

EAST ASIA'S PATHS TO INDUSTRIALIZATION AND PROSPERITY: LESSONS FOR INDIA AND OTHER LATE COMERS IN SOUTH ASIA

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Foreword

The Development Papers Series of the ESCAP South and South-West Asia Office (UNESCAP-SSWA) promotes and disseminates policy-relevant research on the development challenges facing South and South-West Asia. It features policy research conducted at UNESCAP-SSWA as well as by outside experts from within the subregion and beyond. The objective is to foster an informed debate on development policy challenges facing the subregion and sharing of development experiences and best practices.

This paper provides a critical review of the recent works on the Asian transformation since the 1960s. East Asia has led the Asian resurgence contributing to about two-thirds of the increase in region's share in the global GDP and a far greater share of manufacturing value added and world exports. Rapid industrialization in the case of East Asian economies, in substantial measure is due to industrial policies pursued by them resulted in creation of decent jobs, dramatic reduction in poverty and overall social development. In contrast, in South Asian countries like India, Bangladesh and Pakistan, structural transformation was lopsided whereby agriculture-based economy moved to services-dominated economy, bypassing the manufacturing sector, with low employment creation in high value-added sectors and limited social progress. In the case of India, the challenges of pre-mature deindustrialization driven by appreciating exchange rate has been witnessed, as reflected in the growing dependence on manufactured imports in final consumption. In this context, the lessons from the experiences of industrialized and East Asian countries in building industrial capacities and manufacturing competitiveness through strategic interventions could be relevant for India and other late industrializing countries as they seek to build their manufacturing sector, in particular to meet the challenge of job creation and accelerating growth.

We hope that insights and policy lessons summarized in this paper would inspire policy makers in India and other South Asian countries to exploit the potential of industry-oriented structural transformation to achieve inclusive and sustainable growth, create productive employment and decent living standards for all.

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East Asia's Paths to Industrialization and Prosperity: Lessons for India and Other Late Comers in South Asia

A Review Article

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Abstract

Transformation of Asia from its status as the most impoverished region to the growth locomotive of the world economy within past five decades is unprecedented and dramatic. Led by East Asian countries, the industrial transformation and socio-economic progress may have lessons for the late comers in the continent and beyond such as India. The transformative potential of industrialization has also been recognized by the Agenda 2030 on Sustainable Development. The compulsions of rebuilding the Indian economy in the aftermath of COVID-19 shock makes such focus on manufacturing-based industrialization even more critical, as emphasized in the recent policy pronouncements by the government. An analysis of the East Asian experience would be extremely timely for policy formulation for India and other late comers in South Asia. This article presents a selective overview of the analysis and lessons coming out from the three recent studies and other supportive evidence that could be useful for countries like India, seeking to emulate the footsteps of the East Asia countries.

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Key words: Structural transformation, Economic growth, Industrial policy, East Asian Industrialization, South Asia, India

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1. Introduction

Transformation of Asia from its status as the most impoverished region to the growth locomotive of the world economy within five decades is unprecedented and nothing short of a miracle. The achievement seems all the more profound when juxtaposed with a very pessimistic outlook of Asia's development prospects made by Gunnar Myrdal in his three-volume tome *Asian Drama: An Inquiry into the Poverty of Nations*, published in 1968.

What have been the patterns of development and transformation in the continent across countries and subregions? What paths have been taken by the successful industrializers in Asia on their way out of poverty to prosperity? Is there an emerging *Asian Consensus* that is unique and different from the conventional wisdom summed up by the Washington Consensus? Why have South Asia and India lagged behind the East Asian economies in industrialization? And what lessons are there for the late comers like India, to chart out their own transition to industrialization and prosperity, as they seek to rebuild their economies in the aftermath of COVID-19 pandemic?

These are the questions that seek answers. Though there have been some sporadic attempts at finding answers such as the country studies for newly industrializing economies (NIEs) such as Republic of Korea (henceforth RoK), Taiwan Province of China (henceforth Taiwan) (Amsden 1989, 2001; Chang 2002, Johnson 1982; also UNESCAP 2014), a comprehensive analysis of the Asian transformation has been lacking. But the past few months have been bountiful in terms of providing answers to these questions in the form of three well written and produced books.

Asia's Journey to Prosperity has been produced by the Asian Development Bank (ADB) as a part of its 50th anniversary celebrations (ADB 2020). It is a voluminous treatise covering diverse themes such as role of markets, the state and institutions; structural transformation; agriculture and rural development; technological progress; education, health and demographic change; investment, savings and finance; infrastructure development; trade, foreign direct investment, and openness; pursuing macroeconomic stability; poverty reduction and income distribution; gender and development; environmental sustainability and climate change; bilateral and multilateral development finance; regional cooperation and integration, in 15 chapters. Broadly, the chapters cover the descriptive account of evolution of the respective theme over 50 years in the region, typically in the form of where the region was five decades ago and where it has reached in the particular sector. It also tends to accept the conventional wisdom too readily, as discussed later.

Nayyar, on the other hand, in the two volumes -- one authored and the other edited—has analyzed and documented this astonishing transformation of Asia since Myrdal's prognosis, with great care and detail. In particular, he tries to develop an analytical narrative focused at finding answers to some of the questions raised above. Supported by UNU-WIDER, the project has benefitted from and has been enriched by the contributions (in the edited volume) by a band of well-known scholars from across the region and beyond.

Resurgent Asia is 'magisterial' in its comprehension and profoundness of analysis of the transformation of the region over the five decades, bringing out diversity of experiences, highlighting the achievements, and the causative factors (Nayyar 2019a). Highlighting rising inequalities between and among the countries in Asia, Nayyar also reflects on the Asia's role in the changing world economy and contemplates the future of the continent including on the prospects for an Asian Century! The book is rich in detail of the patterns and trends and it would

serve as a very authoritative analysis for any observer of Asian development and political economy for many years to come.

Asian Transformations is an edited volume with 21 essays classified in three parts (Nayyar 2019b). Part I begins with Nayyar's introductory chapter, which along with contributions by Ravi Kanbur, Frances Stewart and Ronald Findlay, sets the stage for the book by reflecting on the Myrdal's work and providing a longer-term historical perspective of Asia in the world economy. Part II covers ten thematic cross-country studies that analyze the role that different factors have played to shape the transformation of Asia: Peter Evans and Patrick Heller examine the role of the state; Richard Kozul-Wright and Daniel Poon, that of economic openness; Rob Vos of agricultural and rural transformations; Ha-Joon Chang and Kiryl Zach of industrialization; Amit Bhaduri of macroeconomics; Guanghua Wan and Chen Wang on poverty and inequality; Sudipto Mundle on education and health; Ralph van der Hoeven of employment and unemployment; Mushtaq Khan on institutions; and Prasenjit Duara on nationalism. Finally, part III covers country and sub-regional studies: Justine Yifu Lin on China; Kaushik Basu on India; Peter Timmer on Indonesia and Finn Tarp on Vietnam; Robert Wade on East Asia, Manuel Montes on Southeast Asia and Syed Osmani on South Asia. One can but only admire Nayyar's thoughtfulness in capturing all the relevant themes and finding authors who can bring an authoritative perspective on each subject.

Between them, the two volumes by Nayyar present very rich, insightful and authoritative analytical material on not only *what* happened in Asia over the past five decades but also *how* it happened, draw lessons and contemplate the future. One could argue that they represent the *real* Asian Drama! Myrdal's treatise was actually the South Asian Drama, given that he had focused largely on the Indian Subcontinent, or South Asia, with a few exceptions.

Industrial transformation of the Asian countries may have lessons for the late-comers in the continent and beyond. Historically, no country, except a few resource rich ones like Australia and Canada, has attained prosperity without a period of sustained industrialization (Kaldor 1967). The transformative potential of industrialization has been recognized by the Agenda 2030 on Sustainable Development adopted at the United Nations Summit in September 2015 comprising 17 Sustainable Development Goals (SDGs). SDG 9 seeks to enhance the share of the industrial sector in employment and GDP (SDG-9.2) which is also critical for SDG-8 on accelerating growth and productive jobs creation.

Particularly from India's perspective, such an analysis would be extremely topical. Not only has India missed the opportunity to industrialize but has been deindustrializing in the last few decades resulting into growing dependence on imports of manufactured products, including some highly labour intensive goods besides the telecom and power equipment, active ingredients of medicines (Kumar 2018). Hence, an attempt to catch up in manufacturing through 'Make-in India' programmes is timely. The lessons from the East Asian industrialization could inform the policy formulation. The compulsions of rebuilding the Indian economy in the aftermath of COVID-19 shock makes such focus on manufacturing-based industrialization even more critical, as the Prime Minister Narendra Modi has emphasized in his statement on '*Atmanirbhar Bharat*.'

This review article presents a selective overview of the analysis and lessons coming out from the three volumes (and other supportive evidence) that could be useful for countries like India, seeking to emulate the footsteps of the East Asia countries. Section 2 summarizes the Asian re-emergence

and transformation. Section 3 provides an overview of the industrial policy that led to the emergence of East Asian countries. Section 4 offers some explanations for different outcomes of industrial policy in India and Section 5 concludes the article with a few policy lessons for India.

2. Characterizing Asian Re-emergence and Transformation

Deindustrialization and Impoverishment of Asia under Colonization

Asia's transformation, as both Nayyar (2019a, b) as well as ADB (2020) point out rightly, should be characterized as re-emergence of the continent given its the dominant position in the world economy all through the history until the early nineteenth century, a fact by now well documented by a number of studies. Asia commanded a hefty 68% share of the global GDP in the year 1000 AD, gradually declining to 62% in 1500AD, and to 57% by 1820AD. China and India together accounted for almost 50% of world income even in 1820. Since 1820, however, the Asia gradually lost its pre-eminent position in the world economy with its share of global GDP plummeting from 57% to 15% by 1962 (Maddison 2001, Bairoch 1982, Findlay 2019, Nayyar 2019a).

The decline of the share of China and India from 50% to just 8% was even more precipitous, due to much slower GDP growth compared to other parts of the world. 'The decline and fall of Asia was attributable to its integration with the world economy, through trade and investment, shaped by colonialism and driven by imperialism (Nayyar 2019a).' The unequal trade treaties between the Asian countries by their colonial masters in the mid-nineteenth century, with unfavourable terms of trade for them turned them as exporters of commodities and raw materials and importers of manufactured goods from the colonial powers, as their indigenous industries were decimated. Nayyar (2019a) therefore, concludes that 'the industrialization of Western Europe and the deindustrialization of Asia were, in fact, two sides of the same coin, which had a devastating impact on China and India.'

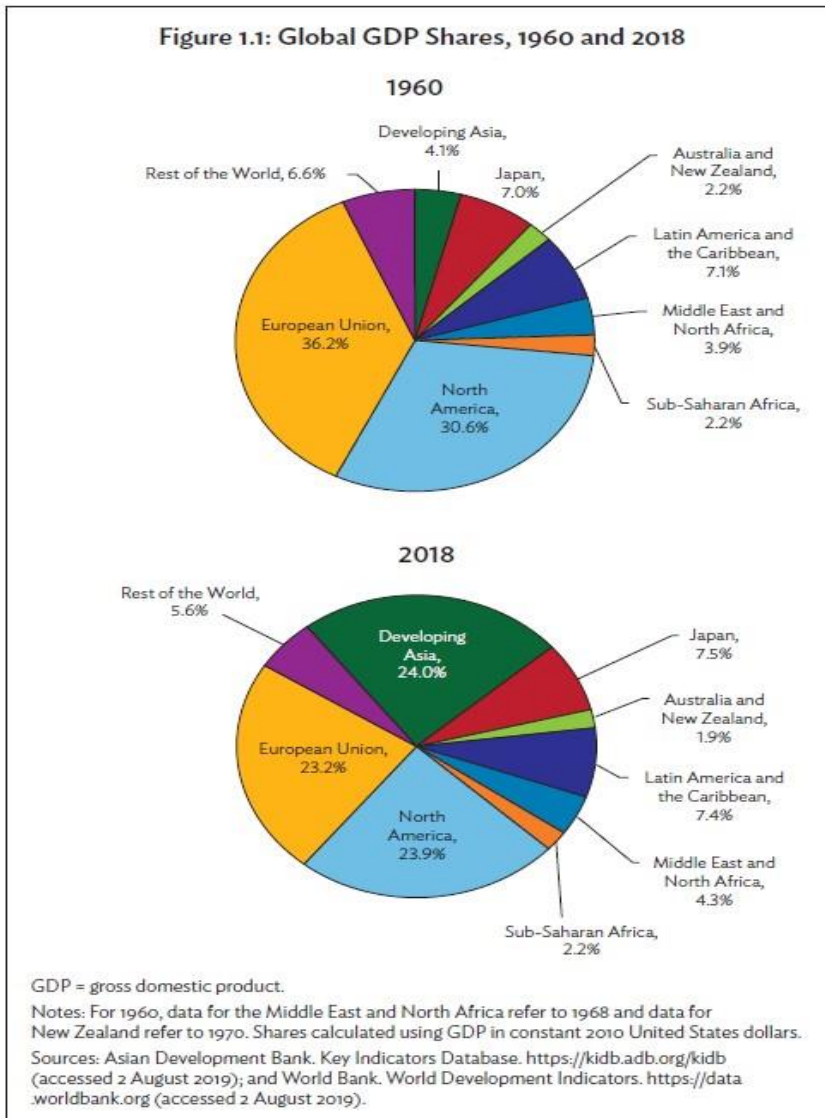
Asia emerged from colonialism, therefore, as the poorest continent in the developing world with the GDP per capita in Asia only 5% of GDP per capita in industrialized countries in 1970 and with their economies dominated by primary sector sustaining four-fifths of the population, with manufacturing value added (MVA) share in GDP at 10%, and savings rate in the range of 8–12% (Nayyar 2019a).

Decolonization, Industrialization and Re-emergence

Political independence, that most of the Asian countries achieved by the mid-1960s, restored economic autonomy to pursue national development policies and re-emerge as a significant player in the world economy. Its share of world GDP (including Japan) trebled from 10% to 30%. In particular, the share of Developing Asia, in global GDP rose nearly six times from 4.1% to 24.0% between 1960-2018 (Figure 1) while the shares of Japan, Australia & New Zealand, Latin America & Caribbean, Middle East & North Africa, and Sub-Saharan Africa either stagnated or increased marginally, and those of the European Union and North America declined (ADB 2020). Asia was gaining the larger share of the world economy with much faster economic growth than any other region of the world. The faster economic growth of Asia was the result of considerable structural

transformation as is clear from Asia's share in world industrial production increasing ten times from a miniscule 4% to over 40% (Nayyar 2019a).

Figure 1: Shares of Global GDP, 1960 and 2018



Source: ADB (2020).

East Asia led the Asian transformation, South Asia lagged behind

Although all the subregions of Asia were growing faster than the rest, there were differences between them. East Asia led the continent contributing about two-thirds of the increase in Asia's share in the global GDP and an even greater share in MVA and global exports. South Asia generally lagged behind in all the respects with Southeast Asia in the middle. South Asia also

lagged behind in industrialization. The share of manufacturing value added in GDP more than doubled, rising rapidly in East Asia, moderately in Southeast Asia and marginally in South Asia.

Transformation was shaped by industrialization and constant upgrading

Structural transformation in the successful East Asian countries viz., Japan, RoK, Taiwan, Singapore, Thailand, Malaysia, China, followed the classical pattern from agriculture through manufacturing, or industry. On the contrary, the South Asian countries especially India, Pakistan, Sri Lanka, Bangladesh, along with a few Southeast Asian countries, moved from agricultural-based economy to services dominated economy, and bypassing the manufacturing sector. These diverging paths to structural transformation explain not only much higher rates of economic growth sustained by the East Asian countries and rising shares of global exports, but also their ability to create decent jobs and poverty reduction.

East Asian countries were able to exploit opportunities of globalization particularly since the turn of the century

Another aspect of the industrial transformation of the East Asian countries has been their ability to upgrade their product structure with high- and medium-technology goods dominating their exports (Chang and Zach 2019). Greater reliance on international trade was evident from its share of world merchandise trade rising from 8% to 33%. In the East Asian countries, especially Singapore, China, and RoK, role of net exports as a demand stimulus to growth was significant. The virtuous circle of rapid investment growth, export growth, and GDP growth benefited the East Asian countries. The rate of catching up was not linear across the whole fifty-year period. The analysis presented in Nayyar (2019a: chapter 2) shows a change to a new steeper trajectory in the shares in the global GDP and in manufacturing value added of East Asia since the turn of the Century, especially since 2004. Was WTO Accession of China in 2002 a turning point, facilitating access to the global markets during the rapid expansion of world trade during 2003-08?

Industrialization helped create decent jobs, alleviate poverty and achieve human development

Rapid industrialization also helped the East Asian countries to create millions of decent jobs. During 1971-90 the job creation rate in industry and services in RoK, China, Malaysia, Thailand exceeded 5% per annum and 4.5% in Taiwan. Poor rate of job creation in secondary and tertiary sectors explains slow rate of decline in employment share of agriculture in India, much of South Asia, and to a lesser extent in Indonesia, Thailand, Vietnam, and the Philippines (Vos 2019).

The benefits of faster growth and job creation through industrialization led to a substantial reduction in absolute poverty. The number of people in extreme poverty (\$1.9 a day) in East Asia declined from 877 million in 1981 to 10.1 million by 2015, while in South Asia from 506 million to 212 million over the same period (ADB 2020). It is clear that while the poverty declined all across Asia, the rate of poverty reduction has been much faster and dramatic in the East Asian countries compared to South Asian countries that now account for nearly 36% of people living in extreme poverty in the world (UNESCAP 2018a).

Similar patterns emerge for education and health too. The secondary school enrolment rates, for instance, rose 28.3% to 95.2% for East Asia between 1970-2018, while for South Asia increased from 23.2% to 69.3% over the same period (ADB 2020). Osmani (2019) finds the current level of human capital base in South Asian countries to be low compared to global standards and certainly with respect to the East Asian standards. Among the indicators of health, the infant mortality rates have come down in East Asia from 205 (deaths under 5 per 1000 live births) to just 11 in East Asia during 1960-2018, and from 244 to 44.6 in South Asia. East Asia managed to bring down the rate of wasting prevalence from 4.2% to 1.9% during 1990-2016, South Asia has found it challenging as the rate has actually gone up marginally from 19.1% to 19.6% during 1990-2016 (ADB 2020). Mundle (2019) concludes that the leading East Asian countries viz. Japan, Singapore, and RoK have already reached or are approaching the best feasible standards of education and health and China, Malaysia, Thailand, Vietnam are likely to catch up over the next decade or so. South Asian countries, with the exception of Sri Lanka, are likely to take more time to catch up.

Rapid economic growth has been accompanied by rising inequalities especially since the 1990s in populous countries such as China, India, Bangladesh and Indonesia. On the other hand, Thailand, Malaysia, Nepal and Vietnam have managed to bring down inequalities in the same period through pro-poor policies (ADB 2020, UNESCAP 2018c). Rising inequality in Asia's most populous countries, especially India and Bangladesh which still have a large unfinished development agenda, is a matter of concern as it could undermine economic growth and poverty reduction (Wan and Wang 2019, UNESCAP 2018c).

3. Explaining East Asia's transformation: the development state and industrial policy

East Asian countries have been heterodox in their approaches to macroeconomic management and targeted job creation and economic growth rather than price stability (Nayyar, 2019a). The Nayyar volumes attribute the stunning success of the East Asian industrialization in building competitive manufacturing base to the role played by industrial policy. This covers strategic interventions by the governments to foster industrialization through protection or industrial promotion. The developmental state has been a prime determinant of Asia's transformation (Evans and Heller 2019). The scale and scope of strategic interventions in Japan, RoK, Taiwan, Singapore, (later emulated in China and Vietnam although in different political setting), has been extensive and has included *co-ordinated* policies across sectors, over time in pursuit of national development objectives including through using the carrots and sticks approach. The evidence presented overwhelmingly concludes that efficiently implemented industrial policy *works* and the issue was not 'why' but 'how' of industrial policy. The East Asian countries have effectively used both markets and the state in a complementary fashion exploding the myth that it is either markets or the state has to lead the economic activities. A defining feature of East Asian industrialization strategies was to 'forcibly align' the business and development interests (Kozul-Wright and Poon 2019: 142,155).

Let us take a brief look at the key elements of industrial policy that have been employed by the East Asian countries to draw some lessons for the late comers.

Strategic approach towards openness and exchange rate management: The openness to trade is generally made out to be critical for industrialization and development in the neoclassical literature (ADB 2020). The East Asian countries have pursued calibrated and strategic integration with the world economy in conjunction with industrial policy, rather than passive opening to world trade (Nayyar 2019a). The trade policy followed has been characterized by a dualism, open for the export sector but restrictive for importing sectors. Exchange rates were undervalued over long periods to strengthen competitiveness of domestic industries in the world market. East Asian countries have widely used managed exchange rates as a tool for fostering industrialization. Japan has extensively used the depreciated exchange rate of yen to boost competitiveness of its exports until the Plaza Accord of 1985. In the early years of industrialization, RoK rationed foreign exchange, giving priority to importers of capital goods and intermediate inputs (Chang and Zach 2019:203). The Chinese government adopted initially a dual-track exchange rate system, allowing the market-determined exchange rate to operate parallel with the overvalued official exchange rate, and the dual-track system converged to a managed floating system in 1994 (Lin 2019). This was followed by a hard peg during 1995-2005, allowing the exchange rate of yuan to move within a narrow band since 2005, as international pressure mounted with growing trade surpluses.

Achieving scale economies through combination of import substitution and export promotion: Import substitution and export-orientation are posited as two alternative industrialization strategies. The East Asian countries have generally combined the elements of both import substitution and export-orientation to exploit the economies of scale although the emphasis has changed with needs. Before embarking on the export-oriented manufacturing in 1970s focused on electronics and textiles, Malaysia had focused on import substitution during 1957-67. In 1981, it launched another import-substitution focusing on heavier industries followed by export-oriented phase from the mid-1980s with greater emphasis on fostering domestic technologies (Kozul-Wright and Poon 2019). The RoK government embarked on the Heavy and Chemical Industrialization (HCI) programme in 1973 when the country was at a relatively low level of development by protecting domestic ‘infant industries’ including through quantitative restrictions that were prevalent until 1980. Performance based subsidies were provided based on export performance or for development of R&D capabilities (Chang and Zach 2019:203).

Selective approach towards FDI inflows: The East Asian countries adopted a selective approach to FDI to achieve their industrial policy objectives. RoK and Taiwan, following Japan, relied on non-equity modes to tap the resources of multinational enterprises (MNEs) such as technology licensing, managerial and technical assistance from Japanese companies such as Nippon Steel and Kawasaki Shipbuilding to build world class industries. RoK and Taiwan also extensively used the special economic zones (SEZs) or export processing zones (EPZs) in a strategic manner to leverage FDI for building export capabilities but ensured domestic linkages by imposing local content requirements (Kozul-Wright and Poon 2019:142). China engaged MNEs into strategic bargaining, leveraging its high-quality infrastructure in its SEZs, disciplined skilled workers, and large domestic market, to impose informal conditions on local sourcing, export commitments, or technology-transfer (Nayyar 2019a). The governments, at all levels and in all parts, proactively approached prospective foreign investors to relocate their production to China with incentives such as tax holidays in SEZs and industrial parks (Lin 2019). As a result the share of FDI in China reached 17% of gross fixed capital formation (GFCF) by 1994 (Kozul-Wright and Poon 2019).

The preferential tax treatment of FDI in China was such that some of domestic investment was roundtripped to China via Hong Kong to take advantage of the incentives. East Asian countries have also used performance requirements extensively to make FDI meet to their objectives—deepening their integration with the local economy or export promotion, among others. Thailand, for instance, has emerged as the third largest exporter of automobiles in Asia through performance requirements imposed on Toyota and Honda by initially insisting on local content requirements (LCRs) to deepen production linkages and, once integrated production bases developed, to impose export performance requirements (EPRs) to virtually turn these facilities into globally sourcing hubs for certain models (Kumar 2005). The quantitative evidence also found that the East Asian countries were able to manage FDI inflows crowd-in domestic investments rather than FDI crowding-out them through the selective approach unlike the South Asian countries where FDI generally crowded out domestic investments (Kumar and Pradhan 2015). Hence, the quality of FDI received by the East Asian countries was perceived to be better (Kumar 2002).

State Owned enterprises and public procurement: East Asian countries have also heavily relied on public sector to develop sectors that were considered strategic or where private sector was not willing to enter, e.g. POSCO, in 1968 as a state-owned enterprise (SOE) in RoK, privatized in 2001, is now the fourth largest steel producer in the world (Chang and Zach 2019). China has extensively used SOEs, use of subsidized credit through state-owned banks, public procurement and public investments (Chang and Zach 2019). SOEs in China did not have to bear any cost for capital before the transition in 1978 after which appropriation was replaced by bank loans at artificially repressed interest rates (Lin 2019).

Enterprise development and national champions: East Asian countries provided support to selected firms to nurture their managerial or technological capabilities, or encourage their horizontal and vertical expansion, so that they were able to realize scale economies, not only in production but also in marketing to develop global brand names and create large international firms, as RoK and Taiwan employed to create national champions like Samsung, LG and Foxconn. RoK promoted the *chaebols*, large and highly diversified industrial conglomerates in an effort to harness scale economies. However, the government also promoted fierce rivalry based on innovation between the *chaebols* besides regulating their investments and pricing in order to enhance their competitiveness. China has facilitated mergers in an effort to create large scale national champions (Chang and Zach 2019).

Directed credit through national development banks and investment incentives: East Asian countries also intervened to develop sunrise industries through use of subsidized credit in ROK and by tax credits in Taiwan. National Development Banks (NDBs) have been employed extensively by East Asian countries to foster industrialization. In conjunction with its HCI programme, the RoK government created in 1973 the National Investment Fund (NIF) to provide funds to financial institutions which would lend for long terms investment in heavy and chemical industries. NIF accounted for 70% of total manufacturing investment lending by institutions, in the late 1970s. China established the China Development Bank, among other financial institutions, to finance large scale infrastructure and industrial projects by providing long-term financing as a part of the high investment growth strategy and has received periodic capital infusions from the

government for bolstering their lending capacity. Kozul-Wright and Poon (2019:153) have shown how the outstanding loans extended by NDBs as a proportion of GDP has grown consistently since 1994 from under 2% to over 13% in China in 2016 and from over 4% to over 11% in Malaysia over the same period (while in India it has rapidly declined from nearly 6% to under 2%). Starting with Malaysian Industrial Development Finance established in 1960, Malaysia has created 13 NDBs over time. Malaysia has also instituted pioneer industry programme to provide investment incentives to industries that did not exist in the country.

Domestic technological capability building through public funding and soft intellectual property regimes: Building domestic technological and innovative capability has been an important objective of industrial policy in the East Asian countries. These countries employed several measures to promote local technological capabilities including establishment of public R&D institutes, conditional subsidies to public and private R&D. RoK created a powerful S&T Agency in the Prime Minister's Office in 1967 besides a network of government research institutes such as Korea Institute for S&T and the Korea Advanced Institute of Science in the late 1960s which also received assistance from the US besides the political patronage (Wade 2019). Taiwan established the Industrial Technology Research Institute (ITRI) in 1973 to support strategic industries with key technology projects (such as semiconductors and personal computers) that had the potential to guide private sector investment and substitution of imports and foster local value addition (Kozul-Wright and Poon 2019). ITRI by the early 1980s had a staff of around 10,000, divided into sub-institutes such as the Electronics Research and Service Organization (Wade 2019). After building domestic production capabilities, China focused on development of local R&D capacity, expansion of domestic linkages and vertical diversification especially in strategic sectors. Major programmes such as the 2006 Medium and Long-term Programme of Science & Technology providing funding for 16 megaprojects such as pharmaceuticals, semiconductors, large commercial aircraft and military industries. This was followed by the second programme-Strategic Emerging Industries launched in 2010 targeted 20 strategic industries to enhance their share in Chinese GDP to 8% by 2015 and 15% by 2020. In 2015, the Made in China 2025 initiative was launched to upgrade Chinese industries and to enhance local content of core components to 40% by 2020 and 70% by 2025 especially in priority sectors such as aerospace, robotics, IT, energy and pharmaceuticals (Chang and Zach 2019).

Although not captured in the volumes, the East Asian countries have also extensively used weak intellectual property right regimes to facilitate the absorption of foreign inventions. Japan did not recognize product patents until the mid-1970s and RoK, till the mid-1980s to facilitate absorption of innovations of others. Japan, RoK, Taiwan, China, Thailand, among others have also used petty patents or utility models to promote incremental innovations by domestic enterprises including the SMEs that could not stand rigorous scrutiny that patent examinations have to undergo (Kumar 2003).

Pragmatism and adaptability of industrial policy to changing requirements: The East Asian countries have been adjusting the focus of the industrial policy and the tools employed in accordance of the changing requirements. Korea initially focused on labour intensive products (toys, textiles and garments, shoes) in the 1960s, started heavy and chemical industries in the early 1970s as wage costs started to rise to stay competitive and focus on emerging industries such as automobiles and electronics. Similarly, China upgraded its export structure from simple toys,

textiles, and other cheap products in the 1980s and 1990s to high-value, technologically advanced machinery and ICT products in the 2000s (Lin 2019).

Assisted by external factors/ enabling conditions: Besides effective and comprehensive implementation of industrial policy, the East Asian industrialization was also facilitated by a number of external factors or enabling conditions. These include the existential threats faced by East Asian countries especially RoK and Taiwan that may have pushed them prioritize industrialization (Chang and Zach 2019). The second is the different colonization experience faced by them vis-à-vis other Asian countries. The Japanese colonial government treated RoK and Taiwan as offshore bases integrated with the core and replicated Japanese institutional architecture focused on providing mass school education, mining, agriculture and manufacturing activities. This resulted in rapid spread of education in these countries. By 1940, around 70% children in RoK and Taiwan were in school. In contrast only 2% of children were in school in Vietnam, a French colony (Wade 2019). South Asian countries also had very poor focus on education under British rule. Thirdly, the authoritarian regime also enabled some of the East Asian NIEs to push their objectives. Wade (2019) documents how leading businessmen in RoK were threatened during the President Park's regime (1961-79) with imprisonment unless they left for the US and returned with export orders. Finally, the role of the US assistance to its three Northeast Asian allies in the post-World War and post-Korean War period has played an important role in their industrialization. In the wake of the Korean War 1950-53, Japan became the main source of American procurement. Between the late 1940s and mid-1960s, the US supported Japan, RoK and Taiwan to create the development state and receive 'tens of billions of dollars in grants, loans, tech transfer, and preferential markets from Johnson and Nixon governments' (Wade 2019:486). Japan was to serve as the core of restored Northeast Asian regional economy with RoK and Taiwan as lower cost semiperipheries, receiving easy access to the US market, preferred in public procurement, on account of their importance for security matters (Wade, op.cit).

The East Asian countries have also exploited the potential of regional economic integration in the form of regional production networking linking them with the ASEAN countries especially since the turn of the Century (ADB 2020). South Asia has also lagged behind in exploiting the potential of intra-regional trade and investment and remains among the least integrated subregions (UNESCAP 2019c).

Is there a unique model of East Asian industrialization and transformation?

Notwithstanding the external factors pointed out above, the two Nayar volumes clearly bring out that the East Asian success at industrialization was driven by *sensible* industrial policy in a *coordinated* manner, implemented by *effective* developmental state, corroborating the existing literature (Amsden 1989, 2001; Chang 2002, Lall 2005, among many others). The rapid industrialization of RoK, Taiwan, Singapore, Malaysia, Thailand, China, Vietnam, following Japan, has been achieved through extensive strategic interventions by the governments to build domestic production capacities, ensure competitiveness through harnessing scale economies, foster technological upgrading and innovation, and create national champions and global brands. While there are variations and nuances in each case in terms of relative reliance on domestic versus

foreign enterprises, in sequencing, the reforms etc., all these countries followed state interventions to achieve transformation, that form part of the industrial policy prescriptions. There is a clear pattern emerging on the East Asian model of industrial transformation that is very different from the Washington Consensus.

Notwithstanding the overwhelming evidence on the role and effectiveness of industrial policy in East Asia's transformation, surprisingly ADB (2020) notes that the policies pursued in Asia 'are not so different from those prescribed by the Washington Consensus' and ...that '*there is no such thing as an Asian Consensus*' (p.10, emphasis added)! It is not the first time that the role of strategic interventions or the industrial policy in the East Asian industrialization has been underplayed. Earlier, the 1993 *East Asian Miracle* study of the World Bank acknowledged the extensive use of state interventions in the successful East Asia economies. But it concluded that East Asian industrialization was a result of market-friendly policies and tended to dismiss the role of state intervention with statements concluding the 'industrial policies were largely ineffective (p. 312)' or 'not successful (p.354) (World Bank 1993).' These distorted conclusions generated huge controversy and led to a rather sharp reaction from a number of analysts of the East Asian industrialization (see Lall 1994, among others).

4. Industrial Policy and India: explaining the different outcomes

India is known to have pursued import substituting industrialization (ISI) since the mid-1960s till the reforms of 1991. In this period of ISI, many aspects of industrial policy including high tariffs and import licensing, industrial licensing policy were implemented. Yet structural transformation in India has bypassed the manufacturing-based industrialization and the economy is dominated by services. The share of manufacturing in India actually has declined after peaking around 1995. The services-oriented structural transformation has given to India robust economic growth rates but could not provide adequate jobs commensurate with its nearly 60% share in GDP absorbing only about a quarter of the workforce (Aggarwal and Kumar 2015). This lopsided structural transformation has led to agriculture supporting nearly half of the workforce with about 15% share of GDP reflecting their low productivity and explains the persisting poverty. Neglect of industry especially manufacturing, has cost the country in terms of creation of productive jobs because the manufacturing sector has the highest backward and forward linkages of any productive sector (Kumar 2018).

Does it imply that industrial policy was ineffective in India? Nayyar (2019a) argues that there were limitations implicit in the implementation, rather than the design, of industrial policy during that period. Basu (2019) points out that democratic setting in India with a vibrant media made governments in India wary of policy experiments, that were possible in RoK, China or Singapore.

To be fair, the industrial policy did succeed in its avowed objective of import substitution by the end of the 1980s, building a diversified industrial base that produced virtually all items of consumption in India. The overall import dependence came down dramatically even for heavy machinery and capital goods. However, the Indian industry was not highly competitive and had failed to keep itself technologically up to date and when exposed to external competition after 1991, many of the enterprises could not compete and stay in business. A large number of Indian

companies entered into joint ventures with MNEs to update their technology to enhance their competitiveness. Many of them were acquired by MNEs in horizontal acquisitions or mergers (Kumar 2000). Even a number of companies and SOEs such as Hindustan Motors, Hindustan Machine Tools (HMT), Indian Drugs & Pharmaceuticals Limited, Hindustan Antibiotics Limited had to stop their operations and many others had to merge with stronger companies (e.g. Heavy Engineering Corporation merged with BHEL). This highlights a crucial difference between the objectives of industrial policy in India vis-à-vis East Asian countries. Indian policy targeted import substituting industrialization in a closed economy context and did not particularly seek international competitiveness. The East Asian countries, on the other hand, clearly focused on building internationally competitive industry. They constantly leveraged rivalry between domestic champions and pushed domestic firms to international markets through export incentives and performance requirements. The outcomes were also different. Nayyar (2019a) also emphasizes that the government almost dispensed away the industrial policy in 1990s without creating the conditions that might have enabled the manufacturing to become competitive in world markets.

It is not to say, however, that industrial policy failed completely in India. India's success in pharmaceuticals, automobiles, and software, can be attributed to industrial policy (Nayyar 2019a). By abolishing product patents, the India Patents Act of 1970, enabled the domestic enterprises to reverse engineer new processes to manufacture known drugs in a cost-effective manner, transforming India into a pharmacy for the developing world. In the passenger car industry, the government formed a joint venture in 1982 with Suzuki, a Japanese company, with a phased manufacturing programme to progressively enhance local value addition to 70% to be achieved within five years. This led to development of a vertically integrated automobile industry in India with investment made to develop the auto-components sector helping transform India into a hub of small cars that are also exported to many countries including to Japan. Besides passenger cars, India has also emerged a competitive exporter of auto parts in recent times that owes itself to a particular strategic intervention by the government in the form of an erstwhile performance requirement that required foreign-owned companies in consumer goods industries to balance imports by foreign exchange earnings (Kumar 2005). In software, Nayyar attributes it to the forced exit of IBM in 1977, leading to local capacity development for computer maintenance and followed by software development and exports facilitated by the Software Technology Parks of India, established by the government. A lesser known fact that also helped India emerge a leading exporter of software services was the creation of institutional architecture for building skills in computer applications and networking following the farsighted recommendations of the Bhabha Committee way back in 1963 and establishment of the Electronics Commission in 1971. By the late 1970s, India had started bachelors and masters courses in computer science and computer applications at premier universities and IITs (Kumar 2014). Furthermore, a number of leading Indian enterprises that are rapidly acquiring global footprints with significant export-orientation and acquisitions of large global companies including Hindalco, Tata Motors, Tata Global Beverages, Mahindra & Mahindra (auto); Bajaj Auto, TVS Motors, Hero Motors (two wheelers), have their origins in the import substituting industrialization era (Kumar 2008). Therefore, industrial policy has produced some significant outcomes including a diversified industrial base in the country, development of several enterprises that could stay competitive and emerge on the

global scene besides highly competitive generic pharmaceutical, software and automobile industries.

In recent times Indian industry has been facing the challenge of premature deindustrialization (see Kumar 2018, Dasgupta and Singh 2006, Amirapu and Subramanian 2015, Rodrik 2015). It was attributed to the appreciation of rupee since 2007 that has led to outsourcing of production by a number of companies to cheaper locations to save costs, a trend sometimes referred to as 'hollowing out' (Kumar 2018). Industrial policy therefore, needs to be geared to not only building internationally competitive manufacturing capacities but also to sustain the competitiveness over time. Otherwise such capacities can be eroded in no time in the era of globalization.

5. Concluding remarks

The transformation of Asia from the poorest region to its new status of the emerging centre of gravity of the world economy within a space of five decades is truly unprecedented. However, as the three new books surveyed in this article show, the transformation has been uneven across the subregions of Asia and has not been linear over time. The Asian transformation was driven by the East Asian countries while South Asia has lagged behind. Impressive structural transformation from agriculture to industry including upgrading from labour intensive simple industries to high value adding modern industries such as automobiles and electronics and harnessing of the opportunities provided by globalization, particularly since the turn of the century, have underpinned the emergence of East Asian countries.

Industrial transformation has also helped the region achieve poverty reduction and social development. While all the subregions have witnessed significant socio-economic progress over the past five decades, East Asia's achievements are truly dramatic while those of South Asian countries have been much less impressive. The key difference is explained by the industry-oriented structural transformation sustained by the East Asian countries in contrast to the services-oriented transformation witnessed by South Asian countries. An interesting contrast is in terms of inequalities that have risen in some East Asian and South Asian countries but a number of fast growing East Asian and South Asian countries have managed to bring them down. It shows that rapid economic growth and industrialization do not have to come at the cost of widening inequalities!

While all the three volumes highlight the transformation of East Asian countries, the two Nayyar volumes also analyze *how* it happened. Industrial policy has played a key role in industrialization of the East Asian countries. The overwhelming evidence presented in the Nayyar volumes corroborates that East Asian success at industrialization was driven by sensible industrial policy effectively implemented in a coordinated manner by the developmental state. The industrialization of the East Asian countries including Japan, RoK, Taiwan, Singapore, Malaysia, Thailand, China, Vietnam has been achieved through extensive strategic interventions by the governments to build domestic production capacities, ensure competitiveness through harnessing scale economies, foster technological upgrading and innovation, create national champions and global brands, with a selective approach to trade openness, FDI and exchange rate management. While there are variations and nuances in each case in terms of relative reliance on domestic versus foreign

enterprises, in sequencing the reforms etc., all these countries followed state interventions to achieve transformation, that form part of the industrial policy prescriptions.

Therefore, the new evidence presented reinforces the emerging consensus on the relevance of development state and of well-defined strategic interventions or industrial policy to achieve the industrial transformation of developing countries. Although the East Asian model of industrial transformation is very different from the Washington Consensus, history corroborates the extensive reliance by the western industrialized countries on industrial policy, including the infant industry protection, in the period of their industrialization (see Bairoch 1993, Wade 2003). The case for state interventions has continued to be made in the theoretical literature at regular intervals. The argument for infant industry protection had been around for very long time since List (1909) and was used to justify high tariff barriers imposed in the US in its period of industrialization, as documented by Chang (2002). Infant industry protection later on was used to justify incorporation of chapter on trade and development in the General Agreement on Tariffs and Trade in the 1960s. Strategic trade theory has also justified state intervention that can be welfare enhancing, shifting profits from international to domestic firms under certain conditions (Brander and Spencer 1985). More recently the New Structural Economics has justified state intervention for building industrial capabilities (Lin 2012). Industrial policy, after falling out of favour for a while, has become fashionable again across the world including in the industrialized world (*The Economist* 2010; Stiglitz et al. 2013; Salazar-Xirinachs, Nubler and Kozul-Wright 2014). Wade (2014) highlights how industrial policy has been revived in the US, otherwise a strong proponent of trade liberalization in multilateral trade negotiations.

Then the question arises why the outcomes of industrial policy in India implemented with rather heavy state intervention geared to ISI between 1960s and 1980s were different from those in the East Asian countries? It has been shown above that the outcomes were different because of different objectives. The East Asian countries targeted building internationally competitive industrial capabilities while India was trying to substitute imports in a closed economy setting. So the industrial capacities were built up but many of them crumbled in the face of international competition after liberalization of the 1990s. Yet the industrial policy did produce some successes such as in pharmaceuticals, automobiles, software where India built internationally competitive niche in select segments. It also created a number of enterprises that are building their global footprints successfully. Yet industrial transformation of India remains an unfinished agenda with some premature deindustrialization and hollowing-out, spurred by appreciating exchange rates.

One may argue that the East Asian countries pursued industrial policy when world trade was expanding and the multilateral framework was more benign and flexible, enabling them to take advantage of opportunities presented by globalization. Indeed the context has changed. The world trade has never quite recovered from the global financial crisis of 2008/9 and has been growing at anemic rates. A lot of policy space has been lost under the Uruguay Round under TRIPS and TRIMS Agreements of WTO. The spectre of trade wars and protectionism and stalled progress of multilateral trade negotiations, the onset of the fourth industrial revolution (IR4.0) followed by the dramatic collapse of world trade following the outbreak of the COVID pandemic call into question the replicability of the East Asian strategy. Indeed, any strategy needs to be finetuned in a particular

context and times. While the case for pursuing a wholesale export-oriented industrialization strategy would appear to be limited at the current juncture, India's large domestic market offers opportunities for building productive capacities through strategic import substitution that can be scaled up when the world trade growth recovers.

There is a compelling case for strategic interventions for reversing the trend of premature deindustrialization that the Indian economy has faced and complete its industrial transformation, particularly to meet the challenge of job creation. The transformative potential of industrialization and job creation has also been recognized by the United Nations' 2030 Agenda on Sustainable Development. UNESCAP's CGE simulations indicate that an industrialization-dominated growth strategy could help to generate over 34 million more jobs and lift over 48 million more people out of extreme poverty in India compared to the business-as-usual strategy by 2030 (UNESCAP 2018a). In that context, the Government of India's focus on industry through programmes like Make-in-India is timely. Based on the East Asian experiences, the elements of industrial policy that may be relevant for the contemporary Indian situation could include strategic import substitution in the sectors with high import content through infant industry protection and pioneer industry programmes, establishment of national development banks for directing longer term credit to industry, facilitation of approvals through single window clearances, preferences in public procurement, infrastructure support, and skill development, among others. Maintaining a competitive exchange rate is perhaps most critical in an open economy environment of low tariff barriers. Leveraging the large domestic market for proactively attracting MNEs to set up world scale manufacturing plants in India to serve not only the domestic market but also for global and regional sourcing could be an option. It is particularly promising in a post-COVID-19 scenario when MNEs are seeking to diversify production locations as a part of their derisking strategies. Another lesson to draw from the East Asian experiences for India is the criticality of sustaining international competitiveness of the manufacturing sector through fostering domestic and international competition as soon as the domestic capacities get entrenched. Besides helping to stay in the business, competition would help to curb the rent-seeking behavior. Innovation is an important driver of modern manufacturing and competitiveness. Government support through direct subsidies, rather than tax incentives may be helpful (Kumar and Aggarwal 2005). Finally, India may adopt a petty patents or utility models regime to harness India's strengths in incremental innovations, frugal engineering and software design for developing new, more efficient and resource-saving products and processes for domestic and international markets (Kumar and Joseph 2007).

To conclude, the new books, especially those by Nayyar, present very profound analysis to characterize the Asia's transformation, bring out the diversity of experiences, highlighting the stylized facts leading to unprecedented successes in industrial transformation of the East Asian countries that have rich lessons for late-comers like India that are now seeking to catch up with their own industrialization. One hopes that they will be read with great interest and will inspire policy makers across the developing world to harness the potential of industrialization to achieve inclusive and sustainable prosperity and to provide a life of dignity to all their people by creating decent jobs!

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