

# Introduction: Challenges Confronting a Rising South Asia—Industry and Employment



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## 1 Background

South Asia is large by relative share of the world population and also in terms of share of world's poor people. Riding on steady economic progress (growth in per capita GDP), poverty headcount ratio (at \$1.90 a day for 2011 PPP) for South Asia fell from 44.4% in 1990 to 15.1% in 2013. However, this may be seen in light of the fact that extreme poverty is getting concentrated in Sub-Saharan Africa and South Asia among all regions.

South Asia, a historically dynamic region, witnessed decline in wealth creation due to de-industrialization during first and second industrial revolution largely due to colonial nature of its relation with the West that emerged as industrial powers in the nineteenth and the twentieth century. Habib (2006) explains that de-industrialisation, first used as a phrase in 1940, means 'reduction or destruction of a nation's industrial capacity'. In the case of India, the decline of traditional artisanal industries was not replaced or adequately compensated by newer or more advanced forms of industrial production. Thus, India's traditional industries declined in the face of the influx of British manufactured goods that were sold under colonial conditions that benefited foreign manufactures. Consequently, industrial workers in India were pushed into agriculture and other low-paying occupations. This process is referred to as the 'de-industrialization of India'. Apparently, by the middle of the nineteenth century, India had lost all of its export market and much of its domestic market. Quantitative evidence on the overall level of economic activity in eighteenth- and nineteenth-century India is scant, let alone evidence on its breakdown between agriculture, industry and services.

Technological advancement has been driver of wealth creation during phases of industrialization witnessed in the West. East Asian countries promoted assimila-

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tion of new knowledge, learning and competence building for technological catch-up. Enhanced physical and human capital accumulation, high-savings rate, careful industrial policy and calibrated integration with the world economy all contributed in achieving high economic growth for East Asian countries during the second half of the last century.

Given prolonged closed economies, South Asia on the other hand registered very slow pace of physical capital accumulation and due to weaker policies and institutions failed to push human capital formation as well.<sup>1</sup> Savings rate remain high, but their conversion into investment has been weak. South Asian countries have encouraged skill development at the top of the pyramid. This had effects in terms of widening the inequality despite enhancing the competitiveness of their knowledge-intensive sectors. While catching-up was not easy, India which occupies a disproportionately larger space in South Asia in terms of geography and population has been able to leverage its knowledge capabilities and skills in greater measure over crude labour resources in production of goods and services in select sectors of the economy.

Persistence of poverty and inequality in South Asia is a major concern. Even as, South Asia has been able to lift millions out of absolute poverty partly by achieving high-income growth over the last three decades, absolute numbers remain among the highest in the world with poor record of well-being of amongst its citizens reflected in low scores across development indicators. Persistence of absolute poverty offers the most resounding alarm about dangers of income inequality even as widening income disparity and slowing economic mobility is on record. Majority of non-agricultural employment in South Asia is informal in nature. The challenge appears insurmountable at this point due to the population bulge in the middle, except in the case of Sri Lanka which is experiencing an ageing population. The challenges are also complex given variety of exclusions in access to opportunities that hinder formation and utilization of human capital leading to greater incidence of inequality. Social sector policies, affirmative action, efforts on gender equality in education, and support for entrepreneurship are among measures frequently applied in the region to address concerns on unequal access to opportunities.

However, Governments in the region are increasingly convinced that in order to sustain economic growth and check rising inequality there has to be commensurate expansion of the productive sectors of the economy (and productivity) and expansion in the share of decent jobs (with guarantees of minimum wage and social security) for greater equality in distribution of the benefits of economic growth. The Sustainable Development Goals (SDG) have emphasized on high economic growth coupled with creation of decent jobs as a priority under SDG 8. There is a strong belief that manufacturing sector would install productive capacities, deepen value addition and guarantee decent job creation. The relative stagnation of the manufacturing sector has been due to poor policy environment that failed to transform rural economies into

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<sup>1</sup>This varied across countries and sectors in South Asia. India's strong push for specialized institutions of higher learning primarily focused on science and engineering is reflected in the establishment of various Indian Institute of Technology (IIT) in the decades following Independence. Sri Lanka made commendable efforts at education and skill development.

industrial ones, even as urban centres were being driven by the services sector. The primary sectors of the economies in South Asia have long been under distress due to poor institutional support, low investments and lack of competence building. Greater value addition in terms of agriculture-based manufacturing and rural industrialization is also an important tool for poverty reduction at the bottom of the pyramid.

Manufacturing sector was the major driver of economic growth in East and South-East Asia and China with huge positive impact on employment creation. While mass manufacturing activities in Asia have been driven by low labour costs, wages have increased as countries moved into more skill intensive segments. It is not unreasonable to consider a similar trajectory for South Asia, particularly so, since manufacturing sector has shown dynamism in pockets and are increasingly contributing to national incomes. Skill distribution has been highly uneven in South Asia. The effect is visible in terms of how countries have specialized in industrial production. While India is increasingly exporting high and medium technology-intensive products, Bangladesh's success in industrial production remains confined to low-tech product segments (majorly textile and apparel). Even as Nepal lags in industrialization, Sri Lanka has wider spread of education and skills aligned with higher end services sector. Industry has played historically important roles in wealth creation and employment generation in India and Pakistan. Pakistan still specializes in low technology-intensive industrial production, while India has experienced strong dualism in industrial performance with rising share of high-tech and medium-tech production and divergence between performance of small and large firms. World Bank (2017) notes that almost 80% of the region's export growth from 2001 to 2013 came from selling the same goods to the same destinations, and remaining 20% came from selling the same products to new markets. It further notes, while the sophistication of exports has increased in India, it has remained low in the rest of South Asia and quality (as measured by the prices its products fetch in international markets) has generally remained low and has declined for some countries.

With sustained economic growth, of the four LDC countries in the region, Bangladesh and Bhutan are poised to graduate out of the LDC status. As per UN norms, it is necessary that at least two of the three graduation criteria—Gross National Income (GNI) per capita, the Human Assets Index (HAI) and the Economic Vulnerability Index (EVI)—are met for eligibility. Bangladesh has been able to satisfy all the three criteria. To some extent, this justifies the importance of sustained economic growth towards accelerating economic progress in resource-poor countries like Bangladesh. Economic growth prospect for the region is strongly influenced by India which accounts for four-fifths of the region's GDP. India maintains strong economic growth outlook and is currently the fastest growing large economy globally. Other economies including Nepal, Bangladesh, Pakistan and Sri Lanka remain on track with average growth rate of over 4% despite periodic fluctuations.

Greater integration with the world economy has meant greater inflow of FDI in the region. India has consistently received the major share and is among the top five recipient economies in Asia. South Asia has also shown consistent performance in registering increased flow of FDI in recent times unlike other developing regions in the world. Pakistan has also seen a sharp rise in its FDI inflows following new impetus

in economic relations with larger regional neighbours like China. Both Bangladesh and Nepal are also poised to attract increased quantum of FDI in the near future. Historically, as World Bank (2017) notes, merchandise trade-to-GDP and FDI-to-GDP ratios in the region remained sub-optimum in comparison to other comparator regions. However, UNCTAD (2017) highlights India and other South Asian countries are linking up with regional value chains and infrastructure networks. Indian manufacturing industries have started to integrate significantly into the strong and sophisticated regional production networks in East and South-East Asia. Trade liberalization has contributed significantly to the rate of economic growth in South Asia. Trade-to-GDP ratio in India has touched 40.6% in 2017 suggesting robust openness of the economy similar to that of countries like Australia (42%), Indonesia (40%), Russia (47%) and China (44%).

One of the foremost debates on economic policies in South Asia in the post-economic liberalization period has been around ascertaining the contested evidence on jobless economic growth. The dominant character of economic growth in the region has been that of economic growth being overwhelmingly determined through the performance of the service sector. However, commensurate employment generation in the formal segments within manufacturing and services has not taken place. Increasing informalization of the labour force has been the main challenge even as rising informal workforce did not contribute to the rise in poverty. Share of industry in employment has been highest for India in the region (and Nepal and Bhutan having very low levels of industrial employment). Agriculture continues to support bulk of the workforce in South Asia. In the Indian context, manufacturing is still the largest employer outside agriculture. Contribution of the services sector in employment creation may go up keeping in view its share in the GDP but employment in this sector mostly dominated by non-tradables would most certainly not be of desirable quality.

Expansion of formal sector manufacturing employment is therefore a credible strategy for reducing inequality and for job creation. The challenge one encounters here is that of nature of the industrial sector itself. Evidence suggests, as in the case of India, preponderance of very small units in manufacturing and services with limited scope of employment generation, even as absolute numbers may be large.<sup>2</sup> Informal employment is therefore rampant and sharply on the rise. The challenge therefore is not only for expanding the manufacturing sector but also creating larger share of decent jobs. It is in this context that the macro-policy regime for determining main drivers and constraints for manufacturing sector growth in South Asia has to be revisited. Assessment of the experience of economic liberalization and deeper integration in the case of South Asia suggests greater resilience. This prompts us to believe that South Asia might further exploit the external sector in aiding its economic growth as well as strengthening economic transformations. Economic reforms that have always been closely linked with integration with the world economy have to be inspired by ideas around transformation, sustainability of economic growth and

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<sup>2</sup>As per the Sixth Economic Census of India (2013–14), 58.5 million establishments were found to be in operation employing 131.29 million persons. Out of 58.5 million establishments, 1.4% establishments were in organized sector (establishments employing 10 or more persons).

equity rather than solely by notions of inefficiencies derived in regulatory controls and extended presence of the public sector.

The idea of full employment had captured the imagination of economists as early as in the nineteenth century and constitutes one of the most enduring policy dilemmas till date. Full employment was also followed as one of the most critical economic dogmas in several developed as well as developing countries. Countries of late, including India, are once again experimenting with policies on full employment with governments playing a proactive role in directing resources to sectors that may create employment. However, with deeper integration with the world economy, full employment policies cannot be effective in isolation and benchmark competitiveness has to be ensured across the board. One of the key challenges in making policies on employment more effective is the unavailability of useful, timely, regular and appropriate labour market data. India with its robust statistical system again has to make labour surveys/census more comprehensive and timely particularly to capture large informal sector employment opportunities and character.

The demise of Washington consensus and the subsequent evolution of the policy regimes have forced national governments to look for alternatives. Across the countries, the issue is how factor price equalization would move with jobless growth. The prescriptions may vary. One has to have the ability to differentiate short-term gains and long-term advantages. The development paradigm has to have a clear strategy for inter-balancing factors of production, viz., land, labour and capital, and of course, technology. It should be relevant for smaller countries and far more relevant for bigger countries with huge population. It is in this context, what Douglas North said about the role of institutions. Institutions play an important role, not only in achieving this inter-balance among these factors of production but also in guiding markets and bringing in elements that are essential in policymaking. If one per cent of population is getting overwhelming expansion in their wealth, the inequality that would emerge out of such a system would derail several measures that inter-balancing of factors of production may intend to achieve.

## **2 Grand Industrial Transitions and Developing Countries**

The paradigm of the Fourth Industrial Revolution (Industry 4.0) currently unfolding suggests total knowledge-based economic progress. It would be important to understand the changes that have shaped economies, societies and politics, through the course of industrial revolutions, keeping governance and development at the core. The fourth revolution showcases a new era that builds and extends the impact of digitization in new and unanticipated ways. Scientific advancements and technological breakthroughs are getting interwoven with development and governance, making socio-economic challenges more complex and apparent.

The twenty-first-century global challenges are emanating out of anti-globalization, fragility, insecurity, environmental crisis, lack of employment opportunities, demographic imbalances and the exclusionary technological advancements.

When we are moving towards hyper-digital future with universal connectivity, decentralized energy production and digital business models and greater automation, obvious questions are: Who controls this process? What market structure is required to facilitate? What would happen to international trade regime, whether all of us are committed for multilateralism? How technological unemployment would be addressed? And what would be the nature of work we are looking at? There are debates emerging all across on these and many other issues, suggesting a serious rethinking of our development strategy and our focus on localization of our development priorities.

The long-standing debate between monetarists and structuralists has also influenced the role of technology that is envisaged in the larger development paradigm. Role of market and the incentivization has also relevance in terms of how specific policy choices are made. Let us have a look at how development narratives have influenced patterns of industrial revolutions. The very term 'industrial revolution', as you may imagine, is not free from contestations. Intense debates are there on its contours, its focus and its very evolutionary process, if at all associated with it. The first industrial revolution can be exemplified as an evolutionary phenomenon, which transformed the industrial organizations from being rooted in rules, excessive manpower, hierarchic and centralized structures of power and authority towards management and mass production. The first industrial revolution, characterized by developments in textiles, iron and steam led by Britain, differentiates from a 'second' revolution of the 1850s onwards, characterized by steel, electrics and automobiles led by the US and Germany, moving further to the 'third' revolution around the 1990s, characterized by technological advancements like IT, biotechnologies and materials in industrialized countries. It is essential to understand that imperialism was a major factor impeding the spread of the industrial revolution. While Britain was experiencing 'industrialization', colonised countries digressed on the path of 'de-industrialisation', characterized with slavery, expropriation of indigenous peoples, imperial expansion and assertion of sovereignty over people and land by foreign governments. Gunnar Myrdal in his seminal work on South Asia captures the post-colonial aspirations of industrialization in South Asia from this perspective.

India witnessed the European 'cotton imperialism', which was also evident in sectors like sugar, tobacco and mining, exploited through large-scale commercial plantation production, fueling the Industrial Revolution. In terms of Science and Technology, through introduction of railways and machinery, the developed West was not intending for technological advancements in the colonies nor to provide a competitive edge. Although science and technology advanced significantly, the era encountered serious consequences of industrialization, in the form of increased child labour, urbanization, dehumanization of factory systems and social degradation.

The second industrial revolution shifted the power play from Great Britain to United States and Germany. A country like India stood at the crossroads of modern science and traditional knowledge, amidst national movements and economic transformations, in the later part of the second industrial revolution. From 1947 to 1970, science became the focal point of economic progress and development—growth of scientific institutions, thrust for industrialization, scientific advancements, etc.

In India and China, ideas were to abridge the inequalities of colonialism and hegemonic west, through the realm of S&T and incorporation of transformative economic reforms, trade policies and regulations serving the national interests.

The advent of third industrial revolution, as Cooper and Kaplinsky in their (1989) paper showed, brought technological advancements to another pedestal with ICT, biotechnology and other scientific advancements. But the gap between LDCs, developing countries and developed counterparts widened further. Contrastingly, it has been argued that the industrial revolution in the west, acted as a compelling force for countries like India and China to adopt a techno-nationalistic and globally competitive perspective, as Sanjay Lall in his paper in (1992) demonstrated, through catching-up, technological leap-frogging and capability upgradation. Countries like India, China, Brazil and Argentina have been characterized by high indigenous science and technological capacities, but low economic strength. Thus, it was essential to build strong scientific base to aid developing countries in challenging technological dominion of the developed countries, which tend to dictate through international regulations and policies.

Furthermore, two themes that had characterized both the first and second industrial revolutions were observably perpetuated by the third revolution—intense exploitation of natural resources deepened within the third industrial revolution, to the point of significant *natural-resource depletion*, for example, as Freeman and Louçã (2001) documents.

- intensification globally in the burning of petroleum derivatives as staple sources of fuel;
- inefficient waste management mechanisms;
- climate change;
- decrease in biodiversity as a result of habitat destruction, in order to expand agriculture, housing, etc.;
- despite computing and production systems that emerged during the third revolution, ‘reprogramming’ of systems ultimately required substantial human intervention.

Some of the leading scholars in the arena of economic history, innovation studies and systems of innovations, have postulated three key features attributing to the fourth industrial revolution. First, ease in flow of information and exchange between inventors and the market, through technologies like 3D printing and prototypes, which would reduce cost of innovation and commercialization. Second, the wave of artificial intelligence and robotics will improve problem-solving to achieve goals in a diverse set of real-world scenarios, which would offer new avenues to economic growth and novel employment opportunities. Third, the systems of innovation will set foundation for integrating different scientific and technical disciplines, facilitating innovation and knowledge production through diverse funding avenues, capability enhancements and infrastructural support.

In the case of fourth industrial revolution, what is extremely fascinating is the likelihood of integration across various scientific and technical disciplines, whereby

outcomes of one stream may become input for the other. It assumes a greater importance with several sectors and geographical locations that are still waiting for third industrial revolution to descend for them. The blurring away of barriers with 3D printing between inventors and markets, lowering cost of bridging ideas of people with specific products. OECD in its reports to the G20 in 2016 and 2017 presented a rather brighter picture, defining as Next Production Revolution (NPR). According to them, the set of technologies is likely to be important for production across several Global Value Chains (GVCs), presenting a combinatorial nature of technologies. This largely represents growth convergence of technological applications in the realm of biotechnology, nanotechnology and information and communication technology. This combinatorial nature of technology will bring in five different kinds of applications. As OECD presents, this may include (1) digital technologies that are transformational for production, based on data-driven innovation; (2) bio-based revolution in production bringing in artificial photosynthesis and microorganisms that produce biofuels; (3) nanotechnology; (4) 3D printing and last, and (5) advances in materials science. These technologies are likely to boost productivity and speed up sectoral transformation with greater track for economic growth. Preparedness of developing countries at the entrepreneurial level to compete and survive against the obliterating approaches of the digitally advanced economies would be a major issue.

As consumption patterns are evolving inclination and push for fourth industrial revolution is very natural. In the first three industrial revolutions, employment could not change in single generation. It evolved from farmers to factories and from factories to knowledge work. But it all happened very gradually. Total employment is not destroyed but multiplied. Under the G20 process West is worried about informalization, about jobs and economy. India has always witnessed informality in economy and uncertainty in employment.

In India, since the pre-independence era, the importance has been on social and economic development and use of S&T, which is evident in various 5-year plans, policies and regulations. The subsequent S&T policies, viz. Technology Policy Statement of 1983, Science and Technology Policy of 2003 and the most recent Science, Technology and Innovation Policy (STIP) of 2013, have reiterated the broad vision of the foremost policy while expanding and enriching it further. At the Indian Science Congress 2017, the Indian PM mentioned Socially Responsible Science which sets the prelude for responsible innovation in the policy framework.

Incorporation of responsible research and innovation (RRI) in the context of Indian Science and Technology policies has been shaped by the concerns that the application of science and technology should enable faster socio-economic development for all sections of the society and they should benefit from scientific and technological advances. The main priorities of the Indian S&T Policy thus would be to ensure access, equity and inclusion (AEI). AEI would mean providing all the sections of the society with affordable and accessible innovative solutions based on S&T. Given the nature of challenges before the Indian society which involves even the lack of basic needs to majority of the population, it can be further argued that a framework based on Access, Equity and Inclusion (AEI) is more pragmatic and appropriate in the Indian context. This institutionalization of an operational framework based on



AEI keys is not supposed to be seen as an alternative framework to RRI, but as a more practical, pragmatic and operational approach inspired by the overall notion of responsibility of research and innovation, amidst the complexities arising in the present and future with the dawn of industrial revolution.

### **3 The Layout of the Volume**

The volume takes a comprehensive view in order to promote manufacturing sector and job creation in South Asia taking into account stage of development, macro-policy regime, comparative advantages and competitiveness, industrial policies, trade and investment, labour market issues, and structural constraints. The volume has two parts. Part A explores country cases in detail for select countries in South Asia, primarily focusing on opportunities and challenges of job creation in the manufacturing sector. The countries covered for this purpose are Bangladesh, India, Nepal, Pakistan and Sri Lanka. The core issues include the contours of the manufacturing sector in the wider context of the national economy with focus on employment creation over the past three decades or so; analysis of what constrained growth of the manufacturing sector in the past, and how they are associated with employment creation. The relative importance of the external sector has been looked into in detail from the point of view of manufactured exports as well as integration with global value chains. Part B presents key chapters on carefully identified topics that may lead to deeper understanding of strategies on industrialization and employment creation in the context of South Asia.

Chapter 2, by Moazzem and Halim, explores the context of Bangladesh by assessing extent of job creation in the manufacturing sector in recent decades focusing on sectoral composition of the manufacturing sector and employment trend in different subsectors. The paper examines national policies related to industrial development and their implications for growth in specific sectors of the manufacturing industry. The paper also identifies the major challenges confronting long-term growth of the manufacturing sector and employment generation in Bangladesh. Bangladesh, contrary to other South Asian countries, has maintained a rising share of the manufacturing sector in GDP, promoted mainly through local private investment. The composition of manufacturing in Bangladesh appears similar to other South Asian countries. Major manufacturing industries include textiles, RMG, food and non-metallic mineral products which comprised 73.5% of total establishments in 2012 (79.9% in 2000). Industries with export intensity include RMG (95% of total production), transport equipment (82%), leather and leather goods (74%) and textiles products (57%). RMG sector has gradually become the major source of manufacturing employment by replacing textiles which was the major source of employment in early 1990s. The other sectors contributing to employment generation include food processing non-metallic minerals, recorded media, pharmaceuticals and leather. Nevertheless, Bangladesh suffers from the lack of diversified industrial base, and hence further growth of employment in industry could be challenging. The chapter also

vividly discusses labour market issues of employability, skills, wages, employment conditions, etc. in keeping with the context of this volume.

Chapter 3 by Khanal and Pandey focuses on the economy of Nepal and presents a detailed assessment of the role played by the manufacturing sector in employment generation. This chapter deeply engages in the policy questions with regard to structural bottlenecks, the absence of competitiveness, low FDI and integration with GVCs, transit and trade facilitation issues and coordination and implementation failures. In comparison with other South Asian countries, Nepal, which is a landlocked country, faces more challenges in the domain of economic growth and employment. In the last four decades, the average economic growth rate in Nepal has been around 4.0%. However, in the last decade and half-economic growth further slowed to 3.7% during 2001–2002 to 2015–2016 with meager growth in manufacturing value added at 1.4% on average with almost stagnating growth in the agricultural sector, which holds the largest share in GDP. Although unemployment rate is estimated to be only 2.2%, it conceals structural unemployment and underemployment problems. The chapter presents statistics to underline the difficult employment situation in Nepal. The inter-census economically active population data shows a sharp deceleration in overall employment growth in recent years, from 2.7% during the period of 1991–2001 to 0.6% during the period of 2001–2011. During the period of 2001–2011, sectors like electricity, manufacturing and trade registered a negative employment growth at 16, 3.7 and 1.3%, respectively. Out of total economically active population, the share of manufacturing employment had reached 8.8% in 1991 from 2% in 1981. This ratio has fallen to 5.5% in 2011.

In its estimation of coefficients of structural change, the chapter concludes that perhaps no significant structural change has taken place over the years for the overall economy although structural change in value added might have been faster compared to the manufacturing industries themselves. Similarly, high degree of rank correlation coefficient for different periods suggests that the sector shares are highly correlated without major structural changes between the two periods (i.e. 1995–1996 to 2011–2012 and 2006–2007 to 2011–2012). This reflects the absence of any leading sector in the manufacturing industry in Nepal. Even in the presence of an industrial policy framework with benefits for the manufacturing sector, the textile industry has shrunk in share and number allegedly due to liberal economic policies in recent times. However, alongside food and beverages and non-metallic mineral products, wood products, rubber and plastic products, chemicals and chemicals products, furniture, and fabricated metal products sectors have expanded between 1996–1997 and 2011–2012. For Nepal, employment elasticity of manufacturing industries ranges from minimum 0.25 to maximum 0.70 with no firm trend across industries. The overall elasticity remains low with exception of a few industries like textile, apparel and light manufacturing industries.

In Chap. 4, Mohanty and Saha captures the role of trade in promoting manufacturing sector employment for a large economy like India which has the most diversified trade linkages both in terms of products and markets in the South Asian region. The manufacturing sector in India contributes around 15% of its GDP, a share which is significantly lower than the newly industrialised countries of Asia and that

of many industrialised nations (who have a lower share now compared to the earlier industrialisation phase). Apprehensions run high that without steady expansion of the manufacturing sector, India is set to lose out on its demographic dividend where a large fraction of the workforce would be languishing in less productive farm and non-farm activities. A strategy for revival of the manufacturing sector has been in focus for the last couple of years as evident from the National Manufacturing Policy (2011) and a larger programme of 'Make in India' launched in 2015. These are supplemented with sectoral policies in many cases aimed at enhancing export competitiveness, value addition and leveraging value chains. However, the range of issues potentially hindering the manufacturing sector exports in India may be diverse and complex. Academic scrutiny on the manufacturing sector in India has focused on experiences with regard to suboptimum employment generation and therefore possible chances of deindustrialization on one hand and deeper dualism reflected in the performance indicators. After almost three decades of external sector liberalization in India, international trade is expected to have profound influence on the performance of the manufacturing sector in India—both value addition and employment generation. With significant trade integration and export orientation of the Indian industry, it is obvious that beyond the domestic market, the external sector would play an important role in enlarging and diversifying the manufacturing sector in India. However, employment absorption capacity differs from one industry to another in the domestic economy. In the context of the manufacturing sector, the chapter explores the question whether there can be a case for India to select its trading partners for preferential trading arrangements (bilateral and regional), and also sectors, in the future with the objective of maximising employment creation, both direct and indirect. Since India's composition of the export basket varies significantly from one country to another, the nature of employment creation will vary accordingly in the domestic economy. The chapter explores the spatial distribution of India's exports to partner countries with a view to examine employment intensity of export covering 165 destination countries. At the product level for each country, direct and indirect employment generation is estimated.

Chapter 5 by Joseph and Kakarlapudi once again focuses exclusively on India and makes a thorough investigation of the industry-level dynamics. The chapter presents an overview of the emerging trends in exports and employment, both in terms of its quantity and quality and locates the industries with revealed employment advantage with respect to high-quality employment and comparative advantage in terms of maximizing exports and employment. It makes an interesting case by analysing industries under four broad categories: export–employment champions, export champions–employment laggards, export laggards–employment champions and export–employment laggards, thereby indicating the scope of policy intervention. In 1990, the employment and export champions accounted for over 55% of the total manufacturing exports, which declined over the years to reach the present level of 20%. When it comes to employment, their share has shown fluctuations but has remained over 19% in 2014. While the chapter captures various facets of quality of employment, a key indicator considered is that of the measure of contractual employment. For the manufacturing sector as a whole, the share of contract labour

increased almost threefold from 13% in 1990 to 35% in 2014. Encouragingly, for export-employment champions, the contract labour intensity is found out to be only 21%. Incidentally, however, it would be interesting to note that the share of contract labour intensity is found to be the highest in export and employment laggards. The contract labour intensity in such industries increased from 9% in 1992–1993 to 19% in 2000–2001 and further to 44% by 2014–2015, indicating that regardless of whether the industry is export-oriented or not, making use of contract labour presumably with a view to save on labour cost appears to have emerged as a major competence building strategy.

Chapter 6 by Javed and Suleri is focused on Pakistan. Beyond the three broad sectors of the economy and of the 15 sectors within manufacturing, textile is the most dominant. Starting 1990s, Pakistan has witnessed major changes in structure of the economy (compare this with Nepal where sector shares remain more or less unchanged). Agriculture's share in the GDP has declined substantially from 25% to around 20% in recent years, while that of mining and quarrying has increased significantly from 0.7 to 2.9%. The share of the manufacturing sector has declined from 17% to about 13%. This is contrary to trends in countries like Bangladesh and India. Most importantly, however, no major shift has been documented for employment contributions of major sectors of the economy. In the previous decade, when the share of manufacturing to GDP has been growing, its share in employment declined from 13.6% in 2005 to 13% in 2010. In fact, manufacturing's share in GDP grew double than its share in employment over the period 2000–2010. Textile and clothing outperform other subsectors in terms of value addition in manufacturing (machinery and transport equipment sector contributes the minimum). As per the last manufacturing census (which is now old by a decade), the textile industry of Pakistan contributed more than 60% of total exports and accounted for 46% of the total manufacturing value added. According to the Economic Survey of 2006–07, 38% of workers employed in manufacturing were in the textile sector. The chapter discusses in detail the structure of the textile industry in Pakistan and associated challenges of value addition and decline in exports.

In Chap. 7, Subramaniam presents the trends and composition of economic growth and industrial performance in Sri Lanka. Sri Lanka by all measures appears a special case in the South Asian context. It is expected to grow slower than the South Asian average despite higher economic development than others. It is also distinct from other South Asian countries because Sri Lanka stands on the adverse end of the demographic conditions. Arguably, Sri Lanka has already passed its peak inverse dependency ratio and is going to face the challenge of mitigating the adverse economic effects of an ageing population in the near term. This makes it difficult for Sri Lanka to continue to compete on labour cost differentials with ageing working population exerting upward pressure on wage rates. Sri Lanka's labour competitiveness can be sustained (if not improved) by an emphasis on strategies that enhance productivity above and beyond higher labour costs. The chapter captures the evolution of the manufacturing sector in Sri Lanka as well as composition, direction and trends in production and exports. The growth of the manufacturing sector in Sri Lanka has not been consistent and the momentum garnered during periods of sustained growth

has been counterweighed by bouts of languid performance. “Food, Beverages and Tobacco” subsector is the largest contributor to value added in manufacturing over the past decade and half, with contribution in value added increasing steadily from 37% of the manufacturing sector in 2002 to 51% in 2014. However, the production in this segment is catered towards the domestic market. Meanwhile, export-oriented segments have experienced subdued growth in value addition. For instance, the share in value addition of the textile and garments industry, which is the largest export-oriented sector, has stagnated between 20 and 25% over the last decade. Despite higher levels of education among the youth, persistent unemployment is a matter of concern. Therefore, issues of labour force participation and skills have also been analysed in this chapter.

Chapter 8 brings us to the next part of the volume. This chapter on Economic Growth and Employment in South Asia by Ajit Ghose goes beyond industrial landscape to revisit the economic growth paradigm, primarily from a historical and sectoral perspective and how it compares with employment generation in South Asia. In doing so, the chapter focuses not only on employment generation but delves deeper into the question of employment conditions. While South Asian countries have experienced economic growth, the quality of employment remains poor. The chapter looks into the question as to why rapid economic growth has failed to rapidly improve employment conditions. The ensuing discussion in the article highlights inappropriateness of the pattern of economic growth as a possible reason. Services have always been extraordinarily important (accounting for an unusually high share in GDP) in South Asian economies, which are still at early stages of development. Moreover, economic growth in South Asian countries (with the exception of Bangladesh) has also been services-led. However, the employment intensity of services has been and remains very low, contrary to the global experience. The growth process in South Asian economies did not materialize in bringing structural change in employment. The movement of workers from agriculture to non-agriculture has been low and even this small movement has often been into low-productivity informal employment in non-agriculture-driven sectors. The chapter underlines the fact that growth-as-usual will not lead to a resolution of South Asia’s huge employment problem in the foreseeable future. Both the pace and the pattern of economic growth will need to change; growth will need to be significantly faster and the growth in the non-agriculture segment would have to be much more employment-intensive. Therefore, the South Asian countries should strive for rapid manufacturing-led growth along the lines of the East Asian experience.

The final Chap. 9 on competitiveness, skill formation and industrialization in the context of South Asia makes an important contribution and in a sense completes the thread of larger issues that need to be considered in tandem for a comprehensive understanding and overview of the theme of this volume. Technological competitiveness underlies growth of industries and skill formation ushers technological momentum. Lakhwinder Gill in this chapter cites that although South Asian countries are undergoing steady structural transformation of their economies, they continue to host world’s largest poor population having failed to promote innovation and industrialization. The South Asian countries are highly dependent on imported technologies.

He argues that such technologies do not suit the factor endowment character of South Asian countries that lead to limited impact in terms of technology transfer benefits. Inappropriate matchmaking between sectors and economic actors result in what the author calls low-productivity trap. Such deficiencies also promote rampant exclusion. Majority of the workforce is employed in low productive economic activities termed as disguised unemployment. On the other hand, the workforce lacks adequate skills to meet the requirements of relevant industries. Low productivity attracts low remuneration and deepens mass poverty. To overcome industrial stagnation and skill formation gaps, South Asian countries need to revamp their national innovation system for harnessing the new industrial revolution. The chapter reiterates that South Asian countries face challenges of low per capita income, low average size of firms, low productivity and low skills. The industrial sector failed to provide leadership in the transformation process in these countries. The education base, particularly of the rural workforce, is extremely low. The workforce in rural areas lacks skills to join the manufacturing sector or precision agriculture and agribusiness activities. The existing technical education is inadequate both in terms of quantity and quality. At the same time, the technical and scientific workforce is inadequate in the region and has not produced new innovations to transform low-productivity low-wage activities to high-productivity high-wage opportunities. The chapter primarily focuses on the structural factors and outlines the need for an alternative strategy of industrialisation and skill formation to address the gaps in innovation outcomes and technical skills.

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