acquire a larger equity share than their labour share; or the enterprise is 'milked' by employees our of existence.

Along the vertical axis, participation in returns goes from zero to participation only in net profit, to participation in both profit and capital gains. A value of one signifies full participation in both; another 'desert' labels the unlikely combination of significant participation in returns without some participation in control. Participation in profits only takes the form of profit-sharing (without control or, at any rate, with non-dominant control, with 0A6, 0A7, 0A10). Dominant control plus participation in profits only is to be found in traditional cooperatives (0A4, 0A8, 0A11, 0Al2, 0A16), as well as in 'Illyrian' enterprises (that is Yugoslav type 'associationist' firms which Ben-Ner and Jones 1995 unduly exclude from their taxonomy); strictly speaking, all cases of non-transferable capital rights of employees find their place in this cell. There remains the bottom right cell for various degrees of entrepreneurial control, and up to 100 per cent participation in profit and capital gains. This is the standard case of shareholding employees, as long as a controlling interest is exercised by individuals holding a smaller share of equity than labour (including OAS, A9, A13, 0A14, A15). Outside the space considered by Ben-Ner and Jones, below the line of 100 per cent participation in profit and capital gains, there is another area, where employee ownership is accompanied by control in the hands of employees individually holding a smaller share of equity than labour—in which case the exercise of dominant control leads to potential excess returns, right down to the expropriation of other shareholders. This cell is not empty: it contains a large proportion of Russian enterprises privatized in 1994–1998.[4]

This class of 'below the line', potentially exploitative enterprise is institutionally unstable: it is likely to be 'eaten up' by employees distributing its net assets among themselves; it will be refused credit and equity capital. The type of enterprise in the top right cell, if it temporarily existed, would be doubly institutionally unstable, first moving to this class of 'below the line' potentially exploitative enterprises, then vanishing as such for the reasons given in the previous paragraph.

[4] Jones (1996) suggests that 'in transition economies privatisation does not produce fundamental changes in inherited patterns of corporate governance but rather has served to strengthen managerial control. There is no strong evidence that the key obstacle to enhanced performance is employee ownership. At the same time, it seems premature to dismiss dominant employee ownership as a major factor explaining the low degree of capacity and employment restructuring in the Russian economy to date.

An additional possibility is the utopia, or rather the 'Agathotopia' (etymologically a 'good place') proposed by James Meade (1993). Meade's Agathothopian enterprise is a 100 per cent participatory enterprise with ordinary capital-shares and temporary labour-shares for employees, commanding equal dividends. Employees receive a dividend in lieu of wages, and therefore the whole value added net of rentals and interest is distributed instead of net profit. Each employee is issued, at the time of hiring, with as many shares as would yield the going wage rate, and thereafter throughout his/her employment gains or losses from enterprise performance being better or worse than anticipated. By definition, net value added is distributed according to the number of shares owned by employees and by outsiders, thus avoiding the kind of conflict illustrated in the previous paragraph—though there may be residual problems in the treatment of pension rights or the possible periodical revision of individual employee shares (Meade 1993). The scheme has the advantage of transforming employees into entrepreneurs—at the cost of additional risk which therefore requires additional arrangements such as part-time non-wage labour, or a citizenship income. In Fig. 19.1 Meade's Agathotopian enterprise corresponds to a segment of the diagonal going from top left to bottom right, located within the bottom right hand rectangle (not represented).

## 19.5 Policy Implications

This kind of classification and accompanying reflections place employee ownership in a more sobering light and weaken the case for public policy support for participation schemes. The signs of productivity effects, expected of the various types of employee participation in control and returns regrouped according to Fig. 19.1, instead of Table 19.1, form a smaller matrix than for Table 19.1, of the type:

| | | |
|---|---|---|
| 0 | + | - |
| 0 | + | +/- |
| 0 | + | +/- |

It does not justify public encouragement for moving in a top left/bottom right direction—lest enterprises are pushed into inferior areas in which employee control and return rights become too much of a good thing. The bottom line of this alternative approach is that the discovery and implementation of positive effects of participation on productivity and other aspects of economic performance is best left to spontaneous market forces: 'se son rose, fioriranno'.[5]

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[5] 'If they are flowers, they will blossom' (Italian proverb).

# Part III

## East-West Integration and Globalization

### Foreword to Part III: East-West Integration and Globalization

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The revolutionary changes after the fall of the Berlin Wall in November 1989, that enabled the start of the transition to a market economy and multiparty democracy in Eastern Europe, were soon followed by the disintegration of the USSR and the dissolution of its trading bloc, the Council of Mutual Economic Assistance (CMEA) also known as COMECON. These important events greatly facilitated the gradual integration between Eastern and Western Europe, inspiring research on the new foundations of East–West economic and political relations. The historically unprecedented events caught the Western world, including the European Community, unprepared, raising important concerns about the appropriate policies to be implemented in the radically changed East European landscape. Many issues were to be explored as part of the Western package of support to Eastern Europe, including the most appropriate forms of financial assistance, trade access to European Union markets or debt relief. Not surprisingly, in those turbulent times Mario Nuti was invited to Brussels to advice the European Commission's Directorate-General for Economic and Financial Affairs. While in Brussels, Mario wrote various academic and policy papers on the

transition and contributed to the preparation of several special issues of the *European Economy* (e.g. *Stabilization, liberalization and devolution—Assessment of the economic situation and reform process in the Soviet Union*, December 1990; or *The path of reform in Central and Eastern Europe*, 1991).

At that time, Mario Nuti made fundamental contributions to raising European awareness about the importance of these events and the necessity of fast Western policy response. Only a few months after the fall of the Berlin Wall, in February 1990, Mario argued in an unpublished conference paper (Chap. 20) in favour of a Marshall Plan to support the transition in Eastern Europe for the sake of West's own self-interest. Mario was also one of the first scholars to analyse in detail the implications of East–West economic integration for the European Union (EU), signalling the many benefits of integration for both sides of the continent (Chap. 21). Some years later, when the Central East European countries were approaching EU membership, Mario was concerned about their monetary integration; in several papers on "euroization", he examined how and when the new member states ought to join the Eurozone (Chaps. 22, 23). In these papers, Nuti analysed in detail what were the preferred exchange rate regimes for the new EU member states, including the costs and benefits of the introduction of the Euro at an early stage. Another of Mario's concerns were the social welfare reforms in the new EU member states, given that most countries had adopted a hyper-liberal model leaving little room to trade unionism and the welfare state. The entry into the EU of the 10 countries from Central and Eastern Europe in 2004–2007, as argued by Mario, has diluted the European Social Model, with a number of negative implications (Chap. 26).

With the start of the new millennium, Mario was also an attentive observer of integration processes and related political and economic events in Italy, the European Union and the global economy. He was deeply concerned about the challenges posed by increasing globalization and by the unregulated nature of many global processes. In a short but conceptually rich paper written in 2008 (Chap. 24), he argued that globalization is equally as spectacular in its progress as in its incompleteness, in addition to being distorted and unfair. Failure to govern globalization and to correct its impact on poverty, inequality, and redistribution, would breed increasing opposition to its further progress. When the global

financial crisis hit the European continent in 2007–2008, Nuti made a pioneering contribution on its impact on East European countries, systematically pointing to both the common and the distinctive effects of the crisis for different groups of countries in Eastern Europe and drawing a parallel between the underlying causes of the crisis in West and East European economies (Chap. 25). The last chapter in this section (Chap. 27) points to the main institutional weaknesses of the European Union. In view of the slow economic recovery and continued instability in Europe after the global financial and economic crisis, Mario frequently reflected on the European Union and what he termed "its seismic faults"—including Brexit, austerity policies, tiny EU budget, premature introduction of the Euro, migration, tax competition, tolerance of illiberal regimes, divergence of welfare policies—considering that its institutions and policies are equivalent to "tectonic plates sliding over each other and colliding" (Chap. 27). Mario particularly condemned the persistence of austerity policies in the European Union, demonstrating how under certain conditions fiscal consolidation could actually increase, instead of decreasing, the public debt/GDP ratio. Nevertheless, he believed in alternative policies for constructing a better Union, proposing remedies in line with the original European design—including a common asylum acceptance regime to reduce the migration crisis, or excluding public investment from the permitted public deficit that would loosen austerity. However, he was also aware that these remedies might clash with the hyper-liberal design of European Union policies, as well as with conflicts of interest between states, ideologies, welfare regimes, classes, bureaucracies, memories and expectations. Mario's frequent reflections on pressing macroeconomic problems in the European Union, particularly in the Eurozone, were partly motivated by the difficulties Italy had in recovering after the global crisis and especially after the 2011 sovereign debt crisis.

# 20

# The Case for Western Aid to Central Eastern Europe

Domenico Mario Nuti

## 20.1 Enlightened Self-interest

The countries of Central-Eastern Europe are currently undertaking the difficult tasks of economic restructuring and reconstruction, monetary stabilisation, liberalisation and multilateralisation of foreign trade. These countries are the six smaller European members of CMEA (Bulgaria, Czechoslovakia, the GDR, Hungary, Poland Romania), Yugoslavia and the Soviet Union itself. In this respect their predicament is reminiscent of that of West European countries after the last War. It matters little whether plant is destroyed by war or simply redundant and obsolete, since neither is usable: whether the currency has been debased by the

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need to pay for the war or for bad investment, since neither bear fruits; or whether autarky and trade diversion have been imposed by a hot or a cold war. This similarity suggests the possibility of external financial assistance similar to that extended by the USA to Western Europe in 1947–1952, under the Plan named after Secretary of State George C. Marshall.

This argument for financial assistance is not so much a question of international solidarity, but one of enlightened self-interest. The Marshall Plan—writes for instance Michael Hogan (1987)—rested squarely on an American conviction that European economic recovery was essential to the long-term interests of the United States. … a 'dynamic economy' at home required American trade and investment abroad, which in turn required the reconstruction of major trading partners and their reintegration in a multilateral system of world trade, as well as the filling of a power vacuum in "Central and Western Europe" (Hogan, 1987, pp. 26–27) and reflected concern at economic deterioration and political instability.

Mutatis mutandis, the same things could be said of West European interests in Central Eastern Europe today. Moreover, this approach is justified and inspired today by the success of West European integration, just as the Marshall Plan was inspired by the success of American integration under free markets and central institutions: another common feature is the preoccupation of "controlling the Germans and containing the Soviets" (Hogan, 1987). The emphasis today, as in Marshall's famous Harvard speech of 5 June 1947, is on the need for cooperation and recovery in "Europe as a whole". Indeed, a current Plan for Central Eastern European recovery may be regarded as the delayed implementation of the original design, seeing that the Soviet Union refused to participate and prevented other Eastern European countries from participating then, but all had been originally included.

The Marshall Plan was successful as a programme to control inflation, restore production and revamp trade. Alan Milward reckons that the Plan merely enabled participating countries to cover deficits with the dollar area and therefore continue a recovery process which had already begun (Milward, 1984, pp. 465–8)—a process which they might have achieved by restricting imports to capital goods. However, in Western Europe then as in Central Eastern Europe today, the issue is precisely that of access to

foreign exchange in conditions of low domestic consumption, hard to compress further.

The pay off for Western Europe is ultimately in trade expansion and access to cheap Central Eastern European labour (everywhere below $3 per hour inclusive of social security payments) through direct investments.

## 20.2 Infant Democracy Protection

The Marshall Plan aided not only Western European economies but also their democratic processes. "This option [of self-financing recovery] was not available to the fragile coalitions that presided over many of the participating countries, none of which could retreat from already low levels of consumption and hope to survive. Marshall aid enabled these coalitions to operate within a range of political choice that precluded vigorously deflationary policies, promised higher living standards, and thus closed the door to extremist elements on the Left and the Right" (Hogan, 1987, p. 431).

This case is much stronger today for the Central Eastern European countries, currently in transition towards an entirely new economic and political system, diametrically opposite to the previous centrally planned and communist dominated regime. It follows that there is an additional and primary purpose in Western economic assistance to Central Eastern Europe today, namely the promotion of speedy and orderly transition to a new economic and political system. This implies not only a contribution to finance the minimum scale of resources necessary to meet emergencies, stabilise and restructure. It also requires actions designed to ensure that reform and stabilisation measures are taken in the sequence necessary to their effectiveness, with the primacy due to stabilisation.

The best example is perhaps Poland, where from 1-1-1990 a drastic stabilisation programme is being implemented, in agreement with the IMF, cutting real incomes by over 20 per cent and expected to create one million unemployed (according to the IMF, corresponding to 5.6 per cent of the Polish labour force) in 1990. The severe austerity associated with this programme has been accepted by the population so far, because of the new leading role of Solidarity in the government coalition, but if

the promised stabilisation and growth was not forthcoming or simply delayed the government might fall. Further political and economic reform then might be irredeemably jeopardised. In other countries the stabilisation task may not be so daunting, but political processes have not yet led to as radical government changes as in Poland. The risk of reversal is just as great as in Poland if not greater. Aid at this stage would aid the transition to political pluralism, and of course could be made conditional on the continued progress towards this end.

## 20.3 Further Differences with the Marshall Plan

Today, with respect to the Marshall Plan:

- There are many donors for fewer recipients, instead of one donor for many recipients;
- Recipients cannot be left to settle between themselves the allocation of aid and loans;
- There are more marked national differences than among Marshall Plan recipients, from the internationally bankrupt to the debt-free, from the emergency cases (Poland) to the relatively rich and economically stable though stagnant (like Czechoslovakia and GDR);
- In particular, the GDR has a unique position in its indirect access to trade outside CMEA, and in particular in its access to aid and loans from the FRG, indeed to de facto economic integration through the proposed German Currency Union;
- In Eastern Europe today the preconditions of market relations and political democracy are not yet entirely met, and progress towards their fulfilment has not been uniform in either pace or achievement; these factors are likely to adversely affect the absorption capacity, or at least the "effective" absorption capacity of investment resources by these countries;

- Unlike the Marshall format, there is very little room for counterpart funds in domestic currency being used at the donors' discretion, given the deep financial imbalance experienced by most of the potential recipient countries. The best use of counter part funds in domestic currency is probably their incineration—except perhaps for labour employment in environmental reclamation;
- Other countries in Asia or Africa are needier and, therefore, would be worthier recipients of aid. This argument can be countered by indicating the exceptional, sudden and most probably short-lived opportunity which has opened for the transformation of Eastern Europe into market oriented democracies: the combination of Soviet acquiescence, indeed encouragement; the simultaneous occurrence of new possibilities in all Eastern European countries except Albania; the presumably temporary nature of aid to Eastern Europe and the large economic and political impact expected of such aid; not to mention the closer proximity and long standing ties between Western and Central-Eastern Europe.
- There is the CMEA trading bloc linking East European countries (except Yugoslavia, which has a much looser association) between themselves and with the Soviet Union, and which could—in theory—play a role in coordinating national policies and provide—as its very name suggests—mutual assistance. However, it has not and is unlikely to play a significant role; indeed it is in disarray and subject to strong centrifugal forces. CMEA cannot attempt the coordination of national plans which are not there any longer; it could only turn into a free trade area, if the bloc could produce a truly transferable currency, or if switched to trade and settlements in hard currencies.
- Last but not least, the position of Eastern Europe today is linked to that of the USSR. Until recently the USSR could have been considered as a potential donor (at least in relieving Poland of its debt towards the USSR, reported to amount to R6 bn and $1.5bn); though the economic advantage of involving the USSR as donor might have been more than offset by the strengthening of Soviet links with and influence in Eastern Europe. Rapidly the USSR is moving to the ranks of potential recipients; however it seeks trade and direct investment and specifically spurns aid. Moreover, the scale of assistance required by the

Soviet Union for economic stabilisation is very large, of the order of US$25 bn (which is roughly the level of additional imports necessary to absorb the estimated domestic ruble overhang, if imported goods were resold at a rate of exchange close to that practiced in non-trade transactions or in the black market); such kind of assistance in any case could not be included in an aid package without a major specific commitment of the US. Yet the continuation and success of Soviet *perestroika*, which looks increasingly unlikely without external assistance, may be regarded by itself as precondition of the smooth transition of East European countries to political democracy and market economy. Indirectly the Soviet Union is going to benefit from Western assistance to Eastern Europe, for instance through Poland being in a better position to repay its Soviet debts or through Romania being able to resume its food exports, instantly interrupted at the end of December. Most of all, the USSR is going to gain in the short term from a switch to trade in hard currency at international prices in its exports of oil and raw materials to Eastern Europe, which would require initial support for the importers; this switch, however, would probably benefit Eastern Europe and damage the USSR in the longer run. The centrifugal forces of the Soviet Union might soon set loose at least some of the smaller Baltic republics, also attempting a speedy transition to markets and democracy; they then might be regarded also as possible individual candidates for aid.

## 20.4 Loans Versus Grants

An important difference between post-War Europe and today's Central Eastern Europe is the presence of large scale international debt towards governments and banks, as opposed to relatively smaller and eventually unpaid post-War reparations. In particular, Poland, Yugoslavia and to a smaller extent Hungary, are past the point where they can take on commercial credits, seeing that their commercial debt is traded at a discount in secondary markets (respectively at 17. 52 and 97 cents in the dollar at the end of 1989). Any additional loan to these countries—including PHARE loans to Poland and Hungary—must be understood to be rolled

over indefinitely and—de facto if not de jure—automatically, or be seen within the context of a programme of debt relief on a scale large enough to reduce the debt to a serviceable level.

Debt relief does not necessarily imply any aid at all, but simply the realistic acknowledgement that some loans, most of which have already been written off in the creditors' books, are in fact bad loans. This acknowledgement is actually overdue, in that it has long been made in secondary markets: whenever those loans are retradable they are traded at a fraction of their nominal value. Now, if $1 worth of debt trades at 20c, if all creditors were to condone 4/5 of their credits they would lose nothing, because 20 per cent is in any case the market valuation of what fraction of outstanding debt can in fact be serviced. Only the remission of more than 4/5 of outstanding debt could be regarded as aid: a creditor condoning his entire credit of $1 bn is in fact donating—in the circumstances—$200mn. The trouble is that any individual creditor remitting 4/5 of his credit while nobody else does is actually losing 4/5 of the remaining 1/5, and therefore has a reduced incentive to do individually what would cost him nothing to do if it were to be done collectively. In any case, however, for a Polish-type discount of over 80 per cent, whether it is done individually or collectively, it only costs a creditor no more than $200 mn to condone $1 bn.

Unfortunately, debt relief is still controversial. It is anathema to the IMF (though the attitude of World Bank officials is mellowing); it raises deep preoccupations in banking and government circles in creditor countries (including the Soviet Union as creditor of large scale uncollectable loans to less developed countries) about other debtors especially in Africa and Latin America also demanding debt relief, about "moral hazard" and general deterioration of creditor's credibility. The stumbling block is the need for collective action involving all debtors and all creditors, for the operation to be truly costless. It should still be possible, however, for aid to take the form of debt relief, as long as it did not formally appear to be debt relief, and therefore did not lead to undue expectations of universal debt relief.

Suppose the EC decided to give $1 bn cash aid to Poland, on condition that Poland uses it to buy back in the secondary market from EC banks Polish debt which currently trades at a substantial discount. This

would have to be preceded by an agreement with commercial creditors allowing parcelling out and retrading of syndicated loans, in order to broaden the scope of secondary retrading of Polish debt. Poland would have a credit line without time constraints, and would be able to draw from it whenever it feels like it, without necessarily having to do it; these conditions are necessary to avoid, the minute such an operation is announced, a fall in the discount at which Polish debt is traded in secondary markets. This operation would be a transfer from the EC to EC banks, i.e. would have no net cost for the Community area as a whole—though undoubtedly the burden would have to be divided among EC member countries so as to fall on the richer and more exposed members (why should Greece and Portugal pay?). The operation would have a multiplier effect because it would reduce Polish debt by something like $4–5 bn; it would bring nearer the day when Poland can obtain fresh funds from commercial lenders; it would remain aid, of the kind that government bestow on this or that country without creating a generalised expectation of equal entitlement on the part of all other needy countries; it would have the same global effect of debt relief without being direct debt relief; and it would not create a precedent even if it was seen by everybody to have exactly the same effects as debt relief.

More ambitiously, imagine Paris Club governments collectively granting $6–7 bn to Poland, on condition that they are used to repay official debt with individual Paris Club governments, at a rate equal to the price of Polish debt in secondary markets. To simplify things Paris Club governments might transfer the management of their credits towards Poland on their behalf to their Central Banks, or to other financial intermediaries. This would wipe out say $30 bn worth i.e. 100 per cent of official debt, leaving Poland with only commercial debt to pay on a manageable scale, and opening up the possibility of a resumption of commercial credits. Seeing that there is no expectation that official debt—unlike commercial debt—could and would ever be repaid at all, this operation would not have a net cost for Paris Club countries as a whole, there would be only distribution effects from below to above average creditor countries within the Club (it should be noticed that the discount on debt would be a matter of indifference for the debtors and for the Paris Club area as a whole, but would be very important in determining costs or benefits for

individual creditor countries within the area if the amount granted was raised in proportions different from the country shares in Paris Club credits). Again, this would be equivalent to total debt relief and clearly seen to be such without formally being debt relief, remaining just a form of tied aid, which no other country or group of country could automatically claim.

## 20.5 Scale of Aid

The scale of aid is a strictly political question, but it is useful to place a few markers. If Western Europe were to be as generous to Central Eastern Europe as the US after the last War (1.3 per cent of GNP for three and a half years), it would have to mobilise a total of some $200 billion over the same period, or over 250 ECU per head per year. The Financial Times notes that this figure would be "equivalent to the total cost to EC taxpayers and consumers of the common agricultural policy". In early January 1990 President Jacques Delors suggested that, if Eastern Europe were to be treated as generously as the less developed regions of the European Community (through the EC Structural Funds), the area would absorb something of the order of ECU 19 billion per year for the next ten years in loans and grants The grants corresponding to this approach for the whole area except the Soviet Union, ECU 13,650 mn a year (about ECU 100 per head; this compares to $ 900 per head US aid to Israel in 1985–1986, about half of which was military aid). The scale of assistance required by the Soviet Union for economic stabilisation is estimated to be of the order of US$25 bn. On the potential supply side, the European Community budget has a surplus of about ECU 4 billion, due to CAP having been less costly than anticipated, which could be mobilised already over the next three years.

A thorny question is whether there is a minimum size of external assistance below which help might be counterproductive. There is no clear evidence that small scale help would make things worse, but it is plausible to think that inadequate help might be ineffective in achieving the desired results of stabilisation and reform.

## 20.6 Trade Not Aid?

The expansion of East European trade with EC and other OECD countries could go a long way towards the alleviation of these countries' problems, through greater efficiency and productivity, the solution of structural mismatching between demand and supply, the generation of net exports for the repayment of debt. Trade and cooperation agreements with the EC are aimed precisely at removing trade barriers (at a rate which has been speeded up amazingly fast in the case of Poland, and rightly so); the restrictions imposed by CoCom (the informal Coordinating Committee involving NATO countries minus Iceland plus Japan and Australia) have been considerably reduced in practice in the last months; if the Internal Market is to produce half the net benefits anticipated by the Cecchini Report we can expect such an overall trade creation effect that East European trade problems will be permanently solved (if not, conversely, East European countries will not have much to fear at the end of 1992). But the further integration of the Soviet Union and Eastern Europe into world trade is something which cannot be simply granted as a Western concession, as Soviet and East European pronouncements often imply. Quite on the contrary, integration into world trade presumes the adoption by these countries of policies and institutions which are yet to come: they range from macroeconomic equilibrium to enterprise autonomy, from the unification of exchange rates to currency convertibility. Only then will Eastern European countries be in a position to be helped through trade expansion.

## 20.7 Western Loans for Exchange Rate Unification and Convertibility

A project worthy of support, instead of straight aid, is the provision of Western loans for the purpose of establishing convertibility of East European currencies outside CMEA. This is already happening for Poland, but could be extended further. It could happen in a country at a time; it would involve the unification of (implicit or explicit) multiple

exchange rates; it would have to be, at first, limited to trade transactions (therefore, at least initially, not meeting the IMF Article VIII criterion for convertibility). It would strengthen economic reform by providing signals of trade opportunities, and competition even in the highly concentrated industrial structures typical of Eastern Europe. All countries would be worthy of support in this fashion; the IMF and the World Bank could be easily persuaded to be involved, having played that role not just for Poland but for a number of other countries; trade expansion could be expected in extra-CMEA trade, while intra-CMEA trade would have to be restructured, which would help the project—currently on ice—of developing a CMEA "internal market" along lines similar to the European Internal Market. A generalised precondition of any such support to convertibility through specific loans must be the prior stabilization of these economies, i.e. the clearing of markets in non hyperinflationary conditions. Again, for those countries which are currently unable to service their debt this kind of operation presumes a prior or imminent debt relief.

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# 21

# The Impact of Systemic Transition on the European Community

Domenico Mario Nuti

## 21.1 German Re-Unification

The first, spectacular effect of the 1989 revolutions was the coming down of the Berlin Wall and the fast re-unification of Germany, first de facto in July 1990 with monetary unification, then de jure in October. German

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unification involved instant, automatic enlargement of the Community to include the ex-GDR (which already had a special de facto relation, with intra-German trade already being treated as internal trade). Initially German re-unification boosted demand, with West German GDP growth of 5.1% in 1990 and almost 6% in the last two quarters of 1990 and the first quarter of 1991. It is estimated that "the growth rates of the other Member States were raised on average by half a percentage point a year in both 1991 and 1992" (CEC 1993).

The narrowing of wage rate differentials between West and East Germany, due to internal labour mobility (and therefore inescapable even if a lower OstMark/DMark rate of conversion had been initially adopted instead of the 1:1 parity for wages and pensions) made East German transition much costlier than in the other countries, where labour migrations were smaller and more difficult while competitiveness losses due to money wages growth could be restored through devaluation of national currencies. Thus transfers from West to East Germany amounted to $79 bn in 1991 and some $105 bn in 1992 (UN-ECE 1992; this is, incidentally, more than double the amounts made available to the whole of centra-eastern Europe and the Soviet Union over that period).

The costs of German re-unification were financed mainly by a higher public sector deficit, which deteriorated by more than 3% of GDP within a year after unification. Given the traditional monetary restraint of the Bundesbank, German interest rates rose as a result of higher government borrowing, driving up interest rates also in other Member States and strengthening the DM relative to other European currencies.[1] Higher interest rates (especially short-term rates), starting

[1] Initially a stronger DM was expected as a result of a boom in German exports of capital goods to a rapidly growing central eastern Europe (CEPR 1990); protracted recession in transitional economies prevented such a boom but the DM strengthened all the same, not as a result of unification as such, or of Bundesbank policy which has remained unchanged, but because of German government refusal to finance re-unification costs through higher taxation. Chancellor Helmut Kohl explicitly undertook not to raise the tax burden before 1995; this fiscal stance has been changing only since March 1993, first with the ruling coalition agreement on a sharp rise in oil and petrol taxes, ostensibly to finance the debt service of German railways; then on 13 March 1993 with a multi-billion D-Mark "Solidarity Pact" between the German government, the opposition and the 16 federal states, involving the introduction of a 7.5% "solidarity surcharge" on income tax rates, however delayed until 1995.

from a level already considerably higher in real terms than in the US or Japan, have contributed to the growth slowdown of GDP and investment in Germany and in the whole Community. A stronger DM, on top of overdue Exchange Rate Mechanism (ERM) realignments after five and a half years of exchange rate stability, together with the Danish and French votes on the Maastricht Treaty, casting doubts on an early European Monetary Union, disrupted the ERM in September 1992, and reduced and weakened its scope ever since. Recession and monetary turbulence continued in spite of German interest rate cuts since early February 1993 and optimistic expectations of further cuts. Continued support to German eastern lands is envisaged, at a yearly rate due to stabilise at around $75 bn after 1995. A modest contribution to income support in the Eastern lands has been made by the European Community mostly within the framework of structural funds.

Because of wages higher than otherwise sustainable, and because support did not take the form of wage subsidies, for East Germany there still is a risk of protracted underdevelopment as German and foreign investors are attracted by central eastern European countries (CEECs) with much lower wages and similar economic structures. In 1991–1993 900,000 manufacturing jobs were lost in Germany; by the end of January 1994 unemployment topped the record level of 4 mn, respectively 3736 thousand in the West and 1293 thousand in the East, corresponding to unemployment rates of 9.9 per cent and 17.8 per cent.[2]

The German "Social Contract" has been disrupted and management and labour are now on a collision course.

The German lesson is the high cost of economic and monetary union between regions characterised by different development levels; unification had to be quick due to fears—totally unwarranted as it turned out—about the temporary nature of the "window of opportunity" that allowed it at the beginning of 1990, but was otherwise—from a purely economic viewpoint—premature. In spite of EMS disruption and its contribution

[2] These unemployment figures are actually underestimates, as they do not include the thousands of people in mandatory work-training programmes or government job creation schemes.

to European recession and unemployment, however, the German experience is not per se evidence of a conflict between Community enlargement and deepening (on this point, see the last section of this paper): the conflict was due to the combination of German fiscal and monetary policies.

## 21.2 EC Financial Assistance to CEECs

The tasks faced by post-communist economies were large-scale, simultaneous, unprecedented: external and domestic stabilisation (including unsustainable foreign debt and/or repressed inflation); restructuring of capacity inappropriate with respect to domestic and world prices and the state of technology; systemic transition from versions of socialist central planning to a market economy with private property and enterprise. Moreover, these daunting tasks were being attempted at the worst possible time, i.e. the middle of a world slump. These processes, initially expected to yield early net benefits, were accompanied by a deep and protracted recession (for a discussion of its causes see Kolodko 1992; Nuti 1992, 1993a; Nuti and Portes 1993).

The European Community and its Member States reacted fast and contributed generously to the costs of these processes, providing the bulk of western assistance and its coordination on behalf of the twenty-four most industrialised countries (the "G-24"). Initially the Community share of G-24 assistance to CEECs was fixed at 50% of the total, but between 1990 and 1992 it provided over 60% of western bilateral aid to the area (see Table 21.1 for central eastern Europe and Table 21.3 for the former Soviet Union). In those three years the Community and its Member States were by far the largest source of aid to the area (including the Baltic states, Slovenia and Albania), providing over ECU 23 bn (of which ECU 5 bn from the Community on its own), while EFTA countries provided only ECU 4.2 bn, Canada ECU 1.7 bn, Japan ECU 2.5 bn and the United States ECU 5.5 bn. Total aid over the period, including that provided by international financial institutions, totalled 52.8 bn.

**Table 21.1** Total assistance from G-24 countries to Central and Eastern Europe, 1990–1992 (ECU billion)

| | Overall assistance | Of which: grants |
|---|---|---|
| Community and Member States | 23.0 | 7.0 |
| (of which community alone) | 5.0 | 2.4 |
| EFTA | 4.2 | 1.6 |
| United States | 5.5 | 3.5 |
| Japan | 2.5 | 0.5 |
| Canada | 1.7 | 1.2 |
| G-24 Total (excluding IFIs) | 37.8 | 14.1 |
| G-24 Total (including IFIs) | 52.8 | 14.1 |

*Source*: G-24 Scoreboard

Financial assistance by the Community and Member States has taken a variety of forms: food and non-food emergency aid, external debt restructuring, technical assistance; loans for balance of payment support, for investment in infrastructures, for capacity restructuring; export credit and guarantees (a breakdown by category of aid is provided in Table 21.2 for central eastern Europe, and in Table 21.4 for the Former Soviet Union).

Already at the beginning of 1990 the PHARE programme was launched to assist Poland and Hungary (the acronym stands for "Pologne, Hongrie: Assistance à la Reconstruction Economique"), involving grants on agreed, demand-driven projects, aiming at covering emergency humanitarian and food aid, building a market economy and a democratic "civic society", restructuring capacity, promoting private enterprise, mostly through technical assistance. Subsequently PHARE aid has been extended to cover all nine reform countries of the central European region, as well as Slovenia; aid is conditional on the continued progress of recipient countries towards a democratic market economy. The PHARE budget was 500 MECUs in 1990 and exceeded 1 bn ECUs in 1993.

The European Investment Bank (a Community institution) has been allowed to operate in the CEECs, and in 1990–1992 has approved 17

**Table 21.2** Assistance to Central and Eastern Europe (including Albania, Slovenia and the Baltic States) in 1990–1992 (ECU million)

| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| Community and Member States | 848 | 252 | 3216 | 1417 | 5915 | 1398 |
| (of which Member States) | 509 | 135 | – | 844 | 81 | 25 |
| EFTA | 31 | 73 | 741 | 250 | 1158 | 238 |
| USA | 380 | 81 | 1893 | 1062 | 1859 | 286 |
| Japan | 25 | 1 | 450 | 45 | 543 | 1 |
| Canada | 71 | 1 | 1244 | 30 | 467 | 2 |
| G-24 Total | 1375 | 446 | 7543 | 2910 | 10,429 | 1976 |

A: Food aid
B: Emergency non-food aid
C: Restructured debt
D: Technical assistance
E: Official export credit
F: Official assistance for private sector investment
*Source*: G-24 Scoreboard

**Table 21.3** Assistance to the former Soviet Union, 1-1-1990/31-10-1993 (ECU billion and per cent share)

| | ECU billion | % share |
|---|---|---|
| Community | 3.5 | 4.2 |
| Member States | 50.8 | 60.7 |
| (of which Germany) | (40.7) | (48.7) |
| EFTA | 1.2 | 1.4 |
| Canada | 1.5 | 1.9 |
| United States | 10.4 | 12.5 |
| Japan | 3.9 | 4.6 |
| Total (excluding IFIs) | 80.1 | 95.8 |
| Overall Total | 83.6 | 100.0 |

*Source*: EC, Brussels

loans for a total of 800 MECU, far lagging behind the amounts made available. The European Coal and Steel Community has earmarked 200 MECU for restructuring investments in metallurgy. The EBRD (of which the Community is a shareholder) made a slow start in 1991, initially with actual disbursements greatly lagging behind modest commitments, but

**Table 21.4** Assistance to the independent states of the ex-USSR (ECU million)

| | A | B | C | D | E | TOTAL |
|---|---|---|---|---|---|---|
| EU | 487 | 1750 | 0 | 1615 | 0 | 3852 |
| Member States | 1420 | 37,950 | 8770 | 607 | 1535 | 50,282 |
| EU and Member states | 1907 | 39,700 | 8770 | 2222 | 1535 | 54,134 |
| EFTA and Nordic council | 49 | 1025 | 0 | 129 | 3 | 1206 |
| Other countries | 1743 | 17,380 | 973 | 1418 | 4972 | 26,281 |
| International institutions | 0 | 3518 | 0 | 178 | 5 | 3702 |
| TOTAL | 3699 | 61,624 | 9743 | 3947 | 6516 | 85,323 |

A: Food and medical aid (grants)
B: Credits and credit guarantees (including untied balance of payments support)
C: Strategic assistance: withdrawal of Soviet troops and destruction of nuclear warheads
D: Technical assistance
E: Others or non available
*Source*: EC provisional estimates, 7-1-1994. Figures do not include debt rescheduling nor grants from private sources

by 1993 it was operating in 25 countries in the region and had significantly enlarged the scale of its operations.[3]

The Community has also made available loans in support of macroeconomic policies, mainly balance of payments loans, complementary to those of the IMF and the World Bank and subject to IMF conditionality (see CEC 1992a). They amounted to 1630 MECUs in 1992, including 1440 MECUs for the CIS. Additional programmes cover other items, such as scientific cooperation, the Business Cooperation Network, the Euro Info Centre. There are also measures of export credit guarantees (like 500 MECUs for food aid to the CIS); in practice guarantees often transform themselves into delayed loans or grants, in case of default (so much so that at the Edinburgh European Council of 11–12 December 1992 a Fund was set up to cover the general budget guarantees in favour of third countries, in order to avoid budget implementation problems in case of default).

[3] 1n 1993 the EBRD approved 91 projects totalling ECUs 2.28 bn, up from 51 projects totalling ECUs 1.09 bn in 1992; disbursements tripled to ECUs 435 mn in 1993 over the previous year. Loan commitments appear to have stabilised in 1994.

## 21.3 Trade Access: Association ("Europe") and Other Agreements

The Community had concluded General Trade and Economic Cooperation Agreements with CEECs in 1988. Already in 1990 the Community abolished—for the reforming countries—the specific restrictions that applied to state trading countries, suspended other quantitative restrictions generally applicable to other third countries and extended to them the Generalised System of Preferences (GSP, which was already applied to Romania). For CSFR, Hungary and Poland a new set of Association Agreements were negotiated during 1991 and signed in December 1991 (EC-CSFR 1991; EC-Hungary 1991; EC-Poland 1991); they came into effect in March 1992 on an interim basis pending ratification by all Member States and by the three other parties. In October 1993 the agreement with CSFR—following the Federation's split—was replaced by separate agreements with the Czech and Slovak republics; following ratification the agreements with the four countries came into force on 1 February 1994. Associate Agreements were also signed in October 1993 with Romania and Bulgaria.

These association agreements—labelled "Europe" Agreements to distinguish them from earlier Association agreements with Malta, Cyprus, Greece and Turkey—envisage the creation of a free trade area within ten years, in two five-year stages. The agreements abolish all quantitative restrictions on industrial imports, except for textiles and coal, as well as tariffs on more than half EC imports. Remaining tariffs on EC industrial imports will be abolished within 5 years from 1-1-1993, except for textiles (where the transitional period might be prolonged to six years or one-half the period agreed in the Uruguay Round for phasing out the Multi Fiber Agreement, whichever the longer); for iron and steel improved Voluntary Export Restraints (VERs) have been arranged. Rules of origin stipulate a minimum 60% local content requirement. For agriculture, the GSP is consolidated and improved, and additional reciprocal concessions are made (see below).[4]

[4] For steel a yearly 20 per cent reduction of duty with respect to the base year is envisaged for 1991-95, plus a reduction of 10 per cent in 1996; similar provisions apply to coal, textile and clothing import duties abolished over six years. In agriculture and food variable trade concessions are applied to yearly quotas initially fixed with reference to previous average levels and growing yearly (on average by 10 per cent for five years), with parallel custom duties reduction in excess of quotas (see OECD 1993b).

Asymmetry in liberalisation allows the central European countries more time to reciprocate these concessions (Poland seven years, Hungary and Czechoslovakia nine years). There is a standstill provision (no new customs or quantitative restrictions after the signing of the agreements—except for infant industries and restructured sectors in the east), as well as anti-dumping protection and a general provision for serious injury to a domestic industry. Untypically, there is no financial protocol, only temporary financial provisions for PHARE 1992 (beside access to EIB loans).

The agreements involve also a commitment to the "four freedoms" of movement (goods, services, labour and capital), attempts at policy convergence and approximation in legislation, including the introduction of "Treaty of Rome" competition law within three years of entry, and technical cooperation over a long list of areas. There is a prefixed timetable for the liberalisation of capital movements, whereas the Community does not guarantee any access to workers from the associate countries beyond what is guaranteed bilaterally by its Member States. Adaptation of legislation could take place at the pace suitable to each country. Last but not least, the Agreements introduce a structured political dialogue between associate countries and the EC, through Association Councils and Parliamentary Association Committees.

Trade relations with the Baltic States and Albania are regulated by agreements which have been in force since May 1992, similar to the "Trade and economic co-operation agreements" prevailing with CEECs before the Europe Agreements. They involve the abolition of quantitative restrictions, MFN treatment, GSP, EIB investments. Slovenia has a similar trade and economic cooperation agreement, including transport and finance.

In November 1992 negotiations for less comprehensive "Partnership and Co-operation Agreements" have begun with a number of new independent states of the CIS (Russia, Belorus, Ukraine, Kazakhstan, Kyrgyzstan) and Georgia, in commercial, economic, political and cultural areas, proclaiming the principles of the CSCE and the Helsinki Charter. A programme of Technical Assistance to the CIS (TACIS) is aimed at aiding reform and restructuring in these states.

## 21.4 Trade Developments

Systemic transformation has led to a complete reshaping of trade relations, with the collapse of CMEA (unanimously decided by its members in June 1991 with effect from September, but doomed anyway due to Soviet economic collapse), monetary and economic disintegration and consequent trade implosion in the former Soviet Union, the Central European Free Trade Area (CEFTA) instituted in December 1992 with effect from 1 January 1993 by Poland, Hungary, the Czech and Slovak republics, implementing the Visegrad Treaty of February 1991 (for an overview of these trends see Daviddi 1992; Nuti 1993b; see also below, Sect. 21.6).

In 1989 CEEC exports to the EC accounted for between 28 and 34% of CEEC exports, except for Bulgaria (9%), relatively biased towards resource-based products and unskilled-labour-intensive low-technology, with intra-industry trade also biased towards lower technology; while CEEC markets accounted for only 2.8% (with a declining trend) of Community trade. Trade liberalisation measures have raised CEEC exports (though some of the growth is due simply to former GDR trade being included under the EC from 1991 onwards). This growth has been enhanced by trade diversion away from CMEA destinations and by the search for new outlets given domestic recession, without much of the necessary restructuring of trade flows to date, except on the import side through a switch from investment and intermediate capital goods to consumption goods (see Hughes and Hare 1991; Graziani 1992).

In 1990 sensitive sectors were still subject to high non-tariff measures (NTM; see Messerlin 1991): over 100% average protection prevailed in agriculture due to CAP and VERs; in textiles and apparel under the Multi Fiber Agreement MFA-4, amounting to between 43% protection for Bulgaria and 64% for CSFR; 487 out of 490 items in iron and steel, mostly through VERs, minimum prices and anti-dumping duties. Chemicals were protected through extensive use of anti-dumping actions (mostly against CSFR and Romania; see Graziani 1992). Schumacher (1992) estimated that, as a result of the Europe Agreements, in 1992 Czechoslovakia would enjoy a tariff reduction of 60%, Hungary of 65% and Poland of 53%; textiles quantitative restrictions were not generally binding because of supply-side problems.

As a result of trade liberalisation in the new conditions, in 1991 Community imports from the five CEECs increased by 24% to reach 16.1 bn ECU, while exports grew by 46% to reach 17.5 bn ECU thus generating for the first time a positive trade balance of the EC with the Six as a group. In 1992 trade grew further: Community imports from and exports to the five CEECs grew by 17% and 22% respectively, raising the Community surplus to 2.5 bn ECU, made up of a surplus with each of the five countries of Central Eastern Europe (see Table 21.5). Thus from 1989 to 1992 the share of the EC in CEE trade grew from 24.5 per cent to 48.2 per cent of their exports and from 20.8 per cent to 44.7 per cent of their imports, making the Community their most important partner. In 1993 these trends appear to have accelerated, with further growth of EC share in CEE trade turnover and much faster growth of CEE imports from the EC.

The front-runner was the CSFR, with a cumulative 1989–1992 growth of 116.4 per cent of exports and 162.7 per cent of imports, followed by Poland, Hungary and Bulgaria, whereas Romania's exports to the EC fell by 44.4 per cent and its imports by 27.7 per cent.

Significant growth has occurred also in trade between the European Community and the CIS, whose exports to the Community rose by 16 per cent between 1989 and 1992, while Community exports only rose by 7 per cent over the period, thus leading to a growing trade deficit with the CIS (from ECU 2.6 bn to ECU 4.2 bn over the period) instead of the surplus now run with all CEECs.

The assessment of future trade prospects involves conjectures about the success of systemic transition, the speed of capacity restructuring and of catching-up, as well as the adoption of models determining trade structure and levels (such as a "gravity" model, which appears to be the most popular among researchers). Among the many studies available—which cannot be reviewed here—are the following: Wang and Winters (1991), Graziani (1992), Hamilton and Winters (1992), Landesmann and Shields (1993), Rollo and Smith (1993). There is a consensus that, under optimistic assumptions about systemic transition and catching up, the growth of CEEC-EC trade has an enormous potential.

Wang and Winters (1991) suggest that, if the first three countries covered by Europe agreements had been fully integrated into the world economy, even at the low income levels of 1985 Hungarian and Polish

**Table 21.5** European community trade with Central and Eastern European countries (CEECs)

| Country | 1989 | 1990 | 1991 | 1992 | 1990 | 1991 | 1992 |
|---|---|---|---|---|---|---|---|
| 5 CEECs | | Million ECU | | | Per cent change | | |
| EC Exp | 11,482 | 12,003 | 17,536 | 21,439 | 4 | 46 | 22 |
| EC Imp | 12,089 | 12,960 | 16,116 | 18,898 | 7 | 24 | 17 |
| Balance | -597 | -957 | +1420 | +2541 | | | |
| Poland | | | | | | | |
| EC Exp | 3944 | 3393 | 7874 | 8148 | 11 | 79 | 3 |
| EC Imp | 3857 | 5156 | 6212 | 7077 | 33 | 20 | 14 |
| Balance | 87 | -763 | +1662 | +1071 | | | |
| CSFR | | | | | | | |
| EC Exp | 2384 | 2608 | 3816 | 6263 | 9 | 46 | 64 |
| EC Imp | 2557 | 2689 | 4061 | 5535 | 5 | 51 | 36 |
| Balance | -173 | -81 | -245 | +728 | | | |
| Hungary | | | | | | | |
| EC Exp | 2988 | 2875 | 3484 | 4060 | -5 | 21 | 16 |
| EC Imp | 2587 | 2933 | 3624 | 3986 | 13 | 24 | 10 |
| Balance | +400 | -58 | -140 | 74 | | | |
| Romania | | | | | | | |
| EC Exp | 689 | 1227 | 1330 | 1854 | 78 | 8 | 39 |
| EC Imp | 2548 | 1603 | 1467 | 1402 | -37 | -9 | -5 |
| Balance | -1859 | -377 | -137 | +452 | | | |
| Bulgaria | | | | | | | |
| EC Exp | 1477 | 900 | 1033 | 1112 | -39 | 15 | 8 |
| EC Imp | 530 | 582 | 752 | 897 | 10 | 29 | 19 |
| Balance | +946 | +317 | +281 | +215 | | | |
| **Share of 5 CEEC in EC external trade (per cent)** | | | | | | | |
| EC Exp | 2.8 | 2.9 | 4.1 | 4.9 | | | |
| EC Imp | 2.7 | 2.8 | 3.3 | 3.9 | | | |

*Source*: Eurostat

exports to the EC would have been five times higher and Czechoslovak exports ten times higher. In absolute terms this involves a scope for raising trade turnover (with respect to that baseline) by 10 bn ECUs for Czechoslovakia, 4 bn ECU for Hungary and 8 bn ECUs for Poland.

Landesmann and Shields (1993) project the composition of CEEC trade with reference to recent EC members and EC border countries, identify long-run comparative advantage (taking into account factors such as size and location, current quality of products and the time schedule of their reform programmes); until 1995, CEECs export growth is taken as

constrained by their export capacity. The results of this analysis suggest that CEECs would increase their export share in EC imports of manufactures (including intra-EC trade) from 2.25 in 1987 to around 7 per cent by 2010.

The largest projected increases in market shares are for Czechoslovakia (still treated as a single unit, whose share would rise from under 0.3% to over 1.4%), Hungary and Poland. Much of this increase is expected to be at the expense of intra-EC trade but, given EC market growth, the impact on export growth rates of EC countries is expected to be small. The composition of CEECs exports, currently and in the shorter term concentrated in a few key industries (primarily metal manufactures, chemicals and clothing), in the longer run is projected to become much more diversified, with faster growth in the market share of metal processing, engineering industries, the paper industry and, to a lesser extent, motor vehicles, while varying across CEECs. On the side of CEEC imports, Landesmann and Shields suggest a shift from capital to consumer goods, in particular consumer durables—a shift which to a great extent has already taken place in 1987–1991. For the former Soviet Union, which in 1987 accounted only for 0.5% of EC manufactures imports, Landesmann and Shields project a share of 2.1% by 2010, while the Yugoslav share is projected to rise from 0.7% to 1%.

## 21.5 Criticisms of the Europe Agreements

The Europe Agreements have been subjected to a barrage of criticism, not only in public and private pronouncements by CEEC politicians but also by many EC economists and officials. For Alan Winters, for instance, "The agreements are disappointing in the degree of support and encouragement they guarantee to [the three countries] … Indeed, they sometimes appear to be designed as much to minimise the adjustment that the revolutions of 1989 cause in the EC than to maximise the benefits that accrue to [the three countries]" (in CEPR 1992a). Richard Portes (1992) emphasises the lack of a policy towards longer term relations with the associating countries, and the residual "restrictive provisions that are potentially detrimental to both the Community and the CE [central and eastern] countries". The title of Jim Rollo (1992) refers to the agreements

as "a half-empty glass?" Jacques Attali (1992, while EBRD President) argued that "The Agreements are a step in the right direction. But they are deficient in that they do not include a comprehensive approach to the problem but rather deal case by case with each country, and in this way create differential trade regimes. Nor do they provide adequate trade access for between a third and a half of exports from the central and eastern European countries. Nor do they address the former Soviet Union" (p. 4). Attali called instead for a new Treaty leading eventually to a "Continental Global Market", for the appointment of an international group of experts to study the problems involved and produce a report within six months (like the group appointed by the Messina Conference which led to the Spaak report and paved the way for the Treaty of Rome). The Treaty would include Russia and be negotiated multilaterally, involving also the US and Japan with a view to induce them to liberalise their trade with "post-Communist Europe" (see below, Sect. 21.12). The Treaty would follow the Maastricht Treaty without interfering with it; a pan-European works programme would extend the European Growth Initiative to the east,[5] rebuilding European infrastructures and alleviating unemployment throughout Europe. Additional funds were envisaged as part of the Attali package, for training, research and development, action on small and medium enterprises (SMEs).[6]

Criticism of the Europe Agreements has become more intense over time: for instance, in a House of Lords debate on the Agreements Lord Eatwell noted their "economic, indeed political, inconsistency … We encourage the central and east European countries to adopt free markets while carefully manipulating the markets in our own favour by excluding exactly the goods which those countries have some capability of selling";

[5] Beside national initiatives, the "growth initiative" launched at the Edinburgh Council of December 1992 includes a European Investment Rind with a capital of 2 bn ECUs which once in function would provide guarantees for investment of the order of 15-20 bn ECUs, and a EIB facility of 5 bn ECUs allowing for investments of the order of 7-10 bn ECUs, including 11 Transeuropean Networks of energy, transport and telecommunications.

[6] Attali proposed to fund these pan-European public works programme "without spending more tax-payers money" (p. 9), through a greater endowment and loans raised by the EBRD, of which he was President at the time. Unless a keynesian effect of higher tax revenue and savings out of higher income is envisaged—which in turn requires a world in which economic policy does not pursue monetary targets—the problem of funding this additional vast programme of public works without raising taxation is, to say the least, formidable.

"That is what is meant by asymmetry: they buy from us we do not buy from them" (10 March 1994). Timothy Garton Ash describes the Agreements as "shameful and shamefaced protectionism" (in The Independent, March 1994, quoted by Lord Eatwell in the same debate).

## 21.6 Obstacles to Integration: Structural Problems, CAP, Dumping

Apart from the relatively slow pace of transition, three main obstacles stand in the way of more rapid integration than that envisaged by the Europe Agreements. The first is the similarity of structural problems in the EC and the CEECs, with high-cost over-capacity in sensitive sectors, mostly agriculture, textiles, steel, chemicals; moreover, sensitive sectors are usually regionally concentrated. Similar structural problems do not lend themselves to a resolution through free trade, but through concerted and assisted capacity reduction, as it has been and is the case for steel within the Community: if the CEECs were already members they would be involved in these exercises in capacity reduction, therefore they cannot claim now more than they would have as members while their exports in these sectors are actually allowed to rise. Alternatively, measures could be considered for reciprocal partial opening of market segments (say, opening the Community to labour-intensive agricultural products from the East in exchange for access to central eastern markets for capital-intensive highly-processed foodstuffs; see Munk 1992). According to Hughes and Hare (1991), domestic resource cost (DRC) calculations show that in general the sensitive products are not among the most competitive: this is a case for maintaining, not removing trade obstacles in these sectors, in order not to encourage the growth of activities which are not internationally competitive.[7]

[7] Gros and Steinherr (1991) argue that "Soviet agriculture has in the long run a strong export capacity" (p. 65), but provide a most tenuous ground for this suggestion, namely that "Productivity is so low in the Soviet Union that it is virtually impossible not to augment agricultural production" (p. 63). Even so, exactly the same could be said of consumption levels, and therefore even rising productivity in agriculture does not generate a presumption of net export potential.

The second obstacle to greater integration is the present Common Agricultural Policy regime (see Senior Nello 1991). Price support in agriculture, mostly through a variable import levy bridging the gap between fluctuating border prices and stable support prices,[8] already absorbs almost 60% of the Community budget. Estimates of the budgetary cost for the EC of opening trade in agriculture, let alone extending CAP to CEEC farmers in case of accession, vary[9] but would certainly be hard to finance it under the present regime. Again, EC should not stimulate CEEC production which is unlikely to be profitable at world prices: unilateral concessions are an unattractive way of providing assistance (Munk 1992). Hamilton and Winters (1992), on the contrary, argue that even if CEEC farmers' access to EC markets was restricted, comparative advantages are such that the increment of their supply would drive world prices down sufficiently to create an additional burden on the CAP budget—which is a different but still strong argument to maintain restrictions in order to avoid an even greater burden through accession.

This problem could be eased and possibly resolved with CAP reform, moving from market price support towards direct income support for farmers, eventually to be phased out over time. This will imply a significant reduction in EC agricultural prices[10] or quota regulations: income support would not have to be extended to CEECs farmers, as the new compensatory system is a compensation for losing an earlier price

[8] This system applies to cereals, sugar, beef and milk products; in a slightly modified form, to pigs, poultry, meat and eggs; fruits, vegetables and wine are subject to high tariffs of the order of 15–30% and minimum import prices. Some products which were not part of the original CAP schemes (sheep meat and oil seeds) have duties affected by GATT and are protected through production subsidies and VERs. CAP levies on raw materials are carried over on to products (See Appendix A of Rollo and Smith 1993).

[9] The budget cost is reckoned to be high by CEPR 1992 and Gros and Ludlow (1992), low by Munk (1992). Munk argues that CEECs should aim at basic self-sufficiency, because they are not competitive at world market prices and cannot afford to subsidise agricultural exports. Rollo and Smith (1993) estimate the effects of opening EC trade to CEEC agricultural exports as a fall in EC producer incomes by 3.7 bn ECUs a year, offset by increases in consumer surplus of 3.9 bn ECU and savings in administrative costs of ECU 1.8 bn—a marked Paretian improvement which however, as we know from the economic theory of compensation tests, is not decisive unless compensation actually takes place and the test is irreversible after compensation.

[10] This has already happened for cereals as a result of May 1992 reform decision; cereal prices will probably go down to world price levels in ten years; for other crop products and animal products protection is also going to be reduced but less drastically (see Munk 1992).

support which CEECs farmers have never enjoyed; moreover, under the principle of "subsidiarity" arguably the burden of such income support—unlike that of a common price support—should fall not on the EC budget but on that of Member States. In the short period, perhaps the EC and CEECs could grant mutual privileged access to market segments, favouring EC capital intensive agricultural products (e.g. highly processed dairy products) and CEECs labour intensive products (e.g. fruits and vegetables; see Munk 1992).

The third problem is dumping, and the permanence of anti-dumping action.[11] Even in the countries where progress towards a market economy has been fast there are still forms of substantial state aid, often difficult to identify and to trace. Many crucial inputs, notably energy, are still underpriced by world price standards: for instance, with energy at about one tenth of the world price, Russian aluminium exports have soared sixfold to 1.6 mn metric tons in 1991–1993 driving down the world price to almost half, at a time of worldwide concerted efforts for output reductions, with price reversals and considerable fluctuations being caused by the vagaries of Russian stated intentions as to their participation in output reduction.[12]

[11] The Europe Agreements envisage anti-dumping provisions complying with art. vi of GATT (art. 29); countervailing duties also GATT-consistent i.e. if "public aid distorts or threatens to distort competition… "; general safeguard measures in case of "serious injury to domestic producers of like or directly competitive products" or "serious disturbances … or difficulties which could bring about serious deterioration in the economic situation of a region", plus additional safeguards for special goods and circumstances, mostly for agricultural goods but also in case of balance of payment difficulties. Rules of origin restrict imported materials from outside the EC to 40–50% of the value of output.

[12] In early 1994 the aluminium price has recovered slightly in response to an international agreement to cut output, including a doubtful Russian commitment to cut output by 500,000 tons, hard to implement due to resistance by 80 per cent private Russian producers. It is doubtful whether much of Russian aluminium—highly intensive in energy available at one tenth of the world price, and highly pollutant—yields a positive value added at international prices, let alone being competitive internationally; indeed most Russian producers claim to be on the edge of bankruptcy and demand government subsidies. Moreover, metal exports are a notorious vehicle for Russian illegal capital flight. In these conditions, it cannot be argued that free access of Russian aluminium to western markets is mutually advantageous. A similar situation prevails in some Eastern European countries, notably the Czech Republic where aluminium producers are still subsidised. In CEECs steel is more of a problem, being also a sector where direct and indirect state aid is provided and where in the European Community there is also an attempt at reducing yearly output, whether voluntarily concerted or centrally imposed, of the order of 50 mn tons.

There are still state enterprises whose losses are made good by fairly automatic credit, if not by direct subsidies, and therefore might be willing to export at any price. In the CIS, domestic prices are often still far from market clearing: when, for instance, Russian aluminium is exported on a large scale while domestic shortages develop, this is an obvious case of dumping even if the export price is the same as the domestic price. If CIS and CEECs were treated as state trading countries, their exports would be judged relatively to an external cost standard and kept out by anti-dumping measures; if treated as market economies, their exports would be given artificial competitiveness by unsustainable (over-undervalued) exchange rates and dollar wages. Secure permanent EC access to underpriced imports would be a long term advantage, but exposure to temporary dumping is a disruption of domestic production which can be very costly in the long run. The problem can only be solved with further progress of price liberalisation and wage and exchange stability in the CEECs and the CIS.

The same obstacles to integration—similar structural problems, agricultural protection, needs for contingent protection—have appeared both in the Association Agreements concluded by CEECs with EFTA[13] and, moreover, within CEECs. Trade concessions envisaged in the CEFTA agreement are considerably lower than those granted in the Association Agreements, cover a shorter time horizon and exclude agriculture and food products (see OECD 1993a, 1993b). Anti-dumping provisions have been invoked by member countries in their own internal trade. Moreover CEFTA is not open to other CEECs. Increasingly agriculture is being protected against intra-CEFTA and extra-CEFTA imports.

These circumstances make the trade concessions granted in the Association Agreements look fairly generous after all. The case for more generous concessions rests on other considerations. First, the inflexibility

[13] The EFTA Association Agreements with CEECs are similar to the Europe agreements, involving: asymmetrically phased reductions of tariff and non tariff barriers, temporary safeguard intervention; they concern only industrial and processed agricultural products, with agricultural raw materials being subject to bilateral negotiations. Most EFTA countries have higher barriers to agricultural trade, involving quotas, extra charges and measures that require the importer to buy the same quantity on the domestic market.

of quotas based on trade levels and patterns associated with an entirely different international division of labour, relative prices for products and factors, exchange rate regimes. Second, the turnaround of EC trade into surplus with each of its Associates since 1992 and the closing or reversal of the trade deficit in some of the sensitive sectors including agriculture (see Table 21.6 on the development of EC-CEEC trade flows and balances for the main product groups, and Table 21.7 for a breakdown by country and by product of 1992 trade). Third, the acceptance in 1993 of the principle of the Associates' eventual accession to EC membership (see below, Sect. 21.9).

**Table 21.6** Development of EC trade with five CEECs by most important product group

| Sections of common | | 1989 | 1992 | Change | 1992 | Share | |
|---|---|---|---|---|---|---|---|
| custom tariff | | | | | % | in X, M, | % |
| I–IV agricultural | X | 1234 | 2020 | +64 | 9 | | |
| products incl. | M | 2108 | 2321 | +10 | 12 | | |
| processed products | B | -874 | -301 | | | | |
| V mineral products | X | 131 | 764 | +483 | 4 | | |
| | | | M | 1827 | 1154 | -27 | 6 |
| | | | B | -1696 | -390 | | |
| VI chemical products | X | 1497 | 2098 | +40 | 10 | | |
| | | | M | 742 | 1086 | +46 | 6 |
| | | | B | 755 | 1012 | | |
| XI textiles | X | 1102 | 2378 | +216 | 11 | | |
| | | | M | 1532 | 3127 | +204 | 17 |
| | | | B | -430 | -749 | | |
| XV base metals | X | 807 | 1180 | +46 | 6 | | |
| and articles | | M | 1732 | 3049 | +76 | 16 | |
| | | | B | -925 | -1869 | | |
| XVI machinery | | X | 3416 | 6158 | +80 | 29 | |
| and electrical | | M | 943 | 1957 | +107 | 10 | |
| equipment | | | B | 2473 | 4201 | | |
| XVII transport | | X | 624 | 2425 | +289 | 11 | |
| equipment | | | M | 417 | 1093 | +162 | 6 |
| | | | B | 207 | 1332 | | |
| All sectors | | X | 11,482 | 21,439 | +87 | 100 | |
| | | | M | 12,081 | 18,898 | +56 | 100 |
| | | | B | -599 | 2541 | | |

X = EC exports, M = EC imports, B = EC trade balance
*Source*: Eurostat

**Table 21.7** EC trade flows and balance with 5 CEEC countries by most important product group, 1992, Million ECU

| Section of common tariff | | 5CEECs | POL | CSFR | HUN | ROM | BUL |
|---|---|---|---|---|---|---|---|
| I–IV agricultural | X | 2020 | 923 | 417 | 228 | 325 | 124 |
| products including | M | 2321 | 951 | 276 | 830 | 77 | 183 |
| processed products | B | −301 | −28 | 141 | −602 | 248 | −59 |
| V mineral products | X | 764 | 499 | 110 | 28 | 70 | 58 |
| | M | 1154 | 674 | 353 | 70 | 43 | 12 |
| | B | −390 | −175 | −243 | −42 | −26 | 46 |
| VI chemical | X | 2098 | 890 | 516 | 455 | 124 | 113 |
| products | M | 1086 | 398 | 341 | 221 | 57 | 69 |
| | B | 1012 | 492 | 175 | 234 | 67 | 44 |
| IX textiles | X | 2378 | 943 | 421 | 554 | 324 | 136 |
| | M | 3127 | 1113 | 665 | 657 | 494 | 198 |
| | B | −749 | −170 | −244 | −104 | −170 | −62 |
| XV base metals | X | 1180 | 453 | 382 | 235 | 72 | 37 |
| and articles | M | 3049 | 1339 | 1012 | 413 | 150 | 136 |
| | B | −1869 | −886 | −630 | −178 | −78 | −99 |
| XVI machinery and | X | 6158 | 2064 | 2381 | 1091 | 402 | 220 |
| electrical | M | 1957 | 483 | 645 | 655 | 84 | 89 |
| equipment | B | 4201 | 1581 | 1736 | 436 | 318 | 131 |
| XVII transport | X | 2425 | 721 | 759 | 490 | 238 | 217 |
| equipment | M | 1093 | 405 | 518 | 129 | 34 | 8 |
| | B | 1332 | 316 | 241 | 361 | 204 | 209 |
| XX miscellaneous | X | 539 | 183 | 163 | 144 | 28 | 21 |
| manufactured | M | 1133 | 419 | 300 | 162 | 231 | 22 |
| articles | B | −594 | −236 | −137 | −18 | −203 | −1 |
| All sectors | X | 21,439 | 8148 | 6263 | 4060 | 1854 | 1112 |
| | M | 18,898 | 7077 | 5535 | 3986 | 1402 | 897 |
| | B | 2541 | 1071 | 728 | 74 | 452 | 215 |

*Source*: Eurostat

## 21.7 Labour Migrations

In the early days of transition there was a strong concern for the possibility of large scale migrations from transitional countries to the European Community. Migrations have taken place, especially from areas characterised by ethnic strife and armed conflict, but the scale has been manageable so far.

A more sober view emerged that even current income differentials—being no greater than earlier North-South intra-Community differentials—are unlikely to generate flows in excess of 5% of CEEC population

over twenty years; though "labour mobility should not be introduced now" for fear that this would scare EC politicians into slowing down integration (CEPR 1992b). Baldwin (1994), on the basis of a three-to-one income differential deemed to be equivalent to that prevailing in the Community during the 1970s and 1980s, estimates cumulative migrations of the order of 5–10 per cent of present CEEC populations. Layard et al. (1992) estimate an even smaller "desired" migration over fifteen years of about 13 mn people (3 mn Germans, 4 mn non-Soviet Eastern Europeans and 6 mn former Soviet-European citizens), corresponding to about 3 per cent of the populations of origin and to a yearly flow of roughly 0.3 per cent of the population of Western Europe. The cost of accommodating such migrations would be reduced by the rejuvenating effect on an ageing West European population (Layard et al. 1992, and Baldwin 1994). However, current income differentials are certainly being grossly underestimated by Baldwin; in any case, even the same range of regional differentials experienced in the past for North-South wage levels might lead to much faster East-West flows, given the sudden opening of migration opportunities, with respect to a much more gradual process occurred in North-South migrations. Moreover, renewed concern at the scale of potential migratory pressure on Europe's eastern borders seems well justified by the emergence of mass unemployment in the CEECs (not yet emerged but probably soon to emerge in the former Soviet Union), given the initial large scale recession and the slow pace of recovery even in those CEECs where growth has resumed (Poland 1992, Romania 1993) or is now resuming (Czech Republic 1994, Hungary 1994). Mass unemployment is the only parameter which has rapidly converged in the European Community and in the CEECs to a common rate around 12 per cent at the end of 1993 (moreover with similar national peaks of 17–18 per cent, similar distribution across countries and regional concentration). Such migratory pressures are likely to continue in view of GDP growth—if any—still below the combined growth of labour productivity and labour force, partly due to the relatively disappointing creation of new jobs through direct foreign investment. Hence the desirability of additional trade opening in order to allow additional employment creation in the countries of origin rather than in Western Europe after substantial migrations.

## 21.8 Direct Investment

Information on foreign direct investment (FDI) into CEECs is usually subject to considerable lags, inaccuracies and inconsistencies, mostly due to confusion between flows and cumulative totals, commitments and actual disbursements, cash and intangibles, acquisitions of financial assets and direct investment in productive activities, data about larger projects and balance of payments statistics. By and large the FDI flow to CEECs, already small and sluggish up to 1989, has increased since then but has remained small relative to world FDI, to FDI flows to developing countries and to local expectations and capital requirements. Only Hungary and the CSFR have experienced noticeable inflows from 1989 to 1991, but Hungarian inflows of about $1 bn a year in 1990–1991 should be compared with over $13 bn to Spain and over 2 bn to Portugal in 1990, and a worldwide grand total estimated at $196 bn in 1989 (Scott 1992). In 1992 Poland appears to have experienced a mini-boom in foreign investment: total joint ventures have doubled and the flow of investment has quadrupled, with further committed investments in the pipeline. According to the Agency for Foreign Investment in 1992 foreign direct investment in Poland was $1.1 bn of actual contributions and further commitments of $3 bn, bringing the cumulative totals respectively to $1.6 bn and $3.9 bn. According to balance of payments statistics foreign direct investment to the CEECs increased from $766 mn in 1990 to $2490 mn in 1991 and $ 3490 (of which $1 bn from Germany) in 1992; Hungary received over half the investment in the region in 1990 but the amount fell in 1992 and Hungary was overtaken by the Czech Republic in 1993; Poland comes third, probably reflecting a narrower coverage of balance of payment statistics.[14]

CEECs "needs" for FDI are usually estimated using catching—up models with a short time horizon and a large domestic savings gap, and therefore are vastly overestimated: for instance, Gerard Roland puts CEEC needs at $1000 bn over the next ten years. But even if such a

[14] I am grateful to Klaus Meyer of LBS who kindly supplied these balance of payments data.

figure was scaled down by a factor of five or ten, current flows would still be grossly inadequate.[15,16]

There is considerable competition among CEECs for foreign investment. This tends to be directed to relatively small, "toe in the water" investments, made in order to establish a presence in and a knowledge of regional markets, especially by companies based in Germany, Benelux and EFTA, and in sizeable amounts only in telecommunications and, to a smaller extent, chemicals. There is little evidence of current or potential diversion of FDI from the EC less developed regions to the CEECs.

There is a consensus that FDI volumes will remain small until 1995, and probably for longer for the former Soviet republics. The attraction of currently low dollar wages is reduced by the prospect of their rapid rise as real exchange rates consolidate and get closer to purchasing power parities, and partly offset by expectations of institutional and political instability. Other obstacles are the ambiguity of property right regimes and the need for prior recapitalisation of banks and enterprises. The Hungarian experience shows that formal current account convertibility is not a necessary precondition of FDI inflow: unrestricted capital repatriation, illegality of future expropriations, recourse to international arbitration, large and growing market or access to a neighbouring market, are all equally important determinants of FDI attraction.

## 21.9 Community Enlargement to the East

The Europe Agreements of 1991 and 1993 did not mention the possibility—let alone a set of conditions or a timetable—of eventual Community accession by the associating countries, other than as a non-committal record of this "final objective" on their (not the Community's) part.[16]

[15] Gros and Steinherr (1991) go to the opposite extreme, taking such an exceedingly optimistic view of the growth potential of CEECs even for unchanged capital stocks and of high domestic saving rates and low incremental capital output ratios, that they can relegate foreign investment to the still important but much less crucial role of assisting with the transfer of know how and new technology (pp. 29–33).

[16] In the Polish Europe Agreement, for instance, after lengthy negotiations the wording was agreed: "…recognising the fact that the final objective of Poland is to become a member of the Community and that this association, in the view of the Parties, will help to achieve this objective…".

Ex-post official interpretation of the Europe agreements attributed to them greater significance: if the process envisaged by the Europe agreements was completed within the ten year interim period, "the implementation of the Agreements should resemble accession—provided the obligations to European agriculture can be accepted" (Mr Pablo Benavides, Chief EC negotiator of the Europe Agreements, in CEPR 1992b).

A further move towards a reconsideration of CEEC accession came with the Edinburgh Council of 11-1 December 1992. A Commission report (CEC 1992b) reopened the question, recalling that general conditions for accession are established by the Treaties.

"At the appropriate time, political decisions will be needed which take into account the particular situation of each applicant as well as the following considerations:

- the capacity of the country concerned to assume the obligations of membership (the "acquis Communautaire");[17]
- the stability of institutions in the candidate country guaranteeing democracy, the rule of law, human rights and respect for minorities;
- the existence of a functioning market economy;
- the candidate's endorsement of the objective of political, economic and monetary union;
- its capacity to cope with competitive pressure and market forces within the European Union;
- the Community's capacity to absorb new members while maintaining the momentum of European integration".

The Commission report stressed that "It would be premature at this stage to establish a timetable" and envisaged a process of preparation through the operation of the Europe Agreements and a process of

[17] The "acquis communautaire" involves a long list of obligations, including among other things: free circulation of goods, services, capital and workers; the Common Commercial Policy, and the Common Agricultural Policy; agreements with Mediterranean neighbours, Latin American, Asia, and other third countries; the System of Generalised Preferences for developing countries and for other countries of the former Soviet Union, former Yugoslavia and Albania; the Lome' Conventions with African Caribbean and Pacific countries; competition policy; fiscal harmonisation.

transition "both before and after the formal act of accession"; thus the prospect of accession was put squarely on the table. The Edinburgh Council publicly endorsed this approach.[18]

The Copenhagen Summit of June 1993 spelled out in stronger terms the European Community commitment to eventual membership of those CEECs with which Association agreements had been or would soon be concluded.[19] This is a most important development which, however, is subject to a number of criticisms. First, the decision process was the reverse of what might have been expected and desired: instead of deciding general preconditions and then verifying whether they were satisfied by specific countries a decision was taken first about which countries to "associate" and then these were singled out for possible eventual accession. Second, the economic effectiveness of the announcement was diluted and virtually evaporated by the long delay: if at the beginning of 1990 the EC had declared the admissibility in principle of CEEC membership subject to precise preconditions this would have costlessly boosted support for reformers, business confidence and foreign investment, whereas by June 1993 these benefits were no longer available. Third, the June 1993 decision about eventual accession still failed to spell out precise preconditions or time schedule and was not matched by any change in the Agreements favouring more rapid integration—except for a six-months acceleration in the time schedule of agreed trade concessions.

The enlargement of the European Community (or rather, since 1 November 1993 following the ratification of the Maastricht Treaty, the European Union) to the East opens a number of important and thorny questions. What are the ultimate European frontiers to the East? What position in the queue of potential candidates for accession should be given to acceptable CEEC candidates? Should accession be negotiated bilaterally or multilaterally? Should EFTA play a special role during the

[18] The Conclusions of the Presidency of 12 December state that "The European Council welcomed the Commission's report … [called for] a wide ranging debate. The European Council in Copenhagen [June 1993] will reach decisions on the various components of the Commission's report in order to prepare the Associate countries for accession to the Union" [emphasis added].

[19] The Copenhagen Summit decided that the Associate members could join at an unspecified date in the future, subject to only broadly defined conditions such as: stability of pluralist democracy, rule of law, human rights and protection of minorities, a functioning market economy and the capacity to cope with competitive pressures within EC.

waiting period? Is there now a conflict between Community widening and deepening? Are the new central eastern members to accede as equal members or be part of a multitiers Community?

The background is the following. Over the last forty years the European Community has been deepening and widening at the same time. Deepening has proceeded from sectoral privileged trade arrangements (ECSC, Paris 1952; Euratom, Rome 1958) to a Customs Union (EEC, Rome 1958), an economic union (the Single Act of February 1986, effective from 1 July 1987; completed with the Single Market on 1-1-93; see Noel 1988), moving through the ERM towards monetary unification. This has had a setback in the autumn of 1992, but six or seven Member States can still be considered as broadly mature for the move, and monetary unification is still officially scheduled for 1-1-99 at the latest, if the Maastricht Treaty is going to be implemented. The Treaty envisages also a Common Foreign and Security Policy, and cooperation in the fields of justice and home affairs. Last comes the prospect of eventual political unification ("la finalitè politique").

Widening has extended membership from the 6 founding members (the Benelux countries, France, Federal Germany, Italy) to include the UK, Ireland and Denmark on 1-1-1973, Greece on 1-1-1981 and Spain and Portugal on 1-1-1986, and the ex-GDR through German reunification in October 1990 (see Sect. 21.1 above). Turkey's application (1987) was turned down in 1989 due to temporary factors but the question of its membership is bound to be reopened. In mid-1990 negotiations between EC and EFTA began to forestall a flood of new members. On 13 October 1991 President Delors, who until recently considered enlargement as a sequel to political and economic union, in an interview to Der Spiegel called on the European Community to prepare for an expansion from 12 members to 24, or even 30. He also said the EC must turn itself into a "political superpower" with a new treaty on political union, i.e. he pressed for both deepening and widening. Work on a structure comprising 24 or 30 countries—he declared in an interview to Belvedere on the same day—should start immediately after the forthcoming Maastricht summit. On 23 October 1991 the EC and the seven EFTA states[20] concluded an agreement for the formation of a single vast

[20] Austria, Finland, Iceland, Norway, Liechtenstein, Sweden and Switzerland.

European Economic Area of 380 million people, stretching from Iceland to Greece. Austria, Sweden, Finland and Norway are now poised to join the European Union from 1-1-1995. Malta and Cyprus have also applied and are under consideration.

The first membership application from an Associate country is expected from Hungary in mid-1994, speeded up by impending political elections, with a view to obtain membership before the year 2000; the Czech Republic and Poland are also expected to apply formally in the near future, although a statement by the Polish Foreign Minister Andrzej Olechowski at the beginning of March 1994 indicated the new realisation that a Polish early accession is precluded by the cost of both CAP in its present form and of regional support under structural funds (see below).

## 21.10 The Eastern Border of Europe

Article 237 of the Treaty of Rome states that "Any European state may apply to join the Community". The enlargement decision must be unanimous and remains at the absolute discretion of present Member States. It may be argued, however, that the spirit of the EC is not meant to be that of a club whose members may arbitrarily decide whether a prospective member is clubbable, or can individually blackball a new member. Presumably any European state that satisfies a set of general conditions satisfied by existing members can legitimately expect to be accepted and welcomed.

Strictly speaking, nothing would prevent a candidate judged not to be European from applying and being accepted if this was regarded as mutually advantageous; but non-European candidates cannot aspire to membership as of right. Morocco applied in 1988 and was turned down precisely on the grounds of not being European; the fact that geographers place part of Turkey in Asia may have had something to do with its failure to gain accession to date. The question of where to draw the eastern borders of Europe thus becomes important.

There can be no question of a "Common European Home" stretching as far as Vladivostock, which incidentally is where Mikhail Gorbachev first coined the expression. Yet alternative definitions of Europe have

been discussed, along cultural, religious or historical lines.[21] At one extreme, Metternich saw Asia beginning on the Landstrasse, by which one leaves Vienna for the East.[22] At the other extreme, Kenneth Arrow considers as Europe "the entire part of the world derived from the European people and culture, including therefore the bulk of the Soviet Union, the USA, and much of the rest of the Americas" (Arrow 1991, p. 377).

For the time being the question of acceptable candidates for accession has been already resolved by the Community by including all those covered by Europe agreements, thus implicitly excluding those covered by trade and cooperation agreements or partnerships agreements. Presumably their possible move to the group of potential candidates—perhaps next for the Baltic states—will be signalled by the conclusion of a Europe agreement. For CIS members no more is envisaged than "a long term commitment to bring our peoples closer together over the next generation" (Conclusions of the Presidency, Edinburgh 12 December 1992; compare with footnote 20).

## 21.11 The Accession Queue

Undoubtedly, all EFTA candidates will be first to join: they all concluded Free Trade Agreements since 1972–1973 with the European Community and developed a network of bilateral closer links since then; the concept of a European Economic Area dates from the 1984 Luxembourg

[21] See for instance Wallace (1991). Cultural criteria, appealing to a common heritage of the Renaissance, the Reformation and the French Revolution might have excluded some of the countries which are already members (Wallace 1991). Historically the Balkans could be regarded as less closely associated with Europe (i.e. Romania, Bulgaria, Yugoslavia except for Slovenia and Croatia). Appeal to a common Christian tradition would include the Baltics and the northern republics of Yugoslavia but would exclude Greece and the rest of the Balkans (ibidem). But can Israel be regarded as less "European" than, say, Croatia or Lithuania? As Jacques Attali forcefully put it, "The Europe of today can no longer consider itself a Christian Club—the Europe of today must include all religions" (1992, p. 3). Presumably the Community should avoid involvement with fundamentalist fanaticism of any religion, rather than reject, say, a Muslim candidate as such; other criteria could be used for screening, for instance excluding an excessively fundamentalist candidate on the grounds that it could not be regarded to be at peace with the rest of the world and could be a security threat.

[22] Quoted by Wallace (1991).

Declaration, and has already been implemented following the Porto Agreement of May 1992, leading to the extension to them of most of the rules and principles of the Single Market, accelerating accession. Austria applied to join the three Communities (ECSC, EEC and Euratom) in July 1989, Sweden in July 1991 and Finland in March 1992. Following the Commission's positive evaluation, the applications of Austria and Sweden were welcomed by the Council in October 1992 and that of Finland in November 1992; the Edinburgh European Council agreed on enlargement negotiations starting early in 1993; Norway applied later but joined the same batch, now scheduled for accession on 1-1-1995. Malta and Cyprus have also applied and are under consideration; they are unlikely to jump the existing queue. Turkey remains in a limbo, its future position as well as accession itself being uncertain.

The four Visegrad countries are next in the queue, with Slovakia lagging behind: one of the reasons behind Czech prompt support for the split must have been, in spite of Premier Vaclav Klaus' declared misgivings about the etatist nature of the European Community,[23] precisely the purpose to accelerate Czech accession, on the grounds of smaller size and lower agricultural challenge. These countries had a head start on the others: Hungary because of its early and gradual progress towards reform, the development of markets and the move to a private market economy without a traumatic stabilisation; the Czech republic because of CSFR internal and external balance, speedy privatisation and record growth of trade with the Community; Poland because of its pioneering programme, fast progress and earlier signs of recovery. All three have resumed growth and have undertaken a multilateral political dialogue with the Community (starting with the October 1992 joint summit). Their Association Agreements have been ratified. The Slovak declared intention to use the newly acquired independence to slow down privatisation, stabilisation and restructuring must place it now somewhat behind the other three.

Romania and Bulgaria have greater "distance" to cover, with respect to the conditions laid out by the Commission Report (1992), and the

[23] In an interview to the Mlada Fronta Dnes daily of 29 August 1992 Mr. Klaus declared that the Czech government is a conservative one and would not like a return to state interventions through the EC.

delayed conclusion of a Europe Agreement (October 1993) conveys a measure of such a distance. Bulgaria, like Slovakia, is handicapped by the burden of restructuring heavy industry overcapacity, by gradual stabilisation and slow progress with privatisation and structural change. Romania is probably last, as in addition it is also characterised by less developed markets, poor infrastructure, and is the only country with the group to register a decline in trade with the Community.

## 21.12 Multilateral Versus Bilateral Negotiations

In his spirited intervention in favour of a Global European Initiative and a Continental Common Market, Jacques Attali (1992) advocated a multilateral approach to enlargement, including Russia—"to stop the very real threat of tribalism and the collapse of the market economy" (1992, p. 6). A global approach limited to the CEECs has also been advocated by Richard Baldwin (1994), in place of the "hub-and-spoke" bilateralism of the Europe Agreements (seen as the spokes linking individual countries to the West European hub). To start with, Baldwin's approach would lead to an "Association of Association Agreements", bringing the more advanced CEECs into the EC-EFTA duty-free zone for industrial goods; later, pending eventual accession, the CEECs would join the European Economic Area (initially without free migrations), to be supervised by a new Organisation for European Integration: gradually the two outer concentric circles would deepen to the same degree of integration of the inner circle.

It is true that, before 1989, the Community adamantly followed the principle of bilateral relations and agreements with CMEA countries, instead of dealing with CMEA (with which formal and very limited relations were established only in June 1988 with the Luxembourg declaration), on the grounds that CMEA was not a supranational entity capable of enforcing the implementation of treaties by its members, and primarily in order to bypass the Soviet Union and neutralise its dominant position within CMEA (see Nuti 1988; Schneider 1991). With the dissolution of CMEA (September 1991) and of the Soviet Union (December 1991) this rationale for bilateral negotiations and treaties disappeared.

However, the diversity and growing divergence among CEECs and former Soviet republics continues to provide a perfectly good rationale for bilateral agreements. Moreover, even if a Global Treaty was multilaterally negotiated with the participation of, say, the Baltic States and Russia, their individual ability to be full members of such a community would not be brought forward at all. Today Russia, for instance, is in the grips of hyperinflation and a large scale recession, with restructuring visibly delayed by the artificial maintenance of employment; it is involved in the badly executed economic and monetary disintegration of the former Soviet Union, and is subject to internal centrifugal forces, with a major constitutional crisis in spite of the September 1993 "democratic" coup, a new constitution and the December 1994 elections; its budget deficit is out of control and it has had great difficulties in obtaining IMF endorsement and loans; capital flight is taking place at the rate of $1-2 bn per month. In such circumstances Russian involvement in negotiating multilaterally the terms of a global common market would be a time-wasting, delusory diversion.

The same thing can be said of other former Soviet republics. The Baltic states have made modest progress towards reform, stabilisation and privatisation, but their institution-building lags behind that of even the weaker CEECs, and they are suffering from the large scale shock of republican trade disintegration. There are armed conflicts in Armenia, Azerbaijan, Georgia, Moldova and Tajikistan; throughout the area we witness monetary disintegration, aborted or failed stabilisation programmes, constitutional crisis. In ex-Yugoslavia there is the most brutal civil war, which has destroyed the 1990 stabilisation effort and dominates over reform efforts—except for Slovenia (more industrialised, has instituted trade and currency liberalisation, banking deregulation, but has made slow progress with privatisation), while Croatia has not yet reformed its self-managed enterprises and is not internationally competitive. Recession, fiscal crisis, mounting inter-enterprise debts and still high inflation afflict the whole area.

Attali recognised that "Variable speeds might well be needed for certain groups of countries needing more protection than others" (1992, p. *7);* but the question is not simply one of speed, but of entry level, i.e. of zero speed for candidates not yet ready to join and therefore only

capable of being nominal members. A bilateral approach, on the contrary, might maximise the size of an "operational" as opposed to a purely nominal community: at any rate, the alleged superiority of a multilateral approach remains to be demonstrated. Moreover, for the Associate countries it is hard to see what multilateral negotiations could achieve that could not be equally achieved if the Community were to make "the Association Councils fully multilateral from the outset" (as recommended by Portes 1992).

Most of the postulated advantages of a global approach are illusory: inconsistent rules of origin could be improved within the existing framework; CEEC bargaining strength would remain low vis-à-vis the European Union regardless of a global or multilateral approach; simultaneous membership is not an implication of a global approach (see the staggered accession of EFTA countries in spite of EC-EFTA global agreement for the formation of European Economic Area). There is nothing to stop the construction of Baldwin's "concentric circles" through bilateral agreements.

Ultimately, the only advantage of a global approach could be the possibility of promoting greater cooperation among the CEECs themselves than they seem willing to voluntarily endorse in their own trade arrangements, exemplified for instance by the CEFTA treaty (see above, Sect. 21.6). In any case, when the Association Agreements were being negotiated there was a marked disinclination—to say the least—of CEECs to cooperate among themselves for fear of replicating CMEA or reducing the chances of individual early accession. By 1994 those fears have been reduced, but it is questionable whether the Community should push these countries to follow commercial policies among themselves other than specifically requested by the prospect of their accession.

## 21.13 An EFTA Enlargement to the East?

It has been suggested (Baldwin 1992) that, pending the question of CEECs accession to the EC—which "The CEECs will not achieve … for at least two decades"—the European Free Trade Association should be enlarged to include them. This would avoid their individual

"marginalisation" and put them on a shortcut to accession by promoting their growth and "providing them with track records on European integration". The EFTAn countries would benefit from entering a rapidly growing market, and EFTAn governments could encourage their voters to approve their own EC accession through fear that "expanding the Association eastward would lead eventually to a CEEC-dominated EFTA". However, the conclusion of CEEC-EFTA agreements similar to the Association Agreements (see above), the prospect of early EC accession by most EFTA countries, and the implementation of the CEEC-EC free trade area within ten years must considerably reduce the benefits obtainable by both parties from this operation. In any case, this "would constitute a move towards EC membership, not an alternative" (Baldwin 1992, p. 6).

## 21.14 Enlargement Versus Deepening

The past experience of the Community is one of simultaneous widening and deepening, with new members joining as equals after short transitory arrangements. As we have seen above (Sect. 21.1), the connection between enlargement to the ex-GDR and disruption of the ERM is not per se evidence that such a simultaneous development is undesirable. The cost of German re-unification however, exemplifies how the cost of enlargement before convergence for a "deep" degree of integration can be very large, thus generating a conflict between widening and deepening if that cost—unlike the German case—is deemed unacceptable. In the case of Community enlargement to the east, such a cost is not justified by the perception of a sudden, temporary and irrepeatable opportunity, as it was in the German case.

Concern about Community "cohesion", especially after the accession of lower income per head countries and regions, led to the establishment and growth of structural funds, now accounting for 26 per cent of the Union's budget. But prospective CEEC candidates for accession today are incommensurably more "distant" from present members, with respect to, say, Portugal and Greece relative to Community members at the time of their accession. Moreover, the Community has very greatly "deepened"

in the meantime. Thus—if the high costs of early accession are to be avoided—their accession timing depends very strictly on whether they are joining preferential trade arrangements, or a Customs Union, an Economic Union, a Monetary Union or something even more ambitious.

For full membership at the present level of Community integration, the conditions listed by the European Commission report (1992; see Sect. 21.9 above) must include the achievement of income per head levels comparable at least to those of the poorest regions of the Community which at the time of new members' accession still draw subsidies from Structural Funds.[24] Otherwise, the CEECs would be "prohibitively expensive entrants" (CEPR 1992b): at an income level of the order of two/thirds that of Portugal today, under structural funds alone the Visegrad Four would be entitled to annual transfers from current members of 8 bn ECU, with a further 5 bn to Bulgaria and Romania; total transfers would be about twice as much, and according to European Commission estimates would double by 1999.[25] Baldwin (1994) estimates that if the CEECs had joined the European Community in 1991 their cost for structural funds and CAP would have raised Community expenditure by 20 per cent or lowered by the same amount Community supports for agriculture and the poorer regions (which account for almost 85 per cent of Community budget; it would take on average twenty years for CEEC membership to become budget-neutral). Current financial assistance by the European Community is nowhere near this mark (see above, Sect. 21.2). Support for the poorer regions would be probably enhanced by the greater voting power that these would command after enlargement (see Baldwin 1994 for a detailed analysis of the new voting patterns that would emerge after enlargement). "Since the EC will certainly not reduce its commitment to cohesion, the CEECs must stabilise their economies, rationalise their institutions and achieve decades of above-average economic growth before they can realistically consider full accession" (CEPR 1992b). In addition, until CAP is drastically reformed,

[24] This condition is given by Portes (1992, p. 21).

[25] EFTA countries, on the contrary, would make a total net contribution of some 5 bn ECUs to Community structural and regional funds; the enlargement to the "South" was much less costly because the countries involved were closer to the Community average and the poorest countries were much smaller; see CEPR (1992b).

there is the budgetary cost of CAP support (see above, Sect. 21.8). As Baldwin (1992) puts it, "Plainly, a coalition of poor EC states and EC farmers will veto CEEC membership until the CEEC get much richer, or the EC North gets much more generous. The latter is unlikely, the former will take decades" (p. vi).

## 21.15 Equal Membership Versus a Multi-Tiers Community

The alternative to decades of waiting is unequal membership, both in the degree of integration of each new entrant economy, and in the degree of income support and price support involved in Structural Funds and—until its substantial reform is agreed and implemented—CAP.

This discrimination may be regarded as unpleasant and invidious, and could well be rejected on political grounds. However, a non-discriminatory approach towards new members is only justified if accompanied by wide accession; certainly inequality among members would be preferable to unequal exclusion from membership for the sake of equality. The economic theory of unequal partnerships confirms that they are more efficient and less restrictive of membership than equalitarian ones (see for instance Meade 1986).

A multi-tiers membership is different from a Community à la carte, since there would still be a generally agreed ultimate target and a clearly defined path for closer ties. Different tiers do not necessarily imply a multi-speed Community in the sense of new entrants proceeding more slowly: progress towards further integration could be left to the new members' discretion. Indeed the new members may move faster towards the ultimate goal of full economic and political integration than those members who are already closer to that target.

A multi-tier membership is already in existence within the group of existing members, which is much more homogeneous than an enlarged group. Instances are:

- the Exchange Rate Mechanism, which has members and shadow/members, within wider or narrower bands of variation, as well as non members, with precipitous changes occurring in this membership structure;
- most probably EMU, with at least five EC members being far from fulfilling the Maastricht criteria for fiscal and monetary convergence[26];
- the Western European Union (WEU), a security grouping founded in 1954; although not a Community organ, it includes nine out of the twelve EC members (excluding Denmark, Greece and Ireland), who are also members of NATO, splitting them into two groups with different rights and obligations. Within the WEU, Germany and France have proposed to set up a European army, starting with some of their own troops, which would reach full strength through gradual increases (possibly shifted from NATO) provided by all WEU members; this would create for some time an inner core within the group.
- the Schengen Group, initially including the six original founders of the Community (France, Germany, Italy, Benelux) then enlarged but still excluding Great Britain, lowering internal border controls and barriers. Benelux has always linked its members with closer ties than with the rest of the Community, i.e. forming a tier of its own.

A multi-tiers membership for CEEC members has some support already. Richard Portes (1992) argues: "Surely we cannot expect them to meet the conditions that at least one of the existing members does not meet…". Uvalic et al. recommend "concentric circles", i.e. "a multi-tier framework in which different levels of development of member countries are accommodated … The discriminatory treatment that would imply may still be better than exclusion" (Uvalic et al. 1993a). A multi-tiers Community is the most attractive feature of the Attali package described above, which could be implemented also for a less ambitious project than the Global Common Market. Unequal treatment of members for specific provisions such as CAP and Structural Funds is more problematic,

[26] These criteria involve a public debt not exceeding 60% of GDP, other than temporarily if falling; a public sector deficit not exceeding 3% of GDP; inflation rates differentials not exceeding 1.5% and interest rates differentials not exceeding 2% over the respective rates of the three Member States characterised by the lowest inflation; two years ERM membership without devaluations.

though it could perhaps be accommodated by fairly long transitional arrangements. A multi-tiers/concentric circles approach is now strongly advocated by Baldwin (1994).

Ultimately, a multi-tiers unequal membership seems the only solution to the conflict otherwise arising—barring inordinately large west-east transfers—between Community widening and deepening, if the waiting period is to be shorter than the "decades" otherwise envisaged for the CEECs.

## 21.16 Summary

The 1989 revolutions in central-eastern Europe, and the developments that followed the August 1991 failed putsch in the former Soviet Union, were totally unexpected. An immediate effect on the European Community was through German unification, involving instant enlargement and initially lifting European growth but—due to the combination of deficit finance and Bundesbank monetary restraint—raising interest rates with ensuing deflationary effects throughout Europe and ERM disruption. In the other countries the European Community reacted fast, through: (1) emergency humanitarian aid, other grants, balance of payment support, loans, guarantees, technical assistance; (2) improved market access through the Association or "Europe" Agreements of 1991 with Poland, Hungary, CSFR (subsequently renegotiated following the Czech and Slovak split) and 1993 with Romania and Bulgaria, and through less substantial agreements with Albania, the Baltic republics and a number of CIS states; (3) since the Copenhagen Summit of June 1993, preparations for eventual accession—at an unspecified date once preconditions yet to be spelled out are met—by the countries covered by "Europe" agreements.

Trade diversion and creation has led to fast growth of trade with the European Community (except for Romania), in spite of market access being still limited in "sensitive" sectors (agriculture, metallurgy, textiles; chemicals). The impact on the European Community has been relatively small because of the low initial share of its trade with these countries, and their protracted recession; medium and longer term potential trade

growth is large. Foreign direct investment has been disappointing to date, while labour migrations have been manageable but are poised to rise.

Current obstacles to greater integration are: high-cost over-capacity in similar sectors; the Common Agricultural Policy, though currently under review; and the threat of temporary dumping on the part of economies which, in spite of reforms, are still characterised by forms of state aid (through implicit and explicit subsidies and privileged credit). In view of these objective obstacles, and of the far less generous trade concessions granted to CEECs by EFTA and within CEFTA, the experience of Europe Agreements to date is positively assessed. However renewed and justified pressure for improved trade access derives from the inflexibility of quotas in the new market environment, from the EC now running a trade surplus with each of its CEEC trade partners, and by the commitment to their eventual accession.

The paper discusses the questions of the European frontier to the east, the queue position of candidates for accession, the question of multilateral or bilateral negotiated accession, the role of EFTA in the waiting period, the potential conflict between Community enlargement and deepening today. Given the income-per-capita gap between EC members and potential eastern entrants, it is argued that prospects for EC enlargement to the East depend crucially on the acceptability of a multi-tiers Community.

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# 22

# Symposium on *Exchange Rate Regimes in Transition Economies. The Euroization Debate*—Introduction

Domenico Mario Nuti

Ever since its inception in 1957 the European Union has been engaged in successive rounds of both widening—from six to fifteen members—and deepening, from sectoral co-operation to Customs Union, then to a Common Market and a deeper Single Market, then to a single currency, the euro. The current round of EU enlargement to the east, however, is very much different from the earlier four rounds. It is large scale, involving twelve prospective entrants (including Cyprus and Malta), adding one-third to the EU population and only about 5 per cent to EU income. The ten east European candidates are engaged in a profound, complex and unprecedented transformation from a Soviet-type system to a market

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economy; they are also undertaking a painful restructuring of their productive capacity. Convergence to EU standards—monetary/fiscal, real, and above all institutional—is slow and incomplete, and the enlargement process is both delayed and excruciatingly slow. Parallel monetary unification in the EU is also a slow motion and partial process, moreover out of sequence in that it precedes instead of follows political unification in Europe.

In these circumstances the question arises of whether candidates to EU accession might usefully speed up economic and monetary integration with the EU unilaterally, ahead of their assigned schedule, either by replacing their domestic currencies with the euro or by irrevocably fixing their exchange rate with respect to the euro through the operation of a Currency Board. Both forms of 'euroization' (with apologies for such a cacophonic neologism drawn by analogy with 'dollarization') were thoroughly discussed at a conference held on 16–17 March 2001 at the Centre for New and Emerging Markets of the London Business School, under the title 'When is a National Currency a Luxury?—Prospects for Transition Economies and Lessons from Experience'. It was organized and funded jointly with the Vienna Institute for International Economic Studies (WIIW) and with financial support from the ESRC, the Austrian National Bank and other sponsors. The provocative title was not meant to refer to the British pound; the focus of papers and discussions was on general issues of exchange rate policy and optimal currency areas, on lessons from the experiences of the many countries around the world that have adopted a foreign currency or a Currency Board, and on euroization prospects for central and eastern Europe regardless of their EU accession prospects.

We are grateful to *The Economics of Transition* for accepting a selection of conference papers for publication in this symposium.

Ronald McKinnon (Stanford) sets the frame and the pace in a keynote presentation on optimum currency areas, contrasting Bob Mundell's classic early definition of 1961 with a lesser-known contribution to that literature by Mundell (1973). The first regarded an optimum currency area (OCA) as a basically homogeneous and converging area, with synchronized cycles and symmetric response, flexible prices and factor mobility; the second on the contrary stresses the advantages of some diversity for

the sake of risk diversification within the area, off-setting supply-side shocks. While the first approach would lead to a rather pessimistic view of a common currency area extended to central eastern Europe, Mundell (1973) would seem to set far less strict criteria for justifying monetary unification—whether in the present EMU of 12 or an enlarged EU of 27 members.

Mundell (2001) seems to confirm—implicitly at least—this approach, or in any case to go beyond the original OCA propositions. He lists the factors necessary to create an 'important' currency area: large transaction domains; stable monetary policy; absence of controls; a 'fall-back' value i.e., what a currency would be worth in a crisis (depending on reserves); a strong central state. The euro satisfies all of these criteria except the last one, for which the NATO alliance is an imperfect substitute. He proposes a more stable exchange rate system between euro, dollar and yen, and the extension of the euro to central eastern Europe in order to obtain monetary stability: 'any convergence or movement towards a more stable monetary policy should be welcomed with open arms' (p. 16). 'Once the monetary policy is taken care of, the fiscal policy is solved as well, because the budget constraint will become a hard one' (p. 18). Euroization becomes 'not just the natural and fastest way to join, but also the best way for each of the countries to achieve a macroeconomic policy better than anything they had before' (p. 19). Had he been able to present these views at the conference—as we had hoped—he would have come up against many objections and qualifications from the audience.

Felipe Larrain (PUC and Harvard), for instance, in a paper written jointly with Andres Velasco gives a strong defence of floating exchange rate regimes. Revocable pegs were rightly discredited due to their inability to resist massive capital flow reversals, leaving the 'bipolar' alternative between hard pegs and floats. But irrevocable pegs can be risky and costly in terms of output contractions when terms of trade decline, or the peg currency appreciates. In the light of recent financial crises—they argue—many countries had no other choice other than deciding how to float. Inflation targeting plus monetary policy reaction to nominal exchange rate movements seem to them the most plausible option.

At the other extreme, Guillermo Calvo (IADB), advocates currency replacement, in the guise of Latin American dollarization, on the grounds

of the already significant dollarization of domestic liabilities, which renders devaluation all the more unattractive, and of the otherwise excessively high interest rate, which cuts off small and medium-sized enterprises from the international market, impeding competition and 'democratic growth'.

Fabrizio Coricelli (Siena, now at the European Commission in Brussels) characterizes EU accession candidates as running large current account deficits, due both to faster growth and to real exchange rate appreciation (an undoubted trend in all transition economies, although Coricelli probably overplays the Balassa-Samuelson effect, see Nuti's paper), thus leading to rising foreign debt. These factors expose countries to adverse effects of exchange rate swings, which are accompanied by high interest rate levels and spreads; countries that have enough reserves to afford it ought to go for an early, unilateral adoption of the euro.

Under a guise of impartiality, D. Mario Nuti takes a more skeptical view, especially for those who can read between the lines of his paper. Nuti stresses the considerable similarities and small differences between the three regimes: EMU membership, Currency Board linked to the euro and domestic currency replacement by the euro. Potential benefits include lower transaction costs, lower interest rates, lower exposure to speculative attacks. Costs include initial reserves, inadequate response to asymmetric shocks, loss of seigniorage, no lender of last resort. Nuti takes the view that both expected costs and benefits have probably been exaggerated. Net effects depend primarily on the degree of monetary, real, and institutional convergence. Positive net advantages will accrue to countries that are either already converging, or wish to use a single currency to speed up convergence—especially if small. Nuti sees no legal or economic justification for EU opposition to unilateral euroization in accession candidate countries.

Such opposition is also strongly criticized by Andrzej Bratkowski and Jacek Rostowski. They argue that the European Commission and the European Central Bank confused unilateral euroization and full membership of EMU. In any case nominal convergence conditions should be softened for accession candidates; preoccupation about unilateral euroization at an excessively undervalued rate neglects the subsequent inflation acceleration. The implicit limitation on euro convertibility that derives

from EC rejection of such policies is taken by them as evidence of the euro's immaturity as a global currency.

Anna Sulling (Tallinn) advocates a move from the Estonian Currency Board to formal and complete currency replacement, in order to secure lower and more stable interest rates, greater price transparency and the elimination of conversion and hedging costs. The only cost—she argues—is loss of seigniorage, which could be recovered by agreement with the ECB. Finally, Daniel Gros makes a strong case for full euroization of the Balkans (loosely defined), on two major grounds. First, the ensuing radical reform and opening of the financial system, involving the liberalization of credit allocation. Second, the avoidance of extremely large exchange rate adjustments required to absorb shocks in the interest rate payable on (high) external debt or in capital availability to emerging markets.

Had the conference taken place eight months later, Argentina's financial collapse of December 2001 and the end of its Currency Board regime of parity between the peso and the US dollar might have instilled more caution in the supporters of hyper-fixed regimes including euroization. Authors were invited to add a comment on the implications of Argentina's crisis for their arguments, but time constraints were tight and only a few authors were able to respond. Those who did drew different, often opposite lessons from Argentina's experience, the extremes being represented by Nuti and Gros. D. Mario Nuti saw there the confirmation of his contention that no hyper-fixed regime is irrevocable, that foreign currency cover of primary money may not be sufficient in a crisis, and that a cash shortage could develop, too large to be filled by foreign banks. Daniel Gros, on the contrary, saw in Argentina the danger of keeping two currencies and of a corresponding mis-match between assets and liabilities; a heavily indebted country which is partially dollarized, needing to re-establish external balance, may require such a large devaluation as to jeopardize its domestic financial system.

It is particularly difficult to summarize conclusions, given the complex and controversial nature of the issues at stake in the euroization debate. But there is perhaps a measure of agreement that small, open or opening countries, either converging like the Baltics or in bad condition like, say, Montenegro, could in principle make a success of an early unilateral

adoption of the euro; that EU aversion to such policy is unwarranted, and that any country that wished to adopt the euro should not be penalized in its negotiations for membership of EU and EMU.

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# 23

# Costs and Benefits of Unilateral Euroization in Central Eastern Europe

Domenico Mario Nuti

## 23.1 Introduction

For all the present candidates to EU accession—ten central eastern European countries[1] plus Cyprus and Malta—eventual membership of the European Monetary Union is part of the *acquis communautaire;* its

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[1] These are the so-called Luxembourg group comprising Hungary, Poland, Czech Republic, Slovenia, Estonia; plus the so-called Helsinki group, Slovakia, Latvia, Lithuania, Bulgaria and Romania; both groups being named after the summits that decided to open accession negotiations.



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acceptance is a precondition of membership. Soon after accession the new Member States would have to join the Exchange Rate Mechanism II (ERM-II)[2] for at least two years and achieve the Maastricht conditions for monetary and fiscal convergence in the year before their EMU membership is examined.[3] Once admitted by decision of the EU Council they will then replace their domestic currency with the euro at an irrevocably fixed exchange rate, confer the bulk of their reserves to the European Central Bank (ECB) and be represented in the ECB Governing Council[4]; they will also be bound by the so-called 'growth and stability' pact. There is no *derogation*, or opt-out clause, as in the case of Great Britain or Denmark; the only way to stay out is the persistent failure to satisfy at least one of the Maastricht conditions for EMU membership, though not—like Sweden—failure to join ERM-II.

For accession candidates and, *a fortiori*, for those countries that at least for the time being are excluded from the EU, the problem is not how to stay out of EMU but on the contrary how to reap, sooner rather than later, the net benefits expected of a monetary integration which otherwise is either delayed, at best until around 2008, or denied. Greater economic integration in trade and investment, as well as greater macroeconomic stability and lower interest rates, are perceived to outweigh the costs of the single currency, such as the loss of autonomous monetary policy.

[2] The ERM to which the Maastricht Treaty refers was replaced from the beginning of 1999 by ERM-II, including additional criteria such as the development of market integration, current-account balance, monitoring of unit labour costs and other price indices.

[3] In addition to two year ERM-II membership: (1) an average rate of inflation over a period of one year before the examination, not exceeding the average of the three best performing member states by more than 1.5 percentage points; (2) an average nominal long-term interest rate on government bonds, also over a period of one year before the examination, not exceeding by more than two percentage points the average of the three best performing member states in terms of price stability; (3) a government deficit of at most 3 per cent of GDP and (4) a government debt of at most 60 per cent of GDP—unless the ratio for both deficit and/or debt is close to the reference values and either has already declined substantially or exceeds the reference value only temporarily.

[4] Probably new rules will have to limit the size of the ECB Governing Council through a rota or a constituency system, so as not to make it too unwieldy.

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Such benefits are well understood in countries that in the 1990s have witnessed and suffered the large scale recession brought about to a very great extent by monetary *dis*-integration—of the rouble area, of Comecon, of the Czecho-Slovak and of the Yugoslav federal republics.

The effects of *negotiated and agreed* membership of a single-currency monetary union—say the dollar, or the euro—can be approximated by *unilateral* dollarization or euroization, understood as a commitment to a so-called 'hyper-fixed' exchange rate regime, which takes one of two forms: (1) official and total currency replacement; or (2) a currency board regime.

1. Dollarization (euroization) in a *strict* sense is the *official and total replacement of the domestic currency by the dollar (euro)*. This is to be distinguished from *informal* and *partial* replacement, which is voluntary and amounts to a flexible exchange rate regime. Sometimes this informal currency substitution is regarded as a reverse Gresham's Law, good money chasing bad money away instead of the other way round, but this is not correct. Gresham's Law applies to disequilibrium fixed rates between alternative legal tenders, with preference accorded by debtors to payments in the weaker and overvalued currency; whereas with informal dollarization both currencies are good, each better than the other in performing specific functions, their relative advantages defining a flexible exchange rate between the two, not prefixed by law but determined by economic agents.[5]

   Of course, the more an economy is dollarized informally, the closer it will come to a formally dollarized economy, without ever getting there, for those prices which are usually expressed in domestic currency—notably wages—are never instantaneously and fully indexed to the dollar exchange rate. For a long time the Deutschmark (and therefore the euro, from 1 January 1999 for non-cash transactions, from 1 January 2002 also for cash) has been used extensively in central eastern Europe and the Former Soviet Union (FSU), next to and often

[5] In Soviet-type systems in the old days foreign currency was used, even when it was illegal, because of domestic currency debasement by actual and repressed inflation, and because of its greater liquidity and safety after the transition, mostly because of continued inflationary expectations much higher than in foreign exchange prices.

in preference to the US dollar, as a unit of account, store of value and means of payment together with the domestic currency. This kind of informal, partial 'dollarization' is common also in other countries especially in Latin America, where it has been the object of extensive research (see Calvo 2002; IMF 1999; US Senate JEC 1999; Berg and Borenszstein 2000). The Federal Reserve estimates that in 1998 40–60 percent of US dollar notes and coins, corresponding to US$192–288 billion, circulated abroad (Feige et al. 2000). The DM was used widely outside Germany especially in central eastern Europe. In 1995 the German Bundesbank estimated that about 30–40 percent of all DM notes and coins in circulation were held abroad (Seitz 1995). Since then, at least in a sample of five transition economies (Croatia, Hungary, Slovenia, Czech Republic and Slovakia), there appears to have been (1) a decline in both DM and US$ holdings and (2) a switch from DM to US$ (Stix 2001), probably in the attempt to avoid the fiscal and penal consequences of foreign exchange holdings surfacing into the open in the conversion from DM to euro after January 2002.

2. Dollarization (euroization) in a broad sense is a currency board issuing domestic currency only in exchange for convertible currencies at a permanently fixed rate with respect to the reference currency. When this arrangement is introduced the pre-existing currency may be kept or replaced, as long as it is covered by foreign reserves at the same rate. For the sake of convenience and of psychological impact the domestic currency—whatever it is called—could also be re-denominated so as to make its unit equivalent to a unit of the reference currency, say the euro (like Argentina's peso parity *vis-à-vis* the US dollar, established in 1991 and ended in January 2002).

In this paper the terms dollarization/euroization will be used to designate *both* currency replacement and currency board regimes, except when dealing with their differences when the two will be specifically indicated. These two regimes are very similar between themselves and to a monetary union.

A monetary union is currency replacement plus participation in the management of the adopted currency, pooling reserves and sharing

automatically in seigniorage directly or indirectly, as well as engaging in economic policy coordination and supervision.

A currency board can switch to currency replacement at any time, at the costs of losing a sovereignty symbol and interest on the reserves used to withdraw the national currency from circulation, and the benefits of reducing further any residual risk premium on its exchange rate and of not having to manage the currency. Costs and benefits would be mirrored in a hypothetical, possible reverse move from use of a foreign currency to a currency board linked to it.

These differences and similarities are clearly little understood by both the ECB and the European Commission, when they accept the adoption of a currency board by accession candidates (e.g., Bulgaria) but reject currency replacement as if it involved the same rights as EMU membership (see below, Sect. 23.5).

In post-communist transition economies, currency boards have been established in Estonia (June 1992, 8 kroons =DM 1, i.e., EEK 15.6466=1 euro), Bosnia-Herzegovina (June 1997, with a convertible mark equal to 1 DM), Bulgaria (July 1997), all with a peg to the euro following that to the DM. Latvia pegged the Lat to the SDR, *de facto* in February 1997, formally in 1997, followed by a peg to the euro (Korhonen 1999, 2000). Lithuania in 1994 established a currency board originally pegged to the dollar (Korhonen 1996), then switched to the euro with effect from February 2002. Since the fall of Milosevic the Central Bank of Yugoslavia effectively has been mimicking the operation of a currency board linked to the DM. In Kosovo and Montenegro—though not fully sovereign states—the DM is legal tender. The move to domestic currency replacement by the euro has been seriously discussed not only in countries that already had a currency board linked to the euro, like Bulgaria and Estonia (see OECD 2000) but also in Poland (Bratkowski and Rostowski 2000), as well as more generally (Mundell 1999) and especially in Balkan countries (CEPS 1999; Gros 1999, 2002). Bratkowski and Rostowski (2000, 2002) recommend an early official replacement of the Polish zloty by the euro; strong reservations on these proposals have been expressed by Daviddi (1999).

This paper discusses the benefits (Sect. 23.2) and costs (Sect. 23.3) of these exchange rate regimes, in general and in connection with

convergence processes (Sect. 23.4); the EU and ECB policy *vis-à-vis* unilateral euroization (Sect. 23.5); and conclusions are summarized in Sect. 23.6.

## 23.2 Benefits from Unilateral Euroization

Benefits expected of dollarization/euroization include some that are rather dubious, such as greater exchange rate certainty and greater policy credibility, and others that are more tangible though probably overestimated, such as lower transaction costs, lower interest rates, greater macroeconomic stability and greater economic integration through both trade and investment. There are also costs to be considered (Sect. 23.3).

### 23.2.1 Greater Exchange Rate Certainty?

The strength of a currency board regime is that it is a fixed exchange rate *plus a monetary rule* that, *in normal conditions,* might just be sufficient to sustain it. But there is nothing to stop demand for foreign exchange from exceeding currency board reserves, which are only required to cover M0, precipitating a crisis and forcing a devaluation. In theory both currency replacement and Currency Boards involve a permanent, irreversible commitment to a fixed exchange rate; as Larrain and Velasco (2002) put it, 'One cannot easily devalue a currency that does not exist, or one whose exchange rate is set by law'. However they speak as devil's advocates for, on the contrary, a currency that does not exist can always be brought back into existence and, when the exchange rate is set by law it can also be changed by law. Indeed Bratkowski and Rostowski (2000) in the same breath recommend zloty replacement by euros and contemplate a possible reversal. It remains to be demonstrated that such policy reversals would be so expensive as to stop the government from deciding them; the point may come when the government has no other choice (as in Argentina in December 2001) and the greater cost of reversal (with respect to other exchange rate regimes) may make a crisis worse rather than prevent it. Strictly speaking there is no such a thing as a hyper-fixed

exchange rate regime. Indeed even common currency areas can be split again (as in the Soviet Union, the CSFR, or the Yugoslav Federation), while in the case of currency replacement and especially of currency boards there remains always a non-negligible residual risk of devaluation, clearly visible in the interest rate premium almost invariably prevailing for debtors of equivalent ratings. It is significant that in Bosnia in 2001 the DM should continue to circulate as a parallel currency next to a DM-linked currency (though to a rapidly diminishing extent), showing that even the adoption of a currency board can be ineffective unless it is preceded by extensive economic and political reforms.

### 23.2.2 Credibility?

It is often argued, for a fixed exchange rate policy and, *a fortiori,* for a hyper-fixed regime like those considered here, that a government lacking policy credibility and a track record can 'borrow' credibility by anchoring the national currency to a strong and credible currency. However, it is questionable whether credibility can be borrowed, for the strength of a chain cannot be greater than the strength of its weakest link, which here is the credibility of the national government commitment to such or indeed *any* policy. Thus a promise to pay in gold is not more credible than a promise to pay in a less liquid and less stable medium—as long as the equilibrium market price for that medium in terms of gold is used for the conversion. Suppose Russia had adopted a Currency Board at the end of August 1998, after defaulting on over US$40bn worth of government dollar debt, plus an even larger public debt denominated in roubles; it seems naive to believe that a commitment to a permanently fixed parity to hard currencies would have been judged as credible by international financial markets.

### 23.2.3 Lower Transaction Costs

Undoubtedly the use of a common currency as both measure of value and medium of exchange leads to lower transaction costs, though these

savings have probably been exaggerated. It is true that anybody switching from one of the 12 currencies of the eurozone into each other in succession and back to the initial currency would lose most of its initial stake in commission charges; for a modest 2 per cent commission charge on each transaction one would lose almost one quarter of the initial amount. However nobody in his right mind would be so inefficient as not to gear the composition of one's currency portfolio to the likely pattern of actual expenditure. As a result the total gain in the circumstances is unlikely to be much higher than 2 per cent even if total expenditures are 100 per cent mismatched with total revenues. Such complete mismatching is totally implausible, so that the gains in transaction costs are more likely to be of the order of 1 per cent of the value of transactions or less.

The use of a single unit of account makes prices more transparent, but we do not seem to have much difficulty in comparing relative prices (domestic/foreign) when travelling in foreign countries using different currencies. Hence in general transaction costs gains are undoubtedly there but probably are overestimated.

### 23.2.4 Lower Interest Rates

Lower nominal interest rates in terms of the reference currency are likely, thus promoting investment and growth. The country risk premium, however, especially with a currency board, in practice is never completely eliminated and can remain substantial. In Argentina, for instance, after ten years of a currency board successfully linking the peso to the dollar at parity, in November–December 2001 on the eve of default, a crippling interest rate premium of the order of 25 per cent prevailed over the dollar rate. In all probability interest premiums will normally be lower than with alternative exchange rate regimes, but not necessarily zero even in the case of total currency replacement.

Undoubtedly both the government and private investors benefit from a common currency through their ability to borrow internationally in their domestic currency, the same in which expenditure is denominated and actually incurred (Hausmann 1999; Hausmann et al. 2000). Again, such benefit is probably exaggerated in economic discussions.

### 23.2.5 Greater Macroeconomic Stability

A reassuring aspect of both currency replacement and a currency board is the presence of automatic, self-regulating adjustments in money supply, determined by changes in domestically-held foreign assets, similar to those occurring under a gold standard. The speed and intensity of such self-regulating adjustments are unlikely—as under a gold standard—to be sufficient to ensure complete stability, but they are also incapable of doing any damage. Again, there is a small but probably exaggerated benefit from a currency board or currency replacement.[6]

A more significant contribution to stability may come from both regimes by avoiding the vulnerability to capital inflows/outflows and the associated speculative crises in the case of fixed exchange rates even if successful. Indeed often speculative crises may occur especially *if* a fixed (but not hyper-fixed) exchange rate *is* successful; the firming up of the currency encourages capital inflows that in turn strengthen the exchange rate further to the point of non-sustainability, through loss of competitiveness and deterioration of market sentiment, reversing capital flows and causing panic and collapse. This explains the recently established 'bipolar' orthodoxy, favouring either fully floating or hyper-fixed rates rather than intermediate regimes, with a marked world-wide switch in the second half of the 1990s away from such intermediate regimes towards the extremes (see Fisher 2001, who however regards a crawling peg with inflation targeting as a reasonable compromise). The fact that floating rates may be associated with inflationary bias, volatility and recurring turbulence, places a hyper-fixed exchange rate regimes in a good light (Mundell 1999).[7]

Bratkowski and Rostowski (2000) see the rise of current account deficits in transition economies as the inevitable consequence of

[6] In an economy which is already extensively euroized, moving to total and official currency replacement would eliminate the complications of dual components in money supply, in setting intermediate targets of monetary policy.

[7] Irrevocably fixed rates, unlike pegs subject to intermittent adjustments, do not encourage speculation—as demonstrated by the experience of EMU members since May 1998 as opposed to the September 1992 ERM crisis and its abandonment by the UK and Italy (a difference neglected by Larrain and Sachs (1999), in their rehearsal of arguments against dollarization).

consumption-smoothing in countries experiencing or expecting growth acceleration, and regard the elimination of the risk of currency crisis as a major benefit of euroization. But a common currency does not really eliminate *costlessly* the risks of current account deficits arising in a domestic currency, it simply transforms them into risks of regional underdevelopment, especially without the provisions for transfers from the EU budgets which would only benefit EU members. Such risks may be potentially more difficult to deal with, and span over a longer run, than a temporary currency crisis.

### 23.2.6 Greater Trade and Foreign Direct Investment

Until recently, empirical work has failed to find a reliable empirical connection between monetary arrangement and trade flows. Andrew Rose (2000), on the contrary, claimed a dramatic effect of currency unions on trade; he found that countries that use a common currency trade almost 300 per cent more with each other than similar countries with similar currencies, though he could not indicate the source of the incredibly large effect that he measured and warned readers from drawing dramatic policy implications from his results in connection with EMU and other actual currency unions. Torsten Persson (2001), however, qualified substantially and cut to size Rose's conclusions. He supposed that countries that adopt a common currency are a self-selected group, in that they are also those for which a common currency has the largest effect on trade, and considered other possible determinants of trade intensity. As a result the impact of a common currency appears to be considerably smaller at about 40 per cent, and much less precise.

Rose's rejoinder renews claims of a large and precise estimate of the impact of a common currency on trade (Rose 2001), but discussant Patrick Honohan and the *Economic Policy* Panel at which these papers were presented concluded that 'the apparent trade effects of currency unions—whether large or small—may really be due to the simultaneous adoption of other policies by the countries concerned' (Editors' Introduction, *Economic Policy*, October 2001, p. 260). In the same vein Rogoff (2001) stresses that, beside pursuing a common-currency

arrangement, EMU members 'have taken numerous other steps toward economic integration, ranging from co-ordination of electric-plug sizes to standardization of supervision and regulation of banks and financial intermediaries' (p. 245). Rogoff's reference to the old fable of nail soup is apt: a delicious soup can be made with only a nail—if all sort of other good things are added: 'The euro is the nail' (Rogoff 2001).

This drastic re-consideration of trade expansion is best understood by analogy with medical research, where the effectiveness of a particular treatment for those treated cannot necessarily be generalized to all untreated patients (Persson 2001). By the same token the effect estimated for existing currency unions or currency areas, whatever its size, cannot be confidently extrapolated to a group of central and east European countries whose only common feature is a fairly similar former communist economic regime, and whose main common feature with the eurozone it wishes to join is proximity. Moreover, the eurozone's already high share in their foreign trade weakens rather than strengthens expectations of further growth.

A positive impact on trade may have, indirectly, an adverse impact on foreign direct investment (FDI), which at least to some extent is a substitute for direct trade (see Bevan and Estrin 2001); for a common currency to have a positive net overall impact on FDI such an adverse impact would have to be more than compensated for by the positive effects that a common currency may have on general business climate and re-exports prospects. At the same time the lower interest rate expected of the adoption of a common currency must dampen inflows of *financial* capital.

## 23.3 Cost of Unilateral Euroization

The benefits expected of unilateral euroization/dollarization are associated with costs, such as loss of seigniorage, loss of a lender of last resort and more generally of monetary policy. These losses—like most of the benefits discussed above, also appear to be fairly certain but not as large as it is often made out. Other costs, due to the extensive use of other currencies in trade invoicing and in debt denomination, are tangible but can be countered by specific measures offsetting exposure to currency risks.

### 23.3.1 Loss of Seigniorage

Euroization involves some loss of seigniorage—the revenue obtained from issuing domestic currency—usually defined as the increase in real value of base money.[8] In the currency board case some of the seigniorage otherwise accruing to a Central Bank is preserved through the interest earned on reserves. Under currency replacement the loss of seigniorage on the mass of foreign exchange in domestic circulation is total, except that a seigniorage sharing arrangement could be agreed with the Central Bank that governs the chosen currency (Calvo 2002; Daviddi 1999); such an arrangement was contemplated for dollarized countries by the International Monetary Stability Act of 2000, introduced in the US Senate by the Chairman of the Joint Economic Committee Senator Connie Mack, and now shelved. According to the then Secretary of US Treasury, Larry Summers, 'In the long term, finding ways of bribing people to dollarize, or at least give back the extra currency that is earned when dollarization takes place, ought to be an international priority…' (Quoted in US-Senate Joint Economic Committee 1999). The same argument would apply to euroization. Seigniorage loss resulting from euroization is sometimes under-estimated (for instance Bratkowski and Rostowski 2000 neglect the loss of likely *increases* in seigniorage after shedding the domestic currency) but it can also be over-played (e.g., by Larrain and Sachs 1999).

In transition economies seigniorage is usually fairly low, of the probable order of 1–2 per cent of GDP (Schobert 2001) with a few exceptions such as Albania (where in 1994–1999 it represented on average 4.1 percent of output and 18.2 percent of fiscal revenues),[9] followed by Belarus, Ukraine and Romania, confirming the view that the loss is probably greater for countries with weak fiscal collection or low central bank

[8] There are also other definitions, such as the nominal interest rate on real base money, or net revenues from central bank operations related to the creation and management of base money (which are one component of central bank transfers to the state budget). For a discussion and estimates for central-eastern Europe see Schobert (2001).

[9] High seigniorage in Albania is due to a combination of high inflation and low fiscal revenue, in a country that by comparison with other transition economies is well monetized, and therefore it is poised to fall.

independence. In transition economies low seigniorage is often due primarily to large-scale losses from sterilization operations by central banks; such losses are largely due to high domestic interest rates, and are therefore avoidable, thus adding to the loss of potential if not of actual seigniorage.

### 23.3.2 Loss of Lender of Last Resort

The mythical advantage of a currency board is that the domestic currency is 'fully backed' by foreign exchange (e.g., see *The Economist* 29-1-2000).

Unfortunately all that is backed up by foreign exchange is primary money, i.e., M0, whereas in a currency crisis—as spectacularly demonstrated by Argentina in December 2001—there is absolutely nothing to prevent the public from wishing to convert into foreign exchange more than M0, up to their entire liquid assets, i.e., anything up to M2. In this case limits must be introduced—whether *de facto* or *de jure*—on the convertibility of bank money into cash, thus re-instating the kind of monetary segmentation and financial repression which were typical features of the old-style centrally planned economy. Such limits have been observed in Argentina's crisis, where they have been a major cause of riots and social unrest.

In a 'normal' monetary economy a cash shortage is prevented—short of a total melt-down—by the national Central Bank acting as a lender of last resort, in principle standing-by to provide unlimited liquidity at a penal interest rate against good quality securities. A currency board can act as Lender of Last Resort (LOLR) only within the bounds of excess reserves over and above M0 coverage; under total and formal currency replacement the central bank can equally continue to act as lender of last resort within the bounds of its residual foreign exchange reserves left over after the currency change. In Poland such reserves would be substantial, equivalent roughly to half the money supply, but this opportunity is not present anywhere else in the area. In a liquidity crisis these margins may be insufficient to maintain an orderly monetary circulation. Some liquidity may be provided by foreign banks (Calvo 2002), or a consortium of foreign banks, but at some point even foreign banks may prefer

bankruptcy to further involvement (as, again, in Argentina at the beginning of 2002); the LOLR function remains significantly impaired. In order to avoid a cash shortage interest rates will have to rise in order to attract foreign exchange and induce the public to reduce their demand for money, but it cannot be presumed that an interest rate level equilibrating demand for and supply of cash will necessarily always exist. Banks could be bankrupted not for their underlying insolvency, in which case bankruptcy might be regarded as a necessary and even desirable development in most transition economies, but for sheer illiquidity artificially created by the currency board rules of monetary issue and the consequent interest rate rise.

In principle the LOLR function could be partly fulfilled by the Central Bank of the common currency, even without membership of the currency union, for instance through a contingent loan in an emergency. But there is no statutory provision for such a role; indeed the International Monetary Stability Act cited above specifically stated that 'The Federal Reserve System has no obligation to act as a lender of last resort to the financial systems of dollarized countries' (Section "Credibility?"). A formal arrangement for the ECB *to act as* LOLR to countries that lacked convergence even by the Maastricht criteria would expose the euro to a very great risk; without such an arrangement, financial fragility would ensue. The problem would be aggravated by the fact that the ECB could not take on any responsibility for the supervision of financial institutions in euroized countries.

### 23.3.3 Loss of National Monetary Policy

A fixed exchange rate regime necessarily restricts the scope for domestic monetary policy. The permanent adoption of a common currency, in any form, necessarily delegates monetary policy to the Central Bank responsible for the maintenance of price stability in that currency. Of course the stabilization needs of transition economies may not leave much margin for an autonomous monetary policy, but the instant abatement of inflation may not necessarily be the best policy, as confirmed by the dominant success of the Polish economy which for all the talk of shock therapy has

been dis-inflated at an excruciatingly gradual rate. Moreover, all central eastern European transition economies are facing extremely challenging issues of social welfare reform, on a greater scale than the rest of Europe (see Eatwell et al. 2000), which may require country-specific approaches to macroeconomic management.

The policy followed by such a Central Bank may be at odds with the country's fundamentals. The probability of asymmetric shocks within EMU might be reduced endogenously by the convergence possibly obtained by adherence to the Maastricht criteria and by the 'stability and growth' pact, but cannot be eliminated. *A fortiori*, euroized countries who are not in EMU will be more likely to suffer from asymmetric shocks.

The loss of a domestic monetary policy resulting from euroization is clear but should not be exaggerated. A Currency Board may be unable to conduct *any* monetary policy, but is still fully 'independent' with respect to political authorities. Once a government has delegated to a fully independent Central Bank the maintenance of price stability, it has already abdicated its monetary sovereignty. Then it matters little whether a National Central Bank or an equally single-minded and independent super-national or foreign Central Bank manages the currency used.

### 23.3.4 External Debt Denomination

External debt may be denominated in currencies other than the euro. A number of countries have raised a very large part of their external debt in US dollars: in 1997 the share of dollar-denominated external debt was 77.9 per cent in the Czech Republic, 75.1 per cent in Bulgaria, 61.6 per cent in Lithuania, 46 per cent in Poland, against DM shares respectively of 4.7 per cent, 4.7 per cent, 6.2 per cent, 9.9 per cent, (DBR 2000). For such countries any euro devaluation with respect to the dollar, such as occurred in the first eighteen months of the euro's life in 1999–2000, would raise the domestic burden of foreign debt service; a significant re-denomination of external debt would have to accompany their euroization, or offsetting transactions in foreign exchange forward markets would have to be entered on a vast scale. This would be a relatively minor problem, not difficult to tackle, though action would have to be taken and a cost would be incurred.

### 23.3.5 Invoicing Practices

In some countries the euro may not be the preferred currency in the country's invoicing practices in foreign trade, which may be difficult to change. Settlement practices are often regarded as relevant but they are immaterial. For instance, Helmut Aancans, head of monetary policy at the Latvian central bank, was quoted as saying that 'Our structure of settlement currencies reflects the SDR basket ... When the euro goes down the dollar goes up and there is no net instability' (*Financial Times* 16 February 2000). But such stability only obtains if the SDR is the currency in which contracts are denominated.

The Lithuanian Lita, while being pegged to the US dollar, appreciated instead in real terms with respect to other currencies used in its pricing and invoicing, thus causing a large scale current account deficit. 'Trade in euro is not as big as trade in dollars' (Lithuanian CB deputy governor Arvidas Krejzde, *ibidem*), but 40 percent of Lithuanian foreign trade is with the EU and appreciation was therefore a non-negligible problem. In Albania the dominant role of the US dollar in invoicing and settlement even in trade with the EU is undoubtedly a major obstacle to euroization—unilateral or even via eventual EMU membership.[10] In such cases invoicing practices will have to change beforehand, de-linking the economy from the dollar; otherwise euroization will have to be postponed or replaced by a Currency Board type link to *both* the euro and the dollar—thus gaining the general advantages of a hyper-fixed exchange rate regime but losing those expected of a single currency.

### 23.3.6 Initial Reserves

Large-scale foreign currency reserves are needed to establish currency boards or to formally replace a national currency. At birth a currency board must be endowed with sufficient foreign exchange reserves to back

[10] In view of the lek's sustained real *and* even nominal revaluation, very low inflation and falling interest rate, the continued high degree of dollarization and DM/euroization in Albania is surprising. The dominant role of the US$ with respect to the euro, in spite of trade with the EU being a hundred times larger than trade with the USA, is a puzzling phenomenon (see Nuti 2001).

the entire currency in circulation (whether new or unchanged) at the permanently fixed exchange rate pre-selected by the government. Estonia benefited from the return of 11 tonnes of gold which had been sent to the West before 1940; Lithuania also benefited from the return of 6 tonnes of gold as well as purchases from the IMF (OECD 2000). Bratkowski and Rostowski claim that Poland (with US$26bn, i.e., twice the reserves necessary to back or replace the domestic currency), the Czech Republic and Slovenia could certainly afford euroization, while Slovakia and Hungary are classed as 'possible'. Other countries might be less fortunate; Gros (1999) suggests that the resources necessary to introduce a currency board (which he estimates at US$269mn for the Former Yugoslav republics, probably an under-estimate) could be borrowed, but this would undermine credibility and lead to expectations that the exchange rate would not be permanent but would only last as long as the loan and its subsequent renewals. Instead reserves must be instantly and permanently available against possible requests for conversion, therefore a currency board cannot be run on borrowed money, or it would become indistinguishable from an ordinary fixed exchange rate regime subject to occasional adjustments. Unless, as in Bulgaria, finance is being provided only partly by Bretton Woods institutions, and on a long-term basis, in which case foreign lending amounts to assistance and really might as well take the form not of a loan but a gift.

### 23.3.7 Inflationary Impact of Real Revaluation

All transition economies have introduced convertibility at a significantly undervalued exchange rate; invariably they have all undergone real revaluation falling gradually to a position of around twice the ratio between the Purchasing Power Parity (PPP) exchange rate and the actual rate. Real revaluation is usually associated with the so-called Harrod-Balassa-Samuelson effect, of faster productivity growth in the tradables sector driving up wages and prices in non-tradables (see Coricelli 2002), but this effect can easily be overplayed. First, this is bound to be a worldwide trend, reflected in the evolution of world prices, therefore only *differential* higher growth for productivity in tradables over non-tradables matters, in

comparison to the rest of the world. This differential may well be positive for transition economies catching up with best-practice techniques (Buiter and Grafe 2001), but will always be lower than domestic differences in productivity growth between the two sectors. Second, tradables are both inputs in non-tradable goods, and substitutes for non-tradables, which rather reduces the relevance of such a classification. Regardless of this effect, or in addition to it, *any* exchange rate (whether fixed or floating) at which convertibility is introduced in inflationary and troubled times—as in transition economies in the early 1990s—is bound to be undervalued in real terms.

For any fixed nominal exchange rate, subsequent unavoidable real revaluation necessarily involves a positive inflationary differential with respect to the peg currency. Far from aiding the control of inflation, in such circumstances any fixed exchange rate regime can turn into an inexorable inflationary machine. The necessary real revaluation could only be achieved without inflation through a nominal revaluation (as in Albania alone among transition economies).

Any transition country that had linked its currency to the euro from its birth in 1999 would have improved its competitiveness through the euro's subsequent nominal depreciation against the dollar in 1999–2001; in order to undertake the necessary real revaluation such a country would have had to accept additional differential inflation, whereas for instance Albania was able to revalue the lek in real terms by nominal revaluation with respect to the euro over the same period, with zero or negative inflation. This however is an exception; normally inflation in transition economies is higher than required to achieve the necessary real revaluation at a fixed nominal rate; therefore a fixed rate not only is not inflationary but acts as an anti-inflationary anchor. A possible (and widely expected) strengthening of the euro *vis-à-vis* the US dollar would assist any real revaluation still necessary in transition economies with currencies linked to the euro—unless the euro strengthened too much, as happened to the dollar in the case of Argentina's Currency Board, which played a significant role in its financial crisis of end-2001.

Of course a real revaluation can be inconsistent with the parallel commitments to price stability and nominal exchange rate stability involved by Maastricht criteria (Rollo 2001), and unilateral euroization can be

seen (Bratkowski and Rostowski 2000) as a way to evade those constraints. However the very broad fluctuation margins envisaged by ERM II (±15 per cent) and the applicability of the Maastricht inflation limits only in the run up to EMU membership—for just one year before examination—should still allow EMU candidates to accommodate the necessary real revaluation without having to euroize unilaterally. After EMU membership they could—like Ireland—continue to inflate as needed only subject to fiscal constraints.

## 23.4 Convergence to an Optimum Currency Area

De Grauwe and Aksoy (1997) (see also De Grauwe and Lavra 1997) argue that central eastern European countries are not part of a European optimum currency area (OCA), as theorized by Mundell in his classic article (Mundell 1961), i.e., as a fairly homogeneous region with synchronized cycles and symmetric response, flexible prices and factor mobility. McKinnon (2001) notes that in a lesser-known contribution to OCA literature Mundell (1973) stresses the advantages of some diversity for the sake of risk diversification within the area. Moreover it has been suggested that close trade links may actually promote economic convergence, thereby making OCA criteria endogenous (Frankel and Rose 1997a, 1997b).[11] Arguably the diversity exhibited by transition economies in the 1990s exceeds the degree of diversity that might actually be good for an OCA, and which may set in motion endogenous convergence.

There can be no doubt that the disadvantages discussed above would be considerably reduced with the convergence of transition economies to the eurozone; benefits possibly might also be reduced, but proportionately less than costs. Convergence must be understood not only for the monetary and fiscal parameters but also for real and institutional ones:

[11] Kenen (2000) shows that trade links do not ensure business cycles convergence, unless countries are already sufficiently similar, but Fidrmuc ( 2001) includes the impact of intra-industry trade thus confirming the endogeneity hypothesis.

1. *Monetary and fiscal convergence* as represented by the Maastricht criteria has received a great deal of attention. The basic idea is that convergence can be realized not endogenously through trade links but as a result of deliberate policy measures; indeed most of the accession candidates seem to have made significant progress towards fulfilling those criteria, which appear well within their reach (see Table 23.1 below). The share of government deficit and debt in GDP are below or near the Maastricht parameters: in 2000 accession candidates averaged a government debt share of 50 percent of GDP, compared to a eurozone average of 73 percent; the deficit can be reduced below the limit of 3 per cent of GDP by drastic measures rather fast, if there is political will, and the debt is allowed to exceed the limit as long as it is falling. Inflation and interest rates are usually much higher but still within striking distance of Maastricht targets in most cases.

   The trouble is that Maastricht criteria ignore essential and worrying features of transition economies such as quasi-fiscal deficits and debt, due to extra-budgetary, delayed and/or contingent public expenditure and commitments, including hidden subsidies and non-performing loans in the balance sheets of state banks. Those criteria do not include the low share of credit to the private sector, the low capitalization and/or low liquidity of financial markets throughout transition economies, as well as the extra-ordinary volatility of their rates of return (see EBRD, 2000). Once quasi-fiscal items are taken into account, even seemingly virtuous candidates such as the Czech Republic lose much of their attraction (see Drabek 2000). The share of credit to the private sector appears to be inversely related to the share of bad loans (EBRD, 1997). Transition economies seem to have either low market capitalization or a low ratio of value traded to market capitalization (i.e., illiquidity) of their stock markets—e.g., respectively 2.6 and 36.3 per cent of GDP in Romania, 39.7 and 3.9 per cent in Russia—or both, e.g., 5.8 and 7.6 per cent in Bulgaria and 6.2 and 11.6 per cent in

**Table 23.1** EMU convergence criteria: central eastern European accession candidates in comparison (January 2000)

| | Inflation rate % | | | Budget deficit, % of GDP | | | Gvt. Debt, % of GDP | | | Interest rates | Exchange rate regime |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 2000 | 2001F | 1999 | 2000 | 2001F | 1999 | 2000 | 2001F | November 2000 | November 2000 |
| Ref. Value | 2.0 | 2.8 | 3.2 | -3.0 | -3.0 | -3.0 | 60.0 | 60.0 | 60.0 | 7.4 | ERM II |
| BG | 0.3 | 8.9 | 6.6 | -1.0 | -1.5 | -1.5 | 93.6 | 95.5 | 97.5 | 5.0 | Currency Board (EUR) |
| CZ | 2.1 | 4.1 | 5.1 | -4.2 | -5.2 | -6.1 | 29.0 | 29.0 | 28.5 | 7.6 | Managed Floating (EUR) |
| EE | 3.3 | 4.9 | 4.8 | -4.7 | -1.1 | -0.9 | 11.0 | 11.4 | 12.6 | 7.1 | Currency Board (EUR) |
| HU | 10.10 | 9.8 | 6.6 | -3.8 | -3.0 | -3.0 | 72.7 | 70.5 | 63.3 | 9.3 | Fluctuation Band (EUR) |
| LT | 0.8 | 1.5 | 3.2 | -8.6 | -2.9 | -2.5 | 28.6 | 28.3 | 26.6 | 8.2 | Currency Board (EUR) |
| LV | 2.4 | 3.4 | 4.1 | -3.8 | -1.9 | -1.6 | 10.6 | 10.6 | 10.4 | 10.4 | Peg (SDR) |
| PL | 7.0 | 10.8 | 7.4 | -3.7 | -2.4 | -2.5 | 43.0 | 43.7 | 42.5 | 13.1 | Flexible |
| RO | 44.8 | 44.2 | 22.9 | -4.0 | -3.5 | -3.0 | 32.3 | 31.3 | 30.4 | 43.4 | Managed Floating (EUR) |
| SI | 6.1 | 9.0 | 7.6 | -0.7 | -1.0 | -1.0 | 24.3 | 25.0 | 25.5 | n.a | Managed Floating (EUR) |
| SK | 10.6 | 12.1 | 6.7 | -3.9 | -5.5 | -5.6 | 25.3 | 27.0 | 26.7 | 7.7 | Managed Floating (EUR) |

*Sources*: ECB, IMF, DBR. From: Deutsche Bank Research, Euro Watch n. 88, December 2000

*Notes*: F = Forecast; n.a. = non available. Definitions may differ from those of the EU. 10-year government bonds where available, in p.c. per annum. Shorter maturities for BU, EE, LT, LV, RO, SK

Latvia (EBRD, 2000). Further progress in approaching Maastricht inflation targets may be expensive.[12]

2. *Real convergence*, in the view of some observers, is not a meaningful concept (Gros 2000). However, it can be easily identified as convergence of real incomes per capita—a process of catching-up which is already labeled 'real convergence' by the ECOFIN Report of November 2000 (p. 2) and therefore of labour productivity and wage rates; of real interest rates, rates of unemployment, capacity utilization. Accession candidates have an income per capita ranging from 7 per cent of the EU in Bulgaria to nearly 50 per cent in Slovenia; even at PPP exchange rates those differences although lower at 23 and 70 per cent, respectively, are still large (EC-DG II 2001). With sustained differences in income per capita the cost of cohesion policies is bound to be large, and it is not clear whether it can be contained within current limits of 4 per cent of the recipient country's GDP. Such re-distribution policies would be enhanced if the EU supported national farmers, whose share in employment and GDP in accession candidates exhibits extreme diversity both within the group of new members and with respect to the Union of 15. Growth rates are bound to be much faster in the central eastern accession countries, engaged in a catching up process which is probably more inflationary and requires a more accommodating monetary policy than that which suits the present eurozone of 12. Apart from their almost instant convergence to EU unemployment average and variance—not requested by any treaty but promptly achieved already in the early 1990s—real convergence appears to be a much slower and more protracted process than anticipated (see Kolodko 2000; see also Salvatore 2000). For a country like Serbia, contemplating euroization, reconstruction (IMF and World Bank 1999) would have to be undertaken before real convergence can be attempted.

[12] In October 2001 in Warsaw the ECB Vice-President Christian Noyer said that 'Central and eastern European countries should not try to qualify for eurozone membership by suppressing inflation so quickly that they hinder the growth of people's real incomes' (*Financial Times*, 16 October).

3. *Institutional convergence* also would appear to have been making rapid progress, at least for the front-runners lined up for accession, judging from the EBRD assessment of systemic transition achievements in the scoreboard published yearly since 1994 in the *Transition Reports;* (EBRD 1994–2001). Especially in areas such as privatization and foreign trade, transition scores are impressive. However, the EBRD indicators suffer from an over-optimistic bias, not least because of the adoption of scores ranging from 1 to 4+ instead of starting from zero, which therefore credit even transition non-starters with an achievement of over 20 per cent of the road to a full-fledged market economy.

In Table 23.2 the original scores are adjusted by turning (+) and (-) into ±0.5, then re-scaling on a 0–4.5 basis; private sector shares are converted to the same scale. Naturally transition achievements now are lower on average, much lower for the more backward economies, and much more diverse. Moreover the EBRD approach neglects any notion of minimum requisites for a country to operate as a market economy, or of possible weights to be attached to their different indicators, or of the relative difficulty of making progress at different points of their scores and in different fields. In particular, banking systems, financial markets and regulatory regimes are not yet sufficiently developed, for the very good reason that they had to be set up *ex novo* instead of being re-structured as the other production sectors. Economic relations between advanced market economies like the EU-15 and economies with an incomplete market system are similar to those previously entertained with centrally-planned Soviet-type systems; they can appear—and at the microeconomic level they can be—mutually advantageous but are not a good foundation for efficient economic and monetary integration.

These considerations invite greater caution in assessing the progress of new members' convergence to a single European Union standard—and therefore in evaluating the gross and net advantages to be obtained from both their membership of the EMU and from possible EMU membership surrogates.

Habib (2001) argues that, on balance, the case for unilateral currency replacement is weak in the Czech Republic and Hungary, because although converging they do not need to import monetary stability and

**Table 23.2** Summary transition scoreboard: means and standard deviations (mid-2000; calculated from the EBRD Transition Report, 2000)

| | Country Average excluding private sector score | | | Country Average including private sector score | | | | Country Standard Deviation excluding private sector score | | | Country Standard Deviation including private sector score | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | EBRD Scores | Corrected Scores | Diff. | EBRD Scores | Corrected Scores | Diff. | | EBRD Scores | Corrected Scores | Diff. | EBRD Scores | Corrected Scores | Diff. |
| | Range: 1 to 4.5 | Range: 0 to 4.5 | | Range: 1 to 4.5 | Range: 0 to 4.5 | | | Range: 1 to 4.5 | Range: 0 to 4.5 | | Range: 1 to 4.5 | Range: 0 to 4.5 | |
| | (A) | (B) | (A)-(B) | (C) | (D) | (C)-(D) | | (E) | (F) | (E)-(F) | (G) | (H) | (G)-(H) |
| Albania | 2.63 | 2.09 | 0.54 | 2.74 | 2.23 | 0.50 | Albania | 1.13 | 1.45 | −0.32 | 1.04 | 1.42 | −0.38 |
| Armenia | 2.63 | 2.09 | 0.54 | 2.68 | 2.16 | 0.52 | Armenia | 0.95 | 1.23 | −0.27 | 0.85 | 1.17 | −0.31 |
| Azerbaijan | 2.38 | 1.77 | 0.61 | 2.40 | 1.80 | 0.60 | Azerbaijan | 0.83 | 1.07 | −0.24 | 0.74 | 1.01 | −0.27 |
| Belarus | 1.50 | 0.64 | 0.86 | 1.52 | 0.67 | 0.85 | Belarus | 0.46 | 0.60 | −0.13 | 0.41 | 0.56 | −0.15 |
| Bosnia & Herzeg. | 2.06 | 1.37 | 0.70 | 2.08 | 1.39 | 0.69 | Bosnia & Herzeg. | 0.82 | 1.06 | −0.23 | 0.73 | 0.99 | −0.26 |
| Bulgaria | 3.06 | 2.65 | 0.41 | 3.11 | 2.71 | 0.40 | Bulgaria | 0.78 | 1.00 | −0.22 | 0.70 | 0.95 | −0.25 |
| Croatia | 3.25 | 2.89 | 0.36 | 3.23 | 2.87 | 0.36 | Croatia | 0.85 | 1.09 | −0.24 | 0.75 | 1.02 | −0.27 |
| Czech Republic | 3.56 | 3.29 | 0.27 | 3.59 | 3.33 | 0.26 | Czech Republic | 0.73 | 0.94 | −0.21 | 0.65 | 0.88 | −0.24 |
| Estonia | 3.44 | 3.13 | 0.30 | 3.46 | 3.16 | 0.30 | Estonia | 0.68 | 0.87 | −0.19 | 0.60 | 0.82 | −0.22 |
| FYR Macedonia | 2.88 | 2.41 | 0.46 | 2.88 | 2.42 | 0.46 | FYR Macedonia | 0.88 | 1.13 | −0.25 | 0.77 | 1.05 | −0.28 |
| Georgia | 2.94 | 2.49 | 0.45 | 2.96 | 2.51 | 0.44 | Georgia | 1.08 | 1.39 | −0.31 | 0.96 | 1.31 | −0.35 |
| Hungary | 3.81 | 3.62 | 0.20 | 3.81 | 3.61 | 0.20 | Hungary | 0.53 | 0.68 | −0.15 | 0.47 | 0.64 | −0.17 |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kazakhstan | 2.81 | 2.33 | 0.48 | 2.84 | 2.37 | 0.47 | Kazakhstan | 0.70 | 0.91 | −0.20 | 0.63 | 0.86 | −0.23 |
| Kyrgyzstan | 2.81 | 2.33 | 0.48 | 2.84 | 2.37 | 0.47 | Kyrgyzstan | 0.84 | 1.08 | −0.24 | 0.75 | 1.02 | −0.27 |
| Latvia | 3.19 | 2.81 | 0.38 | 3.20 | 2.83 | 0.37 | Latvia | 0.84 | 1.08 | −0.24 | 0.74 | 1.01 | −0.27 |
| Lithuania | 3.19 | 2.81 | 0.38 | 3.22 | 2.85 | 0.37 | Lithuania | 0.70 | 0.91 | −0.20 | 0.63 | 0.85 | −0.23 |
| Moldova | 2.81 | 2.33 | 0.48 | 2.81 | 2.32 | 0.48 | Moldova | 0.80 | 1.03 | −0.23 | 0.70 | 0.96 | −0.26 |
| Poland | 3.63 | 3.38 | 0.25 | 3.61 | 3.35 | 0.26 | Poland | 0.58 | 0.75 | −0.17 | 0.52 | 0.70 | −0.19 |
| Romania | 2.81 | 2.33 | 0.48 | 2.84 | 2.37 | 0.47 | Romania | 0.70 | 0.91 | −0.20 | 0.63 | 0.86 | −0.23 |
| Russian Fed. | 2.56 | 2.01 | 0.55 | 2.66 | 2.14 | 0.53 | Russian Fed. | 0.90 | 1.16 | −0.26 | 0.84 | 1.15 | −0.31 |
| Slovak Republic | 3.44 | 3.13 | 0.30 | 3.46 | 3.16 | 0.30 | Slovak Republic | 0.78 | 1.00 | −0.22 | 0.69 | 0.94 | −0.25 |
| Slovenia | 3.25 | 2.89 | 0.36 | 3.21 | 2.85 | 0.37 | Slovenia | 0.85 | 1.09 | −0.24 | 0.75 | 1.03 | −0.27 |
| Tajikistan | 2.19 | 1.53 | 0.66 | 2.21 | 1.56 | 0.65 | Tajikistan | 1.07 | 1.37 | −0.30 | 0.94 | 1.29 | −0.34 |
| Turkmenistan | 1.31 | 0.40 | 0.91 | 1.38 | 0.48 | 0.89 | Turkmenistan | 0.46 | 0.59 | −0.13 | 0.44 | 0.60 | −0.16 |
| Ukraine | 2.56 | 2.01 | 0.55 | 2.62 | 2.09 | 0.54 | Ukraine | 0.56 | 0.72 | −0.16 | 0.52 | 0.72 | −0.19 |
| Uzbekistan | 1.94 | 1.21 | 0.73 | 2.01 | 1.30 | 0.71 | Uzbekistan | 0.62 | 0.80 | −0.18 | 0.58 | 0.80 | −0.21 |
| **AVERAGE** | **2.79** | **2.31** | **0.49** | **2.82** | **2.34** | **0.48** | – | | | | | | |
| **STD. DEV. of the MEANS** | **0.63** | **0.81** | **−0.18** | **0.61** | **0.79** | **−0.17** | **STD. DEV. of the POPULATION** | **0.97** | **1.24** | **−0.27** | **0.93** | **1.20** | **−0.27** |

credibility, are not highly euroized and would not gain a significant reduction in risk premia. In Poland, as a medium size relatively closed economy, an autonomous monetary policy could smooth the economic cycle; but the country could gain from a reduction in interest rate and risk premium by replacing the zloty with the euro—as long as labour market rigidities were tackled. Bulgaria presents all the favourable conditions for an early adoption of the euro (though Roussenova (2001) is much more cautious in her assessment). A strong case for euroization is also made for Estonia by Sulling (2002); basically the move from currency board to currency replacement is less traumatic than a move from other exchange rate regimes.

## 23.5 EU Policy Towards Unilateral Euroization

Both the European Commission and the European Central Bank leave accession candidates free to adopt any exchange rate regime they choose, including a Currency Board as confirmed by the acceptance of those of Bulgaria, Estonia and Lithuania. Some time after accession the new Member States are expected to join ERM-II, which is incompatible with fully floating rates, and with pegs (whether fixed or crawling) against anchors other than the euro. But euroization in a strict sense, understood as domestic currency replacement by the euro, on the contrary is strictly ruled out by the EU until not only accession but also full convergence and negotiated acceptance into EMU: '*Any unilateral adoption of the single currency by means of 'euroization' would run counter the underlying economic reasoning of EMU in the Treaty, which foresees the eventual adoption of the euro as the endpoint of a structured convergence process within a multilateral framework. Therefore, unilateral 'euroization' would not be a way to circumvent the stages foreseen by the Treaty for the adoption of the euro*.' (EC-DG-II 2001, p. 21, emphasis added).

This is an extraordinary combination of bad logic and bad policy. The Treaty sets conditions for EMU full membership, including provisions for domestic reserve transfer to ECB and representation in ECB organs, which would not apply to unilateral euroization, and says nothing that might stop *any* country, whether or not an accession candidate (or indeed

even a EU member not qualifying for EMU membership), from adopting the euro as domestic currency. By replacing its currency with euro as domestic currency, a country renounces completely the 15 per cent margin fluctuation either way *vis-a-vis* the euro envisaged ERM-II; such a greater commitment to a stable exchange rate should be rewarded, not penalized. Moreover the only force of such prohibition is possible EU retaliation in slowing down or making harder the accession process or, after accession, behaving in a punitive fashion towards countries that have disobeyed and euroized unilaterally. Countries excluded from accession cannot be stopped from euroizing—other than by possible discriminatory penalties or bribes.

Until the introduction of euro banknotes and coins in EMU countries on 1–12002, EU rejection of unilateral euroization might have been due to fears that it might complicate the conversion process. But in any case central eastern European economies have contributed to the weakness of the euro by getting out of eurozone currencies into dollars in order to avoid the surfacing of their holdings. Euroization would have added to demand for eurozone currencies if implemented before such date, and to demand for the euro after that date. Apart from these fears which no longer apply, EU aversion to unilateral euroization is probably induced by three considerations:

First, the fear that participation in the euro-area (though not in EMU) by weaker countries might destabilize the euro. Indeed many believe that the weakness of the euro after its launch may have had something to do with the enlargement process, neglecting that the central eastern candidates represent under 6 per cent of the enlarged Union's income and 3 per cent of its money supply. Paradoxically a greater threat—if any—to eurozone stability would be more likely to come from the unilateral euroization not of accession candidates but of outsiders, in view of their lesser degree of convergence to EU parameters.[13]

[13] Moreover, unilateral euroization of countries outside EMU would involve advantages for ECB and EMU members as well as potential disadvantages. The main advantage would be seigniorage, net of the possible net cost of ECB sterilization of the Currency Board country's euro bonds and deposits if their effects on euro monetary expansion were judged to be excessive. In addition unilateral euroization would avoid the complications generated by the growth in membership of the ECB Governing Council.

Second, the fear that political pressure might be brought to bear on the ECB to take into account the particular needs of euroized countries, except that the ECB would be under no obligation to do so and would remain fully independent in the formulation of its monetary policy.

Third, the fear that the exchange rate at which a country unilaterally euroizes might be excessively undervalued, thus undermining the competitiveness of EU exports. These fears are not justified, in view of (1) the large scale current account deficits, in general and especially towards the EU, of all accession candidates and especially those that have adopted a currency board, which justify an element of under-valuation when a hyper-fixed rate is selected; and (2) the higher inflationary pressure in economies that grow significantly faster than current EU members, which is bound to erode any initial gain in competitiveness from undervaluation.

It is not clear what conceivable gain might come from candidates running a Currency Board, in order to satisfy EMU criteria according to EU documents on enlargement (such as ECOFIN 2000), first moving from their long-standing fixed exchange rate to a presumably stronger rate negotiated with EMU countries, then floating for two years within a 15 per cent band of variation with respect to the euro, then locking their exchange rate irrevocably on EMU membership. This appears to be the kind of perverse scenario beloved by currency speculators, who with these rules of the game may succeed in destabilizing the best behaved and most solid candidate economy. The only credible exit from a Currency Board linked to the euro seems precisely instant currency replacement at parity.[14] If that exit is accepted at some stage, there is no reason why currency replacement should not be allowed at any other time an accession candidate may wish to do it.

The only justification for not treating two years successful euroization as a substitute for two years in the much looser ERM-II, and allowing accession candidates to apply to join ERM-II only *after* accession,

[14] Buiter and Grafe (2001) on the contrary argue that "*a currency board arrangement must be recognized as temporary, and there must be a 'strong exit' strategy*" (emphasis in the original text). But a temporary currency board would cease to be a hyper-fixed regime and would be undistinguishable from an ordinary fixed exchange rate, while a pre-announced exit (or conditions for exit) would unleash precisely the risks of speculative attacks that the currency board is expected to discourage.

presumably is the potential progress in convergence to EU and EMU standards in the intervening time. This concern, however, would be much better served if convergence requirements were spelled out and specified in detail, rather than simply holding up EMU membership pending what is basically a purely administrative rather than a fundamental requirement.

## 23.6 Conclusions

To a visitor from outer space the arrangements of the present EMU-area and those of the wider euro-area enlarged to include strict euroization and/or euro-backed local currency would be indistinguishable.[15] Qualitatively the advantages of the arrangement would be the same, in terms of exchange rate certainty, policy credibility, lower transaction costs, lower interest rates, greater macroeconomic stability and greater economic integration and investment. But there would be an immensely important difference, in the different role of the ECB, which in a strictly euroized country would not act as a central bank. Namely, the ECB would not be, or not as fully, a Lender of Last Resort; it would act—by definition—as an institute of issue obtaining some or all of the seigniorage otherwise accruing to the euroized country, but would not have any responsibility towards that country in deciding its monetary policy or its exchange rate policy towards the rest of the world. The euroized country would lose not only seigniorage but also the function of a Lender of Last resort and more generally of monetary policy. Some minor problems, like possible extensive use of other currencies in trade invoicing and in external debt denomination, could be met at a relatively small cost. There are also inflationary implications of any fixed exchange rate policy for currencies initially undervalued and experiencing sustained real revaluation. Other, more significant costs would be the initial cost of backing up or replacing domestic currency with foreign exchange.

[15] As long as, without loss of generality, a Currency Board managed a domestic currency with a one to one parity with the euro.

Both costs and benefits from currency replacement and Currency Boards have probably been over-estimated. Neither a Currency Board nor a formal currency replacement are irreversible; a residual uncertainty remains and is reflected in interest rate premia. Credibility cannot be raised to that of the euro because it cannot exceed that of the link to the euro. Gains in transaction costs are likely but probably smaller than anticipated. Macroeconomic stability may be gained at the cost of regional imbalances. The same can be said of costs: in transition economies seigniorage is usually small; for currency replacement it could also be shared out by the ECB by agreement. A function of Lender of Last Resort could be retained to the extent that it was backed by surplus reserves. The loss of national monetary policy is not a big deal for countries that have already delegated that policy entirely to an independent Central Bank responsible for the maintenance of price stability. Issues of invoicing and external debt denomination can be resolved at a reasonable cost. The need for initial foreign exchange reserves could be met by long term official loans, or by aid. The inflationary impact of real revaluation under a fixed exchange rate need not involve a loss in competitiveness and is no great obstacle to satisfying apparent inconsistency with Maastricht criteria, which only apply in the year before examination and within broad margins for manoeuvre.

Gross benefits and costs are bound to be reduced with the progress of a process of convergence to EU and EMU standards. Monetary and fiscal convergence criteria appear close to being satisfied, at least in the accession frontrunners, but there are skeletons in the closet (quasi fiscal operations, weakness of banking institutions, underdevelopment of financial markets, etc.). Real convergence—of real income per head, real interest rates, capacity utilization, unemployment—is a slower and more protracted process than anticipated. Institutional convergence is also slower and more diverse than usually believed (e.g., by the EBRD). Paradoxically, the further away an area is from satisfying convergence criteria the greater are the potential net benefits from trade integration—but then displacement costs in terms of capital utilization and labour employment are also higher, and require international, interregional and inter-temporal redistribution from gainers to losers on a scale much larger than is contemplated at present (up to a maximum 4 percent of recipients' GDP).

Positive net benefits from unilateral euroization cannot be taken for granted but are subject to empirical verification in each country at any given time. Net benefits are probably highest for smaller countries, either already converging to the currency area they wish to join, thus minimizing resource displacement, or so distant as to use euroization to speed up convergence. Aversion to unilateral euroization in Brussels and Frankfurt has no legal or economic justification.

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# 24

# Globalization Today: Incomplete, Distorted and Unfair

Domenico Mario Nuti

Globalization—understood as increasing worldwide economic integration—is today equally as spectacular in its progress as in its incompleteness. Globalization is incomplete because of the maintenance of forms, often intense, of protectionism, tariff and non-tariff; the proliferation of commercial blocks (200 regional agreements at the latest count, for the 150 World Trade Organization (WTO) members; only Mongolia is not part of a block); the lack of a single world currency in place of 105 currencies, the conspicuous lack of global governance institutions.

Globalization is also *asymmetric*—as Pompeo Della Posta has argued rightly in his contribution to this volume—or, I would say, *distorted,* for it favours the international mobility of capital rather than labour; it

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finances global imbalances instead of investment and growth in poorer countries; it causes turbulences, crises and contagion; it promotes trade opening to the industrial exports of advanced countries that protect their domestic markets against the agricultural and labour-intensive exports of poorer countries; and so on. This very asymmetry/distortion is a form of incompleteness (complete globalization would have to be symmetric, though the converse is not true, for in principle incompleteness could be symmetric).

Economic theory provides hardly any support for the efficiency of an incomplete and distorted globalization; on the contrary, it favours *second-best* type arguments that cast strong doubts on its efficiency. Clearly the advantages expected of globalization—comparative advantages, static and dynamic; acceleration of growth due to foreign direct investment and financial capital mobility; technology diffusion—have been grossly exaggerated.

But the costs of globalization have also been much exaggerated. All of the objections raised by the opposers of globalization have substantial grounds but—with the exception of distributive considerations—there are mitigating factors or qualifications that reduce the strength of their arguments. True, multinational companies have a dominant weight in domestic economies, avoid taxation, manipulate consumers with their trademarks, contribute to environmental pollution, and exploit cheap (especially female and child) labour, while international organizations have restrictive policies and nondemocratic procedures.

But states have powers that are much greater than those of multinationals, governments are at fault if those powers are not used, against offending national as well as multinational companies. Tax avoidance is facilitated by globalization but also takes place domestically; the demise of the welfare state is due more to the victory of hyper-liberalism and the loss of government policy instruments than to trends in globalization.

Corporate governance is a general problem regardless of multinational status. Labour exploitation existed before globalization; it may be a condition better than unemployment and is certainly better than destitution. Boycotting the products of exploited labour by advanced countries' consumers or by the WTO is an inappropriate and perverse response. Trademarks reduce competition and manipulate tastes but make

producers identifiable which also benefits consumers; moreover, *caveat emptor*. Let those who object to advertising and trademarks boycott the offending goods and services.

Multinational companies raise pollution by concentrating polluting activities in the countries of least resistance, but they cannot be blamed for the pollution generated by the additional growth that they generate; the type of growth is at fault and could and should be changed for less-polluting growth patterns.

International organizations are lacking in transparency and democracy and often impose inappropriate policies, but they have improved over time; this also requires qualification. In transition economies some of the shock therapy was inappropriate (for instance, premature capital markets liberalization, or recessionary monetary policies), but some was inescapable (instant price rises to market-clearing levels; ending the state monopoly of foreign trade; establishing exchange rate convertibility on the current account; and legalizing private ownership and enterprises). The residual costs of globalization of this kind can and should be reduced if not eliminated by means of specific measures not only at the global level, but also at that of nation-states and commercial blocks — for instance, with measures on corporate governance, fiscal harmonization, minimum wage and labour conditions, environmental protection; the transparency and democracy of international organizations.

While in some areas, such as capital markets liberalization or the arms trade, the costs are large and greater than benefits, the net effect of overall globalization is undoubtedly positive. Markets—including global markets—are the foundation of the vitality of any economic system, of its capacity to evolve and innovate. Around 1990 it was precisely the inability to deploy this vitality that caused the collapse of the centrally planned economies. Moreover, globalization is a form of technical progress, as it raises the productivity of resources. And an export-led growth is more readily sustainable than one based on internal demand. In many respects, there is not enough globalization in the world. Suffice to think of agricultural protectionism of the EU, the USA and Japan; so-called contingent protection, with anti-dumping measures, so-called 'voluntary' export restraints, unreasonable standards; the reciprocal protectionism practiced by developing countries against each other; the restrictions to the

circulation of technologies and ideas imposed by the WTO—of all people; the restrictions on labour migrations.

The overwhelming problem is the distribution of the gross costs and benefits of globalization, its resulting impact upon absolute poverty and upon world income inequality, and the difficulties of tapping into worldwide gains to compensate worldwide losers. Income distribution at the national or global level depends upon the operation of markets for goods and factors—for a given endowment of resources, technology and given economic policies and institutions. If nothing else can be changed, naturally the opposition to existing distribution turns against the operation of domestic and global markets.

The reduction of absolute poverty that accompanies globalization *per se* is not sufficient to redeem globalization, if there is consensus that poverty is excessive and is not being reduced fast enough. Even the modest Millennium Development Goals 1990–2015 in terms of reducing poverty and under-nourishment, and raising the levels of access to health, education, water and sanitation, already appear to be beyond reach. The acceptability of the conventional threshold of absolute poverty (US$2 per head per day for 'ordinary' poverty, which afflicts half the world population, US$1 per head for 'extreme' poverty), in turn depends on trends in average income.

Global inequality, usually measured by the Gini coefficient, can be referred to: (i) the average income of all countries; (ii) their average income weighted by their population; or (iii) the household income of the citizens of the world, for whom there are comparable data (see B. Milanovic, *Worlds Apart,* 2006), obtained by combining the data available for advanced countries with those collected by the World Bank *household income surveys* for developing countries. The first measure has been increasing, indicating a lack of global convergence. The second has been falling slightly, if only because of the growing weight of China, and, moreover, shows a polarization between rich and poor countries. The third measure—the only accurate measure of global income inequality—gives the highest measure of inequality and has been increasing, although in terms of purchasing power parity in 2002 it has fallen back to the 1993 level: a Gini coefficient of 65.2 per cent (remembering that Gini = 0 corresponds to absolute equality, and Gini =100 per cent to absolute

inequality, or a situation in which one takes all). Again, as stated above for poverty, it is immaterial whether globalization raises or lowers global income inequality; the widespread judgement that income inequality is excessive and does not fall fast enough is sufficient to justify opposition to the operation of global markets, when the other determinants of income distributions cannot be influenced. Thus at Cancun in 2003 an alliance of 20-odd emerging countries now labelled the G20 was perfectly legitimate—morally and legally and strategically—in opposing a trade deal within the WTO Doha Round that would have benefited them, simply because they did not accept a distribution of gains just as biased in favour of advanced countries as was the Uruguay Round (that assigned to advanced countries 70 per cent of the gains, according to Jo Stiglitz).

Globalization redistributes income from wages to profits in advanced countries, where, over the course of 25 years (1980–2005), the share of labour has fallen on average by 10 points (from about 65 per cent to about 55 per cent of their GDP, according to the IMF World Economic Outlook 2007), without a corresponding increase in the wage share in developing countries, where labour is still abundant. Globalization also redistributes income from higher to lower wages, from producers to consumers, and from the importers of non-reproducible natural resources to their exporters.

The existence of net benefits from globalization in theory would allow the redistribution of some of the winners' benefits to an extent sufficient to overcompensate all losers, in such a way as to make everybody better off. Redistribution could also reduce both absolute and relative poverty, showing the absolute superiority of globalization over all alternatives. However, it is not enough for this overcompensation—of losers, of the poor, and of the relatively less rich—to be potential; it is necessary that it should actually take place for a welfare improvement to be established. But compensation is extremely difficult in view of the lack of global agencies with powers of taxation and redistribution, the paucity of unilateral and multilateral aid, the intergovernmental nature of the little redistribution that actually happens and that therefore does not reach the intended recipients.

This is why it is essential to create and strengthen redistribution agencies at all levels, of nations and commercial blocks as well as the global economy. The problem is that very often the winners of globalization are numerous, relatively poor and operating in competitive conditions, whereas the losers are few, relatively rich and operating in monopoly conditions. This is true, for instance, of the gainers and losers from labour migrations, or from the abolition of agricultural protection. Should we really take much of the gains from poor migrants to compensate the more highly paid and protected labourers whose salaries they hold down with their competition? Should we really tax food consumers benefiting from lower food prices to compensate rich and highly protected farmers (including the Queen of England) for their loss of protection? In these cases it is necessary to limit redistribution, or to implement it at the national or commercial block level—if at all—concentrating efforts and resources instead in the reduction of poverty and inequality.

Failure to govern globalization, and to correct its impact on poverty, inequality and redistribution, will breed increasing opposition to its further progress, which may lead eventually to the possible destruction of all of its benefits, together with its costs.

# 25

# The Impact of the Global Crisis on Transition Economies

Domenico Mario Nuti

## 25.1 Introduction

Some events are rare, extreme, unpredictable until they actually happen but perfectly explainable afterwards. Taleb (2007) calls them "black swans" after those ugly birds that, unimaginable until they were discovered in Australia, have precisely these characteristics. The collapse of Soviet-type systems in 1989–91, associated with a deep and almost invariably prolonged depression, belongs to this class of events; its scant prediction was either mistaken in important respects or from purely "accidental prophecies" (Laqueur 1996). So does the global financial

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crisis of 2008–9, which might continue well into 2010 and beyond; in this there had been a number of accurate predictions (reviewed by Bezemer 2009) but they were rarely believed—otherwise they would have been falsified. The countries of Central and Eastern Europe were struck by the global crisis when their post-socialist transition had just been completed—for the ten new EU members of 2004 and 2007—or was still in process: a veritable double whammy in less than a generation.

This paper outlines the main features of the global crisis (Sect. 25.2); reviews the recent economic performance of transition economies (2006–2008) and their current prospects (Sect. 25.3); and the heterogeneity of country performance (Sect. 25.4). The global crisis impacted the area through two main general channels, namely the drastic fall in world trade (Sect. 25.5) and the fall or reversal of FDI and portfolio investment flows (Sect. 25.6). Additional specific factors, of varying significance in different countries, are considered in Sects. 25.7–25.10, namely: external imbalances; terms of trade; domestic sub-primes; foreign banks' withdrawal of funds. Section 25.11 considers the importance of differences in initial positions, and in policy responses both nationally and internationally. Section 25.12 argues the need for a larger, more balanced and coordinated fiscal stimulus in order to speed up recovery in developing countries, including transition economies. Section 25.13 discusses whether an earlier membership of the euro-zone might have improved the new EU members' resilience to the crisis, and whether an early membership now might be advisable. Section 25.14 suggests a connection between these countries' vulnerability to the global crisis and their adopted transition paths and target models. Section 25.15 provides a summary and some conclusions.

## 25.2 The Global Crisis

The global crisis of 2008–2009 was abrupt. It was due not to an exogenous shock but to the endogenous workings of financial markets in advanced countries, where it went through synchronised stages that sometimes can be pinpointed to the day and became systemic; then it spread to the real economy in different ways, timing and speeds in

different countries. It is a seismic crisis as deep—until June 2009—as that of 1929–32. In the end it may turn out to be shorter, and therefore less deep than that, thanks to the more appropriate, large scale and synchronised macroeconomic policy responses by governments and central banks throughout the world, and international financial institutions—as long as these will not engage in premature, collective exit strategies.

The suddenness, financial origins and stages of the crisis are best synthesised and illustrated by the evolution of Interbank Market Spreads, i.e. the difference between 12-month Euribor/Libor and Overnight Index Swap rates, in basis points (from Trichet 2009; Fig. 25.1 below).

All was well in the euro, sterling and US dollar markets until August 2007, the "Beginning of the Turmoil", when the US crisis of sub-prime mortgages erupted. The Turmoil worsened gradually until September 2008 (on 15 September, Lehman Brothers went bankrupt) when it began to intensify reaching a peak in November 2008; the spreads have declined gradually since then but are still roughly as high and diversified in July 2009 as they were around July 2008.

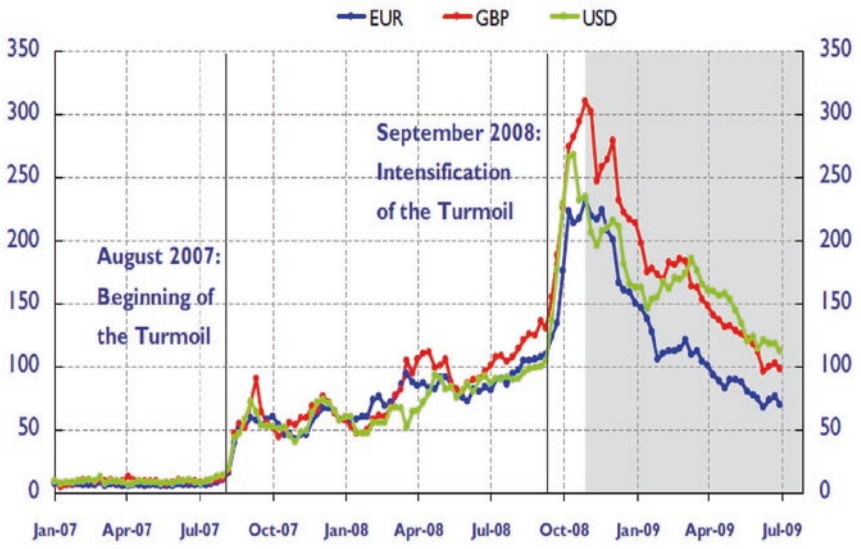


**Fig. 25.1** Interbank market spreads. Source: Bloomberg and ECB's calculations. From: Trichet 2009

The President of the European Central Bank, Jean-Claude Trichet (2009), readily acknowledges

> "...that there was a dramatic shift in focus in large parts of the financial sector—away from facilitating trade and real investment towards unfettered speculation and financial gambling. Hans-Werner Sinn has called these deviations 'Kasino-Kapitalismus'".

Financial liberalisation and innovation had beneficial effects; for instance the securitisation of loans allowed better risk diversification and management, but also allowed

> "Banks and non-banks not only to sell loans, but also to place them fully off-balance sheet as soon as they had been granted. This resulted in weak underwriting standards and a lack of incentives for lenders to conduct prudent screening of loans." ... The credit boom leading up to the crisis was exacerbated by three "multipliers": "first, incentives: ill-designed compensation schemes for loan managers and traders that reinforced the shortening of their time horizons; second, complexity: increasingly complicated and opaque financial instruments [derivatives] that made it difficult for holders of securities to assess the quality of the underlying investments; and third, global macroeconomic imbalances: a chronic shortage of savings in some industrialised economies was made possible by an excess of savings in other parts of the world. In mid-2007 the turmoil erupted. This was sudden, but not entirely unexpected." The reassessment and repricing of risk "occurred very suddenly, triggering turbulences in the interbank market. The consequences of this very sharp repricing threw the credit boom into reverse. The asset cycle turned, and many of the missing links in the financial chain were exposed." (Trichet, Ibidem).

> "The collapse in mid-September of last year [2008] of a major financial institution [Lehman Brothers] transformed the financial turmoil into a global financial crisis. Immediately, financial intermediaries restored liquidity buffers, scaled down their balance sheets and tightened lending conditions. They dramatically reduced exposure to the risks that they had imprudently accumulated during the period of financial euphoria. Collectively, they engaged in a large-scale "de-leveraging" process. Banks' intermediation was sharply reduced, and loans to companies were curtailed. A long-term trend that had brought credit risk spreads on loans

extended by international financial intermediaries to historical lows was suddenly reversed. A credit squeeze ensued which took a severe toll on the real economy." (Ibidem).

Eichengreen and O'Rourke (2009) have tracked down the course of the current crisis against that of the 1929–32 global crisis, in terms of industrial output, Stock Exchange values and international trade volume (Vox.eu 6 April, updated 4 June 2009). They have taken as the respective starting points of the two crises the earlier peaks in world industrial production, which occurred respectively in June 1929 and April 2008. Month after month, our current recession replicates the trends of 1929–32 or is worse. Signs of improvement appeared in the 4 June update, but do not alter the basic picture: the latest levels to which our recession has plunged in 2008–2009 are still below the corresponding levels reached at the equivalent time in 1929-30. "Today's crisis is at least as bad as the Great Depression" (op. cit) (see Figs. 25.2, 25.3, 25.4).

"To sum up",—Eichengreen and O'Rourke conclude—"globally we are tracking or doing even worse than the Great Depression, whether the metric is industrial production, exports or equity valuations. Focusing on the US causes one to minimise this alarming fact. The "Great Recession" label may turn out to be too optimistic. This is a Depression-sized event. That said, we are only one year into the current crisis, whereas after 1929 the

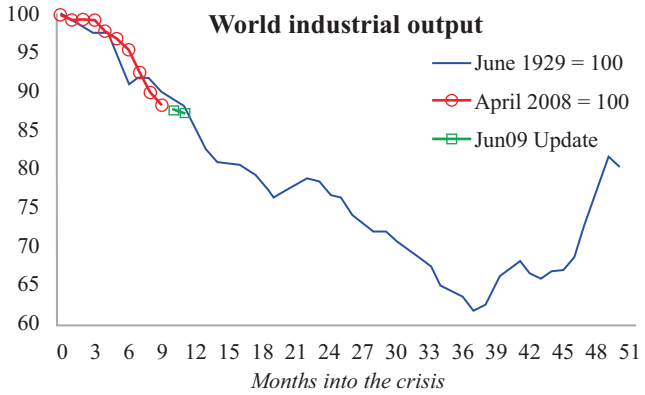


**Fig. 25.2** World Industrial Output, Now vs Then [update in green]. Source: Eichengreen and O'Rourke (2009) and IMF

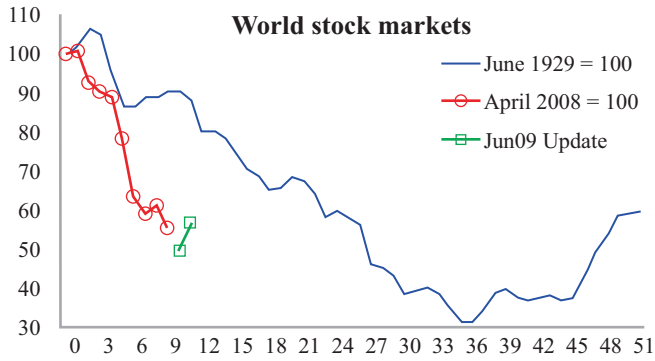


**Fig. 25.3** World Stock Markets, Now vs Then [update in green]. Source: Global Financial Database. From: Eichengreen and O'Rourke (2009)

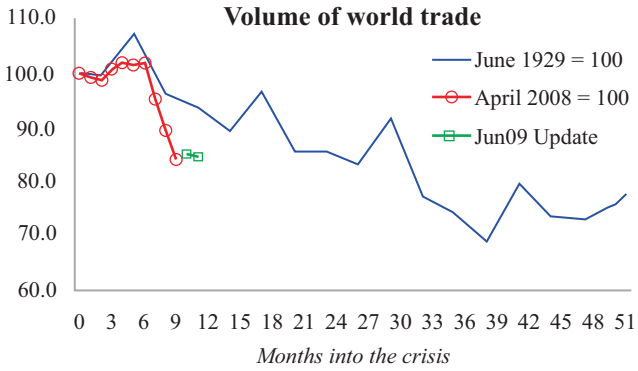


**Fig. 25.4** The volume of World Trade, Now vs Then [update in green]. Source: League of Nations Monthly Bulletin of Statistics. From: Eichengreen and O'Rourke (2009)

world economy continued to shrink for three successive years. What matters now is that policy makers arrest the decline."

The difference between the current crisis and that of 1929-32 is the massive macroeconomic intervention, monetary and fiscal, national and international, jointly set in motion in particular by the G-20 of April 2009 but also before and after. Monetary policy has responded faster and more strongly in the present crisis: in 7 major countries interest rates have

been cut more rapidly, from a lower level, down to unprecedented low levels. In 19 major countries money supplies in the run up to the beginning of the current crisis had been growing faster than before 1929, but the expansion has continued to be faster in 2008–2009, moreover without any prospect of the money supply contraction of 1929-32 (Eichengreen and O'Rourke 2009). Short-term interest rates have been driven to almost zero in the US, Japan and Canada, and generally under 1% in Europe. Government budgets have been running consistently higher deficits than in 1929-32, on a world basis, especially in the advanced countries, but also in emerging countries. At the emergency summit of G-20 leaders on 15 November 2008 a fiscal stimulus of the order of 2% of global GDP was proposed—uncharacteristically—by the IMF Managing Director Dominique Strauss-Kahn, but most of the US$ trillions involved are still only on paper or are not yet getting spent. Yet there have been calls for an exit strategy (for instance by the German Chancellor Angela Merkel and the ECB President Jean-Claude Trichet), viewed as premature by the IMF. Worse, a *collective* exit strategy was considered—though rejected for the time being—by the G-8 of 8–10 July 2009 at L'Aquila (see Nuti 2009).

## 25.3 The Delayed but Strong Impact on Transition Economies

Initially, from mid-2007 to mid-2008 when the current global crisis was only financial, the transition countries of Central Eastern Europe—regardless of EU or EMU membership—seemed to be fairly resilient. The sub-prime loans crisis that hit the United States and global intermediaries did not affect them directly. The 29 transition countries of operation of the European Bank for Reconstruction and Development (EBRD)—founded in 1991 to assist the post-socialist transition of Central-Eastern Europe, including Turkey from October 2008 – recorded still impressive, though falling, average growth rates of GDP of 6.9 per cent and 4.2 per cent respectively in 2007 and 2008.

Then, already by the last quarter of 2008, the indirect effects of the growing financial crisis on liquidity and on asset values began to be felt. A lagged slowdown began to reduce the sustained growth rates experienced until then. The crisis of mid-September 2008 triggered off by the Lehman Brothers bankruptcy began to spread across countries, impacting exchange rates and investment in the corporate sector. By end-2008/mid-2009, when consumption also began to be affected, economic activity in transition economies deteriorated much faster, from slowdown to rapid decline.

In May 2008 the EBRD still forecast for 2009 in its 29 countries of operation a resumption of higher growth of GDP at 5.7 per cent. By November 2008 a further slowdown was forecast instead, at 3 per cent. By January 2009 the forecast had been slashed to an imperceptible but still positive growth at 0.1 per cent. On 7 May 2009 the EBRD published their latest forecasts for 2009-2010,[1] anticipating an average 5 per cent *contraction* in real GNP in 2009, followed by a modest recovery of 1.4 per cent in 2010, mostly in the second half of the year. The latest EBRD figures are also—on average but not for Central Europe—worse than the April 2009 growth forecasts by the IMF, in the *World Economic Outlook on Crisis and Recovery.*[2] The European Commission *Spring Forecasts 2009*[3] are much more optimistic about Russia (only -3.8 per cent in 2009) but more pessimistic about Hungary and Poland, and otherwise only marginally different. The forecasts of UN/DESA (2009a) *Monthly Briefing on the World Economic Situation and Prospects,*[4] published on 7 May 2009, the same day as the EBRD forecasts, are consistently slightly more optimistic.

For the whole world, forecasts for 2009 are a decline at -1.4%, -2.5%, -2.2%—2.9% respectively by the *EC Spring Forecas*ts of April 2009, the IMF *World Economic Outlook* of April 2009 (IMF 2009a), the OECD Economic Outlook of June 2009 (OECD 2009a), the World Bank Global Development Finance of June 2009. The same sources forecast 2010

[1] http://www.ebrd.com/new/pressrel/2009/090507gdp.pdf.

[2] IMF (2009a); http://www.imf.org/external/pubs/ft/weo/2009/01/pdf/text.pdf

[3] European Commission *(2009) European Economy* 3/2009, 4 May 2009, http://ec.europa.eu/economyfinance/publications/publication15048en.pdf.

[4] http://www.un.org/esa/policy/publications/wespmbn/sgnote8.pdf

growth respectively at 1.9%, 1.0%, 2.3%, 2.0%. The same projections for the eurozone are -4%, -4,2%, -4.8%, -4.5% in 2009 and -0.1%,—0.4%, 0.0%, 0.5% in 2010; the *EC Spring forecasts* give for the whole EU the same rates as the euro-zone, -4% in 2009 and -0.1 in 2010. Compared with a contraction of the EU-10 transition economies by around 3% in 2009 and zero growth in 2010 (EBRD May 2009), average convergence with the EU is preserved, though not for individual countries. The IMF *World Economic Outlook Update* of July 2009 (IMF 2009b) lowered the world forecast by -0.1 for 2009 but raised it by +0.6 for 2010, i.e. a marginally deeper decline followed by a slightly faster recovery.

Within the aggregate forecasts given above, the 29 EBRD client countries exhibit very different economic performances (see Table 25.1). In

**Table 25.1** Growth in real GDP, 2007–2008 and forecasts 2009–2010

| | GDP Growth (year over year percent change) | | | | | | Memorandum item: GDP Growth within year (Q4 over Q4 percent change) | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Current forecast | | | | Forecast Jan 2009 | | Forecast | | | |
| *(In percent; EBRD forecasts as of May 7, 2009)* | 2007 | 2008 | 2009 | 2010 | 2009 | Change May–Jan | 2007 | 2006 | 2009 | 2010 |
| **Central Europe and the Baltic states** | | | | | | | | | | |
| Croatia | 5.5 | 2.4 | -3.0 | -0.2 | 0.0 | -3.0 | 3.5 | 0.2 | -3.0 | 1.9 |
| Czech Republc | 6.0 | 3.2 | -3.5[2] | 0.1[2] | 0.0 | -3.5 | … | … | … | … |
| Estonia | 6.3 | -3.6 | -10.5 | -0.2 | -3.5 | -7.0 | 4.4 | -9.7 | -5.9 | 2.9 |
| Hungary | 1.1 | 0.5 | -5.0 | 0.0 | -2.0 | -3.0 | 0.8 | -2.3 | -3.7 | 0.4 |
| Latvia | 10.0 | -4.6 | -13.2 | -4.1 | -5.0 | -8.2 | 10.0 | -10.3 | -8.7 | -1.3 |
| Lithuania | 8.9 | 3.0 | -11.8 | -2.0 | -2.5 | -9.3 | 8.8 | -2.2 | -10.6 | -0.4 |
| Poland | 6.7 | 4.9 | 0.0 | 0.8 | 1.5 | -1.5 | 7.2 | 2.5 | -1.0 | 1.9 |
| Slovak Republic | 10.4 | 6.4 | -3.5 | 0.8 | 2.5 | -6.0 | 14.3 | 2.5 | -4.9 | 2.2 |
| Slovenia | 6.8 | 3.5 | -4.0 | 0.5 | 1.5 | -5.5 | 5.4 | -0.8 | -2.1 | 2.0 |
| ***Average[1]*** | ***6.2*** | ***3.4*** | ***–2.9*** | ***0.2*** | ***0.4*** | ***–3.3*** | | | | |
| **South-eastern Europe** | | | | | | | | | | |
| Albania | 6.2 | 6.9 | 1.2 | 1.8 | 4.0 | -2.8 | 7.0 | 5.8 | -0.3 | 3.5 |
| Bosnia and Herzegovina | 6.8 | 6.0 | -1.0 | 1.0 | 1.5 | -2.5 | … | … | … | … |
| Bulgaria | 6.2 | 6.0 | -3.0 | -1.0 | 2.0 | -5.0 | 6.9 | 3.5 | 4.3 | 1.2 |

(*continued*)

**Table 25.1** (continued)

| *(In percent; EBRD forecasts as of May 7, 2009)* | GDP Growth (year over year percent change) | | | | | | Memorandum item: GDP Growth within year (Q4 over Q4 percent change) | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Current forecast | | | | Forecast Jan 2009 | Change May–Jan | Forecast | | | |
| | 2007 | 2008 | 2009 | 2010 | 2009 | | 2007 | 2006 | 2009 | 2010 |
| FYR Macedonia | 5.9 | 5.0 | –1.3 | 0.8 | 3.0 | –4.3 | 7.3 | 2.1 | –1.4 | 1.6 |
| Montenegro | 10.3 | 7.0 | –1.0 | –0.3 | 3.0 | –4.0 | … | … | … | … |
| Romania | 6.0 | 7.1 | –4.0 | 0.4 | 1.0 | –5.0 | 6.6 | 2.9 | –4.0 | 3.0 |
| Serbia | 6.9 | 5.4 | –3.0 | 1.0 | 2.0 | –5.0 | 5.8 | 2.8 | –3.4 | 3.2 |
| ***Average[1]*** | ***6.3*** | ***6.6*** | ***–3.2*** | ***0.4*** | ***1.5*** | ***–4.7*** | | | | |
| **Eastern Europe and the Caucasus** | | | | | | | | | | |
| Armenia | 13.8 | 6.8 | –5.5 | 1.0 | 5.5 | –11.0 | 13.8 | 6.8 | –4.5 | 1.1 |
| Azerbaijan | 23.4 | 10.8 | 3.0 | 6.0 | 8.0 | –5.0 | 23.4 | 10.8 | 3.4 | 6.6 |
| Belarus | 8.2 | 10.0 | –3.0 | 1.4 | 2.0 | –5.0 | 7.1 | 7.5 | –3.8 | 2.8 |
| Georgia | 12.4 | 2.1 | –1.0 | 2.0 | 3.0 | –4.0 | 11.7 | –2.5 | 0.4 | 3.4 |
| Moldova | 3.0 | 7.2 | –6.0 | 1.5 | 1.7 | –7.7 | 2.3 | 6.2 | –6.7 | 2.7 |
| Ukraine | 7.6 | 2.1 | –10.0 | 0.0 | –5.0 | –5.0 | 7.4 | –8.0 | –2.6 | 0.0 |
| ***Average[1]*** | ***9.9*** | ***5.0*** | ***–6.2*** | ***1.3*** | ***–0.8*** | ***–5.4*** | | | | |
| **Turkey** | 4.7 | 1.1 | –5.5 | 1.0 | –3.0 | –2.5 | 4.2 | –6.2 | –0.1 | 1.0 |
| **Russia** | 8.1 | 5.6 | –7.5[3] | 2.5 | 1.0 | –8.5 | 9.0 | 1.2 | –4.7[3] | 1.0 |
| **Central Asia** | | | | | | | | | | |
| Kazakhstan | 8.9 | 3.2 | –2.0 | 1.4 | 0.5 | –2.5 | 6.5 | 1.3 | –1.1 | 1.0 |
| Kyrgyz Republic | 8.2 | 7.6 | 0.5 | 3.5 | 3.9 | –3.4 | … | … | … | … |
| Mongolia | 9.9 | 8.9 | 2.7 | 5.0 | 6.0 | –3.3 | … | … | … | … |
| Tajikistan | 7.8 | 7.9 | 0.5 | 2.0 | 5.0 | –4.5 | … | … | … | … |
| Turkmenistan | 11.6 | 9.8 | 9.5 | 9.0 | 10.5 | –1.0 | … | … | … | … |
| Uzbekistan | 9.5 | 9.0 | 5.0 | 6.0 | 5.0 | 0.0 | … | … | … | … |
| ***Average[1]*** | ***9.2*** | ***5.0*** | ***0.4*** | ***3.0*** | ***2.3*** | ***–1.9*** | … | … | … | … |
| **All transition countries** | | | | | | | | | | |
| ***Average[1]*** | ***6.9*** | ***4.2*** | ***–5.2*** | ***1.4*** | ***0.1*** | ***–5.3*** | | | | |

1. Weighted average. The weights used for the growth rates are EBRD estimates of nominal dollar-GDP lagged by one year. 2. IMF projections. EBRD no longer produces a forecast for the Czech Republic. 3. Based on first quarter GDP growth estimates of the Ministry of Economy of the Russian Federation of- 9.5 per cent year on year.

*Source*: *EBRD Forecasts*, 7 May 2009

2009 Poland fares best in Central Europe and the Baltics, with zero growth. At the other end of the range three Baltic countries are contracting by more than 10 per cent: Estonia (already in recession at −3 per cent in 2008) at −10.5, Lithuania at −11.8, and Latvia at −13.2 per cent. Hungary is doing rather poorly: after stagnation at 1.1 per cent in 2007 and 0.5 per cent in 2008, its GNP is poised to fall by 5.0 per cent, with zero growth in 2010. On average in Central Europe and the Baltics GDP is expected by the EBRD to decline in 2009 at 2.9 per cent, and to resume growth at only 0.2 per cent in 2010. In the April 2009 *World Economic Outlook* the IMF was even more pessimistic, with a 3.7 per cent GNP decline, but more optimistic for Russia and the rest of the Commonwealth of Independent States.

EBRD forecasts for South-Eastern Europe show a slightly better performance: on average growth rates in 2007-2010 follow the pattern (in per cent): 6.3, 6.6, -2.2, 0.4; in 2009 Romania is worst with -4.0. In the same years Eastern Europe and the Caucasus (meaning the non Asian members of the Commonwealth of Independent States, not counting Russia) exhibit actual and predicted growth of 9.9, 5.0, -6.2, 1.3; Ukraine is expected to contract by 10.0 per cent this year and grow at a zero rate next year. Central Asia is the least affected area, with GNP growth rates of 9.2, 5.0, 0.4, and 3.0 in 2007-2010. Finally, Russia is seriously affected: 8.1 and 5.6 in 2007, 2008;—7.5 in 2009, the result of an even deeper fall in the first quarter and an expected improvement in the rest of the year. The EBRD (7 May 2009) forecasts green shoots of recovery in Russia at a growth rate of 1.0 per cent in 2010.

Figure 25.5 represents real GDP growth in the last two quarters of 2008 and the first quarter of 2009, in the ten East-European members of the EU (from Laursen 2009). The data confirms a sharp slowdown across the region, with the sharpest GDP declines in the Baltic Countries: Latvia -18%, Estonia -15% and Lithuania -13.6%. Poland is the only country in the region to record positive growth in the first quarter of 2009. Figure 25.6 represents IMF data for 2008 and forecasts for 2009-2010 for the EU-10.

Naturally, unemployment will continue to rise until output growth will exceed that of productivity (minus the possible fall in the labour force); the peak of unemployment is yet to come (see Fig. 25.7).

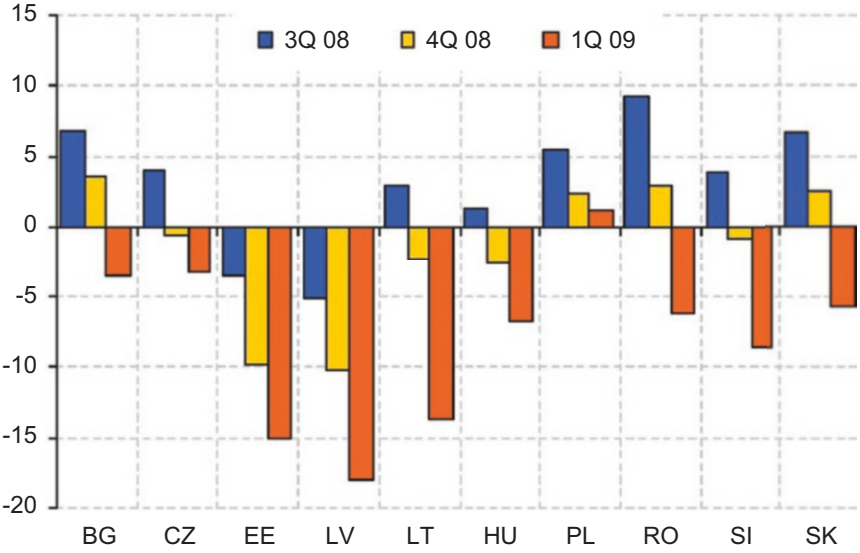


**Fig. 25.5** Real GDP growth in EU10 in 3Q 2008 to 1Q 2009, (% change, year-on-year, seasonally adjusted). Sources: Eurostat, World Bank Staff calculations. Q1 2009 data is preliminary. From: Laursen 2009

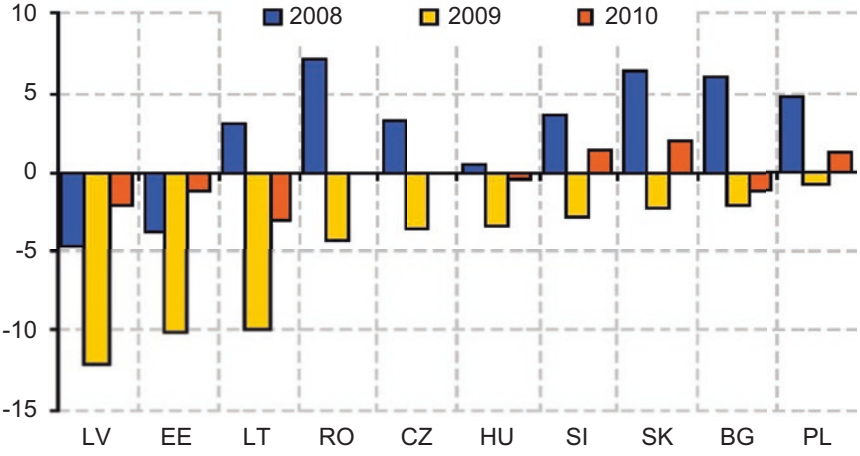


**Fig. 25.6** IMF forecast of real GDP growth in EU-10 in 2009 and 2010 (% change, year-on-year). Source: IMF, World Economic Outlook, April 2008. From Laursen (2009)

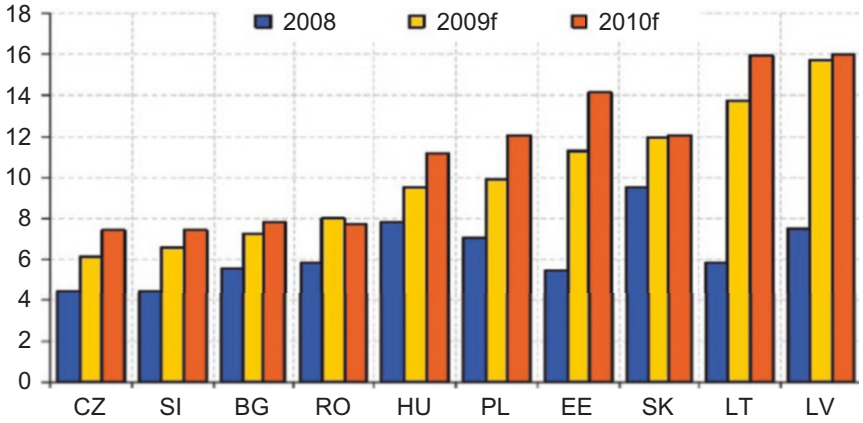


**Fig. 25.7** Unemployment rates in EU-10 countries (% of labour force), 2008 and forecasts 2009–2010. Source: EC Spring Forecasts, May 2009, and World Bank Staff calculations. From: Laursen 2009

## 25.4 Heterogeneity

The heterogeneity of country experiences, already visible from Tables 25.1, 25.2, & 25.3 and Figs. 25.5, 25.6, 25.7, & 25.8 above, is pithily and efficiently synthesised by one-liners from three sources. The first is a table on *Fourteen ways to slowdown* from *The Economist*, 26 February 2009 (Table 25.2).

The second source is the *EC Spring Forecasts 2009* (cited), whose country chapters for transition economies (EU member states, candidate states and Russia) have the enlightening subtitles listed below:

Bulgaria: Vanishing budgetary surplus, external deficit remains large.
The Czech Republic: Output falls sharply driven by collapse in external demand.
Estonia: Adjusting to face gloomier years.
Latvia: Domestic demand and trade implode.
Lithuania: Deepening recession leads to wider fiscal deficits.
Hungary: Domestic financial crisis magnifies recession.
Poland: Mild recession knocking at the door.
Romania: Growth contracts sharply.

**Table 25.2** Fourteen ways to slowdown (italics=pegged to euro; bold=in euro area)

| Country | GDP per person* | S&P credit rating# | Financing requirements, % of GDP° | Exports§ | In a nutshell |
|---|---|---|---|---|---|
| Belarus | 12,344 | B+ | 7.3 | 62.1. | Autocratic, isolated, gained surprise IMF bailout |
| *Bulgaria* | 12,372 | A | 29.4 | 61.0 | Strong finances back currency peg; sleaze rampant |
| Czech R | 25,757 | AA | 9.4 | 80.1 | Thrifty and solid but hit by export slowdown |
| *Estonia* | 20,754 | AA | 20.0 | 72.0 | Star reformer squeezes spending to stay afloat |
| Hungary | 19,830 | A | 29.9 | 80.2 | Currency crush could topple debt-heavy economy |
| *Latvia* | 17,801 | BBB | 24.3 | 46.6 | Clinging to currency peg amid turmoil & downturn |
| *Lithuania* | 18,855 | A+ | 27.1 | 59.0 | Painful spending squeeze to avoid worse |
| Poland | 17,560 | A+ | 13.2 | 42.3 | Regional heavyweight speeds up euro bid |
| Romania | 12,698 | BBB+ | 20.2 | 36.4 | Spendthrift policies meet solid reality |
| Russia | 16,161 | BBB | 2.2 | 31.7 | Energy-based kleptocracy in denial about crisis |
| Serbia | 10,911 | BB- | 23.5 | 22.2 | Seeking more IMF help |
| **Slovakia** | 22,242 | AAA | 12.5 | 90.5 | Smugly in euro-area, hit by car-factory slowdown |
| **Slovenia** | 28,894 | AAA | – | 70.5 | Self-satisfied, rich and still growing |
| Ukraine | 7634 | CCC+ | 16.1 | 45.0 | No end in sight to political and economic chaos |

* PPP$, 2008 estimate. # Standard & Poor's, latest. °Current account balance, principal due on public and private debts plus IMF debits, 2008 estimate. § Goods and services, % of GDP, 2008 estimate

Sources: IMF; Moody's; Economist Intelligence Unit, *The Economist*. From: Sarah Hanson (2009), "The whiff of contagion", *The Economist*, 26 February 2009 (Corrected, 5 March). http://www.economist.com/world/europe/displaystory.cfm?storyid=1318459

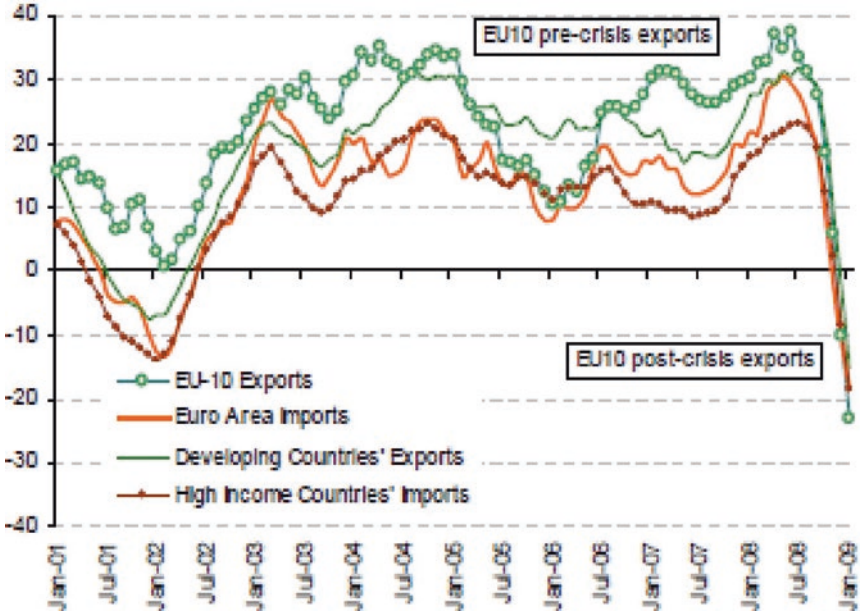


**Fig. 25.8** EU and High Income Countries Imports and EU-10 and LMIC Exports (3 months moving average, % change, year on year, seasonally adjusted). Source: Datastream Thomson and World Bank. From: Laursen 2009

Slovenia: Sharp falls in exports and investment point to competitiveness challenges.

Slovakia: Global downturn weighs on exports.

Croatia: a declining economy creates important fiscal challenges.

The Former Yugoslav Republic of Macedonia: Joining the general trend ... albeit with a delay.

Turkey: Manufacturing faltering as exports decline.

Russian Federation: The first recession in a decade.

The third is a review of "Recent Economic Developments" by the Austrian National Bank, *Focus on European Economic Integration* Q2/2009, with the following country subtitles:

Slovakia: Euro Introduction Mitigates Spillovers from Global Financial Crisis.

Slovenia: Successive Crisis-Response Packages to Counter Economic Contraction.

Bulgaria: Crisis hits, too, but So Far Less Hard than in Other CESEE [Central, Eastern and Southeastern Europe] countries.

Czech Republic: Marked Downturn in Growth Dynamics.

Hungary: Global Crisis Pushes the Economy into Recession.

Poland: Looming Stagnation—Fiscal Policy Response Trying to Square the Circle.

Romania: Turning to the IMF and the EU for Macrofinancial Assistance.

Croatia: Coping with Spillovers from the Global Financial Crisis.

Turkey: A Major Downturn in Late 2008.

Russia: Fiscal Stimulus to Mitigate Spillovers from Crisis.

Some of these special features of individual countries will be considered further below.

## 25.5 Two General Factors: 1) the Collapse of World Trade..

In general the current financial crisis confronted all emerging and developing countries—including transition economies—with two shocks: "a 'sudden stop' of capital inflows driven by global de-leveraging, and a collapse in export demand associated with the global slump" (from an IMF Staff Position Note, Ghosh et al. 2009). But there are different aspects and intensities, specific to country groups, discussed both in the IMF Note and in other papers (see for instance: Richard Connolly 2009).

Current projections for 2009 indicate for the first time since the last World War a decline in world output (-2 per cent according to the IMF) and a much larger decline in world trade, which fell by 17 per cent between September and December 2008 (FT Editorial, 5 September), thus reducing for the first time since WWII the most common measure of globalisation, the ratio between world exports and world GNP. This "trade destruction" appears to have been much worse than in the corresponding months of 1929-32. As recently as May 2008 the IMF External

Relations Department could still issue a paper "Globalization: A Brief Overview" ("By IMF Staff"), saying that "*Globalisation is irreversible*: In the long run, globalization is likely to be an unrelenting phenomenon" (italics in the original). Six month later a sizeable de-globalisation episode was already well under way.

Output and trade contractions are larger in the EU, with which transition economies have grown to be increasingly integrated, with EU trade shares of the order of 60-90 per cent for the New Member States and South-Eastern Europe, all characterised by high foreign trade openness, higher than that of most old members of the EU (see Table 25.2 above, penultimate column). Such openness makes the transition economies' opportunities of "de-coupling" from downturns in the EU rather limited (Connolly, cited, p.5). The impact of trade shocks has been augmented by the parallel reduction of emigrant remittances, highly significant in some countries (though data are still fragmentary).

Figure 25.8 shows "Double-digit collapse in the EU10 exports much in line with the abrupt slowdown in Euro Area imports" (Laursen 2009). Lower trade shares involve a slowdown in manufacturing and extractive industries and in internal demand, especially in construction and financial services. Industrial production exhibits large contractions since September 2008 in the EU-10, much larger than falls in consumption due to large reduction of inventories. By March 2009 the rate of change of industrial output was still negative but slowing down (not shown in Fig. 25.8). As a consequence of industrial output fall, industrial investment since September 2008 has collapsed.

## 25.6 ... And 2) the Fall or Reversal of FDI and Portfolio Investment Flows

"With net private capital flows to emerging market (and developing) countries projected to decline from an *inflow* of US$600 billion in 2007 to an *outflow* of US$180 billion in 2009, Emerging Market Economies (EMEs) are facing a severe credit crunch. Particularly affected are the countries with large current account deficits—many of which had asset

price and credit booms" (Ghosh et al. 2009, p.6.). Transition economies had been able to attract large and growing capital inflows thanks to privatisations at attractive prices, high interest rates net of devaluation cover or even plus revaluations, and production de-localisation thanks to low wages. These attractions have weakened, and the recession has made inflows even less attractive.

"The region (i.e. Connolly's Emerging Europe defined above) faces an aggregated adjusted gross external financing requirement of approximately $460bn, or around $930bn if short-term is added... The deterioration in the outlook for private capital flows to emerging markets makes 'roll-over' of these loans extremely unlikely, with the Institute of International Finance (IIF) projecting a fall in private capital flows to the region from around $254bn in 2008 to only $30bn in 2009" (Connolly 2009, p.4).

The slowdown in gross capital flows (from $6bn in the third quarter of 2008 to $2bn in the first quarter of 2009, to the UE-10) has been accompanied by a slowdown in credit growth; the rise of interbank interest rates since October 2008 in counter-tendency with Libor, beginning to fall again but still higher than then in March-May 2009; the rise of Credit Default Swap rates of parent banks in November 2008, beginning to ease in April 2009; the drastic fall of stock exchanges everywhere in the EU-10, by over 60% in the Baltics in January 2008-April 2009, ranging in the other EU-10 between almost 30% in Slovakia to over 80% in Bulgaria.

In these circumstances devaluations are unavoidable, but steering a course between floating and pegging is hard. Higher interest rates are unlikely to bring back capital in a recession. Controls on capital flows will at best stop capital flight but not bring it back, and can be counter-productive. Official financing is therefore badly needed, by the IMF in the first instance with doubling access limits, Flexible Credit Lines, and Stand-By arrangements. Thus, for instance, Romania took $26.3bn in total credit, of which $17.1bn from the IMF (1111% of quota), Ukraine took $16.4bn from the IMF (802% of quota), Latvia $10.42bn in total credit, of which $2.4 from the IMF (1223% of quota), Serbia $4bn from the IMF (560% of quota), Bosnia $1.52bn from the IMF (600% of quota). With additional resources, support for debt restructuring can

come from national governments, for instance by converting foreign currency loans to domestic currency and compensating banks for losses, maybe only partly.

The intensity of the two general factors reviewed here—collapse in global trade and fall/reversal of capital flows—is modified by additional features, reviewed in the next five Sects. (25.7-25.11): external imbalances; terms of trade; domestic sub-primes; foreign banks withdrawal of funds; differences in initial positions and policy responses.

## 25.7 External Imbalances

Laursen (2009) shows that "EU-10 countries with the largest imbalances, as reflected in large current account deficits, large bank-related capital inflows, and high inflation are set to see the largest downturns in economic activity" (he also finds the scale of the downturn is inversely related to the trade-weighed growth of their export markets).

Connolly (2009, cit.) considers twenty countries which he labels "Emerging Europe" (the EBRD 29 minus Turkey, Albania, Bosnia & Herzegovina, Macedonia, Montenegro, Serbia, Tajikistan, Turkmenistan and Mongolia). He notes: "Emerging Europe is the only emerging market region to collectively run a current account deficit". Apart from Azerbaijan, Kazakhstan and Russia in 2008 all the other countries in this group have current account deficits, of which seven are over 10 per cent of GDP: Bulgaria -21.2 per cent, Georgia—20.6, Moldova -15.3, Lithuania -13.9, Romania -13.3, Latvia -12.1, Estonia -11.2.

At least until September 2009 these current account deficits have not prevented the maintenance of fixed or hyper-fixed exchange rates in countries like Bulgaria, Latvia, Lithuania, Estonia; floating exchange rates, on the contrary, have been subjected to significant devaluations. All transition economies, however, have found themselves between a rock and a hard place: floating rates and associated devaluations have correspondingly raised the value of foreign currency domestic debt and its service, while fixed rates have reduced external competitiveness, preventing adjustment, and aggravated decline and unemployment, while still being subjected to the Damocles' sword of impending devaluation (Fig. 25.9).

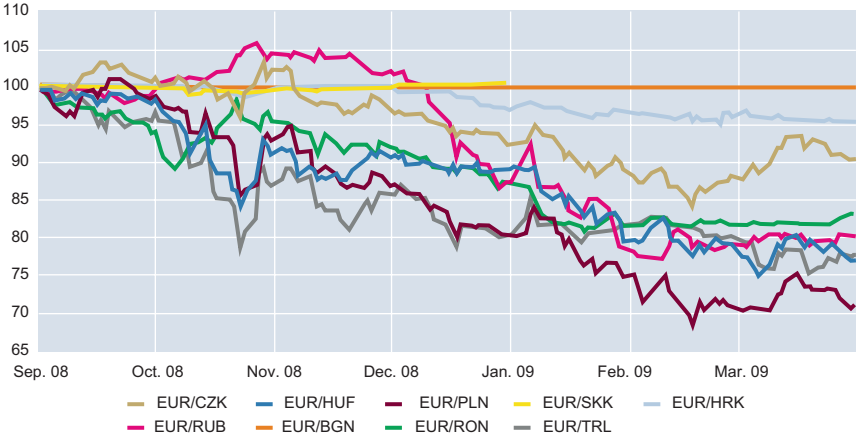


**Fig. 25.9** Exchange Rate Developments against the Euro (1 September 2008=100; Cutoff date 31 March 2009). Note: An increase in value means a nominal appreciation. Source: Thomson Reuters. From: Austrian National Bank (2009)

Sustained current account deficits lead naturally to higher external debt. But it cannot be argued that the current account deficits were the result of fiscal profligacy. Between 2000 and 2008 the number of countries running a government surplus increased from one (Russia) to five (with the addition of Azerbaijan, Belarus, Bulgaria, Kazakhstan), while the deficits of another 13 countries out of the twenty reviewed by Connolly fell below 3 per cent. Thus on average growth of external debt is clearly due primarily to the private sector. Yet the expected emergence of contingent liabilities and costly bailouts reduces governments' credibility anyway.

Darvas and Pisani-Ferry (2009) establish a significant correlation between the cost of credit default swaps (CDS), i.e. the insurance against default on government debt, and current account deficits. Moreover, they find that non-eurozone members pay a higher insurance cost, rising very much faster over time: "the crisis management in the euro area has had the unintended consequence of putting non euro-area new member states at a disadvantage". Probably, without the credibility bestowed by the euro, floating rates lead to overshooting devaluation, while fixed rates lose competitiveness to the country that maintains them and provide adverse shocks when the peg sooner or later has to be altered.

## 25.8 Terms of Trade

Primary product exporters—primarily Russia, Azerbaijan and Kazakhstan—were in position until mid-2008 to run current account surpluses and accumulate foreign reserves. But in 2008 oil, gas, cotton and metals fell in price. Terms of trade changes added themselves to the reduction in trade volume, as illustrated in Fig. 25.10 below. For transition economies on average the impact of worsening terms of trade was almost as large as that of the reduction in trade volume.

Foreign reserves were used—to some extent wasted, we could say—to support overvalued exchange rates and to bail out financial institutions and productive enterprises. The Central Bank of Russia foreign reserves (including gold) fell from $476.4bn in 2007 to $427.1bn in 2008 and

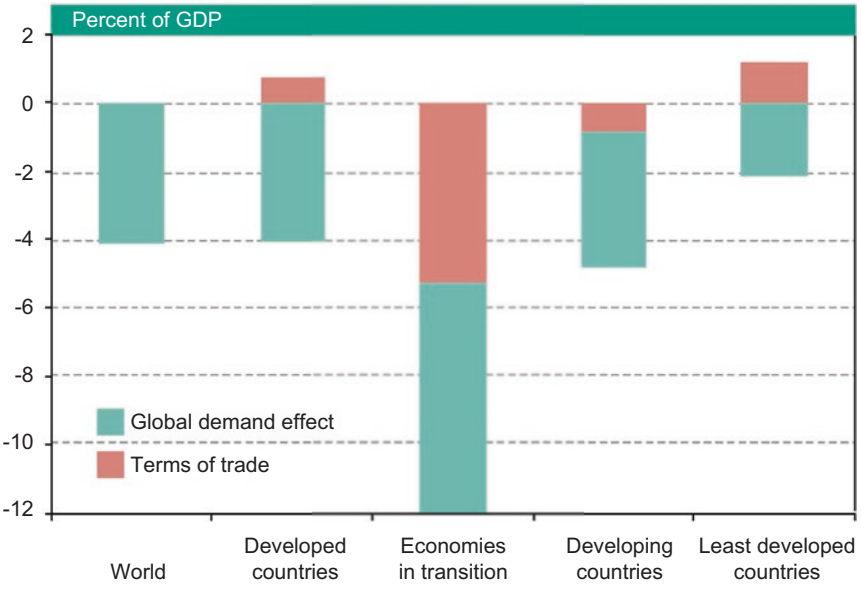


**Fig. 25.10** Projected trade shocks in major country groups in 2009. From: UN/DESA (2009b), Monthly Briefing, World Economic Situation and Prospects and Monitoring of Global Vulnerability, 12 August 2009, n. 11

$383.9bn at the end of April 2009[5] (though other sources report larger losses). The EC Spring Forecasts 2009 (cited above) are more optimistic than the EBRD, yet expect a Russian budget swinging sharply from a hefty surplus to large deficits, of respectively 6.5% and 2.7% of GDP in 2009, due to the reduction in commodity prices and in economic activity, plus the large fiscal stimulus packages. Russia is also forecast to see major falls in both its trade and current account surpluses, respectively to 5.1% and 6.3% of GDP in 2009, and 1.4% and 2.7% in 2010. Recovery in the price of oil in the second quarter of 2009 does not seem to have succeeded in improving the prospects of Russian financial markets and economic growth.

## 25.9 Domestic Sub-Primes

The USA sub-primes crisis of August 2007 touched only marginally the transition economies. But a large amount of domestic loans, mostly for house-purchase finance but also in the enterprise sector—and in the government sector—were originally denominated in foreign currency because the national currency a) involved much higher interest rates and b) had been stable or (with the exception of countries with a successful Currency Board: Bulgaria, Estonia and Lithuania) appreciating. All these loans, amounting to $250 billion in Central Eastern Europe (Auer and Wehrmuller 2009) promptly *became* sub-prime, as soon as the domestic currency began to depreciate. Thus, for instance, Polish borrowers in Swiss Francs in the last quarter of 2008 and the first quarter of 2009 have seen their zloty liabilities rise by 31 per cent due to the revaluation of the SF with respect to the Polish zloty. In turn, not surprisingly, the countries with fixed or hyper-fixed exchange rates tended to be hit harder by the recession, thus reducing borrowers' capacity to service their loans, which also became sub-prime in that way.

Auer and Wehrmuller (2009) estimate that in the 10 EU member states from Central Europe total losses from private and public debt

[5] Bank of Finland Institute of Transition, Russian Statistics Update, 2009, http://www.bof.fi/bofiten/seuranta/venajatilastot/index.htm

revaluation amount to about $60bn, under 5 per cent of GDP in most countries, but as much as 18 per cent and 8 per cent in Hungary and Poland respectively. The expectation that the state will ultimately bear the cost of bailing out the debtors, plus the cost born by the state on its own debt, has dramatically raised the spread on Credit Default Swaps for the eight out of the ten new Member States for which data are available.

The problem is serious: in 2007 in eight countries—Ukraine, Romania, Bulgaria, Lithuania, Hungary, Georgia, Estonia, Latvia—the foreign currency-denominated debt in the non-financial private sector exceeded 50% of total non-financial sector debt. In Hungary, Georgia and Estonia it was over 60% and in Latvia almost 90% (Connolly 2009, p. 23).

De Haas and Knobloch (2009) illustrate, more generally, the changes in the incidence of non-performing loans (NPLs) in 21 transition economies between June 2008 and March 2009; they remind us that "widely differing definitions and limited data availability pose serious constraints to this kind of exercise", which is why percentage changes in the NPLs incidence are preferred to largely non-comparable measures of their incidence. Figure 25.11 below reflects the wide variation in NPL dynamics across 13 transition economies.

The largest increases are in Russia, Central Asia, Mongolia, Georgia and Latvia, where NPLs ratios increased more than two-fold over the period, over 3 times in Latvia; Georgia's doubled immediately after the armed conflict of August 2008 and continued to increase at a lower pace. In Central-Eastern Europe there have been so far fairly moderate increases (Hungary's actually fell in the second half of 2008 and resumed a moderate growth in the first quarter of 2009). Eastern and South-Eastern countries show an intermediate dynamic. Between April and May 2009 NPLs' ratios increased across the board.

De Haas and Knobloch show that "... collapsing real house prices and relative increases in NPLs go hand in hand" (see Fig. 25.12), i.e. there was the autonomous replication of the US sub-prime experience. They note that "... there seems to be a negative correlation between the increase in NPLs and the foreign ownership of local banking systems. Latvia would be the main exception to this observation". However, their outlook for NPLs in 2009-2010 is pessimistic: "...during a business cycle downturn or

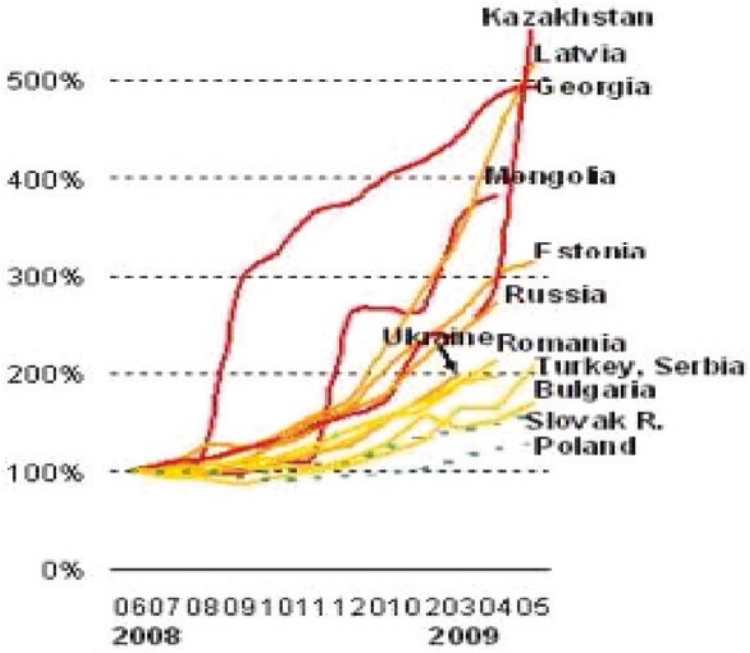


**Fig. 25.11** Relative changes of non-performing loan ratios since June 2008. From: De Haas and Knobloch 2009

a crisis, the inflow of 'fresh' loans is reduced, the average loan portfolio of banks matures and loan problems become increasingly apparent over time. NPL *ratios* increase particularly fast as they combine the effect of weaker loan quality in the numerator with lower loan growth in the denominator. We expect therefore that during the next couple of months, when economic 'green shoots' will hopefully become increasingly visible, we may be confronted with the lagged legacy of the 2007-2009 crisis in the form of a further increase in nonperforming loans."

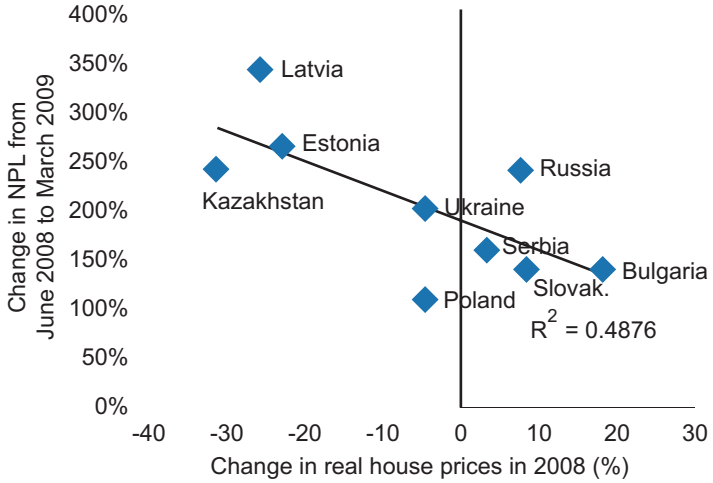


**Fig. 25.12** Correlation between house price collapses and relative changes in non-performing loans. From: De Haas and Knobloch 2009

## 25.10 Foreign Banks Withdrawal of Funds

At the inception of the transition an under-capitalised and largely insolvent state banking system was partly cleansed of what today are labelled toxic assets, then recapitalised, privatised mostly to foreign banks, and new banks were promoted, also mostly foreign. By 2006, foreign ownership in the ten New Member States, excluding Slovenia (at 22 per cent), ranges from 74 per cent in Latvia to 98 per cent in Estonia. [6] Foreign banks were to provide capital and know how, and through access to foreign parent banks provide foreign exchange and effective access to lending of last resort in the country of origin.

In May 2009 Eric Berglof, the EBRD Chief Economist, noted that "Over the past six months important bank bailout programmes in Western Europe have helped stabilise the international banks operating in Eastern Europe" and assumes "continued external engagement,

[6] EBRD, Transition Report 2006, http://www.ebrd.com/new/pressrel/2006/152nov14.htm

particularly from the western parents of banks in the region" (EBRD Press Release, 7 May 2009). On 14 May 2009, at the EBRD Economic Policy Forum, the Bank's President Thomas Mirow stressed "... *the fact that the danger of large-scale retrenchment or withdrawal of western parent banks from eastern Europe has been averted and seems more unlikely now than only a few months ago*"(my Italics throughout). And Darvas and Pisani-Ferry (2009) also argue that "Several factors have mitigated the impact of the crisis on non euro area NMS (New Member States): ... [among other things] western European ownership of NMS banks (*by indirectly stabilizing their NMS subsidiaries*)..." (emphasis added).

Yet the *EC Spring forecasts 2009* tell a different story: "*The repatriation of capital by foreign banks has been particularly abrupt in some cases... the presence of EU banks in the region creates further potential negative spill-overs via the financial channel*" (p. 22, emphasis added).

And "If a foreign bank with big exposure to the region—Swedish, Austrian or Italian—needs to raise more capital but finds that outsiders think its loan book is too risky, what happens? The price of rescue may be that it sheds a troubled foreign subsidiary. Signs of shareholder twitchiness are growing" (*The Economist*, 26 February 2009). Foreign parent banks risk downgrading as a result of the declining profitability and the losses on their operations in Eastern Europe, while EE countries depend on their continued financial health.

Not unnaturally, when capital becomes scarcer in the country of origin, foreign capital tends to go back home. "Paradoxically, it is precisely this characteristic—strong foreign banking presence—that renders EE countries (except for the CIS region), much more vulnerable to the present financial turmoil" (Uvalic 2009, p. 4).

On the EBRD Blog, Eric Berglof (2009) readily admitted the problem: "I do indeed think that there is a serious risk that some banks could decide to withdraw or be forced to withdraw from the region. We should not kid ourselves, the forces on the banks to retrench are extraordinary—some de-leveraging and adjustment to lower credit demand is unavoidable and essentially healthy." He actually strengthened the point adding that "The current situation has elements of a prisoners' dilemma where the banks as a collective want to stay involved, but in the short-term an individual bank

has incentives to be the first to withdraw." But he relied on the "Vienna Initiative" (illustrated in his post, 7 and 12 May) and other forms of concerted and conditional support by international financial institutions.

But clearly the problem of bank withdrawal of funds from Eastern Europe does worry the EBRD. On 11 May 2009 two other EBRD officials, Piroska Nagy and Stephan Knobloch, in an excellent post on the EBRD Blog, on "BIS data on cross-border flows" produced substantial and disquieting evidence of the seriousness of such outflows. In the last quarter of 2008 BIS-reporting banks significantly reduced their asset holding across major world regions ($1.8 trillion or 5.4% of their stock). In absolute terms advanced countries were hit harder ($1.3 trillion), but in relative terms emerging markets did worse. So far the EBRD region was the least affected, but the decline ($57 billion) was "still very significant".

Moreover, within Emerging Europe: 1) the decline was concentrated on a few countries: Russia, Turkey, Ukraine, as well as Poland, the Czech Republic, and Slovenia; 2) the decline happened in the most financially integrated countries, not necessarily in countries with weaker fundamentals, "with large outflows both from countries that have already been hard hit by the crisis (Ukraine) and countries that have been resilient so far (Poland)". "This is in line with earlier crisis experiences which showed that investors withdraw liquidity not only from countries with weaker fundamentals but also from markets in the same region that are deeper and more liquid" (Nagy and Knobloch, Ibidem). Thus asset outflows in the last quarter of 2008 were 15.5% of the stock in Russia, 9.4% in Ukraine, 8.2% in Poland, 7.5% in Turkey (which is also a country of operation for the EBRD), 7.2% in the Czech Republic, 4.1% in Moldova. In absolute terms, the outflow was $33bn in Russia, $12bn in Turkey, $11bn in Poland, $4bn in the Czech Republic and in Ukraine (Figs. 25.13 and 25.14).

"Looking forward", Nagy and Knobloch conclude, "similar trends are expected to have continued—if not deepened—in Q1 of 2009. De-leveraging is an inevitable part of banks' balance sheet adjustment in the context of the global financial crisis." While the average picture is reassuring, for the individual countries where the phenomenon is concentrated it is intensely worrying.

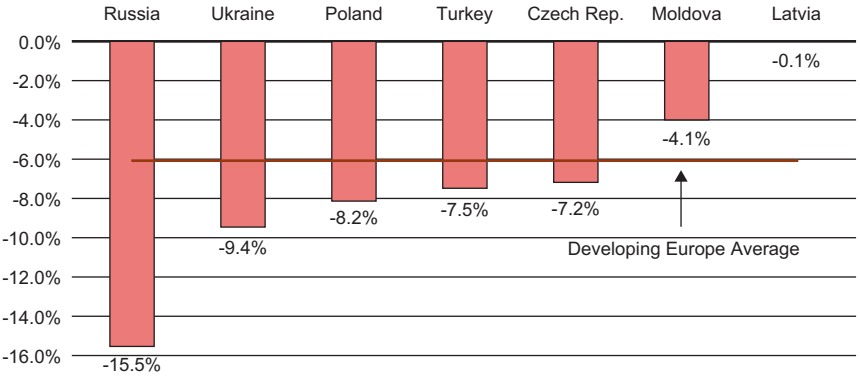


**Fig. 25.13** Selected countries with Q4 asset outflows, relative terms (2008Q4, in percentage change to previous quarter, exchange rate adjusted). Source: BIS locational dataset 6A, external assets of BIS-reporting banks vis-à-vis Developing Europe (excludes Caucasus, Central Asia, Mongolia, Slovenia). From: Nagy and Knobloch 2009. Data refers to all cross-border loans, deposits, and securities held by bank offices located in one of the 41 BIS-reporting countries. This includes assets held vis-à-vis all economic sectors, i.e. private and public, or bank and non-bank. BIS uses the category "developing" countries; this note uses "emerging" countries instead

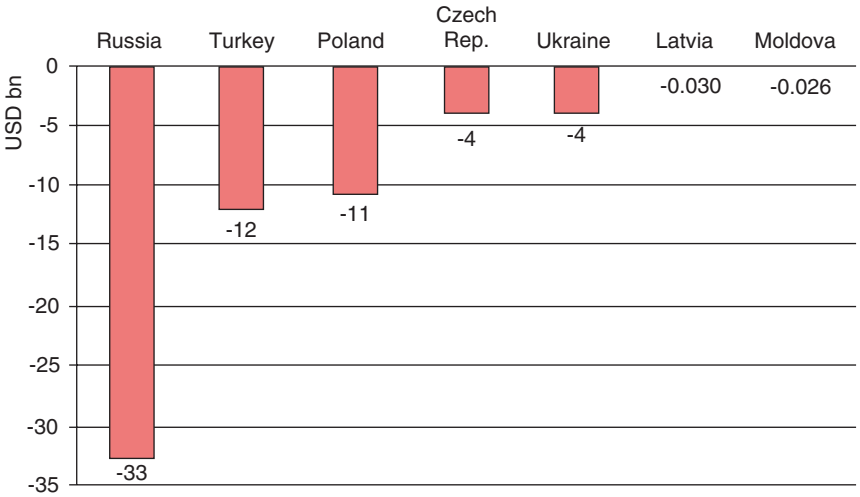


**Fig. 25.14** Selected countries with Q4 asset outflows, absolute terms (2008Q4, in percentage change to previous quarter, exchange rate adjusted). Source: BIS locational dataset 6A, external assets of BIS-reporting banks vis-à-vis Developing Europe (excludes Caucasus, Central Asia, Mongolia, Slovenia). From: Nagy and Knobloch 2009

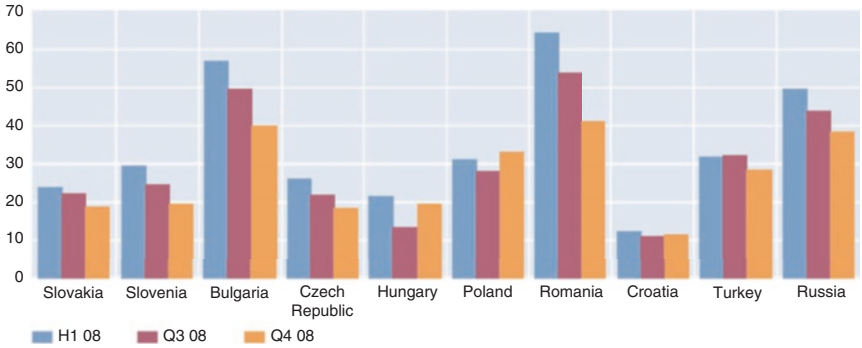


**Fig. 25.15** Domestic credit to Non-government Non-banks (year-on-year change %). Source: Eurostat, national central banks. From: Austrian National Bank 2009

The combination of the high incidence of domestic sub-prime loans, and the withdrawal of funds by foreign banks, has resulted in a credit squeeze to the non-government non-banking sector (with the exception of Hungary and Poland), as shown in Fig. 25.15.

Recently the EBRD made one of its larger investments, worth a total of €432.4 million, in UniCredit subsidiaries across eight Eastern European countries, to provide medium and long-term debt and equity financing through UniCredit subsidiaries in support of SMEs, lease finance and energy efficiency projects.[7] This is precisely the kind of contribution that the EBRD can make to the region's recovery, especially if its relatively modest resources of €20bn were to be raised by 50-100 per cent when its capital is due for review in 2012 (Wagstyl 2009).

[7] "UniCredit is the largest banking group in the central and eastern European region, with over 4000 branches in 19 countries. The group has invested around €10 billion of equity in central and eastern Europe and has around €85 billion of total customers loans in the region. Beside its own funding programs to its subsidiaries, it cooperates with international institutions including the EBRD in order to ensure continuing support to the local economies during these challenging times", http://www.ebrd.com/new/pressrel/2009/090507g.htm.

## 25.11 Differences in Initial Positions and Policy Responses

"Some [countries] were ripe for a home-grown crisis associated with the end of unsustainable credit booms or fiscal policies; others were just bystanders caught in the storm" (Ghosh et al. 2009, p. 3; "... the majority were just innocent bystanders", p. 2).

Uncharacteristically, the IMF has recommended easing monetary policy and lower interest rates to advanced economies experiencing the global recession. It has also "called for a timely, large, lasting, diversified fiscal stimulus that is coordinated across countries with a commitment to do more if the crisis deepens" (Ibid, pp. 19-20). The IMF is now forced to recommend the same policies to transition economies in crisis, though with stronger warnings about the possible side effects: "Much of the spending and revenue policy advice for advanced economies remains relevant for EMEs [Emerging Market Economies], *once scaled down for their small fiscal space*" (Ibidem, emphasis added).

Thus transition economies and other EMEs are reminded that looser monetary policies involve dangers of exchange rate devaluation and consequent adverse effects on balance sheets and that it is dangerous to exceed the "policy space" and especially the "fiscal space" of a country, jeopardizing policy credibility and sustainability. Changes should be *gradual* (however strange this may now sound coming from the IMF, especially as regards transition economies) and sustainable; abrupt and non-sustainable changes can be particularly costly and disruptive (see Ghosh et al. 2009).

Clearly an expansionary fiscal policy "is likely to be more effective in stimulating aggregate demand if the economy is relatively closed to trade flows, uses monetary policy to prevent or limit the appreciation of the currency, has substantial spare capacity, has a high proportion of credit-constrained households or firms, and has a sustainable public debt position" (Ibidem, p. 21). Which is fair enough, except that transition economies and other EMEs are most unlikely to satisfy these ideal preconditions.

Some transition economies—like Romania, Poland—have taken advantage of the relaxation of EU and IMF macroeconomic stringencies to sustain output and employment, but most of the EU-10 have maintained fairly strict fiscal constraints (Table 25.3).

**Table 25.3** General Government Budget Balance

| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009[a] |
|---|---|---|---|---|---|---|
| | % of GDP | | | | | |
| Slovakia | –2.3 | –2.8 | –3.5 | –1.9 | –2.2 | –2.8 |
| Slovenia | –2.2 | –1.4 | –1.3 | 0.5 | –0.9 | –3.2 |
| Bulgaria | 1.6 | 1.9 | 3.0 | 0.1 | 1.5 | 2.0 |
| Czech Republic | –3.0 | –3.6 | –2.6 | –0.6 | –1.5 | –2.5 |
| Hungary | –6.4 | –7.8 | –9.2 | –4.9 | –3.4 | –2.8 |
| Poland | –5.7 | –4.3 | –3.9 | –1.9 | –3.9 | –3.6 |
| Romania | –1.2 | –1.2 | –2.2 | –2.5 | –5.4 | –7.5 |
| Croatia | –4.3 | –4.0 | –2.5 | –1.6 | –2.2 | –2.5 |
| Turkey | –4.5 | –0.6 | –0.1 | –1.2 | –1.3 | –2.5 |
| Russia | 4.9 | 8.2 | 8.4 | 6.0 | 4.8 | .. |

*Source*: Eurostat, WIIW, national statistics

[a]As forecast by the European Commission (January 2009). Developments since January 2009 suggest that headline fiscal deficits will be revised upwards in several Central-Eastern and South East European economies. From: Austrial National Bank, 2009

Among transition economies, only China and Russia have made significant contributions to the macroeconomic stimulus which is being implemented by the G-20, corresponding on paper to 3.7% of their GDP (see Fig. 25.16). The other transition economies will benefit from the stimulus packages of the more advanced economies as free riders.

## 25.12 Fiscal Stimulus: Larger, more Balanced, Co-Ordinated

A United Nations source (UN-DESA 2009c) estimates that, since September 2008, Governments worldwide have made available massive public funding (amounting to $18 trillion, or almost 30 per cent of WGP [World Gross Product]) to recapitalize banks, to acquire ownership stakes in ailing financial institutions, and to provide ample guarantees on bank deposits and other financial assets. Further, recognizing the inadequacy of these monetary and financial measures to stave off a recession, many countries have also adopted fiscal stimulus plans, totalling about $2.6 trillion (about 4 per cent of WGP), to be spent over 2009-2011." While significant, this may still fall somewhat short of the stimulus of 2 to 3 per

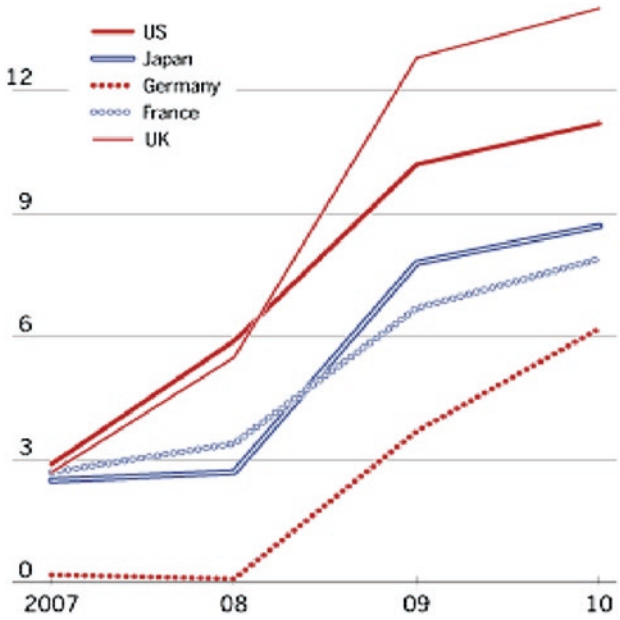


**Fig. 25.16** Fiscal Deficit Forecasts (General government financial balance as a % of GDP). Source: OECD, 2009& 2010=forecasts. From: FT 26 June 2009, Martin Wolf's chart of the week: fiscal deficit forecasts

cent of WGP per year that would be required to make up for the estimated decline in global aggregate demand. "(Ibidem).

In the same document the UN makes a number of recommendations of preconditions affecting fiscal stimulus effectiveness: the adequate recapitalisation of banks; the "fundamental reforms of the international financial system... to overcome the systemic flaws which caused this crisis" (a "macroprudential regulatory system", "counter-cyclical capital provisioning", supervision of all financial market segments in which systemic risk is concentrated, including hedge funds and cross-border flows); "a new framework for global economic governance", attributing to the IMF the role taken until now by the "Group of 7, the Group of 8, the Group of 20 or other ad hoc forums, lacking the participation or representation of important parts of the international community, especially from developing

countries." These preconditions would produce spillovers such as the reduction of tax evasion (enhancing development resources), of corruption, of drug trafficking and the financing of terrorism. The UN document stresses the need for mechanisms of debt restructuring, and for "a new global reserve system which no longer relies on national or regional currencies, as the major reserve currency must be created."

But the most important policy recommendation is that of a *co-ordinated stimulus*, "with global sustainable development objectives". In truth this is understood to involve more than just co-ordination, and to include an increase and redistribution of the stimulus, 80% of which is coming at present from developed, deficit countries. Greater efforts are expected of surplus countries in order to reduce global imbalances and to contribute "about $500 billion extra over 2009-2012, compared with the uncoordinated scenario" to middle and low-income developing countries, strengthening their social protection systems and making long-term investments in sustainable development. "The additional resource transfers needed would include about $50 billion for the least developed countries." Global coordination should also eliminate unfair trading practices associated with many stimulus packages that provide subsidies to domestic firms, in order to benefit through trade those countries that cannot afford domestic subsidies and fiscal stimulus. There would be "concerted efforts to provide countries with greater access to developed country markets as envisaged in a truly developmental Doha round of multilateral trade negotiations."

The WESP Update (UN-DESA 2009c) reports that the UN Department of Economic and Social Affairs has made simulations with their global policy model, which suggests that the proposed larger, more balanced and coordinated global macroeconomic stimulus would yield significant gains in terms of global growth, compared with the existing scenario of uncoordinated fiscal stimulus being individually undertaken by national Governments. The simulations are summarised in Fig. 25.17.

In such a coordinated, development-oriented policy scenario, the world economy would recover at an annual growth rate of around 4 to 5 per cent in 2010-2015, led by robust growth of about 7 per cent per year in developing countries. In the uncoordinated scenario, developing countries—including transition economies—would recover at only 3 to 4 per cent per year.

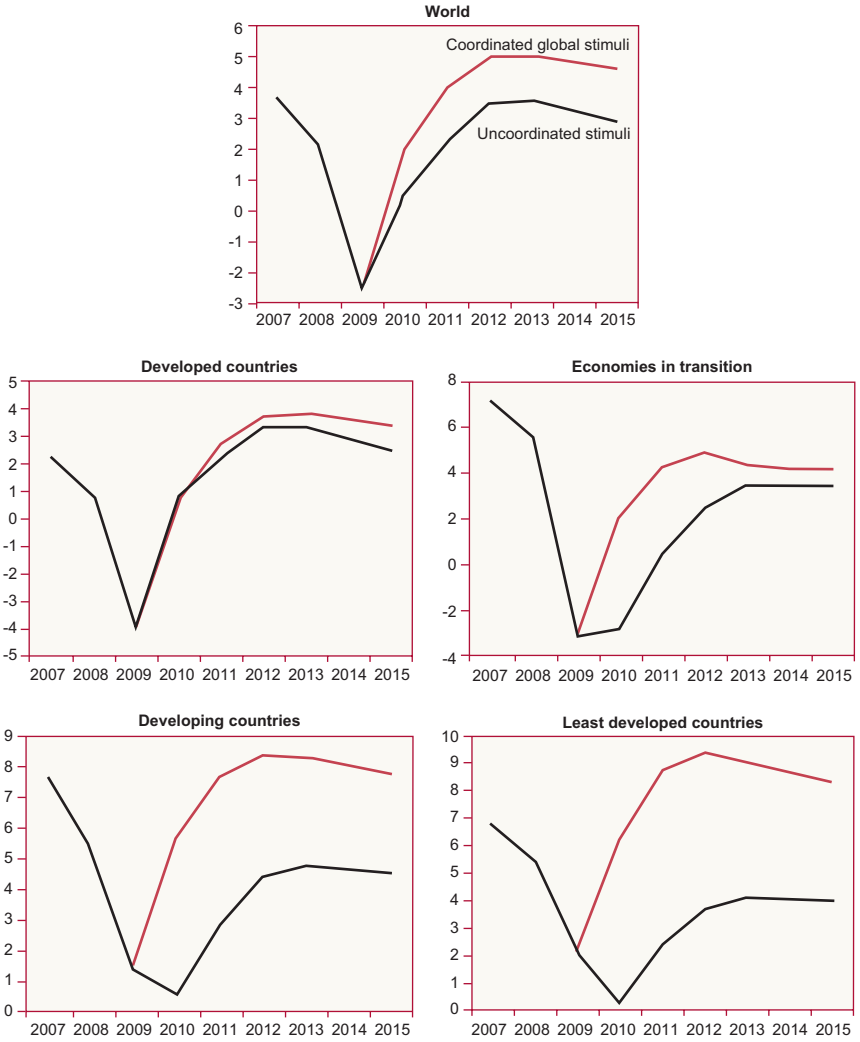


**Fig. 25.17** Economic recovery under coordinated and uncoordinated global stimulus, 2009–2015. Source: UN/DESA (2009c), based on policy simulation within the UN Global Policy Model. From: UN (2009c) WESP-World Economic Situation and Prospects, Update as of Mid-2009, New York

Developed countries would also gain from the proposed policy broadening and coordination, with their GDP growth accelerating to about 4 per cent per year, up from 2 to 3 per cent in the uncoordinated scenario. "Furthermore, the simulation results for the coordinated policy scenario predict a benign unwinding of global imbalances, keeping external asset and liability positions of major economies in check, which would, in turn, support greater exchange-rate stability." Coordination would require monitoring mechanisms. There would be net gains all round.

All this may be considered as "pie in the sky", but—especially at a time of generalised discussions of premature "exit strategies" it is a timely reminder of the generalised, large-scale additional gains, and the possible improvement in global imbalances, that are within the grasp of a slightly larger, more balanced, co-ordinated stimulus package.

## 25.13 A Short Digression on the Euro

The question arises whether early membership of the eurozone might assist recovery in the New Member States, of which only Slovenia and Slovakia are already members. There is a presumption that small open economies would probably gain from being part of a large currency area in times of crisis, although Slovakia (where the euro only became legal tender on 1 January 2009) and the Czech Republic who is not a member have done rather well outside of it.

The IMF has been in favour of eurozone enlargement for some time (see Schadler 2005); Barysch (2009) alleges that "On April 6th [2009] it emerged that the IMF would advise Central and Eastern European countries to adopt the euro, unilaterally and without meeting the EU's strict criteria for the single currency, if necessary." This recommendation is said to have been made "in a leaked report written in March"—which clashes with the long-standing EC decision that rules out the unilateral replacement of the national currency with euro by EU members and candidates; Kosovo and Montenegro have done it but were neither at the time. The EU however allows a hyper-fixed link to the euro through a Currency Board, certainly before EU membership, as in the Baltics, Bulgaria,

Bosnia & Herzegovina; presumably also after joining the EU but before applying for EMU membership, though this is not absolutely certain, as there are no precedents.

Currency Boards reduce the probability of a crisis at the cost of making the crisis catastrophic if and when it happens (as in Argentina in 2001), and European Currency Boards are not yet out of the danger zone, especially in Latvia where the Central Bank acts as a Currency Board and the lat has been on the brink of devaluation for the first three quarters of 2009.

The European Central Bank's role as Lender of Last Resort is remarkably undetermined and left to informal arrangements with the Central Banks of eurozone member states. Non-members with hyper-fixed links to the euro (whether unilateral euroisation or Currency Boards), or with an ordinary fixed exchange rate, might very well be left high and dry in times of crisis. Sweden and Denmark have been offered swaps by the ECB, unlike other non-members. Loans to Latvia have been primarily in the interest of European banks whose loans would have not been serviced otherwise (Bezemer et al. 2009). Darvas (2009) points out that "The ECB accepts non-euro denominated securities eligible for refinancing in three currencies (US dollars, British pound, and Japanese yen, provided the security was issued in the euro area), but it should accept high-quality securities issued anywhere in the EU in all EU currencies. The ECB should also give access to ECB refinancing facilities for non-euro-area commercial banks, which could substitute the malfunctioning euro-area money market for these banks."

The EU could well have admitted at least a few other New Member States to the eurozone by loosening the well known Maastricht criteria for fiscal and monetary convergence.[8] In theory the criteria for fiscal convergence are looser than those of the so-called Growth and Stability Pact (GSP, which involves not only a 3% ceiling to government deficit but a

[8] An inflation rate no more than 1.5% above the average inflation rate of the three least inflationary members of the EU; long term interest rate no more than 2% higher than the average interest rate of the same three least inflationary EU members; government deficit no higher than 3% of GDP and public debt no higher than 60% of GDP, or within reach of those constraints; and the additional condition of two-year membership of the Exchange Rate Mechanism II, holding a course within a +/-15% band around the euro parity agreed with the EMU monetary authorities before joining the ERM II.

stricter zero per cent over the cycle) and apply to all EU members regardless of eurozone membership. In practice however the GSP strictures and the associated penalties were considerably relaxed in March 2005 and further loosened during the current crisis, whereas Maastricht criteria for joining the euro have been very strictly enforced. This glaring asymmetry is unreasonable and injust.

It is also unreasonable to subject countries that grow much faster than the eurozone members and have relatively low ratios between public debt and GNP to the same fiscal stringency as stagnant and highly indebted eurozone members (like Italy). It is more unreasonable to apply to prospective member fiscal constraints more stringent and inflexible than those applied to existing members. It is even more unreasonable to apply to prospective EMU members an inflation constraint linked to the "three best-performing member states of the EU in terms of price stability", regardless of whether or not they are EMU members and arbitrarily interpreted as the three least inflationary EU members (with a non-negative inflation rate; see Darvas 2009). The very fact of EU enlargement from 12 to 27 members has implied a toughening of the inflation condition by virtue of this interpretation.

Lithuania, for instance, in 2006 was left out of the euro-zone only because its inflation exceeded the average inflation of the three least inflationary EU members by 1.6% instead of the 1.5% prescribed by the Maastricht Treaty—not exactly enlightened or rational behaviour, especially considering that two of those three least inflationary countries (Sweden and Poland) were not eurozone members. Slovakia, on the contrary, was admitted in 2009 in spite of a 25% nominal revaluation of its crown in the two years before joining, which was a significantly greater departure from the basic parity than the stipulated maximum band of variation of +/-15%. "The EU can certainly be criticised for clinging to criteria ill-suited to catching-up countries and the case for reforming them is strong" (Darvas and Pisani-Ferry 2009, op.cit.; see also Nuti 2006).

Piatkowski and Rybinski (2009) propose "a 'big bang' euro area expansion to introduce the euro in all 27 member states by 2012." "Such a bold decision"—they claim—"would give a credibility boost to the enlarged eurozone, accelerate replacement of the dollar by the euro as the global reserve currency and breathe new life into a united Europe." This might

have been a good idea when the euro was first introduced in 1999—certainly not now with some of the countries in a financial turmoil, for membership of a single currency area is *a preventive remedy, not a cure*. The authors point out that "the combined GDP of all eurozone candidate countries in central and eastern Europe amounts to less than 10 per cent" and therefore costs would be contained, but this "little-me-ism" by itself does not amount to a case.

The idea that Latvia should first devalue substantially with respect to the euro and then join the eurozone in a hurry (Roubini 2009) does not make sense. Lat devaluation is probably unavoidable. Of course it would aggravate the prospective Latvian insolvency on euro-denominated debt and force a restructuring, but a crisis of the type and scale of Argentina 2001 seems impossible to procrastinate further. However, eurozone membership would not reduce the blow of that devaluation, only the risk of future devaluations; immediately after a devaluation there would be no hurry to join—other than to better milk resources from EMU taxpayers. And since the hyper-fixed exchange rate with the euro was Latvia's problem, currency conversion even at a lower rate cannot be the solution. Yet the OECD (2009b) is now advocating a similar solution for Iceland: join the EU, devalue and join the eurozone as soon as possible. Here as well there is no case other than an unwarranted and expensive benefaction on the part of the rest of Europe. Reade and Voltz (2009) argue that Sweden should join the eurozone: no problem there, if only they asked.

Darvas (2009) appears to recommend new rules based on greater logic and common sense: 1) "All criteria should be related to the euro-area average"; 2) "The inflation, interest rate, and budget balance criteria should allow some deviation from the euro-area average"; 3) "The requirement for the ratio of government debt to GDP could simply demand that this ratio should not exceed the euro-area average, unless the ratio is diminishing sufficiently and approaching the euro-area average at a satisfactory pace." "The suggested change in euro-entry criteria would still require substantial effort from the applicants, but it would ease their pain. It would also boost confidence, helping kick-start the private capital inflows—not western taxpayers' money—that these countries desperately need." (Darvas 2009). However, focusing on *average* EU values could be disastrous, for it

is bound to trigger off a game of self-fulfilling expectations. In a crisis each member expects every other member to raise its inflation, deficit and debt, and therefore raises its own parameters accordingly. Collectively, any macroeconomic discipline goes by the board. It would be wiser to exclude any non-EMU member from reference parameters, and end the asymmetry by modifying Maastricht fiscal parameters in line with the changes introduced in March 2005 to the so-called Growth and Stability Pact.

## 25.14 Transition Paths, Vulnerability and Recovery

By the inception of the global crisis all the transition countries of Central Eastern Europe had either completed their transition to the market economy and their re-integration into the world economy and especially Europe (with the ten new member states of 2004 and 2007, and Slovenia and Slovakia already members of the eurozone), or had made steady and very substantial progress in that direction. *What made them so vulnerable to the pandemic financial and real crisis of 2008–2009?*

Both vulnerability and recovery opportunities appear to be related to the target model adopted by transition economies and the consistency, speed and progress of its implementation. The transition took place at the height of Thatcher-Reagan hyper-liberalism, under the supervision and the inducements (conditionality of loans and aid) provided by the Bretton Woods institutions and the European Union. That model has yielded economic gains to transition economies, but it has also inflicted on them significant costs (see Kolodko 2000; Kolodko and Nuti 1997; Nuti 2007; Stiglitz 2002). *The current crisis exposes the predictable risks of the adoption of the hyper-liberal model in the course of transition.*

The hyper-liberal framework involved the adoption of early full convertibility not only for foreign trade but for capital flows. FDI and foreign portfolio investment are a welcome addition to the finance of domestic investment, and of government and external imbalances; these capital inflows thus enhance growth performance, but their sudden reversal or the sudden rise in their cost can contribute to create and to worsen

a crisis. Reliance on foreign capital in the privatisation and foundation of banks and other financial institutions has allowed the rapid creation of a knowledgeable and credible credit and financial system, but—as we have seen above—has also contributed to the domestic credit squeeze when capital of many foreign banks subsidiaries has been called back home where it was even more needed.

The permission and encouragement of derivatives trade has suddenly turned from an element of reform progress into a channel of vulnerability and contagion. The belief that a Currency Board reduces the risks of a crisis blinded policy-makers to the fact that such hyper-fixed exchange rate regime is a gamble that can make the crisis catastrophic if and when it occurs; the Argentinian crisis of 2001 could well be repeated in Latvia. The adoption of strict monetary discipline under exceptionally independent Central Banks, with high interest rates combined with stable and often appreciating nominal exchange rates, encouraged households, enterprises and governments to take up loans denominated in foreign exchange; the ensuing devaluations turned those loans into domestic sub-primes.

Strict fiscal discipline, especially for prospective EMU members, has cut the fiscal space available to governments for the kind of extraordinary stimuli adopted by the rest of the world, thus turning these economies into dependent free riders.

In the EU, the USA and the global financial markets much of the problem was due to de-regulation (such as the repeal in 1999 of the Glass-Steagall Act of 1933, with its provision that prohibited a bank holding company from owning other financial companies); the combination of commercial and investment functions of banks; etcetera. In transition economies the problem was the total lack of regulations and of efficient bank supervision.

Those transition economies that joined the EU did not—with the exception of Slovenia and to some extent Estonia—adopt the institutions of the European Social Model; it was not part of the institutional convergence required by the EU of new members. This meant the inadequacy of social safety nets, to protect the population from unemployment, poverty, illness and old age. Such inadequacy raised the social cost of the economic crisis when it happened and disabled some of the mechanisms that dampen economic decline (they are usually called "automatic

stabilizers", improperly because they can slow down the decline but cannot reverse it on their own).

On the positive side, the same deep and possibly premature integration with the global real and financial economy is bound to lead to economic recovery in these countries *when—sooner or later—the global economy bounces back*. This is the good side of the dependence coin.

The current global crisis has set in motion a new transition in advanced market economies, towards a reconsideration and revaluation of the role of the state, of active fiscal and monetary policy—right down to zero and even negative nominal interest rates, in place of the previous dogma of positive real rates—and government regulation and control especially of financial markets. Post-socialist economies will have to adjust their transition course towards these new, moving targets, often undoing some institutional developments that had been regarded as important transition achievements. Countries that by the old standard had achieved the transition to the market economy will now have to reconsider where they are and where to go next.

## 25.15 Summary and Conclusions

The global crisis of 2009-2009—and perhaps also of 2010—was abrupt; it was due not to an exogenous shock but to the endogenous workings of financial markets in advanced countries, where it went through synchronised stages that sometimes can be pinpointed to the day and became systemic. Then it spread to the real economy in different ways, timing and speeds in different countries. It is a seismic crisis as deep—at least until June 2009—as that of 1929-32. In the end it may turn out to be shorter, and therefore less deep than that, thanks to the more appropriate, large scale and synchronised macroeconomic policy responses by world governments, central banks and international financial institutions—as long as these will not engage in premature, collective exit strategies.

Initially, from mid-2007 to mid-2008 when the current global crisis was only financial, the transition countries of Central Eastern Europe—regardless of EU or EMU membership—seemed to be fairly resilient. The subprime loans crisis that hit the United States and global intermediaries did

not affect them directly. The 29 transition countries of operation of the European Bank for Reconstruction and Development (EBRD) recorded still impressive, though falling, average growth rates of GDP. Then, already in the last quarter of 2008, the indirect effects of the growing financial crisis on liquidity and on asset values began to be felt. A lagged slowdown began to reduce the sustained growth rates experienced until then. Since mid-2008, prospects for 2009 and 2010 have been worsening steadily and now an average 5 per cent *contraction* in real GNP is expected in 2009, followed by a modest recovery of 1.4 per cent in 2010, mostly in the second half of the year. Unemployment will be growing well into 2010.

In general, all transition economies have in common two shocks: the sudden end of capital inflows driven by global de-leveraging, and a collapse in export demand associated with the global slump.

In 2008–2009 there was, for the first time since the last World War, a decline in world output and a much larger decline in world trade, thus reducing for the first time since WWII the most common measure of globalisation, the ratio between world exports and world GNP. This "trade destruction" appears to have been much worse than in the corresponding months of 1929-32.

Output contraction and trade are larger in the EU, with which transition economies have grown to be increasingly integrated, with EU trade shares of the order of 60-90 per cent for the New Member States and South-Eastern Europe, all characterised by high foreign trade openness, higher than that of most old members of the EU. Such openness makes the transition economies' opportunities of "de-coupling" from downturns in the EU rather limited.

Lower trade shares involve a slowdown in manufacturing and extractive industries and in internal demand, especially in construction and financial services. Industrial production exhibits large contractions since September 2008 in the EU-10, much larger than falls in consumptions due to large reduction of inventories. As a consequence of industrial output fall, industrial investment since September 2008 has collapsed. Unemployment has been growing fast.

Net private capital flows to emerging market economies (including transition economies) are projected to decline from an *inflow* of US$600 billion in 2007 to an *outflow* of US$180 billion in 2009: these economies

are facing a severe credit crunch. Particularly affected are the countries with large current account deficits—many of which had asset price and credit booms. Transition economies had been able to attract large and growing capital inflows thanks to privatisations at attractive prices, high interest rates net of devaluation cover or even plus revaluations, and production de-localisation thanks to low wages. These attractions have weakened, and the recession has made inflows even less attractive.

In these circumstances devaluations are unavoidable but steering a course between floating and pegging is hard. Higher interest rates are unlikely to bring back capital in a recession. Controls on capital flows will at best stop capital flight but not bring it back, and can be counterproductive. Official financing is therefore badly needed, by the IMF in the first instance with doubling access limits, Flexible Credit Lines, and Stand-By arrangements. With additional resources, support for debt restructuring can come from national governments, for instance by converting foreign currency loans to domestic currency and compensating banks for losses, maybe only partly.

The intensity of the two general factors reviewed here—collapse in global trade and fall/reversal of capital flows—is modified by additional factors. There is a noticeable heterogeneity of country experiences, depending on the degree of trade and investment integration, fiscal and monetary policies, eurozone membership, the exchange rate regime, access to credit and to international assistance.

Emerging Europe is the only emerging market region to collectively run a current account deficit. Floating exchange rates and associated devaluations have correspondingly raised the value of foreign currency domestic debt and its service, while fixed rates have reduced external competitiveness, preventing adjustment, and aggravated decline and unemployment, while still being subjected to the risk of impending devaluation. Only those transition economies that are eurozone members have fared relatively better.

Sustained current account deficits lead naturally to higher external debt. But it cannot be argued that the current account deficits were the result of fiscal profligacy; on average growth of external debt is clearly due primarily to the private sector. Yet the expected emergence of contingent liabilities and costly bail-outs reduces governments' credibility anyway.

Primary product exporters—primarily Russia, Azerbaijan and Kazakhstan—were in position until mid-2008 to run current account surpluses and accumulate foreign reserves. But in 2008 oil, gas, cotton and metals fell in price. Terms of trade changes added themselves to the reduction in trade volume. For transition economies on average the impact of worsening terms of trade was almost as large as that of the reduction in trade volume. Foreign reserves were used—to some extent wasted, we could say—to support overvalued exchange rates and to bail out financial institutions and productive enterprises.

The USA sub-primes crisis of August 2007 touched only marginally the transition economies. But a large amount of domestic loans, mostly for house-purchase finance but also in the enterprise sector—and in the government sector—were originally denominated in foreign currency because the national currency a) involved much higher interest rates and b) had been stable or appreciating. All these loans, amounting to $250 billion in Central Eastern Europe promptly *became* sub-prime, as soon as the domestic currency began to depreciate. The incidence of non-performing loans increased everywhere in the area; the largest increases were in Russia, Central Asia, Mongolia, Georgia and Latvia: in Central-Eastern Europe there have been so far fairly moderate increases. Eastern and South-Eastern countries show an intermediate dynamics.

At the inception of the transition an under-capitalised and largely insolvent state banking system was partly cleansed of what today are labelled toxic assets, then recapitalised, privatised mostly to foreign banks, and new banks were promoted, also mostly foreign. By 2006, foreign ownership in the ten New Member States, excluding Slovenia (at 22 per cent), ranges from 74 per cent in Latvia to 98 per cent in Estonia. Foreign banks were to provide capital and know how, and through access to foreign parent banks provide foreign exchange and effective access to lending of last resort in the country of origin.

Paradoxically, the strong foreign banking presence has rendered EE countries (except for the CIS) region, much more vulnerable to the present financial turmoil. Cross-border outflows were concentrated on a few countries: Russia, Turkey, Ukraine, as well as Poland, the Czech Republic, and Slovenia. The decline happened in the most financially integrated countries, not necessarily in countries with weaker fundamentals. The

combination of the high incidence of domestic sub-prime loans, and the withdrawal of funds by foreign banks, has resulted in a credit squeeze to the non-government non-banking sector (with the exception of Hungary and Poland).

In the 1990s the post-socialist transition that began in 1990-92 was implemented under particularly restrictive monetary and fiscal policies, mostly under the conditionality imposed by the IMF: high nominal and real interest rates to support exchange rates and to curb inflation, monetary nominal targets tighter than intended in real terms, cash limits to government budgets, also frequently overshot. These policies undoubtedly played an important part in the deep and protracted recession that accompanied systemic transition everywhere in Central Eastern Europe. In the current crisis, uncharacteristically the IMF has recommended easing monetary policy and lower interest rates to advanced economies experiencing the global recession. It has also called for "a timely, large, lasting, diversified fiscal stimulus that is coordinated across countries with a commitment to do more if the crisis deepens". Thus the IMF was forced to recommend the same policies to transition economies in crisis, though with stronger warnings about the possible adverse side effects on exchange rate devaluation and the risks of exceeding their small fiscal space. Again uncharacteristically, the IMF called for gradual changes, instead of the shock therapy recommended in the transition.

Some transition economies—like Romania, Poland—have taken advantage of the relaxation of EU and IMF macroeconomic stringencies to sustain output and employment, but most of the EU-10 have maintained fairly strict fiscal constraints. Among transition economies, only China and Russia have made significant contributions to the macroeconomic stimulus which is being implemented by the G-20; the other transition economies will benefit from the stimulus packages of the more advanced economies as free riders.

The United Nations have been recommending a "co-ordinated" stimulus, understood to involve also an increase and redistribution of the stimulus, in order to reduce global imbalances and to contribute to developing countries, strengthening their social protection systems and making long-term investments in sustainable development. The simulations made by the UN Department of Economic and Social Affairs with their

global policy model suggest that the proposed larger, more balanced and co-ordinated global macroeconomic stimulus would yield significant gains in terms of global growth, compared with the existing scenario of uncoordinated fiscal stimulus being individually undertaken by national Governments. Such a proposal may be unrealistic, but—especially at a time of generalised discussions of premature "exit strategies"—it is a timely reminder of the opportunities that are generated by the crisis.

The question arises whether early membership of the eurozone might assist recovery in the New Member States. There is a presumption that small open economies would probably gain from being part of a large currency area in times of crisis. The IMF has been in favour of eurozone enlargement for some time. The EU rules out unilateral euroisation but accepts a hyper-fixed link to the euro through a Currency Board; but such a monetary and exchange rate regime reduces the probability of a crisis at the cost of making the crisis catastrophic if and when it happens. European Currency Boards are not yet out of the danger zone, especially in Latvia where the Central Bank acts as a Currency Board and the lat has been on the brink of devaluation for the first three quarters of 2009.

The EU could well have admitted at least a few other New Member States to the eurozone by loosening the well known Maastricht criteria for fiscal and monetary convergence. Current rules for eurozone membership are unreasonable in many respects: they are asymmetric, being tougher on new members than on old ones; they ignore the higher growth rate and lower public debt of potential candidates; they impose an inflation constraint that can be heavily influenced by EU members who do not belong to the eurozone. There have been suggestions of a 'big bang' euro area expansion to introduce the euro in all member states by 2012. But membership of a single currency area is *a preventive remedy, not a cure*.

By the inception of the global crisis all the transition countries of Central Eastern Europe had either completed their transition to the market economy and their re-integration into the world economy and especially Europe (with the ten New Member States of 2004 and 2007), or had made steady and very substantial progress in that direction. Both vulnerability and recovery opportunities appear to be related to the target model adopted by transition economies and the consistency, speed and progress of its implementation. The transition took place at the height of

Thatcher-Reagan hyper-liberalism, under the supervision and the inducements (conditionality of loans and aid) provided by the Bretton Woods institutions and the European Union. That model has yielded economic gains to transition economies, but it has also inflicted on them significant costs. The current crisis exposes the predictable risks of the adoption of the hyper-liberal model in the course of transition.

On the positive side, the same deep and possibly premature integration with the global real and financial economy is bound to lead to economic recovery in these countries *when—sooner or later—the global economy bounces back*. This is the good side of the dependence coin.

The current global crisis has set in motion a new transition in advanced market economies, towards a reconsideration and revaluation of the role of the state, of active fiscal and monetary policy—right down to zero and even negative nominal interest rates, in place of the previous dogma of positive real rates—and government regulation and control especially of financial markets. Post-socialist economies will have to adjust their transition course towards these new, moving targets, often undoing some institutional developments that had been regarded as important transition achievements. Countries that by the old standard had achieved the transition to the market economy will now have to reconsider where they are and where to go next.

By comparison with the transformational depression of the 1990s, the current recession must be barely perceptible to the populations of transition countries. And at least this time they are benefiting not only from more generous assistance from the international community, but from more enlightened policies of monetary easing and low interest rates, fiscal subsidies and expansion, large scale state intervention—all policies *diametrically* opposite to the draconian hyper-liberal policies that contributed so much to aggravate the transition recession and the other costs of transition in the 1990s. Only two things have really changed since then: today the hyper-liberalism that inspired the course of transition in the 1990s has been thoroughly discredited by the global crisis associated with it, and the predicament of transition economies is vastly improved simply because they happen to share it with the advanced countries that control international financial organisations.

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# 26

# The European Social Model: Is there a Third Way?

Domenico Mario Nuti

## 26.1 Introduction

The search for a Third Way, intermediate between socialism and capitalism, began even before the birth of the Soviet Union, whose observed drawbacks encouraged a further search. There have been at least three alternative projects within this approach.

1. Market Socialism, combining public ownership, market allocation and socialist values of high employment, growth and equality. This was the target of many failed attempts at reforming the Soviet-type model, in the 1960s to the 1980s. Its best, though partial, embodiment is the Chinese economy circa 1980-2000.

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2. The New Labour paradigm of the late 1990s, accepting the dominant role of private ownership and enterprise, the primacy of domestic and global markets and budgetary discipline. The model was a move in the right direction but it went too far in some respects, and not far enough in others. It was rejected by electors and its resurrection today would require a major overhaul.
3. The European Social Model (ESM), emphasising the role of institutions as well as markets in resource allocation, with employment protection and a generous welfare state.

This model performed rather well in the 2000s but:

1. its institutions and policies were never part of the acquis communautaire and its implementation was left to the discretion of member states; therefore it was significantly diluted by the European Enlargement to the Central Eastern European countries, that—with the exception of Slovenia and to some extent Estonia—adopted the hyper-liberal model fashionable at the time of their transition to capitalism in 1989-1991;
2. the increasing globalisation of labour, due not only to the more spectacular phenomena of de-localisation (caused by capital mobility) and labour migrations, but above all due to trade growth, has threatened employment, real wages and tax revenues in the more advanced countries such as those that had adopted the ESM;
3. even in those countries that did implement it fully, in spite of the stringencies of the Growth and Stability Pact, eventually the European Social Model was wrecked by the cuts in government expenditure adopted as a response to the global economic crisis of 2008-2010 and to generalised concerns about the sustainability of government debt.

In this paper I will review these three alternative Third Ways, concentrating on the ESM. My conclusion is that the European Social Model is still a viable and sustainable alternative, but only after the consolidation of public finances, subject to the constraints of global competition, and as an alternative to competing uses of public resources.

## 26.2 Market Socialism

Market Socialism was expected to combine public ownership, market allocation and socialist values of high employment, growth and equality. This system is often identified with the Oskar Lange model (1936, 1937), wrongly because this was only a decentralised procedure for constructing a hypothetical central plan by simulating the market; that model retained all the drawbacks of central planning: the lack of enterprise managers' incentives and discipline, and of inter-temporal co-ordination. Market Socialism was the target of many reform attempts in Central Eastern Europe (first in Yugoslavia since the late 1950s, then throughout the area, most notably in Hungary since the late 1960s), which never came to fruition mostly because of persistent, endemic repressed inflation (shortages); as well as political limits to the growth of the private sector and to relaxing the state monopoly of foreign trade.

With the collapse of Soviet-type socialism the opportunity to explore this kind of Third Way in Central Eastern Europe came to an end, although a combination of dominant state ownership and some limited market process was introduced in Belarus and Uzbekistan, which remained politically authoritarian. In Belarus today lip service to a "socially-oriented market economy with state regulation" is simply a smokescreen to disguise the continued maintenance of a communist political monopoly and of a command economy—without full central planning but with dominant state ownership and enterprise. Putin's Russia has moved in some ways towards the same system, with re-étatisation of natural resources, banking and strategic sectors—aviation, aerospace, shipbuilding, car production as well as military production—and forms of "managed" democracy.

Stiglitz (1995), taking a particularly sombre view of market efficiency, argued that market socialism was a hopeless task, for it combined the drawbacks of both markets and socialism. Others regarded market socialism as an oxymoron. Vaclav Klaus (Vienna, January 1991) declared that "The Third Way is the fastest route to the Third World". Proposals such as that of John Roemer (1994), for a universal but non-transferable life interest in domestic capital assets, in place of public ownership, became obsolete since their realisation was unthinkable starting from a capitalist society.

The collapse of Soviet-type systems in 1989-91 did not prove conclusively the impossibility of market socialism, nor did it turn such an impossibility into a plausible conjecture. The project to construct market socialism as a Third Way survived in countries such as China, where it was enshrined in the 1993 Constitution, and Vietnam's "renewal" or "*doi moi*". Except that in the early 2000s, following privatization of state assets and the demise of Township and Village Enterprises (officially part of the "non-state" sector but still public though locally controlled), China's private sector became dominant. But there is still a major, glaring departure of the Chinese economy from a market system, i.e. the gross undervaluation of the *renmimbi*, directly decided by the Central Bank of China regardless of market balance—indeed at the expense of massive global imbalances. This is a conspicuous residual of central planning in spite of China's WTO membership, which should never have been agreed by its trading partners without prior liberalization of its capital markets.

## 26.3 The New Labour Paradigm of the Late 1990s

In 1997-98 the European Union went through a conspicuous, unscheduled and unexpected process of political convergence. By the end of 1998 thirteen out of the fifteen EU member countries (not Ireland and Spain) had social-democratic or left-wing coalition governments; social-democrats also held a dominant position in the European Parliament. Although the electoral dominance of social democracy ended immediately in the European Parliament and was gradually reversed in the following decade, temporarily the discussion of a "New" Third Way gained practical relevance, especially in the larger countries (see Nuti 1999).

The most comprehensive theoretical reflection on the new Third Way is Anthony Giddens (1998), while the most developed political manifesto is the joint proposal by Blair and Schroeder (1999) issued on the eve of the European elections of 10-13 June 1999, at which social democrats were resoundingly defeated. An intermediate system between neo-liberal capitalism and old-fashioned socialism, the new project was committed

to traditional socialist values of community, equality and participation, but differed from similar previous attempts in three major respects:

1. the acceptance of the primacy and desirability of markets, fully recognising their global nature in the modern world;
2. the rejection of public ownership and public enterprise, supporting private entrepreneurship and continued privatisation; and, above all,
3. affordability, i.e. fiscal discipline and monetary restraint, rejecting inflationary expansion and public deficit and debt.

Social-democratic policies were to be implemented using market instruments instead of direct controls and the management of state enterprises. "*The market is part of the social organisation we desire,* not just a necessary means which we reluctantly admit that we need, and need to master" (Karlsson 1999). The end of the commitment to public ownership and public enterprise (e.g. the repeal of the fundamental Clause IV of the old British Labour Party Constitution) did not just remove nationalisation from the new agenda. It also included a commitment to continued privatisation of state assets and to competition, with state regulation taking the form of setting the rules of the game instead of direct interference in resource allocation. More state assets per year were privatised by Lionel Jospin in France in 1997-98 (25bn ECU in under two years) than by Margaret Thatcher (135bn ECU at 1998 prices in 17 years); large scale privatisations followed throughout social-democratic Europe in the following decade.

Undoubtedly these developments went in the right directions for a socialist economy to be efficient and sustainable. Some encouraging practical developments could be discerned, especially at the European level, through the prospect of co-ordination of national fiscal policies, co-ordination between fiscal and monetary policies, and the re-launching of tripartite social pacts to raise and stabilise employment. But these moves were not developed and consolidated. The new Third Way model was never fully developed intellectually while, in implementing policy, its proponents went sometimes too far, sometimes not far enough.

In some ways the New Third Way was wrong-footed by neo-liberalism, by adopting neo-liberal principles of privatisation and de-regulation

precisely at a time when former neo-liberals had moved away towards more critical positions. Damaging ways in which social-democratic governments overshot when implementing liberal policies include:

1. over-commitment to production of wealth versus redistribution;
2. over-commitment to social mobility versus redistribution;
3. over-commitment to reducing the scope of pay-as-you go (PAYG) pensions in favour of funded systems;
4. New Labour's acquiescence in de-mutualisation of financial institutions in the UK;
5. over-commitment to central bank independence;
6. over-commitment to employment policies based on wage restraint and labour mobility/flexibility;
7. identifying market globalisation with passive acceptance of the rules of the game as defined by the most untrammelled private sector enthusiasts.

In other cases, incarnations of the new project did not go far enough, retaining for instance:

1. Moves to shorten the working week without lowering wages;
2. Proposals to lower the pension age in Germany, in spite of significant ageing of the population;
3. Proposals to use excess ECB reserves to finance public investment; and—especially in the UK
4. The neglect of liberty and civil rights, and
5. Involvement in imperialistic conflicts as a US ally.

Today only three EU governments belong to the social-democratic tradition: Greece, Spain and Portugal, none of them in good economic and/or political health. A possible revamping of this model will require emphasis on participation at all levels, genuine restoration of cooperative and mutual values and institutions, and a continued commitment to pacifism and to equality of opportunities, possibly by pursuing the notion of a basic income or citizen income.

## 26.4 The European Social Model

Most social and labour market policies are not part of the obligations of EU membership. Yet official EU documents and economic literature on types of capitalism refer to the *European Social Model (ESM)*:

> "The European social model, characterised in particular by systems that offer a high level of social protection, by the importance of social dialogue and by services of general interest covering activities vital for social cohesion, is today based, beyond the diversity of the Member States' social systems, on a common core of values" (European Council 2000, para. 11, p.4).

The European Social Model is also known as the European model of social dialogue. The label of coordinated market economies (CMEs) has also been used. These expressions are virtually inter-changeable, in that co-ordination takes the form of a dialogue leading to a social pact, and welfare provisions are an integral part of such a pact; thus the choice of label is not even a matter of emphasis, but simply of focus.

The European Social Model is a controversial subject. Some deny that it ever existed. Other contrast it with the American Model, but debate where the UK should be placed. Some argue that there is not one but three or four European models. The ESM has been praised for positive aspects of European economic performance, such as social cohesion and the non-inflationary composition of conflicts, and blamed for the alleged lower ability to compete in the global economy and to create employment and growth. The model is claimed to be in a crisis, to be on the wane or to have collapsed. I believe that the European Social Model is one, recognisable in spite of European diversity, it is alive and well, and has considerable merit.

### 26.4.1 ESM and US Models Compared

Hall and Soskice (2001) and Freeman (2005) compare the ESM or European model of social dialogue or Coordinated Market Economy (CME) with the American model. Freeman argues that in some respects

**Table 26.1** Measured differences between US and EU models of capitalism

| | US | EU |
|---|---|---|
| **Aggregate Measures** | | |
| Economic Freedom Index (Fraser Inst.) | 90 | 82 |
| Tax/GDP ratio | 32 | 42 |
| **Goods Market** | | |
| Days required to form business | 7 | 64 |
| Product market regulations (OECD) | 1.0 | 1.4 |
| Administrative regulations (OECD) | 1.1 | 1.5 |
| Economic regulations (OECD) | 1.3 | 2.0 |
| **Labour Market** | | |
| Employment Protection Legislation Index | 0.7 | 2.4 |
| Unionisation [lower in the US] | < | |
| Collective bargaining coverage per cent | 14 | 76 |

*Source*: Freeman 2005

the two economies are like "two peas in the same pod": advanced capitalist systems, abiding by the rule of law, protecting private property, guaranteeing freedom of association and enterprise, with various degrees of social safety and welfare systems, combining "institutional regulations and markets to determine economic outcomes." The difference is in the weights they place on institutions versus markets, not the qualitative differences that divided capitalism from communist state planning" (Freeman 2005) (Table 26.1).

The US economy, in its idealised form, conforms to the neoclassical theory of markets "where the Invisible Hand of exit and entry determines outcomes". Trade Union membership has declined to a low level and wages and employment have become largely market-driven. Firms' employment policy and wages policy do not have to be negotiated with employees, who can take it or leave it. Product markets are little regulated and firms can enter and exit easily. Employment is the primary form of social protection, including access to health care.

The EU relies more on the non-market institutions of 'voice', particularly in the labour market. The EU requires dialogue between social partners at company level, through Works Councils (EC 94/45/EC), at sectoral and inter-professional level through Sectoral and Social Dialogue Committees, at the aggregate level through the Standing Employment Committee, and Advisory Committees (e.g. on social security); and so on. Wages are determined by collective bargaining between federations of

employees and employers, applying also to firms that are not party to it. Firms entry and closure, and employee lay-offs, face greater administrative obstacles. The welfare state requires higher taxes.

Both the EU and US models partake of the advantages of market economies and are viable systems. "Some theories, such as the Coase (1960) analysis of property rights and efficient bargaining predict that a social dialogue system will work as well as a competitive market driven model" (Freeman 2005). This conclusion is strengthened by game theory (the prisoners' dilemma): an inter-temporal social pact between employees and employers representatives, monitored and guaranteed by the government with fiscal incentives and penalties, can deliver wage restraint today in exchange for price restraint and higher investment and growth tomorrow. In addition, ESM redistribution provisions can alleviate the distributive impact of globalisation (e.g. the European Globalisation Adjustment Fund 2007, 13).

Critics have alleged the superiority of the US system in terms of growth, job creation and employment. Goodin (2003) claims that CMEs [Coordinated Market Economies, i.e. the ESMs] "are naturally doomed to extinction", that the system is vulnerable and unstable. "LMEs [Liberal Market Economies] ultimately [will] prevail". The US outperformed the EU in the 1990s up to the mid-2000s. But some of the smaller EU social dialogue countries, like Ireland, Austria, the Netherlands and Denmark, had an exemplary performance in the same period, while the EU outperformed the US from the 1950s to the 1990s. Relative EU and US performance depends strictly on the periods selected. After the second World War labour productivity in the west of Europe was only half that of the US, whereas now it is not far below.

"Since the turn of the century, the eurozone has created more jobs than the United States" (The Economist, 27-1-2007). In the first half of 2007 Europe's growth rate had overtaken that of the United States. Income inequality is lower in the EU than in the US, also, and with better universal health care at lower cost in the EU than in the US. Comparative performance during the 2009-2010 crisis should not neglect that the crisis itself originated in the United States and was caused by US institutions and policies. A major problem in system comparison is to what extent performance differences can be attributed to institutional differences (Freeman 2005).

### 26.4.2 ESM Dilution: Rising Costs and EU Enlargement

In the last 10 years ESM has suffered some dilution, due to several factors, including:

1. the rising pension burden of an ageing population,
2. the rising cost of available health treatments,
3. opportunistic behaviour (moral hazard),
4. the parallel greater fiscal discipline of the Maastricht 1992 and the Amsterdam 1997 Treaties.

Another major factor diluting the ESM has been EU enlargement to the post-socialist countries of central eastern Europe (the Czech Republic, Hungary, Poland, Slovakia, Slovenia, Estonia, Latvia and Lithuania on 1-5-2004; Bulgaria and Romania on 1-1-2007). It has been argued (Vaughan-Whitehead 2003) that EU enlargement has diluted the ESM model because of:

1. its non-affordability by new members averaging 40% of the older members' GDP per capita,
2. the lack of EU solidarity with new members, or
3. the cost of enlargement itself.

But the impact of these factors has been exaggerated. The ESM has been diluted by EU accession of transition economies that had adopted a hyper-liberal socio-economic model. This has greatly diluted the ESM, both in the new EU average characteristics and—by imitation, competition and active promotion of hyper-liberalism—in some of the older EU members (see Giannetti and Nuti 2007).

On the re-bound from the old system, transition countries gave shape to their systems at the peak of Reaganite and Thatcherite ideology. They were subject to the strong pressures of Bretton Woods institutions. Instances of hyper-liberalism abound:

1. An immediate unilateral opening of international trade, frequently revoked and therefore premature;

2. a much faster capital liberalisation than in the earlier experience of other European economies, which caused currency and financial crises such as those of the Czech Republic in 1993, and Russia in 1998 which affected other central European countries;
3. an unprecedented form of mass privatisation (everywhere except Hungary), a veritable experiment in social engineering of questionable effectiveness, which did not change governance mechanisms, nor access to investment funds and managerial resources;
4. a pension reform from a Pay as You Go to a capitalisation system which made a hidden form of public debt come to the surface while at least partly it could have remained buried;
5. particularly bland and non-progressive taxation of companies and households, as witnessed by the widespread "flat tax" and by the lack of a capital gains tax, with greater incidence of indirect taxes;
6. a central bank of exceptional independence and not subject to any control, and without any coordination with fiscal policy;
7. a particularly restrictive monetary policy, with real interest rates at usury levels, that contributed greatly to the deep and protracted recession that accompanied the transition, discouraging investment and unduly strengthening exchange rates;
8. a particularly flexible labour market (in spite of the occasional protection of employment in some crisis sectors), with weak Trades Unions and scarce diffusion of collective bargaining;
9. a lack of mechanisms for consultation and concertation between social partners and with the government;
10. in general, a dominant weight of markets with respect to institutional mechanisms.In the end the transition economies embraced a hyper-liberal version of the market economy, very different from the European Social Model, converging instead with the US model of capitalism and beyond.

European authorities monitored the convergence of major monetary and fiscal parameters, and of market institutions. Thus EU candidates adopted EU competition policy; restrictions on state aid; improvements in state governance associated with implementation of the acquis communautaire. But the EU authorities did not require of the new

members the convergence with those policies that add up to the social dialogue model that—though to different degrees and in a flexible and non-codified fashion—characterised the European model. Hanson (2006) utilises several indices: World Bank Ease of Doing Business, Kaufmann-World Bank measures of governance, Transparency International Corruption Indices, and the Srholec index placing a country on a scale between liberal market and strategic coordination. He finds a significant partition between old and new members, which he attributes to entry negotiations neglecting the elements of a distinctive economic regime.

Vaughan-Whitehead (2003) notes that:

1. The scope of collective bargaining in the new member countries is only of the order of 10-20 per cent of the labour force;
2. Social dialogue is practically non-existent in small-medium enterprises;
3. EU Directives on Works Councils, profit-sharing and other forms of workers' participation are not being implemented;
4. A large scale informal sector is totally unaffected by ESM policies. The exceptions are Slovenia and, to some extent, Estonia.

### 26.4.3 ESM Dilution: Globalisation and the Recent Crisis

Another important factor of ESM dilution has been the weakening of labour bargaining power due the globalisation, which involved an increasing globalisation of labour markets, due not only to the more spectacular phenomena of delocalisation (caused by capital mobility) and of labour migrations, but above all to trade growth, which has already been mentioned. Labour markets globalization has threatened employment, real wages and tax revenues in the more advanced countries which had adopted the ESM. Competition in the global labour market is best illustrated by the growth of the export-weighted world labour force, of over 250% in 1980-2005, relatively to an un-weighted labour force growth of 70%. This is what in 1985-2005 lowered by 10 points the average share of labour income in GDP in advanced countries, from 65% to 55% (see

IMF World Economic Outlook, June 2007). The crux of the matter is that it is impossible to maintain current relative and often absolute standards of living in the more advanced countries while, at the same time, following policies of the free mobility of factors and free trade. Protectionism, and/or constraints on migrations and on capital mobility, would have to be introduced to support living standards and welfare states in the more advanced countries, at the expense of lower overall productivity and lower living standards and growth in the emerging countries. This is the dilemma facing advanced countries, including all those adopting a European Social Model.

The stringencies of the Growth and Stability Pact had already forced a certain dilution of the ESM, but eventually the Model was wrecked by the cuts in government expenditure adopted as a response to the global economic crisis of 2008-2010 and to generalised concerns about the sustainability of government debt. In the European Union expenditure cuts have apparently reached a total of the order of €300bn, plus another €90bn in the UK in the October 2010 budget adopted by the new Coalition government.

At the same time, the provisions of the ESM, though diluted, have allowed the older EU members to fare better, during the recent crisis—in terms of social costs—than the less welfare-minded New Member States of Central Eastern Europe. This, of itself, is causing internal migratory strains on EU cohesion as central and east Europeans move to high welfare EU countries but bring neo-liberal wage and conditions flexibility with them, thus destroying the "voice" of the ESM in older member states. And the US model has also been transformed in the crisis, reinstating the state as a major actor, taking care of the welfare not just of workers but of shareholders, creditors and managers of bankrupt private financial institutions.

## 26.5 Conclusions

In conclusion:

a) The European Social Model is alive and well;

b) It has a distinctive identity in spite of cross-country diversity;
c) It is not a superior model but it partakes fully of the advantages of a market economy and has specific merits in social protection and the composition of conflicts;
d) It has been diluted in the last ten years as a result of various factors, including its rising costs, the adoption by nearly all transition economies of a hyper-liberal socio-economic model, the deterioration of labour's bargaining power caused by globalisation, the fiscal discipline imposed by the Maastricht and Amsterdam Treaties and, finally, the cost of expenditure cuts undertaken—rightly or wrongly, for lower government expenditure does not necessarily leads to a lower deficit—with the purpose of consolidating public finances.

It appears to be still a viable and sustainable alternative, but only

1. after consolidation of public finances, or at any rate conditionally on the continued feasibility of such consolidation;
2. subject to the constraints of global competition, and
3. as an alternative to competing uses of public resources.

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# 27

# Seismic Faults in the European Union

Domenico Mario Nuti

## 27.1 Introduction

The UK secession from the EU, currently unfolding after the unexpected victory of Brexit in the Referendum of 23 June 2016, is widely viewed as a possible step towards EU disintegration, with the risk of contagion spreading its weaker member states such as Greece and Italy. In truth the crisis is much more serious: the EU has many fault lines, institutions and policies sliding over one another and colliding like tectonic plates. There are also external pressures similar to continental drift. A swarm of economic and political tremors has already caused widespread serious cracks

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and debris. Unless institutions and policies are radically and urgently changed, in ways that are theoretically feasible but made difficult to implement because of geo-political obstacles (discussed below), with the passing of time the probability of a catastrophic institutional earthquake—"the big one"—approximates near certainty, though with unpredictable timing.[1]

Crisis management, i.e. the exploitation of a crisis to promote solutions, is not a way to, and does not promote, greater integration. Usually it is ineffective because of delays and inertia, especially in multiple crises; at best it generates too little too late lagging behind the evolution of the crisis; at worst it is used as a political tool to justify "mission creep" and to avoid democratic monitoring of the EU élites' political, non-transparent agendas and behaviour.

## 27.2 Fault Lines

There are at least a dozen fault lines in the EU:

(1) *Brexit*. David Cameron promised a Referendum on British EU membership in order to defuse UKIP electoral challenge and also to tame the Eurosceptics in his own party. Clearly he hoped to replicate the success of the referendum on Scottish independence, when he had managed to keep the Kingdom united, diverting votes away from Labour opposition towards Scottish Nationalists, thus destroying the Scottish Labour Party whose MPs were reduced from 57 to 1. In the Brexit referendum he tried to divert opposition away from his government towards Brussels, but he went too far: he instantly destroyed the Liberal Democrats and undermined Labour, alright, but in the whole of the UK a 52% majority on a large turnout of 71.8% secured independence, i.e. voted to LEAVE the EU; he had to resign and probably undermined the Conservative Party as well in the longer run. His successor Theresa May, though a lukewarm Remainer, confirms "Brexit means Brexit".

Donnelly (2016) argues that Brexit might not actually happen, considering the payments to the EU budget necessary to keep the UK

[1] A similar but milder preoccupation is expressed by Podkaminer (2016).

connected to the Single Market after Brexit, the recent bye-election victory of a Liberal Remainer, and likely cross-party opposition. But even if the Supreme Court upheld the High Court ruling, and notification of the intention to leave the EU under art. 50 of the Treaties required Parliamentary approval, an overwhelming majority of the House of Commons has already confirmed parliamentary determination to notify the EU before the end of March 2017, on May's schedule. Short of an unlikely unanimous extension of the two-year deadline being granted by the rest of the EU—British exit will happen by the end of March 2019.

Brexit is likely to be punitive: migrations control and reduced access to welfare provisions by EU migrants, no European Court of Justice jurisdiction, and the rest, mean reduced UK access to the single market in spite of significant mutual losses. Bank of England Governor Mark Carney warned that Europe's dependence on London for finance services put it at greater risk of a banking crash and an economic slowdown than the UK in the event of a hard Brexit with no transition arrangements (Aldrych 2017); but the EU needs to discourage a domino effect on other exits or requests by other members for *à la carte* membership.

Gudgin et al. (2016, Rev. 2017) argue that the papers published by the Treasury pre-Referendum greatly exaggerated the economic costs of Brexit. On the basis of UK export performance over a long period both pre- and post-accession, Gudgin et al. estimate a pessimistic scenario involving half of the trade loss anticipated by the Treasury, while "in the milder Brexit scenario there is a two per cent loss of GDP by 2025 but little loss of per capita GDP, less unemployment but more inflation. In the more severe, Treasury-based scenario the loss of GDP is nearer five per cent (two per cent for per capita GDP), inflation is higher and the advantage in unemployment less."[2] This presumes an orderly departure from the EU. However, what we may end up with is a chaotic process which would generate a serious lose-lose situation. This might happen if it is impossible to reach a mutually acceptable trade agreement, or if the negotiations drag on for years beyond the two-year deadline, or if the agreement, when reached, is not ratified by all the EU member states.

[2] Busch and Matthes (2016) survey several estimates of Brexit net economic effects ranging from +12% to −20% of UK GDP.

(2) *Trade policy*. There is a clear democratic deficit: *either* representatives of 3.5mn Wallonians can block a Treaty affecting 545mn people[3]; *or* after 7 years of secret negotiations with Canada, the Treaty on CETA (Comprehensive Economic and Trade Agreement) was unduly favourable to international investors, enjoying *ad hoc* ISDS (Investor-State Dispute Settlement) mechanisms, protection of profits from regulatory legislation on labour and the environment, excessive protection of patents (European Scrutiny Committee 2016). Another large scale agreement currently under negotiation, the TTIP (Transatlantic Trade and Investment Partnership) between the EU and the US is also unlikely to be signed under Donald Trump. Apparently the new President opposes also the Trans-Pacific Partnership between the US and 11 Pacific Rim TPA (in spite of current Chinese exclusion which would help his policy of restraining China's expansion) and intends to denounce NAFTA (the North Atlantic Free Trade Association) as "the worst trade deal ever".

There is a pro-multinational corporate bias also in the EU "Gold Plated Revolving Doors" recruitment policy of high officials, with Goldman Sachs (Monti, Draghi, Issing, Barroso, Christodolou, Sutherland, Borges) and other global corporations (Bangemann, etc., see Corporate Europe Observatory 2016). One important role of the nation state is that of protecting its citizens from multinational corporations (Judt 2010): self-evidently this role cannot be entrusted to the European Union.

Globalisation (including migrations, as we shall see below, and like technical progress) has undoubted net welfare benefits, but these are the result of gross benefits and losses by different participants. The assertion of the superiority of globalisation must be conditional to the *actual* and not just the *potential* over-compensation of losers by gainers, which is usually neglected and rarely happens, therefore justifies losers' resistance. Trickle-down of gross benefits spilling over the losers cannot be taken for granted, a reverse trickle-up is just as likely. The idea of a win-win liberal-democratic order is false even in the long run: "redistributive policies are

[3] Canada's Trade Minister Chrystia Freeland noted that the EU was incapable of reaching an agreement, as she put it, "even with a country with European values such as Canada, even with a country as nice and patient as Canada." In the end the Canadian Premier Justin Trudeau and EU representatives signed the Treaty on 30 October, only four days behind schedule; the Treaty is immediately in force but still subject to approval by 38 parliaments and its final approval should not be taken for granted.

fundamentally not win-win. The main beneficiaries of free trade and technological change must actively compensate the losers through taxation, subsidies and employment support" (Derviş 2016). In the United States the idea that losers from free trade need compensation goes back to the 1974 Trade Act, that established the Trade Adjustment Assistance (TAA) Program, providing a variety of income benefits, training and reemployment services to workers displaced by imports (in 2010 involving 227,000 workers and almost 1bn federal spending). President Obama proposed to expand the TAA program but did not actually do it. The EU also has a European Globalisation Adjustment Fund, started in 2006, with a purely token annual budget of €150mn devoted exclusively to training (Asatryan et al. 2014).

Moreover, even if everybody was demonstrably made better off by globalisation, the inequality in the distribution of gains cannot be ignored. Milanovic (2016) shows such a distribution to resemble an "elephant curve": Fig. 27.1 along the horizontal axis ranks the world's citizens

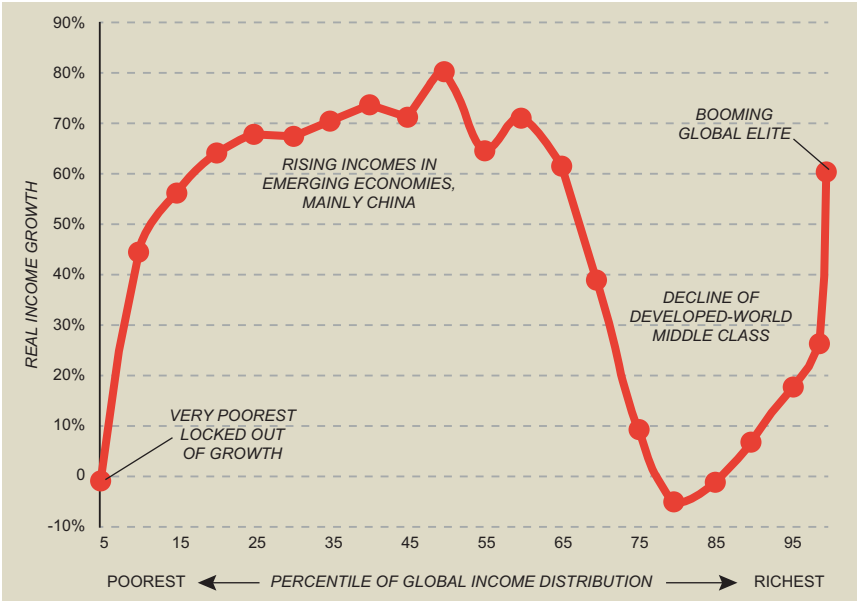


**Fig. 27.1** Global Income Growth, 1988–2008. (Source: Milanovic 2016)

in terms of increasing 1988 income from lowest to highest, while the ordinates show how much each income group has gained by 2008 with respect to their 1988 level. The increase over the period was significant for some, striking for many others, but disappointing for others. The rise of a global middle class (to which China greatly contributed), though still relatively poor, and of the top global 1% already very rich (the elephant's trunk), were unprecedented. For the lower and middle income classes in the richer countries this move was accompanied by income stagnation, insecurity and worry about their future and that of their children. This process, mostly the result of globalisation, cannot be regarded as universally satisfactory even if nobody was made worse off in the process.

The over-extension of trade agreements beyond trade liberalisation, mentioned above, and the distributional implications of trade integration, lead Rodrik (2016b) to the exhortation "Don't Cry Over Dead Trade Agreements".

(3) *Migrations*. At the beginning of 2016 Roubini wrote: "Those who argue that the migration crisis also poses an existential threat to Europe are right. But the issue is not the million newcomers entering Europe in 2015. It is the 20 million more who are displaced, desperate, and seeking to escape violence, civil war, state failure, desertification, and economic collapse in large parts of the Middle East and Africa." In fact the years 2014–2016 saw an acceleration of migrant inflows into the EU, not only from the Middle East and Africa but also from the Balkans and South-East Asia. In 2016 migrants into the EU approached 2mn, in 2017 the European Commission expects the inflow to accelerate further to 3mn. OECD (2016) provides comprehensive up-to-date statistical records and forecasts and an excellent analysis, but totally useless policy recommendations, relying on improving living conditions in countries of origin (which might have been effective if it had been done 20–25 years ago), investing in integration in the host countries (without indicating where the necessary resources might be obtained), and stressing alleged mutual benefits from migrations while neglecting the drawbacks.

Refugees escaping war and persecution are entitled to asylum (art. 13, Universal Declaration of Human Rights, UN 1948) but most migrants are economically motivated and, unlike refugees, their right to migrate is

unmatched by any country's corresponding obligation under international law, to receive them. In theory migrants from "safe countries" of origin or arrival are not entitled to refugee protection elsewhere, but there is no EU let alone UN official list of safe countries, and practices differ widely internationally. The Dublin Treaty whereby the first EU country of arrival is responsible for identifying refugees and for receiving them has placed an unfair burden on countries neighbouring hotspots, such as Italy and Greece. Identification of migrants has been likened unduly to the branding of concentration camps inmates, and a violation of human rights.

In September 2015 the EU Justice and Home Affairs Council adopted two Decisions to relocate 160,000 asylum seekers from Italy and Greece, to assist them in dealing with the pressures of the refugee crisis. The state of play over a year later, on 6 December 2016, was a relocation of 8162 people, or 5.1% of the target; the Visegrád countries (Czechia, Hungary, Poland, Slovakia) and Romania declined to take part in the scheme. Within the Schengen area relocation is necessarily ineffective anyway, as migrants will always be able to move to their preferred destination—unless countries implement a population registration system and compulsory residence permits for aliens, and have a sufficiently efficient bureaucracy to actually enforce it.

Without any doubt migrations—just like all other manifestation of globalisation—yield a net welfare gain. In a world *without borders* the net benefit from migrations has been estimated to range from a maximum of 143.3% of global GDP (Hamilton and Whalley 1984, surely an overestimate, moreover now out-of-date) to a more sober but still respectable 7%–17.9% (Docquier et al. 2012). But gross losses are also involved: of workers in host countries, especially if unskilled, and employers in countries of origin. These losses are bound to be lower than the gross benefits involved, accruing to migrants, to workers who remained at home, to employers in the host country; to consumers all round benefiting from lower prices due to greater competition. However gross benefits cannot be mobilised to over-compensate the losers, so as to make everybody better off, because transfers from gainers to losers would have to be international (which is impractical) and/or from the poor to the rich (undesirable) (see Nuti 2009).

Within the EU labour mobility, together with flexible salaries and a large budget (see point 6 below) is a precondition for an Optimum Currency Area. However in the presence of significant cultural and linguistic barriers, such as those existing across Europe, labour migrations have perverse effects for the weaker countries because they are skill-biased: "Regional differences in skill or education may be self-perpetuating because higher skilled and better educated individuals are the most likely to migrate out of the depressed regions" (Akkoyunlu and Vickerman 2001); "Migration of high-skilled and qualified workers… [will] then work to increase regional disparities instead of diminishing them" (Fatas 1998).[4]

Migrations also involve the dilution of social capital (whether viewed as physical social infrastructure, or as total benefits provided by the welfare state, or as trust and cohesion) and their free appropriation by migrants, while private capital is fully protected globally. This is an unsustainable contradiction: you cannot have global communism for social capital and at the same time globally unrestricted capitalism for private property.

Moreover, any benefits of cultural enrichment can be matched by losses from cultural impoverishment. Here the seismic fault is an East-West divide, that caused Schengen area collapse, and the building of walls: 175 km of barbed wire and blades, 4 m high, between Hungary and Serbia, completed in September 2015; the barrier between Macedonia and Greece, completed in March 2016; the 4 m high wall built in Munich in November 2016 to separate the local population from a migrants' camp; the "Great Wall" built in 3 months to stop migrants from crossing the Chunnel by illegally entering lorries directed to Dover: 1 km reinforced concrete, 4 m high, at a cost of €2.7mn paid by Britain, to complete the iron and barbed wire fence erected to prevent access to the Calais Harbour. Walls may be unsightly and unpleasant, but Schengen

[4] See also Fratesi and Riggi (2004). "The widening economic asymmetries within the European Union have called into question the ability of labour mobility to act as a shock absorber within the EU. While free movement of workers within the EU was established more than 40 years ago, the rate of mobility within the EU has remained relatively low compared to other free mobility regions such as the US, Canada and Australia. While emigration from the Periphery has increased significantly since 2008, in absolute terms the level of mobility flows from this region remains extremely limited." (Holland and Paluchowski 2013).

member countries are actually required to erect them by art. 17 of the Agreement: "With regard to the movement of persons, the Parties shall endeavour to abolish checks at common borders and transfer them to their external borders… and to take complementary measures to safeguard internal security and prevent illegal immigration by nationals of States that are not members of the European Communities." Indeed a country like Greece, unable to satisfy this obligation because of dramatic crisis conditions, was taken to task by the European Commission for failing to control its borders (BBC 2016).

Opposition to migrations is regarded as a major factor in the recent spreading of populism, but the very concept of populism must be reconsidered. Populism today includes cross-party and inter-class protest against the reintroduction of poverty, mass unemployment, poor services in stable societies, and above all against all losses from globalisation and migrations. Globalisation has exceeded "the boundaries of institutions that regulate, stabilize, and legitimize markets. Hyper-globalization in trade and finance, intended to create seamlessly integrated world markets, tore domestic societies apart" (Rodrik 2016a). Such protest, amplified by the failure to generate a European identity (especially evident in the UK referendum where the assertion of "national sovereignty" was a major factor) is an integral part of democracy and no longer deserves contempt and demonization (of the kind expressed by Nuti 2011). A redefinition of populism is required also by the diffusion of Information Technology and the fast inter-connectivity of people in everyday life (e-mail, social media, blogging, mass access to leaked official documents and to expertise, etcetera.)

(4) *Austerity*. Maastricht rules on budget deficit and public debt ceilings (respectively 3% and 60% of GDP or converging sufficiently fast to those limits), the tougher so-called GSP (Growth and Stability Pact) and the Fiscal Compact, have condemned member states to pro-cyclical fiscal policies, which in Southern countries has led to protracted recession and mass unemployment, creating a North-South divide.

Early claims of a possible "expansionary fiscal consolidation" (Giavazzi and Pagano 1990, 1996; Alesina and Perotti 1995; Alesina et al. 2006) were disproved by the IMF Research Department (Blanchard and Leigh 2012 and a vast literature reviewed by Nuti 2013b) and now have been

abandoned even by its proponents. It turns out that throughout 1970–2009 the IMF and other international organisations had underestimated fiscal multipliers in EU and OECD countries, at an average 0.5, now recalculated upwards to be as much as 1.7 (the argument is conducted in terms of international averages, but fiscal multipliers partly depend on the size of the country: small foreign-trade dependent countries have smaller multipliers than bigger countries, because of the leakage effect). This upwards revision is justified by the reduced effectiveness of monetary expansion close to a zero interest rate, lack of opportunities for exchange rate devaluation especially in the Eurozone, a large gap between potential and actual income (multipliers being higher in a recession when external leakages are lower than in a boom) and consolidation occurring simultaneously across countries. Also, fiscal multiplier for expenditure cuts, contrary to expectations, turns out to be up to ten times higher than for tax rises.

It follows that fiscal consolidation is much more expensive in terms of output loss than previously believed. Worse, it can be proven that, starting from a hypothetical fiscal balance, a fiscal consolidation (tax increases plus government expenditure cuts) will always necessarily result in an *increase instead of a decrease of the Public Debt/GDP ratio*, with respect to what that ratio would have been otherwise, *as long as the fiscal multiplier is greater than the country's GDP/Public Debt ratio*.[5] Thus fiscal consolidation works only in countries with a low Public Debt/GDP ratio, that do not need a consolidation (Nuti 2013a, 2013b, see also Stuckler and Basu 2013).

[5] Given $D$ = Public Debt, $Y$ = GDP, $d = D / Y$ (initially $d = 0$), consider a fiscal consolidation x=tax rises plus expenditure cuts of given composition, expressed as a share of GDP, $\Delta D = -xY$, $\Delta Y = -mxY$, where $m$ is the appropriate fiscal multiplier. We then have

$$\Delta(D/Y) = \frac{(\Delta D)Y - (\Delta Y)D}{Y^2} = \frac{(-xY)Y - (-mxY)D}{Y^2}$$
$$= \frac{-xY^2}{Y^2} + \frac{mxYD}{Y^2} = -x + \frac{mxD}{Y} = mxd - x,$$

and therefore $\Delta(D / Y) = x(md - 1) = xd(m - 1 / d)$ from which we can see that the ratio $D/Y$ must increase, i.e. $\Delta(D/Y) > 0$ if and only if $m > 1 / d$. Q.E.D. see Nuti (2013b).

An additional case for austerity was made by Reinhardt and Rogoff (2010), who claimed that a Public Debt/GDP ratio above 90% slowed down economic growth significantly; such claim was also shown to be unfounded and was debunked by the IMF.[6]

Austerity can also take the form of restrictive wage policies leading to large trade surpluses that suppress growth in countries which fail to follow suit (and thus run trade deficits and accumulate foreign debts) as well as weakening growth in the countries that restrain wages. This is why such policies are subject to EU-wide coordination, although they were taken unilaterally and therefore illegally by Germany with the Schroeder-Hartz internal devaluation, and by Austria (Bagnai 2012, 2013). "In practice, the 'beggar-thy-neighbour' policy is also a 'beggar-thyself' policy" (Laski and Podkaminer 2011, 2012, 2013).

The theoretical and empirical evidence that austerity policies were actually counterproductive made no difference to European practice. Italian former premier Matteo Renzi promised to make Europe "change direction" but he ran perversely large primary surpluses (second only to Denmark, higher than Germany) and slowed down debt growth, actually reversing it in the third quarter of 2016.

(5) *Tax competition*. Taxation across the EU is not sufficiently harmonised. Tax competition in order to attract foreign investment and tax revenue destroys national and EU collective tax revenue potential, making fiscal discipline more difficult. In his capacity as Luxembourg Premier, in

[6] On the basis of a new dataset of forty-four countries spanning about two hundred years, incorporating "over 3700 annual observations covering a wide range of political systems, institutions, exchange rate arrangements, and historic circumstances", Reinhart and Rogoff found that "the relationship between government debt and real GDP growth is weak for debt/GDP ratios below a threshold of 90 percent of GDP. Above 90 percent, median growth rates fall by one percent, and average growth falls considerably more." Several critics immediately pointed out that causation was bound to run in the opposite direction, but the final blow to the 90% debt/GDP dogma came from Herndon et al. (2013), who replicated the analysis using the original data. They found that Reinhart-Rogoff selectively excluded available data for several Allied nations—Canada, New Zealand, and Australia—that emerged from World War II with high debt but nonetheless exhibited solid growth. And summary statistics were all weighted equally regardless of the duration of high debt and growth performance. Herndon et al. (2013) conclude that "… when properly calculated, the average real GDP growth rate for countries carrying a public-debt-to-GDP ratio of over 90 percent is actually 2.2 percent, not 0.1 percent as published in Reinhart and Rogoff". It turns out that "average GDP growth at public debt/GDP ratios over 90 percent is not dramatically different than when debt/GDP ratios are lower."

2002–2010 Jean-Claude Juncker made "sweetheart deals" with at least 340 multinational corporations, reducing their tax liabilities by billions of dollars. A poacher turned gamekeeper, he now enforces austerity in countries which he robbed of their tax revenue.

Ireland, levying a 0.005% tax (5 per 10,000, sic!) on Apple European revenues, is the most spectacular instance of tax competition. It was fined €13bn by the EU but tax recovery is doubtful: naturally Apple has appealed against the ruling but, grotesquely the Irish government has also appealed on the ground of undue interference, although what is at stake is not a government ability to determine its own tax policy, but its ability to favour specific taxpayers. Even if the fine was enforced, it is not going to benefit the other EU members damaged by this policy.

(6) *The tiny EU budget (about 1% of EU GDP)*. The USA have a federal budget of over 20% of US GDP, which can support the issue and service of federal debt. Individual member states of the US can issue their own bonds involving a default risk without threatening the dollar or the US financial system.

The tiny EU budget, combined with the rule that it should always be balanced *ex-post* (by a variable income tax on member states) rules out the possibility of issuing and servicing EU debt. It also rules out financing major Europe-wide investment in infrastructure, or counter-cyclical policies: the Juncker Investment Plan has remained a dead letter: €2bn EU funds—plus guarantees and funds already budgeted for and simply diverted from other uses—are expected to mobilise €315bn private investment through impossible multiplier effects. Juncker's recent calls (2016) for "a positive stance" in countries with the fiscal space to boost spending were flatly rejected by Germany.

The need for a larger budget in an Optimum Currency Area, in order to insure member states from regional income shocks, has been known for a long time, at least for a quarter of a century: "…the creation of a European Central Bank that issues unified European currency without the simultaneous introduction (or expansion) of a fiscal federalist system could put the project at risk" (Sala-i-Martin and Sachs 1991). Therefore this congenital handicap must be regarded as part of a deliberate design.

(7) *Divergence of welfare policies*. Until the early 2000s the European Social Model, a desirable target though not part of membership

obligations, relied on *concertation* institutions as well as markets, to provide employment protection and a generous welfare state. The Model was diluted and debased by EU enlargement to the East (2004–2006), by globalisation of labour markets and by austerity (Giannetti and Nuti 2007).

The Bertelsmann Stiftung computes a yearly Social Justice Index (SJI) for all 28 EU states, summarising: poverty prevention, equitable education, labour market access, social cohesion and non-discrimination, health, as well as intergenerational justice. In the vast majority of EU countries the Index, after years of decline, reached its lowest point in 2012–2014; it has improved since but is still noticeably worse than before the crisis (see Bertelsmann Stiftung 2016). There are significant country differences, impacting on the relative attraction of migrations. Figure 27.2 shows the 2016 SJI relatively to 2015 GDP per capita (PPP): note the dispersion of both income per head and SJI throughout the EU. The

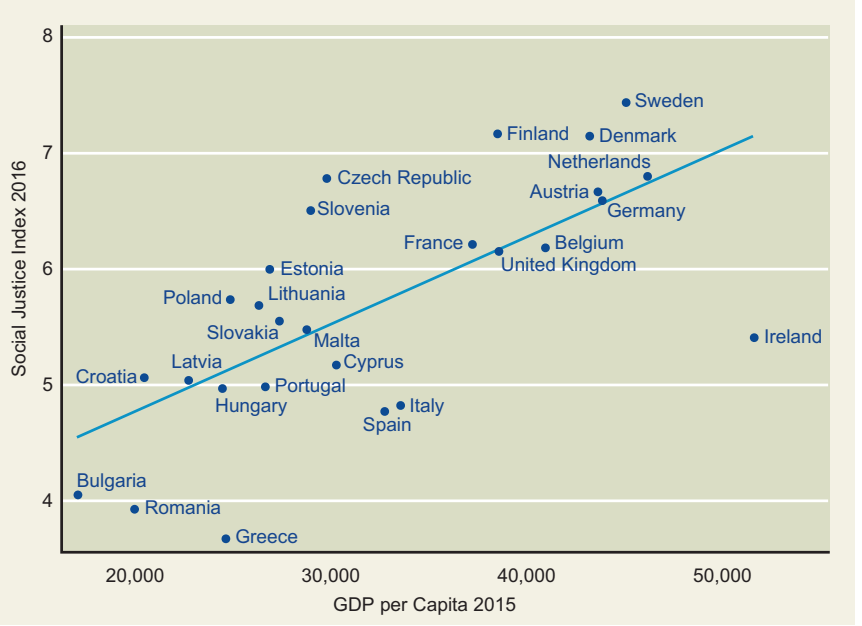


**Fig. 27.2** Social Justice Index 2016 & GDP PPP per capita 2015. (Source: Bertelsman Stiftung 2016)

rejection of a financial Transfer Union has involved a *de facto* Labour Transfer Union (as implicit in the literature on Optimum Currency Areas).

According to OECD data (Bonesmo Fredriksen 2012), EU inequality has risen quite substantially since the mid-1980s; towards the end of the 2000s income distribution was more unequal than the OECD average country (though notably less so than in the United States). The EU enlargement process contributed to this process, but inequality also increased within a "core" of 8 European countries. Large income gains among the 10% top earners appear to be a main driver behind this evolution (see also Dauderstädt and Keltek, 2016).

(8) *Tolerance of illiberal regimes*. The original European design was committed to shared values, listed by Angela Merkel in her congratulatory message to President Trump as "democracy, freedom, as well as respect for the rule of law and the dignity of the individual, regardless of their origin, skin colour, creed, gender, sexual orientation or political views" (Fayola 2016).

Such commitment has been neglected by EU acquiescence in a number of member states' illiberal regimes. Hungary and Poland have restricted freedom of speech, media pluralism and the protection of minorities.

In Hungary since 2010 the Fidesz government of Viktor Orbán changed the election system, redesigned electoral districts, eliminated checks and balances within governance built over the past two decades, reshaped the juridical system and gained nearly full control over the media and all state institutions.

Transparency International describes Hungary as a "state captured by private interest groups". Viktor Orbán in 2014 announced his desire to create an "illiberal state" modelled on China and Russia. Recently he declared the end of the era of "*liberal blah blah*", predicting that Europe would come around to his "Christian and national" vision of politics.

On 2 October 2016 an overwhelming majority of Hungarian voters rejected the EU's migrant quotas mentioned above, though turnout was marginally too low to make the poll valid. In January 2017 Hungary decided that all migrants would be detained pending the verification of their applications for asylum, although this is specifically forbidden by UN regulations.

In Poland, since October 2015 Kaczyński's PiS party "attacked the country's Constitutional Court, politicized the judiciary and the civil service, and launched an assault on media pluralism" (Müller 2016). The EU treated it as a Rule of Law violation but took no further action for the moment.

Accession state Turkey's Erdoğan, emphasizing traditional Islamic morality, claims to be a "conservative democrat." Turkey's authoritarian involution accelerated after the failed coup of 16 July 2016, when over 100,000 people were purged. In November the European Parliament condemned "disproportionate repressive measures" and called for a freeze on EU accession, but MEPs have no formal role in accession talks; the freeze still needs confirmation by the European Commission. Meanwhile Turkey will still receive €6bn to take back migrants who failed to obtain asylum in Greece.

The European Council for Foreign Relations (ECFR) advises that "… both sides need to develop "strategic patience" to anchor Turkey to Europe. … It is important for the EU to think long-term about Turkey. …" "Despite tensions, Turkey and the European Council should think about their shared interests and high degree of integration to avert a 'train-wreck'" (Aydintasbas 2016). The EC President, Jean-Claude Juncker, justifies this position thus: "We, the European Union, have links with regimes that are odious. And nobody asks us about it. Everybody's worried about Turkey, but nobody's talking about Saudi Arabia. … We have relations with all dictatorships because we need to organize, to co-organize the world." (Press TV 2016). This is a demagogic, disingenuous proposition, deliberately confusing arms-length relations with Saudi Arabia under international diplomacy, with an accession partnership, which is a source of legitimacy that strengthens the regime's hand against its democratic opposition (see Ugur 2016). Demographic factors alone make Turkey's EU membership unlikely, for it is poised to become soon larger than Germany, and therefore the biggest and most important member, which explains why EU-6 population is very much against Turkish accession. The British support for Turkish accession, as in the case of East-European enlargement, was probably a strategy to prevent deeper EU integration.

Robert Fico's government in Slovakia has pursued a Polish-style brand of what has been dubbed "raw majoritarianism" (Sierakowski 2016).

Matteo Renzi's constitutional reform (rejected by the 4 December Referendum) was also a move towards power concentration beyond democratic control. A fault line is dividing liberal and illiberal Europe.

The European project itself is illiberal: in the inter-governmental approach national governments bypass their respective Parliaments and co-ordinate decisions among themselves, i.e. obey the strongest, whereas a federal approach would rely on a truly representative European Parliament, endowed with a proper budget. Today's European Parliament has very limited legislative powers, exercised instead by a Council of Ministers with variable membership, while much executive power is vested in European Commission unelected technocrats. The delegation of political decisions to European institutions, beyond the reach of national electoral processes, has been explicitly and openly theorised by the project's supporters (among others Rampini 1998, 2016 and Featherstone 2001). The politicisation of the judiciary, typical of Poland today and rightly opposed by the EU, is a process imitated by the EU with the introduction of a balanced budget in the member states' constitutions: for instance, the new art. 81 of the Italian Constitution has been used to bypass its fundamental principles and results in political overexposure of the Constitutional Court (Barra Caracciolo (2015). The Troika of the IMF, the European Central Bank and the European Commission, which have played a devastating role in imposing severe economic and political conditions on Greece and other countries needing financial assistance, has no basis in any European Treaty and therefore no legitimation whatever (European Parliament 2014).

(9) *The Euro: premature, handicapped, divergent*. The common currency was supposed to "crown" European integration, after political, fiscal and banking integration, and a common foreign and defence policy, but was introduced prematurely, an exemplar of the "crises create opportunity for integration" myth. It was also handicapped by the ECB limited powers: unlike the Fed, the Bank of England and Bank of Japan, the ECB cannot finance the EU budget or that of member states purchasing government bonds in primary markets. The Euro also suffered from increasing divergence of member state fundamentals, both those supposedly targeted by the Maastricht Treaty (deficit and debt shares in GDP, inflation and interest rate, exchange rate) as a precondition of entry and those

that had been neglected but should not have been, such as unit labour costs, unemployment rates, welfare state benefits, share of non-performing loans in bank balances. Many authors claim that divergence among member states is actually increased by the single currency, for a variety of reasons (Krugman 1993; Tornell and Velasco 1995; Feldstein 2005; Fernández-Villaverde et al. 2013; Caporale et al. 2015; Gopinath et al. 2015). Thus the Euro suffered from premature birth and sovereignty handicap and from the degenerative disease of fundamentals divergence.

Nevertheless, the Euro gave us ten years of low inflation, low and converging interest rates, trade and investment integration; its crisis was not due to Southern members' profligacy but to contagion from the US credit crisis, and the worsening public debt due to bank rescues feeding back onto banks' balance sheets.

On 12 July 2012 ECB President Mario Draghi announced that the ECB was "ready to do whatever it takes" to preserve the Euro. He tried Long Term Refinancing Operations, Outright Monetary Transactions and Quantitative Easing (QE), regarded by Pisani-Ferry (2016) as "monetary anesthetics". Draghi did it against steady German opposition, but on a scale much lower than the Fed in the US. Monetary expansion on its own, without fiscal expansion and with debatable, possibly counterproductive "structural reforms", initially stimulates consumption through its positive impact on asset prices (especially houses) which is neither particularly desirable (for it is anti-social) nor sustainable indefinitely; that stimulus soon loses effectiveness. Eventually QE is bound to come to a natural end for lack of eligible assets. Draghi announced the extension of QE from April to December 2017 but on a reduced monthly scale (from €80bn to €60bn) and broadening the range of eligible assets.

Negative interest rates were also introduced in 2015, to induce commercial banks to expand credit, but failed to re-launch economic growth: a credit supply instrument is poorly suited to remedy a demand crisis (Roach 2016). "Negative interest rates are stupid. They only shrink a bank's capital, hinder the sale of credit and weaken the economy" (Stiglitz 2016). Helicopter money might work better to stimulate demand, but then traditional fiscal expansion seems preferable. Mario Draghi's tenure ends in 2018; at present the favourite candidate to his succession seems to be the current Bundesbank President Jens Weidmann, whose political

ambitions and stern commitment to austerity policies are well known. If he were really to succeed Draghi, the worsening of Euro segmentation and of Southern countries' recession would be unstoppable.

(10) *The recapitalization of commercial banks*. The fragility of European banks is due to the long deep recession worsened by austerity, which raised the burden of Non-Performing Loans in bank balance sheets; the uncontrolled expansion of derivatives transactions; local credit concentration, and bank governance failures. "…[T]he sector runs on a level of profitability that is, on average, lower than its cost of equity and maintains a stock of non-performing loans and hard-to-value assets large enough to undermine its capitalization for years to come" (Reichlin and Vallée 2016). Large scale bail-out (Germany €241bn) is no longer available since the EU bail-in directive came into force on 1 January 2016.

A European Deposit Insurance Scheme is still the object of current negotiation: it remains the responsibility of national Treasuries and therefore is dependent on national governments' continued solvency. Bank resolution rules will come into force only in 2018. Bank supervision (stress tests, etc.) has been exercised by the Single Supervisory Mechanism (SSM) since November 2014 for 128 "significant banks", but the remaining 6000 "less significant institutions" remain the responsibility of national Central Banks.

German commercial banks are still in jeopardy because of the persistent derivatives crisis (Deutsche Bank); liabilities to US fines for selling toxic bonds ($7.2bn for Deutsche Bank, $5.28bn for Commerz Bank) as well as the precarious state of German Landesbanks, that remain under Bundesbank control. Basel 3 rules raising capitalisation requirements should make banks safer, but their introduction in a recession slows down lending; not unnaturally plans for the implementation of Basel 4 stricter rules were shelved indefinitely at the beginning of 2017.

At the beginning of 2016 the Single Resolution Board (SRB) was given the responsibility for dissolving ailing banks within European countries, letting shareholders and creditors bear the burden of bankruptcy rather than taxpayers. However the full operations of the SRB, when insolvency or resolution are not an option, relies on bail-out by the Single Resolution Fund (SRF) which is supposed to collect around €55bn by the end of

2023, financed by banks themselves; the question remains of bridge financing for the SRF until such a date (Nüse 2016).

(11) *Foreign policy*. In 1991, after the dissolution of the Socialist Federal Republic of Yugoslavia, Germany's over-hasty recognition of Slovenia and Croatia put the EU in front of a *fait accompli* and was followed by civil war (Bosnia and Herzegovina 1992–1995), NATO intervention (1999) and massive destruction.

After 1992 the EU was complicit in NATO enlargement to the East, in violation of the 1990 confirmed deal between Gorbachev and George H.W. Bush whereby NATO would expand "not one inch to the east," (James Baker, US State Secretary, see Zuesse 2015). A needlessly aggressive policy became a missed opportunity for *détente* with Russia (Romani 2015).[7] Moreover, the 2008 promise of NATO membership to Georgia and Ukraine was counterproductive: it cost Georgia South-Ossetia and Ukraine the Crimea. In Ukraine the EU helped initiate and supported the Euromaidan movement that in February 2014 ousted pro-Russian President Viktor Yanukovych, elected in 2010. The Crimea had been a "present" from Khrushchev to Ukraine in Soviet times (1954) but part of Russia since 1783, ethnically Russian and militarily essential for access to warm-water ports—all contributory factors to Russia's annexation. The

[7] The *Two Plus Four Agreement on The Final Settlement with respect to Germany* was signed by the GDR, the FRG and the four occupying powers, France, the UK, the US and the USSR in Moscow, on 12 September 1990. Cohen (2005) and Gorbachev (Blomfield and Smith 2008) claimed that the Agreement contained a commitment that NATO would never expand further east; Zoellick (2000), who represented the US at the Agreement negotiations, writes that no formal commitment was made. In a 2014 interview (see Kòrshunov 2014) Gorbachev acknowledged that "The topic of 'NATO expansion' was not discussed at all" but claimed that "Another issue we brought up was discussed: making sure that NATO's military structures would not advance and that additional armed forces from the alliance would not be deployed on the territory of the then-GDR after German reunification." … "The agreement on a final settlement with Germany said that no new military structures would be created in the eastern part of the country; no additional troops would be deployed; no weapons of mass destruction would be placed there." Therefore for Gorbachev NATO expansion to the East (1993 and after) "was definitely a violation of the spirit of the statements and assurances made to us in 1990." See also Zuesse (2015) and his comprehensive *Testimony,* and Romani (2015), who was Italian Ambassador to Moscow at the time and confirms the existence of the Bush-Gorbachev deal. Zuesse explains that there had not been a formal written stipulation because that was not a peace treaty after a hot war, and there was no question of land restitution or war reparations. Of course the question remains open of whether the alleged commitment would hold after USSR disintegration or even after the tenure of the Presidents involved, but NATO expansion remains a highly questionable decision even in the absence of a formal violation.

EU joined US sanctions against Russia which damaged member states asymmetrically (Germany continued to import Russian oil and gas.)

Lieven (2016) notes the disintegration of "the West", "…corroded by a combination of the sins of the liberal establishment itself and aspects of globalisation that Western liberalism helped to foster". This has negative implications but also opens new opportunities, including "the prospect of geopolitical reconciliation between the USA, the EU and Russia, overcoming the totally unnecessary hostility created by the expansion of NATO and Russia's reaction to that expansion, and by the adventurism of the USA and its allies in Iraq, Libya and elsewhere." In a more open and multiform West, the European world in the broader sense—"perhaps we should now say North"—there should be plenty of room for Russia; this would also strengthen the position of Russian liberals. One positive implication of Trump's presidency is the greater credibility of such a prospect.

After the US Presidential election Juncker declared that Trump "did not know the world and his first two years would be wasted while he travelled and learned"; his campaign had been "disgusting"—not exactly a sober, diplomatic reaction. Merkel's Social Democratic coalition partner and competitor for her succession, Deputy Chancellor Sigmar Gabriel, imitated Juncker and greeted Trump as "the trailblazer of a new authoritarian and chauvinist movement."

Member states are committed to a Common Foreign and Security Policy (CFSP), aimed at Conflict Prevention and Crisis Management. This has generated very little, except an above average proliferation of European acronyms (EUGS, HRVP, EDA, EEAS, EDP, CDA, INTCEN, EUMS INT …) and a great deal of paperwork in several languages.

"As long as Europe will be an association in which every member acts only when it is directly involved, it will tell the world, implicitly, that the interests of a country are not the interests of all. And it will continue to be half a power, incapable of utilising the virtues and resources at its disposal. It will be like Renaissance Italy, a great treasure of talents and splendours, but too divided for it to be respected and feared" (Romani 2015).

(12) *Defence*. Every EU member state controls its own army, but under the Common Security and Defence Policy more than 30 civilian and

military operations have been launched since 2003, in Europe as well as Asia and Africa. France, Germany Belgium, Spain and Luxembourg also created Eurocorps, a military body for rapid deployment to hotspots.

The lack of a democratic, political route to decision-taking in military and paramilitary action at EU level is a further source of gross instability. The EU was divided over the Iraq War. Unilateral military initiatives were taken against Gaddafi's Libya by Cameron and Sarkozy, with Italian acquiescence. The fight against Daesh is handicapped by divisions over the Assad regime, Turkey's dominant anti-Kurd stance, Saudi Arabia's involvement and differences in policy towards Iran.

A Franco-German Plan for closer EU defence cooperation was discussed at the Bratislava summit last September, including new military Headquarters and swifter deployment of overseas missions (such as the Sophia anti-migrant smuggler operation or the Atalanta anti-pirate mission), coordination of medical assistance and the sharing of strategic assets. EU "tactical groups" or "battle groups"—joint battalions created by small groups of EU states—should be made operationally ready. The aim was a European defence union—"basically a Schengen of defence" (Ursula von der Leyden, German Defence Minister). The British in the past had opposed plans for the creation of an EU army or duplication of NATO structures. British Defence Minister Michael Fallon declared that the UK would veto the creation of EU military capabilities so long as it remained an EU member.

President Trump's plan to require European states to pay up for NATO's costs is bound to strengthen this initiative, while contributing to sources of dissension between supportive eastern EU countries and neutral states such as Ireland, or others such as the Netherlands reluctant to intensify integration after Brexit.

## 27.3 Other Potential Fault Lines

There are other potential fault lines: *energy policy and/or environmental policy*. Energy saving alternatives to fossil fuels and the nuclear power option are still nation-based. The Paris agreement on climate change was ratified by the EU but relies on national implementation policies. The

VolksWagen *Dieselgate* emission scandal was not uncovered by the EU but by CARB, the California state environmental agency that enforced compensation for US drivers, while the EU does not contemplate class actions and compensation has been denied to 8.5 million European drivers of affected vehicles, who are only being offered a software upgrade and at most a new exhaust filter.

*External pressures*. Migration pressures are primarily the result of internal, endogenous EU policies (divergence of living standards and welfare provisions, Schengen open borders and failure to strengthen external borders, failure to adopt a common asylum policy and re-distribute refugees within Europe or re-patriate economic migrants)—except for the rising number of migrants running away from environmental disaster (draughts, floods, tsunamis, earthquakes) who should be, but are not yet, treated as refugees.

*Trump's election* to the US presidency might worsen the EU crisis. The likely rise in interest rates, following his plans for $1000 bn infrastructure investment, is bad for the European South and bad for EU banks which should have sold the government bonds stuffing their balance-sheets much earlier but failed to do it. The Euro will continue to fall, though this might result in a greater export drive for Southern countries than for Germany (whose high-technology exports are more price-inelastic) thus re-balancing trade within the EU (Gros 2016). Trump's plans are reminiscent of Reagan's policies which led to sovereign defaults in Latin America.

*Interconnections*. Many of the EU faults are inter-connected: immigration was encouraged by the divergence of welfare policies; its problems were aggravated by austerity; it was precipitated by EU foreign policy and war involvement; has contributed to Brexit.

Difficulties with CETA are bound to hinder any after-Brexit EU-UK Treaty. Tax competition clashes badly with austerity. ECB negative interest rates contribute to the crisis of commercial banks and raise their recapitalisation requirements, and so on.

Local earthquakes feed back onto the Union as a whole: e.g. the failure of Union attempts at stopping the authoritarian involution of Hungary and Poland, and of enforcing national quotas for refugees relocation, has damaged further EU credibility.

## 27.4 Remedies

In principle, the virtual tectonic plates that make up the EU, unlike physical plates, should be controlled by European governance. The remedies to secure the EU entire system are available, in many cases even without amending the Treaties.

Thus Brexit might be softened by revamping UK membership of the EEA (Yarrow 2016) through EFTA membership, which would allow broader policy margins on immigration and trade policy (such as the rejection of CAP and bilateral trade agreements), without even requiring a British contribution to the EU budget. Alternatively, the creation of a European Continental Partnership might be contemplated, involving participation in goods, services and capital mobility and some temporary labour mobility, with the UK having a say on EU policies but with formal authority ultimately remaining with the EU. This would amount to two degrees of integration, rather than two speeds; over the long run such a European Continental Partnership could structure relations with Turkey, Ukraine and other countries (Pisani-Ferry et al. 2016).

The migration crisis might be reduced by a common asylum acceptance regime; a stronger common external border; re-location of refugees across countries under penalty of losing structural funds; stopping the Dublin Treaty placing an unfair burden on EU frontier countries; deducting the financial burden of migrants from the permitted fiscal deficit. Migrants' welfare entitlements might be restricted to what their states of origin would offer the recipient country's nationals, on plausible grounds of reciprocity. Entitlements might be restricted during an initial period (the Cameron proposal), or made conditional on residence requirements along the lines of the Chinese *hukou* system of government registration of households, or Soviet time *propiska*, an internal passport used both as a residence permit and a migration record.

Repatriation of economic migrants often is problematic: the origin country maybe unknown, or no longer exists, or be unwilling to take back migrants even when this is the object of a treaty (e.g. Pakistan); it can be brutal and is expensive. Nevertheless an unlimited exposure to economic migration cannot be foisted on unwilling host countries:

repatriation ought to be considered and attempted with greater determination than at present. During his presidential campaign Donald Trump caused a sensation by announcing plans to repatriate 11 million undocumented immigrants, scaled down to 2–3 million after his election. But during his tenure in 2009–2016 President Obama got away with repatriating at least 2.5 million immigrants—more than the previous 19 Presidents combined—often in debatable circumstances. Pakistan repatriated 800,000 Afghans; last year Sweden announced the repatriation of 80,000 immigrants.

Austerity might be loosened by excluding from the permitted deficit public investment, which does not involve an inter-generational transfer, and/or the payment of government arrears towards suppliers, which involves a change of creditors and not an increase in debt. Potential output, relatively to which the permitted deficit is calculated, might be estimated according to a more permissive methodology like that of the OECD (regardless of the debatable foundations of all methods employed). The maximum trade surplus permitted, currently of 6% of GDP, should be reduced to 4% in line with the maximum permitted trade deficit; surplus countries exceeding that ceiling (like Germany currently at 8.5% and growing, while exceeding 8% for the last eight years, or the Netherlands) could be penalised as seriously as countries exceeding their budget deficit ceiling. Ideally trade surplus countries could be forced to run a budget deficit equivalent to the surplus or at least to the excess surplus in order to facilitate other members' fiscal discipline—though this would be strongly resisted.

ECB seigniorage, whose present value is estimated by Buiter (2011) to be of the order of €3.4 trillion, could be mobilised to reduce the burden of European public debt. If national public debts were reduced through the issue of ECB bonds in proportion to national holdings of ECB shares, as proposed by Pâris and Wyplosz (2013, 2014) in their PADRE scheme (Politically Acceptable Debt Restructuring in the Eurozone) and by Nuti (2014), a Transfer Union would be avoided.

The adverse distributive effects of globalisation (including migrations, as well as the effects of technical progress) are harder to handle. Short of a global Exchequer taxing gainers and over-compensating losers, the transfers involved have to take place within nation states or Unions,

compensating domestic losers from additional revenue raised by taxing domestic taxpayers regardless of whether or not they are gainers, or out of equivalent general cuts in domestic expenditure.

## 27.5 Clashes

These effective remedies are in line with the original European design. Unfortunately they clash with the hyper-liberal design that has gradually perverted European policies, as well as with conflicts of interest between states, ideologies, welfare regimes, classes, bureaucracies, memories and expectations.

In Germany the Ordo-liberal tradition of Walter Eucken of the 1930s, based on competition and monetary stability as the pillars of society, is still a heavy inheritance (Somma 2014). In German and Dutch the same word, *Schuld*, means both Debt and Guilt. German memories are long about 1921–1924 hyper-inflation, wrongly believed to have caused Hitler's ascent to power, which on the contrary was generated by the deflation and austerity of Chancellor Brüning in 1929–1932 (Holland 2015). But Germans have a short memory about their own *Wirtschaftswunder*, the result of a redistributive currency reform, cancellation of public debt of over 300% of GDP and Marshall Aid—all measures which they denied to Greece. "Thomas Mann dreamed of a European Germany. His wish has turned into its opposite. Today we have a German Europe" (Lafontaine 2015).

Lenin (1915) was prophetic: "… a United states of Europe, under capitalism, is either impossible or reactionary". Conversely, Hayek (1939) strongly supported interstate federalism as essential to his liberal project: international mobility of goods and factors would constrain national state policy, while the heterogeneity of national interests would constrain federal policy. Hence Thatcher's support for UK membership of the EU (Parijs 2016).

*The New European* recently stated that "Brexit is not an earthquake. It is the aftershock of the death of European Social Democracy". This is only partially correct: Brexit and other forms of the EU crisis, Trump's presidential triumph and Renzi's referendum defeat, are not an aftershock

but a foreshock, part of a seismic swarm which may or may not be followed by "the big one".

And it is the agony—not quite the death yet—of a particular, perverted form of Social Democracy: hyper-liberal, globalist, austerian, corporate-driven, stunningly unequal, environment-indifferent, politically correct, undemocratic, pre-Keynesian after Keynes and pre-Minskyan after Minsky, relying on alleged but unreliable mechanisms of self-regulation and self-balancing of markets, through international mobility of labour (Schengen, Pope Francis, Hillary Clinton) and capital (Maastricht).

## 27.6 Exitaly/ExIT/Italeave?

Citizens are reluctant both to move from locations of high seismic risk, and to face the cost of implementing anti-seismic measures to secure their homes and public buildings and infrastructure, for no good reason but out of habit, fear, inexperience, inability, lack of funds or of imagination. After all, both removals and anti-seismic measures are expensive, staying at home is more comfortable than running away, and an earthquake might not occur for another generation or longer. In the same way, EU countries are reluctant to abandon Europe and the Euro, despite the proven impossibility of securing sustainable European institutions.

The idea that "there is no salvation outside Europe", and that "we need *more* European integration rather than *less*"—instead of a *different* Europe—is just as senseless and fearful as the refusal of actual and potential earthquake victims to move elsewhere, and the purblind commitment of the Italian government to "rebuild everything as it was, where it was."

In any case, it is absolutely necessary to imagine, investigate and assess the likely consequences of an exit from the Euro on the part of Italy and other Southern countries that have suffered the consequences of European multiple crises. Euro membership is part of EU membership obligations, the *acquis communautaire*, and according to the Treaties exit from the Eurozone should involve exit from the Union as well. However, Denmark and the UK had obtained a derogation at the time of Maastricht Treaty

negotiations, while Sweden and six recent new members in practice can stay out of the Eurozone virtually indefinitely simply by failing to observe one of the five Maastricht conditions: it is plausible, though by no means a foregone conclusion, that in a major crisis countries like Italy and Greece might be allowed by Germany, France and the rest of the EMU to retain EU membership even after Eurozone exit.

There are three excellent reasons to conduct such an investigation and assessment of the implications of leaving the Euro:

First, Greece and/or Italy might be required to leave at short notice, given Wolfgang Schäuble's repeated threats to force them out. Imagine a balance of payments crisis, a burst of capital flight (revealed within Europe by the rise of *Target2* liabilities, see Reinhardt 2016), restrictions on capital movements and on bank withdrawals, a panic run on the banks. European assistance might be offered, but only subject to draconian conditions. This is where Greece got to before it capitulated. But Italy is much larger, the assistance offered by the EU and IMF might be insufficient to handle the crisis, or the Italian government might be unwilling to meet the required conditions or simply unable to comply before the imposed deadline.

Then the ECB would no longer be able to provide Emergency Liquidity Assistance, and the only choice left would be between a largely demonetised, semi-barter economy, like Russia in the 1990s that collapsed as a result,[8] or the re-introduction of a national currency. The trouble is that this would require long and secret preparations, which are difficult even to contemplate in Italy.

[8] The post-Soviet and East-European economic collapse was only partly due to the rouble area disintegration. A major part was played by other factors, such as the adoption of the shock therapy typical of the Washington consensus, that had been relatively successful in Latin America (suffering from hyperinflation, with a large number of private enterprises fully integrated internationally) but was unsuitable to transition countries still dominated by large state companies, disconnected from international markets and suffering from repressed inflation (shortages). Reformers were concerned with destroying the remnants of the Soviet system and enforcing price liberalisation, privatisations and austerity rather than stimulating economic development. In Russia the transition recession of the 1990s was largely due to state collapse, and above all the inability to create an effective tax system (compounded by the abolition of the state vodka monopoly and the collapse of the oil price); see Nuti (2013c).

Second, the cost of Eurozone exit would be enormous, but probably not as large as it is often suggested. It should not be taken for granted that, in terms of present value, the large cost of leaving the EU would be necessarily greater, over time, than the large cost of remaining in the EU without the necessary, possible but unlikely improvements. The precise implications of leaving should be worked out even for a country that was not required to leave. This applies not only to Italy but also to a country like Finland, small, wealthy and fully solvent, technically very advanced, but suffering from Euro effective over-valuation and the consequent deindustrialisation and loss of competitiveness: thus it is an excellent case for Euro exit, or Fixit.

Clearly it would be less costly, simpler and neater for Germany and other Northern countries to leave the Eurozone and introduce their own Euro, but this is not in their interest (WikiLeaks 2016): their trade surplus would not be feasible with a Northern Euro that would be certainly stronger than today's Euro, and their budget surplus would not be feasible without the ECB Quantitative Easing and negative interest rate under which they now borrow to finance their debt, in spite of their formal opposition to such policy.

Finally, a thorough investigation of the implications of leaving the EU, which would be highly damaging also for the EU remaining member states, could only strengthen the negotiating position of those seeking to reduce the risks of catastrophic developments and eventual collapse by introducing the necessary anti-seismic improvements in our common European home.

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[1] The Bibliography was originally prepared by Mario Nuti and was available on his Blog. However, there were some missing papers or publications that have been added. The Bibliography does not include Nuti's early papers on economic development and some written only in Polish.



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[1] Note: Page numbers followed by 'n' refer to notes.


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