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China's growth miracle in the context of Asian transformation

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Abstract: Myrdal did not cover China in his *Asian Drama*. If he did, he would have been most likely pessimistic about China, as he was about other Asian countries in his book. However, China has achieved miraculous growth since the transition from a planned economy to a market economy at the end of 1978. This paper provides answers to the questions: Why was China trapped in poverty before 1978? How was it possible for China to achieve an extraordinary performance during its transition? Why did most other transition economies failed to achieve a similar performance? What price did China pay for its success? Can China continue its dynamic growth in the coming decades? What lessons can we draw from China's development experiences in view of *Asian Drama*. The paper concludes on a positive note: if a developing country adopts a pragmatic approach to developing its economy along its comparative advantages in a market economy and taps into the potential of latecomer advantages with a facilitating state, the country can grow dynamically like China.

Keywords: Chinese economy, development, rethinking economics, role of the state, transition

JEL classification: N15, O10, P11

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1 Introduction

Myrdal did not cover China in his monumental book, *Asian Drama*. When he published the book in 1968, China was approaching 20 years after the victory of socialist revolution, led by Mao Zedong, in 1949, 10 years after the launch of the failed ultra-leftist Great Leap Forward,¹ and 10 years before the beginning of Reform and Opening Up, launched by Deng Xiaoping in 1978.² In 1968 China was in the middle of the chaotic Cultural Revolution, which was launched by Mao Zedong himself in 1966 and did not end until his death in 1976.³

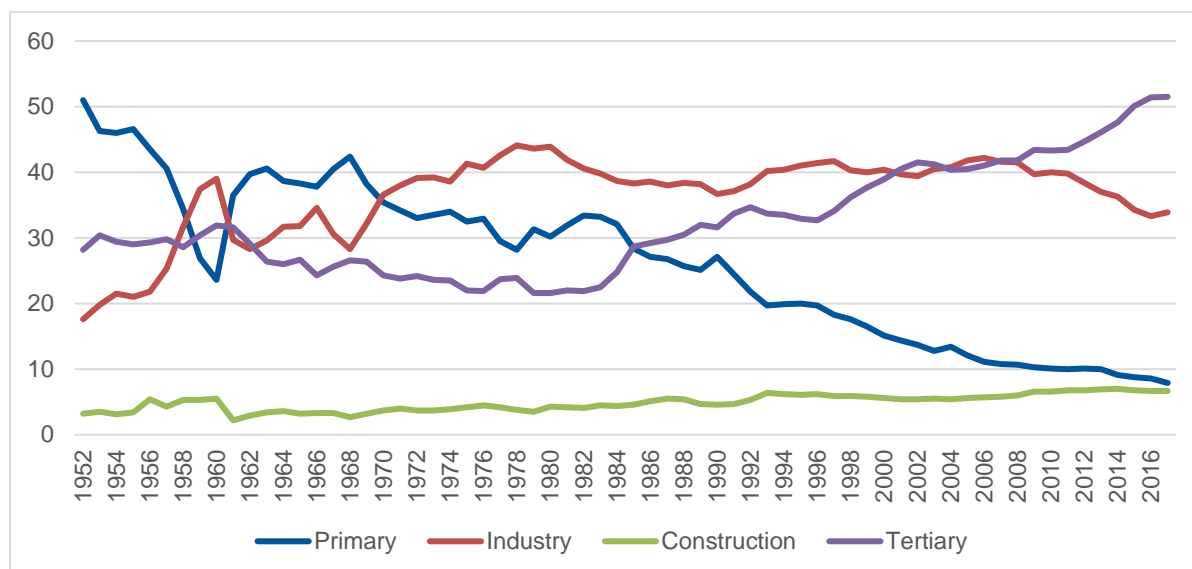
Unlike other Asian countries studied in *Asian Drama*, China had a strong instead of a soft state. China had also carried out since 1953 a big push for industrialization, recommended by Myrdal in *Asian Drama* to Asian countries for changing their miserable underdeveloped status. China, starting in the first Five-Year Plan in 1953, adopted a state-led planned economic system to pursue a heavy industry-oriented development strategy for the purpose of quickly building up a comprehensive system of modern capital-intensive industries. With the big push from the Stalinist planning model as well as Chinese bureaucrats' mobilization and implementation capabilities, China was quickly transformed from an agrarian economy in 1952 to an economy dominated by industry, as shown in Figure 1, with the capability of testing nuclear bombs in 1964 and launch of a satellite in 1970.

¹The Great Leap Forward aimed for China to overtake the United Kingdom in 10 years and to catch up with the United States in 15 years. It set ambitious industrialization targets—for example, doubling steel output from 5.35 million tonnes in 1957 to 10.7 million tonnes in 1958. The programme boosted industrial output rapidly but soon failed, as shown in Figure 1. However, the efforts to industrialize China persisted. The Great Leap Forward also made parallel dramatic changes in rural areas—for example, the adoption of the People's Commune as the basic farming system. After the socialist revolution, in 1949–52 the Chinese government first confiscated landlords' land and distributed it to poor farmers, then afterwards consolidated the private farms into agricultural collectives. The first attempt was the Mutual Aid team of 3–5 households in 1953, which progressed to the Primary Agricultural Cooperative of 20–30 households in 1954–55, then to Advanced Agricultural Cooperatives of around 200 households in 1956–57, and peaked at with the People's Commune, with average farm sizes of 5,000 households. After the failure of the People's Commune, the farm system changed in 1962 to the Production Team system of 20–30 households. That system remained until the introduction of individual farming—the Household Responsibility System—in 1978 when the Reform and Opening Up period began.

²Deng Xiaoping, born in 1904, was one of the first-generation revolutionary leaders. He became general secretary of the Chinese Communist Party in 1956, was purged in 1966 at the beginning of the Cultural Revolution, restored in 1973 by Chairman Mao, and purged again in 1976 by the leftist Gang of Four, Chairman Mao's heirs, when Mao died. He returned to power in 1978 after the Gang of Four were overthrown.

³Mao's ostensible reason for the Cultural Revolution was to prevent China from falling back to the capitalist road. However, one of the true reasons behind his motivation was to regain political dominance in China after stepping aside from the front line of policy making in 1962 due to the setback of the Great Leap Forward and the People's Commune in 1958–61, which led to the Great Famine with 30 million extra death and 33 million postponed births (Lin 1991).

Figure 1: Composition of gross domestic product (%)



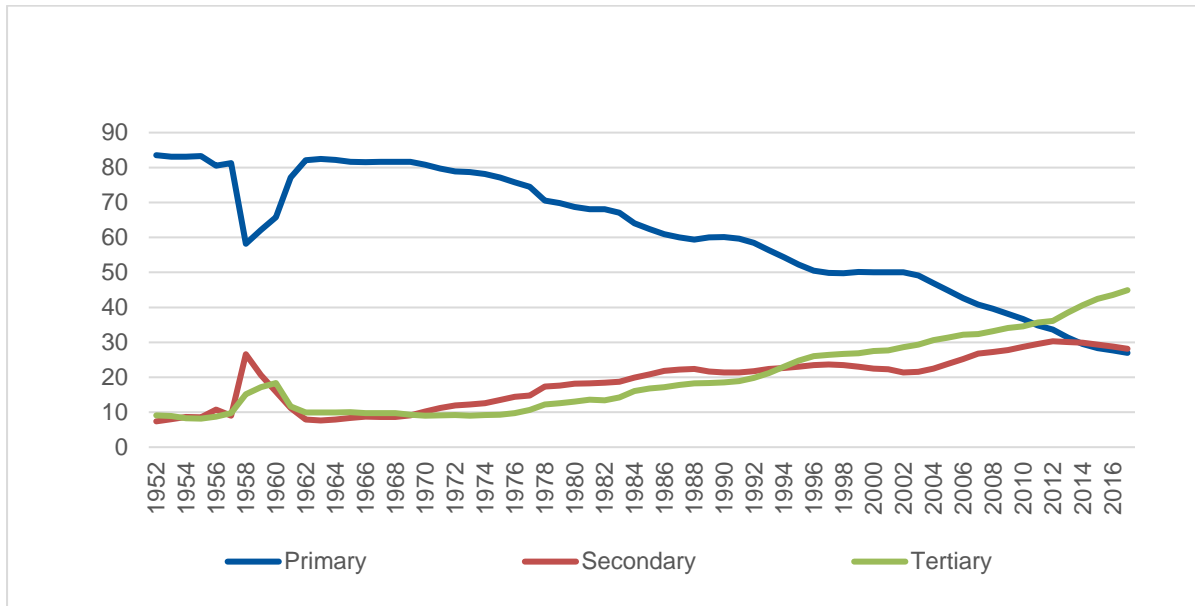
Source: author's illustration, based on National Bureau of Statistics (2014; 2018).

Nevertheless, when *Asian Drama* was published, China was still economically trapped in a dire situation that was worse than that of most other countries analysed in the book. Measured in current US dollars, China's per capita gross domestic product (GDP) in 1968 was US\$91.5, compared to US\$98.8 for India, US\$65 for Indonesia, US\$323.4 for Malaysia, US\$146.9 for Pakistan, US\$224.6 for the Philippines, and US\$150.2 for Sri Lanka.⁴

Real change in China did not occur for another 10 years, until the Reform and Opening Up began in 1978. In that year, 70.5 per cent of the labour force was employed in the primary sector and 82 per cent of China's population lived in rural areas, as shown in Figures 2 and 3. Moreover, 84 per cent of its population lived below the international poverty line of US\$1.25 per day. China's per capita GDP was US\$156, about 25 per cent below India's (US\$204) and less than one-third of the average of US\$490 for sub-Saharan African countries. Like other poor countries, China was also an inward-looking economy, with trade comprising merely 9.7 per cent to its GDP. Myrdal did not have the opportunity to spend another 10 years to do the research on China and publish a sequel to *Asian Drama* in 1978. If he had done so, he, like many economists at that time, would most likely have painted a pessimistic outlook for China, similar to his outlook for other Asian countries in his 1968 book, even though China had implemented many of his proposed programmes, such as big push for industrialization and land reform, for three decades.

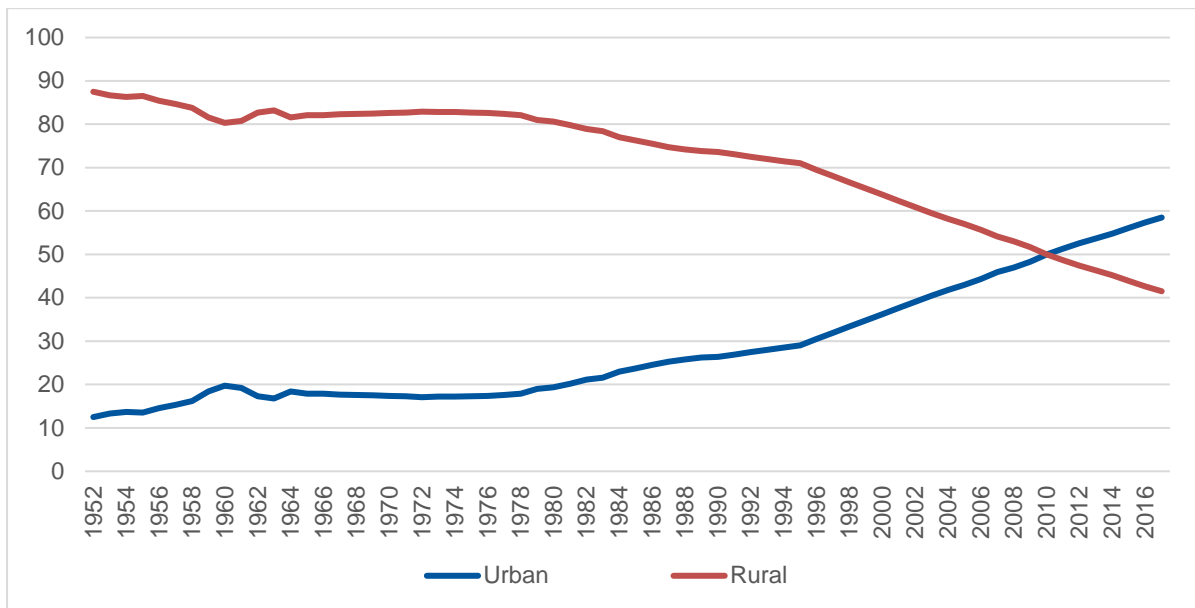
⁴ The data for per capita GDP used in this paper are all taken from the World Bank's World Development Indicators (<https://datacatalog.worldbank.org/dataset/world-development-indicators>).

Figure 2: Composition of employment (%)



Source: author's illustration, based on National Bureau of Statistics (2014; 2018).

Figure 3: Composition of the population (%)



Source: author's illustration, based on National Bureau of Statistics (2014; 2018).

From the above humble starting point, at the end of 1978 Deng Xiaoping and other veterans initiated the Reform and Opening Up programmes to transition the Chinese economic system from a planned economy to a market economy. Deng and his associates were purged during the Cultural Revolution and did not return to power until the death of Mao and the downfall of Mao's hand-picked ultra-left successors—the Gang of Four—in 1976.

China is celebrating the fortieth anniversary of the Reform and Opening Up this year. In the past 40 years, the prediction of the coming collapse of the Chinese economy surfaced repeatedly in the world news media and international forums. However, to the surprise of almost every China observer and economist in the world, China achieved a sustained growth miracle. Instead of

collapse, stagnation, and frequent crises as seen in many transition economies in Eastern Europe, the former Soviet Union, Africa, and Latin America over the same period, the average annual growth rate of GDP reached 9.5 per cent in the period between 1978 and 2017. This performance far exceeded the expectation of Deng Xiaoping himself. When he initiated the Reform and Opening Up, the target was to quadruple the Chinese economy in 20 years. The GDP growth rate required for that was 7.2 per cent per year for 20 years. I was a graduate student at Peking University at that time. None of my classmates, including myself, or my professors, including those visiting professors from the West, thought that growth target was possible to achieve.

In addition, China's trade growth was unprecedented. The average annual growth rate of trade volume, measured in US dollars, reached 14.8 per cent over the period 1978–2017. With such an extraordinary growth performance, China overtook Japan to be the second largest economy measured by market exchange rate in the world in 2009, overtook Germany to be the world's largest exporter in 2010, overtook the United States to be the world's largest trading country in 2013, and in 2014 China's GDP, measured by purchasing power parity, exceeded that of the United States, making China the world's largest economy. China's per capita GDP reached US\$8,640 and trade consisted of 31.1 per cent of GDP in 2017. During this period of time, about 800 million people were lifted above the international poverty line of US\$1.25 per day, contributing to more than 70 per cent of worldwide poverty reduction. Moreover, China was not only the only emerging market economy that has avoided a systemic financial and economic crisis in the past 40 years, but it also helped the Asian economies to quickly pull out of the 1997–98 financial crisis by not devaluing the Chinese currency and maintaining dynamic growth, and also helped the world economy avoid a downward spiral in the 2008 global crisis by using fiscal stimulus to achieve quick recovery, contributing more than 30 per cent of global growth annually.

In this paper, I would like to discuss six related questions. (1) Why was China's growth performance poor before 1987? (2) How was it possible for China to achieve such an outstanding performance after the transition in 1978? (3) How was China able to avoid the collapse and stagnation that occurred in other transition economies? (4) What price did China pay for its success? (5) What are the prospects for China's growth in the coming decades? And (6) what lessons can we draw from China's development experiences in view of *Asian Drama*?

2 Why was China trapped in poverty before 1978?

Rapid, sustained increase in per capita income is a modern phenomenon. Studies by economic historians such as Angus Maddison (2001) show that average annual per capita income growth in the West was only 0.05 per cent before the eighteenth century, jumping to about 1 per cent in the nineteenth century, and reaching about 2 per cent in the twentieth century. That means per capita income in Europe took 1,400 years to double before the eighteenth century, about 70 years in the nineteenth century, and 35 years thereafter. Before 1700 AD, the gap in per capita GDP of China and India with that of Western European countries was only about 50 per cent, and due to their enormous population sizes, China and India together contributed about 50 per cent of the global GDP (Lin and Rosenblatt 2012).

A continuous stream of technological innovation is the basis for continuous improvement of productivity and income, and thus sustained growth in any economy. The dramatic surge in growth in modern times is a result of a paradigm shift in technological innovation. Before the Industrial Revolution in the latter half of the eighteenth century, technological innovations were generated mostly by the experiences of craftsmen and farmers in their daily production. After the Industrial Revolution, experience-based innovation was increasingly replaced by experimentation and, later,

by science-based experiments conducted in scientific laboratories (Landes 1998; Lin 1995). This paradigm shift accelerated the rate of technological innovation, marking the coming of modern economic growth and contributing to the dramatic acceleration of income growth in the nineteenth and twentieth centuries (Kuznets 1966).

The Industrial Revolution not only accelerated the rate of technological innovation, but also transformed industrial, economic, and social structures, as the historical materialism articulated by Karl Marx and Friedrich Engels (1848) in *Manifesto of the Communist Party*. Before the eighteenth century, every economy was agrarian; 85 per cent or more of the labour force worked in agriculture, mostly in self-sufficient production for the family. The acceleration of growth was accompanied by the movement of labour from agriculture to manufacturing and services. The manufacturing sector gradually moved from very labour-intensive industries at the beginning to more capital-intensive heavy and high-tech industries. Finally, the service sector came to dominate the economy. Accompanying the change in industrial structure was an increase in the scale of production, required capital and skill, market scope, and risks. Exploitation of the potential unleashed by new technology and industry, and reducing the transaction costs and sharing risks, requires innovation and improvements in an economy's hard infrastructure—power, road networks, and port facilities—and its soft infrastructure, including the rules and values, the legal framework, financial institutions, and the education system (Kuznets 1966; Lewis 1954; Lin 2011; 2012b; North 1981).

A developing country like China, which started its modernization drive in 1949 after the victory of the socialist revolution, potentially has latecomer advantages in its pursuit of technological innovation and structural transformation. In advanced, high-income countries, technological innovation and industrial upgrading require costly and risky investments in research and development, because their technologies and industries are located on the global frontier. Moreover, the institutional innovation required for realizing the potential of new technology and industry often proceeds in a costly trial-and-error, path-dependent evolutionary process (Fei and Ranis 1997). By contrast, a latecomer country in the catching-up process can borrow technology, industry, and institutions from the advanced countries at low risk and reduced cost. If a developing country knows how to, and introduces the necessary conditions to, tap into the latecomer advantage in technology, industry, and social and economic institutions, it can grow at an annual rate several times that of high-income countries for decades before closing its income gap with those advanced countries (Lin 2009; Vu 2013).⁵

China was the largest economy and among the most advanced, powerful countries in the world in pre-modern times (Maddison 2007). Mao Zedong, Zhou Enlai, and many other Chinese social and political elites joined the socialist revolution for the purpose of realizing the dream of China's rejuvenation. The lack of industrialization—especially the lack of large-scale, capital-intensive, technologically advanced, heavy industries that were the foundation of high labour productivity, and thus high income, and the basis for the production of military machineries and thus military strength—was perceived as the root cause of China's backwardness. It was natural and seemingly intuitive for the social and political elites in China to prioritize the development of large, heavy,

⁵ The concept of latecomer advantages is related but has a subtle difference to the advantages of backwardness made popular by Gerschenkron (1962). Latecomer advantages refer to a country at a lower development stage that can learn from the existing technology, industry, and institutions of a country at a higher development stage to reduce the costs and risks of innovation in its development process. The advantage of backwardness refers to a country at a lower development stage having a lower opportunity cost than an advanced country in adopting the newest technology as the former can adopt directly the newest technology when it first enters a new industry, while the latter is already in the advanced industry and will have to replace the old technology with new equipment for the newest technology when the newest technology becomes available (Lin 2016).

advanced industries when they started the process of nation building after the success of socialist revolution. In the nineteenth century, the political leaders of France, Germany, the United States, and other Western countries pursued effectively the same strategy, motivated by the contrast between Britain's rising industrial power and the backwardness of their own industries (Chang 2003; Gerschenkron 1962).

Starting in 1953, China adopted a series of ambitious Five-Year Plans to accelerate the building of modern, advanced industries, with the goal of overtaking Britain in 10 years and catching up to the United States in 15 years. Because those advanced industries were not only protected by patents but also prohibited access to know-how due to national security considerations of the advanced countries, China needed to 'reinvent the wheel' when it wanted to build up those advanced industries. Such a strategy effectively gave up the latecomer's advantage in technology innovation and industrial upgrading.

Moreover, China was a lower-income agrarian economy at that time. In 1953, 83.1 per cent of its labour force was employed in the primary sector, and its per capita income (measured in purchasing power parity terms) was only 4.8 per cent of that of the United States (Maddison 2001). Given China's employment structure and income level, the country did not possess comparative advantage in the modern advanced industries of high-income countries, whether latent or overt, and Chinese firms in those industries were not viable in an open, competitive market.

To achieve its strategic goal, the Chinese government needed to protect the priority industries by giving firms in those sectors a monopoly in product markets and subsidizing them through various price distortions, including suppressed interest rates, an overvalued exchange rate, and lower prices for other inputs, including labour via wages. The price distortions created shortages and the government was obliged to use administrative measures to mobilize and allocate resources directly to the non-viable firms in priority industries (Lin 2009; Lin and Li 2009).

These interventions, as shown in Figure 1, enabled China to quickly transform the production structure from that of an agrarian economy to an industrialized economy with the ability to test nuclear bombs in the 1960s and launch satellites in the 1970s. However, the modern capital-intensive industries generated only a few employment opportunities, resulting little change in China's employment and population structure from its agrarian past before the end of the 1970s, as shown in Figures 2 and 3. The costs of such a development strategy were not only voluntarily giving up the latecomer's advantage, but also the inefficiency arising from the misallocation of resources, the distorted incentives, and the repression of labour-intensive sectors in which China held a comparative advantage. As a result, economic efficiency was low and growth before 1978 was driven mainly by an increase in inputs. Despite a very respectable average annual GDP growth rate of 6.1 per cent in 1952–78 and the establishment of large, modern industries, China's household consumption grew by only 2.3 per cent per year, in sharp contrast to the 7.9 per cent average growth after 1978.

3 Why could China have an extraordinary performance after the transition in 1978?

As discussed in the previous section, sustained growth relies on continuous technology innovation in the existing industries and upgrading to new, higher value-added industries. A developing country has the latecomer advantage in technological innovation and industrial upgrading and can potentially grow faster than advanced countries. In the post-Second World War period, 13 of the world's 200-plus economies found a way to tap into the potential, and achieved average annual

growth of 7 per cent or more for 25-plus years. China became one of the 13 after the economic transition started in 1978.

The Commission on Growth and Development, headed by Nobel Laureate Michael Spence, finds that these 13 economies have five common features: openness, macroeconomic stability, high rates of saving and investment, a market system, and committed, credible, and capable government (Commission on Growth and Development 2008: 22). Spence suggests that these five features are the ingredients of a recipe, but themselves not a recipe for successful development (Spence 2016). In fact, there *is* a recipe for success. The recipe is to follow a country's comparative advantage to develop its industries and to upgrade these industries according to the changes in comparative advantage in the country's development process (Lin 2009; 2013).

Lin and Monga (2012) show that the first three features are the result of following the economy's comparative advantage in developing industries at each stage of its development, and the last two features are the institutional preconditions for the economy to follow its comparative advantage in developing industries. If a country develops its industries according to its comparative advantage, it will produce whatever the country can produce at low cost and export the goods. Otherwise, the country will import from other countries. The country will be an open economy, with trade comprising a larger share of its GDP than a country adopting a comparative advantage-defying import-substitution strategy. The country will be competitive in domestic and international markets with fewer home-grown crises and better ability to mitigate external shocks due to the government's sound fiscal position, compared to a country adopting an inefficient comparative advantage-defying development strategy. Therefore, a country will have a good record of macro-stability. The return to investment will be high in industries that are consistent with a country's comparative advantage, resulting in high savings and high investment in the country. For entrepreneurs to make investments according to a country's comparative advantage spontaneously, it requires a price system that reflects the relative scarcities of each production factor. Such a price system will exist only in a competitive market, which is the fourth of the five features of the 13 successful economies. Economic development is a process of structural change, which will require a committed, proactive, capable state to help overcome the inevitable externality and coordination issues for a dynamic transformation.

After the transition from a planning economy to a market economy, initiated by Deng Xiaoping at the end of 1978, China switched its development strategy. The government liberalized the entry of private enterprises, joint ventures, and foreign direct investment to labour-intensive industries, in which China had comparative advantage but which were repressed before the transition. With liberalization of entry into the new sectors, in addition to providing incentives for investment, the Chinese government recognized the need to help private firms overcome all kinds of inherent hurdles in the transition process: the overall business environment was poor,⁶ the nationwide infrastructure in China was bad,⁷ and the nation's investment environment was inhospitable.⁸ The

⁶ In 2013, after more than three decades of market-oriented reform, China still ranked 91st in the World Bank's Doing Business survey (www.doingbusiness.org/rankings).

⁷ I still remember vividly the experience of my travel by car from Guangzhou, the capital city of Guangdong province, to Shenzhen, the newly established special economic zone, for the first time in 1984. The car had to cross rivers by ferry three times and it took me more than 12 hours to travel the distance of 300 km. The infrastructure at that time in China was worse than in any African countries where I travelled extensively as the chief economist of the World Bank in 2008–12.

⁸ In the World Bank's *Investing Across Borders 2010*, China's investment environment was ranked the worst among the 87 economies covered in the study. See <http://iab.worldbank.org/~media/FDPKM/IAB/Documents/IAB-report.pdf>.

Chinese government mobilized its limited resources and capability to build up special economic zones and industrial parks (Zeng 2010; 2011). Within the zones and parks, the infrastructure and business environment were made very attractive. The labour costs were low because of the large amount of surplus labour in rural areas when China started the transition. But China lacked knowledge about how to turn that surplus labour to an advantage by producing labour-intensive goods of acceptable quality for the international market, and international buyers were not confident that Chinese firms would be able to deliver the goods in a timely manner. To overcome those difficulties, the Chinese governments at all levels and in all regions proactively approached prospective foreign investors, especially those manufacturers in developing Asia that were about to upgrade their operations in the value chain and relocate their labour-intensive processes to other low-wage economies because of rising wages in their own economies. China provided tax holidays to incentivize foreign manufacturers to make investments in the special economic zones and industrial parks (Graham and Wada 2001; Wei and Liu 2001).

In addition, when the transition started in 1978, the official exchange rate was overvalued. To facilitate trade, the government adopted initially a dual-track exchange rate system, allowing the market-determined exchange rate to operate in parallel with the overvalued official exchange rate. The dual-track system converged to a managed floating system in 1994 (Lin 2012a). The government also innovatively used the countercyclical fiscal policies in the 1997–98 East Asian financial crisis and 2008 global financial crisis to improve infrastructure, especially the interregional infrastructure, such as highways and high-speed rail roads, which contributed to the rapid integration of domestic markets and linkage to global markets.⁹

With the pragmatic transition approach, accession to the World Trade Organization (WTO) in 2001, a favourable exchange rate policy, and infrastructure improvements, China developed labour-intensive light manufacturing and quickly became the world's factory, tapping into the potential of latecomer advantage in the process of industrial upgrading. While in 1978 primary and processed primary goods accounted for more than 75 per cent of China's exports, in 2006 the share of manufactured goods had increased to more than 95 per cent. Moreover, China's manufactured exports upgraded from simple toys, textiles, and other cheap products in the 1980s and 1990s to high-value and technologically sophisticated machinery and information and communication technology products in the 2000s. The exploitation of the latecomer advantage has allowed China to emerge as the world's workshop and to achieve extraordinary economic growth by reducing the costs of innovation, industrial upgrading, and social and economic transformation.

4 Why did other transition economies not perform equally well?

After the Second World War, all other socialist countries and most developing countries, including those studied in *Asian Drama*, adopted a development strategy similar to that of China. The strategy was influenced by the elites' intuitive perception of modernization in the developing countries, the Soviet Union's experience of rapid industrialization before the Second World War, and the

⁹ In 1997, China only had 4,800 km of highway, compared to 86,000 km in the United States, although the territory sizes of both countries are about the same. The length of highway in China expanded to 25,100 km in 2003 after the investment supported by countercyclical fiscal expansion in the East Asian financial crisis, and to over 136,000 km today after the investment supported by the fiscal expansion in the 2008 global financial crisis. Moreover, China had more than 22,000 km of high-speed rail by 2016, contributing more than 65 per cent of the world's high-speed rail (National Bureau of Statistics 2018).

prevailing structuralist development thinking at that time (Lin 2012b; 2012c). Most developing countries shed colonial or pseudo-colonial shackles and gained political independence after the Second World War. They started in earnest the modernization drives under the leadership of their revolutionary national fathers, similar to China before the transition in the late 1970s. Compared with developed countries, these newly independent developing countries had extremely low per capita income, high birth and death rates, low average educational attainment, and very little infrastructure—and they were heavily specialized in the production and export of primary commodities while importing most manufactured goods before their modernization drives. The development of modern, advanced industries to was perceived as the only way to achieve rapid economic take-off, become an advanced country, and avoid exploitation by the Western industrial powers (Prebisch 1950).

It became a fad after the 1950s for developing countries in both the socialist and non-socialist camps to adopt a capital-intensive, large-scale, heavy industry-oriented development strategy (Lal and Mynt 1996). But the capital-intensive modern industries on their priority lists could not develop spontaneously in the market in their countries due to those industries' defiance of comparative advantage and the resulting lack of viability for firms in those industries in an open, competitive market (Lin 2009; 2011). Nevertheless, the perception at that time was that the inherent structural rigidities in the economy caused market failures for developing modern industries.¹⁰ The structuralist thinking at that time thus advised a developing country to adopt an import-substitution strategy to develop modern capital-intensive industries by direct state intervention to overcome market failures with institutional arrangements similar to what were adopted in China's planning system, including market monopoly, price distortions, and direct allocation of financial and other inputs.¹¹ This strategy made it possible to establish some modern industries and achieve investment-led growth for one or two decades from the 1950s to the 1970s. Nevertheless, the distortions led to pervasive soft budget constraints, rent-seeking, and misallocation of resources. Economic efficiency was unavoidably low. Stagnation and frequent social and economic crises began to beset most socialist and non-socialist developing countries by the 1970s and 1980s. Structuralism was replaced by neoliberalism after the 1970s (Lin 2012b, 2012c). As encapsulated in the neoliberal Washington Consensus, liberalization from excessive state intervention became a fad in the 1980s and 1990s.

From the perspective of new structural economics, which advocates the use of the neoclassical approach to study the determinants and impacts of structure and structural change in the process of economic development, the industrial structure in an economy at a given time is endogenous to the comparative advantage determined by the economy's endowment structure at that time. The state's interventions and distortions before the transition were second-best institutional arrangements endogenous to the needs of providing protection and subsidies to non-viable firms in the priority sectors. But the Washington Consensus reforms, advocated by the academic and policy communities in the 1980s, did not realize the root causes and endogeneity of those

¹⁰ From the new structural economics perspective, the reason those capital-intensive industries could not develop spontaneously in a low-income agrarian country was not because of market failures due to structural rigidity, but the lack of comparative advantages and non-viability of firms in those capital-intensive industries in an open, competitive market (Lin 2011).

¹¹ There are different explanations for the pervasive distortions in developing countries. Acemoglu et al. (2005), Engerman and Sokoloff (1997), and Grossman and Helpman (1996) propose that these distortions were caused by the capture of government by powerful vested interests. Lin (2009; 2003) and Lin and Li (2009) propose that the distortions were a result of conflicts between the comparative advantages of the economies and the priority industries that political elites, influenced by the dominant social thinking of the time, targeted for the modernization of their nations.

interventions. As a result, policy makers and academics recommended that socialist and other developing countries adopted a ‘big bang’ approach to eliminate immediately all distortions and interventions by simultaneously implementing programmes of privatization, marketization, liberalization, and fiscal stabilization with the aim of quickly establishing a well-functioning market to achieve efficient, first-best outcomes.

But if those distortions were eliminated immediately, many non-viable firms in the priority sectors would collapse, causing a contraction of GDP, a surge in unemployment, and acute social disorder. Moreover, some of those advanced industries were the backbones of national defence. To avoid the dreadful social consequence and/or because of the needs of national defence, many governments continued to subsidize the non-viable firms in those advanced, capital-intensive, large-scale industries through other, disguised, less efficient subsidies and protections even after privatization (Lin and Tan 1999). Transition and developing countries thus had even poorer growth performance and stability in the 1980s and 1990s than in the 1960s and 1970s (Easterly 2001; Lin 2014).

During the transition process, China adopted a pragmatic, gradual, dual-track approach. The government first improved incentives and productivity by allowing farmers in agricultural collectives to adopt the family farm-based Household Responsibility system. The farmers became residual claimants and were allowed to sell at the market freely after delivering the obligatory quota to the state at fixed prices (Lin 1992). At the same time, the government introduced a profit retention system to the state-owned enterprises, giving workers the right to share partially in the productivity improvements. The government also liberalized the entry of private enterprises, joint ventures, and foreign direct investment in labour-intensive sectors, in which China had a comparative advantage but which were repressed before the transition. In addition, as discussed in the previous section, the government also proactively facilitated the growth of the new industries by setting up enclaves such as special economic zones and export-processing zones to overcome the bottleneck of hard and soft infrastructure in their growth.

This transition strategy allowed China to maintain stability by avoiding the collapse of old priority industries and to achieve dynamic growth by simultaneously turning its comparative advantages into competitive advantages. The rapid accumulation of capital and upgrading of comparative advantage also allowed China to tap into the potential of latecomer advantages in the industrial upgrading process. In addition, the dynamic growth in the newly liberalized sectors created the conditions for reforming the old priority sectors. The rapid accumulation of capital gradually turned those capital-intensive industries from China’s comparative disadvantage to comparative advantage. Firms in those sectors became viable in an open, competitive market. As a result, protections and subsidies become unnecessary for their survival. The government is able to eliminate the remaining protections and subsidies as they become redundant. Through this gradual, dual-track approach, China achieved ‘reform without losers’ (Lau et al. 2000; Lin 2012a; Lin et al. 2003; Naughton 1995) and moved gradually but steadily to a well-functioning market economy.

A similar gradual, dual-track approach also worked in a few other socialist economies—such as Vietnam, Cambodia, and Laos in Asia, Poland and Slovenia in Eastern Europe, and Belarus and Uzbekistan in the former Soviet Union. This small group of transition countries all avoided mass privatization of their large-scale state-owned enterprises and instead of encountering economic collapse, they maintained stability and growth in the transition process (Lin 2014).

Mauritius was the first country to adopt a gradual dual-track transition. Like many other developing countries, Mauritius adopted an import-substitution strategy in the 1960s and followed a gradual, dual-track approach by setting up an export-oriented special economic zone and active investment promotion in 1970 to transition from the country’s import-substitution strategy. Its economy has

grown dynamically since then and Mauritius became an African success story (Subramanian and Roy 2003; Zafar 2011).¹² It is interesting to note that Nobel Laureate James Meade (Meade et al. 1961) regarded Mauritius as a basket case in his report to the government of Mauritius before its independence in 1968.

5 What price did China pay for its success?

Although the economic performance during the transition in the last four decades was extraordinary, China also paid a very high price for its success. In addition to environmental degradation and food safety issues, which draw many public complaints and are the results of rapid industrialization and lack of appropriate regulations, the main issue during the transition is widespread corruption and worsening of income disparities. Before 1978, China had a rather disciplined and clean bureaucratic system and an egalitarian society. According to the Corruption Perception Index published by Transparency International, China ranked seventy-ninth among the 176 countries or territories in 2016; based on the estimates of the National Statistical Bureau and various scholars' research, China's Gini coefficient has exceeded 0.45, higher than the international warning level, since 2000 (Li and Sicular 2014). These problems are related to China's pragmatic, dual-track transition strategy.

As already mentioned, the Chinese government adopted a pragmatic, dual-track approach in the transition. The government, on the one hand, provides transitory protection and subsidies to the non-viable state-owned enterprises in the old, capital-intensive sectors so as to maintain stability and, on the other hand, liberalizes and facilitates the entry to the new, labour-intensive sectors which are consistent with China's comparative advantages so as to achieve dynamic growth. One of the most important costs for the old capital-intensive sectors was the cost of capital. Before the transition in 1978, the government used fiscal appropriation to pay for investments and cover working capital; the state-owned enterprises did not have to bear any cost for capital. After the transition, fiscal appropriation was replaced by bank loans. The Chinese government set up four large state banks and a stock market to meet the capital needs of large enterprises. To subsidize the state-owned enterprises, the interest rates and capital costs are artificially repressed.

When the transition started, almost all firms in China were state-owned. With the dual-track transition, privately owned firms grew dynamically and some of them become large enough to get access to bank loans or list in the equity market. As interest rates and capital costs were artificially repressed, whoever could borrow from the banks or list in the stock market was therefore subsidized. These subsidies were paid for by the low returns to savings in the banks or in the stock market made by individual households, farms, and micro-, small-, and medium-sized firms in industries and services. Those people providing the funds are poorer than the owners of the large firms they financed. The subsidization of the operation of rich people's firms by poorer people was one reason for the increasing income disparities. Moreover, access to bank loans and equity markets generates rents for the recipients, leading to bribery and corruption of the officials who control the access.

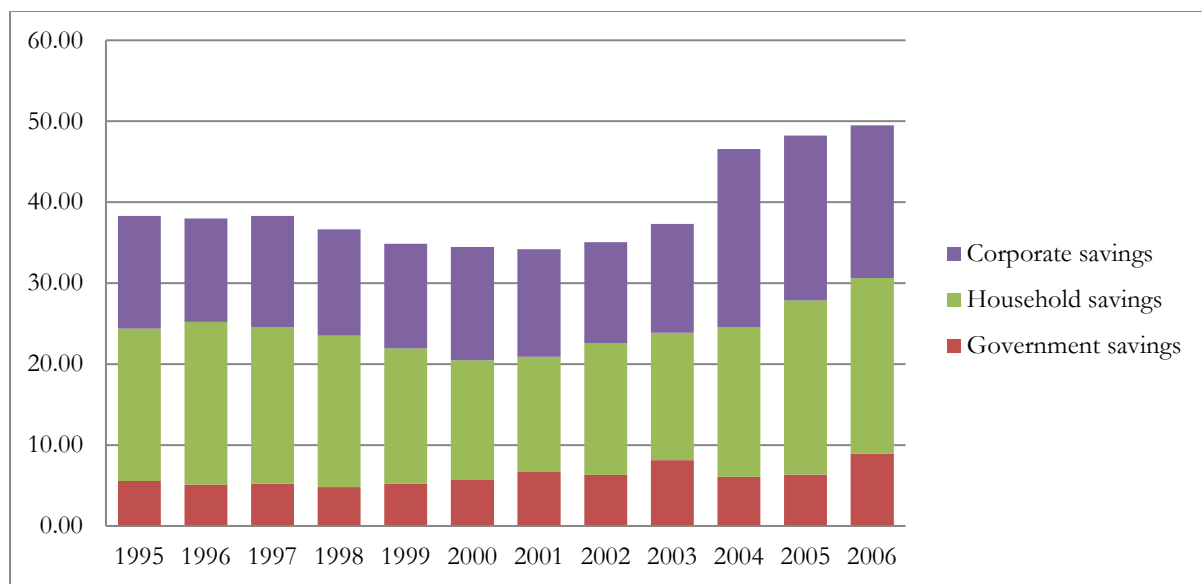
¹² In the 1980s, the former Soviet Union, Hungary, and Poland adopted a gradual reform approach. However, unlike the case of China, their state-owned firms were not allowed to set prices for selling on the market after fulfilling their quota obligations. Private firms' entry into repressed sectors was subject to severe restrictions, but wages were liberalized (while in China wage increases were subject to state regulation). These reforms led to wage inflation and exacerbated shortages. See the discussion about the differences in the gradual approach in China and the former Soviet Union and Eastern Europe in Lin (2009: 88–89).

Similarly, before 1979 natural resources mining was operated free of concession fees by large-scale state-owned enterprises and their outputs were provided to other state-owned enterprises at very low prices. After 1983, the government allowed private firms to enter the mining sectors and liberalized controls over output prices in 1993. Concession fees and output taxes are kept low to compensate for state-owned mining enterprises' social policy burden of employing redundant workers and covering the pensions of retired workers (Lin and Tan 1999; Lin et al. 1998). New private mining companies do not have these social policy burdens. Acquiring a concession promises them overnight enrichment and becomes a source of income inequality and corruption.

In addition, banking and other large-scale service industries, such as power and telecommunications, are operated by state-owned monopoly enterprises. These monopoly rents are also sources of inequality and corruption.

It is noteworthy that, in general, the marginal propensity to consume decreases with income. Therefore, if wealth is disproportionately concentrated in the higher income group, the nation's consumption-to-GDP ratio will be lower and the savings ratio will be higher. The concentration of wealth in the large firms has a similar effect. A consequence of the increasing income disparities is relatively high household savings and extraordinarily high corporate savings in China, as shown in Figure 4 (Lin 2013).

Figure 4: China's corporate, household and government savings as a percentage of GDP



Source: author's illustration, based on National Bureau of Statistics (2014).

To cope with the corruption issue, the Chinese government under President Xi Jinping, who took office in 2013, launched a wide-ranging, persistent anti-graft campaign. However, the root of widespread corruption is the rents arising from the distortions embodied in the dual-track transition for the purpose of protecting and subsidizing the large-scale state-owned enterprises in capital-intensive industries defying China's comparative advantage. In the 1980s and 1990s China was a poor country and capital was scarce. After four decades of rapid economic growth, capital has become relatively abundant and comparative advantage in China has evolved accordingly. Many capital-intensive industries have turned from defying China's comparative advantage to becoming consistent with China's comparative advantage. As a result, firms in those industries have become viable and should be competitive and profitable in domestic and global markets as long as they have good management. The nature of subsidies and protections to the recipient firms changes from a necessity for survival to a pure rent. It is imperative and timely to eliminate all

remaining distortions and protections, so completing the transition to a well-functioning market economy and uprooting the cause of corruption and income disparities. Indeed, this is exactly the intention of the comprehensive reform agenda adopted in 2013 by the third plenary session of the eighteenth party congress of the Communist Party of China. The government has set up a national committee for deepening reform, headed by President Xi Jinping himself, for the purpose of completing the transition to a well-functioning market economy. Hundreds of reforms have been introduced. The implementation takes time. However, the direction of the transition is clear and the government's determination to move China in this direction is strong.

6 Can China maintain dynamic growth and become a high-income country in the years ahead?

The question that arises is, if China removes all remaining distortions and completes this transition to a well-functioning market economy, for how long can it maintain dynamic economic growth and realize its dream of becoming a high-income country? This question is hotly debated in China and closely followed globally. The reason for the question is that China's annual growth rate dropped continuously from 10.6 per cent in 2010 to 6.7 per cent in 2016. A growth of 6.7 per cent was the lowest that China has experienced since 1990, and it was the first time there were six consecutive years of deceleration after the transition started in 1978.

To answer the question of whether, after more than 30 years of extraordinary growth, China can maintain dynamic economic growth in the coming years, one needs to answer two related questions. First, how large is China's growth potential? And second, what are the reasons for the persistent deceleration of China's growth after 2010?

Pritchett and Summers (2014) project that China's growth rate will decrease to a range of 2.3–5.5 per cent in the next 20 years. Eichengreen et al. (2012) suggest that, based on international experiences of rapid-growth catch-up economies after reaching US\$17,000 per capita GDP, measured by purchasing power parity and 2005 constant dollars, a level China will soon reach, China's growth rate will slow down to around 6 per cent. From the analysis in this paper, the potential for rapid economic growth depends on the size of the latecomer advantage China still enjoys. To measure the size of the remaining latecomer advantage, in my view one should compare China's per capita GDP with the per capita GDP in advanced countries such as the United States. This is because per capita GDP is a proxy for a country's average labour productivity, and average labour productivity is a measure of the average level of technology and valued-added of industries in a country.

According to the data for 2008, published by Maddison,¹³ the per capita GDP in China, measured by purchasing power parity, in 2008 was 21 per cent of the United States' for the same year. This proportion was similar to that for Japan in 1951, Singapore in 1967, Taiwan China in 1975, and South Korea in 1977. All stood at 21 per cent of the US figure in their relevant years.

In the 20 years from 1951 to 1971, Japan grew at an average annual rate of 9.2 per cent. From 1967 to 1987, Singapore grew at 8.6 per cent. From 1975 to 1995, Taiwan China grew at 8.3 per cent. From 1977 to 1997, South Korea grew at 7.6 per cent. These four East Asian economies were among the 13 economies referred to in Section 3 as having tapped into the growth potential

¹³ The Maddison Project (www.ggdc.net/maddison/maddison-project/home.htm, 2013 version).

from the latecomer advantage and as having enjoyed high growth rates of 7 per cent or more continuously for 25-plus years.

Just as these economies were able to utilize the technology gap and exploit the latecomer advantage to grow for 20 years at 7.6–9.2 per cent per year, so too potentially China can grow for 20 years at 8 per cent per year from 2008. Ten years have passed since 2008; another 10 years of potential growth at 8 per cent per year remain.

If China has the potential to grow at 8 per cent, why has the growth rate declined persistently to below 8 per cent since 2010 and reached 6.7 per cent in 2016? The potential growth rate reflects the possibilities for technological innovation and industrial upgrading from the view of the supply side. The realization of this potential growth rate depends as well on demand-side conditions.

From a demand-side point of view, growth has three components: net exports, investment, and consumption. High-income countries have not yet recovered from the global financial crisis of 2008; in these countries per capita GDP is stagnant, there is a large debt overhang that they need to reduce, and consumption has increased very slowly. The stagnation of the United States, Western Europe, and Japan has depressed international trade, with a major impact on Chinese exports as China is a major global supplier of consumption goods. From 1979 to 2015 China's annual average export growth was about 16 per cent. It was –2.8 per cent in 2015 and –7.7 per cent in 2016. The poor export performance was one of the reasons for a deceleration in China's growth.¹⁴

The second reason was that China, like most countries, adopted countercyclical fiscal expansion to support investment and growth after the 2008 global crisis. These projects were completed but the global economy has not fully recovered. As such, incentives for private investment remain low. Without a new round of stimulus programmes, investment growth rates will fall.

The above two factors affect all countries: growth has decelerated not just in China but also, and often more sharply, in other BRIC (Brazil, Russia, India, and China) countries and many others. Fortunately, China maintains a high employment rate. Household income in China has continued to grow rapidly at about 8 per cent per year, with consumption growing at a similar rate. This is the reason why China was able to maintain a growth rate higher than other BRIC and emerging market economies.

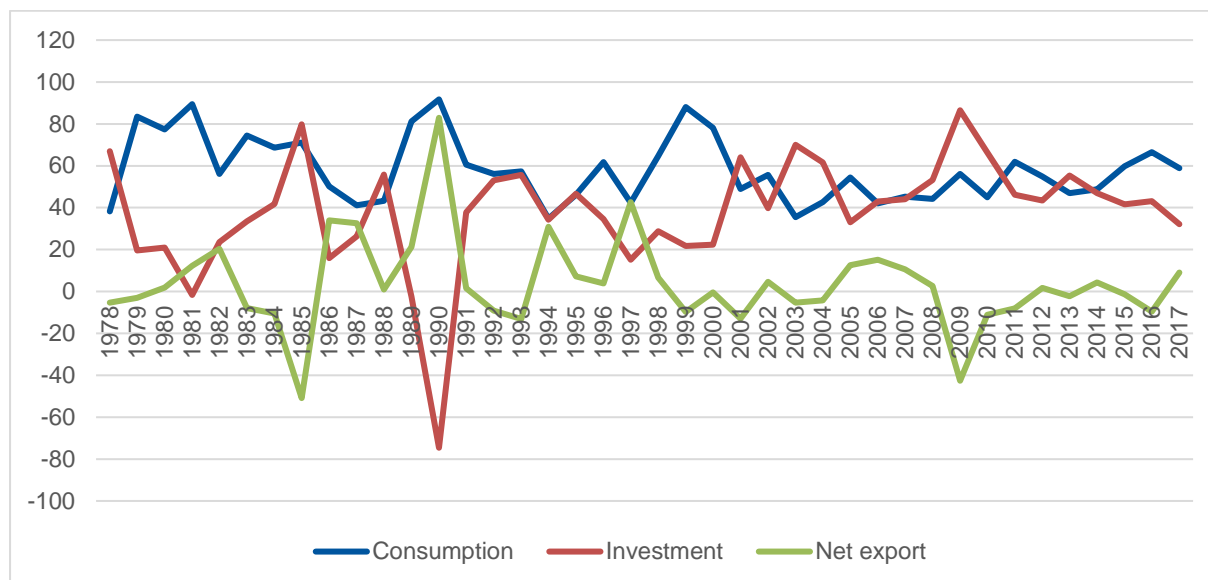
Looking forward, high-income countries are very likely to experience a secular stagnation (Summers 2014), similar to that of Japan after 1991 due to the lack of structural reforms. These economies are likely to grow at less than their normal growth rate of 3–3.5 per cent per year. The external demand is likely to remain sluggish.

To what extent China can turn the 8 per cent growth potential to actual growth in the coming years depends largely on domestic demand, including investment and consumption. There is a popular view that China needs to switch its unsustainable investment-led growth model to a consumption-led growth model. This is not the right prescription for China or any other country. Consumption is a desirable goal of development but its growth can be sustainable only with increasing household income. The latter requires continuous improvement of labour productivity through technological innovation and industrial upgrading, both of which rely on investment. In fact, as shown in Figure 5, due to rapid income growth resulting in high consumption growth,

¹⁴ China's growth bounced back to 6.9 per cent in 2017. The main reason was that export growth recovered from –7.7 per cent in 2016 to 7.9 per cent in 2017.

consumption has been the major source of growth in China since the transition started in 1978. Except for a few years with investment surges as a result of events such as the entry to the WTO in 2001 and the countercyclical fiscal stimulus in 2009, consumption contributed more to China's growth than did investment.

Figure 5: Components of GDP growth



Source: author's illustration, based on National Bureau of Statistics (2018).

The key to assessing how much of China's growth potential can be realized in the coming years depends on whether China has good investment opportunities in the face of the existence of excess capacity in many industries as a result of the lingering global crisis and whether China has sufficient resources to support the investment. Although there is excess capacity in many industries, such as steel and cement due to slack demand, as an upper-middle-income country China has considerable room for investment to upgrade the industries to higher value-added industries, urbanization and intra-urban infrastructure, and environmentally friendly green technologies. Such investments will increase efficiency and environmental sustainability while using China's latecomer advantage. China also has plenty of resources for investment. Its fiscal position is very sound. In 2015, national, provincial, and local governments' combined debt was less than 60 per cent of GDP, among the lowest in the world. Private savings are around 50 per cent of GDP, one of the highest in the world. China also has more than US\$3 trillion in foreign exchange reserves. With good investment opportunities and abundant funding, China will maintain a reasonable rate of investment growth, create jobs, and increase household income and consumption. With these conditions and depending of reforms to eliminate the remaining distortions from the dual-track transition, there is no reason why China cannot reach its annual growth target of 6.5 per cent or more before 2020 and 6 per cent in the following decade. If China does reach these targets, it is very likely that around 2025, Chinese per capita GDP will reach the threshold of US\$12,700, making China a high-income country (Lin et al. 2016).

7 Final remarks

There are three additional questions to answer before I conclude this paper. (1) Why did China start the Reform and Opening Up programme in 1978 to transition from the planned economy to a market economy? (2) Why did China not follow the popular, seemingly more logical, neoliberal

shock therapy of privatization, marketization, and stabilization encapsulated in the Washington Consensus, and instead adopted a gradual, dual-track transition that was regarded as the worst possible transition strategy, although retrospectively this approach is the best? (3) What lessons can we draw from China's experiences in the past half-century for other developing countries?

For the first question, I think it is because Deng Xiaoping came back to power by purging Mao's hand-picked successors, the Gang of Four, in a palace revolt. He needed to justify his actions in order to gain the support of the people and consolidate his power. After almost 30 years of socialist revolution the Chinese people still lived in poverty. The need to shift from the ultra-left policy to improve people's lives was a good justification for his actions in purging the Gang of Four (Lin 2012a).

Then why did Deng adopt a gradual, piecemeal transition approach? There was no theory at that time that supported this approach. On the contrary, a gradual, piecemeal transition approach was considered the worse possible transition strategy, according to the prevailing theory at that time, suggested that such an approach would make the economy worse than a planned economy (Murphy et al. 1992). The accepted wisdom in the 1980s and 1990s was that the correct way to transition from a planned economy to a well-functioning market economy was to implement the Washington Consensus of privatization, marketization, and stabilization simultaneously in a shock-therapy approach (Summers 1994). In the Marshall Lectures (Lin 2009) I argue: first, pragmatism has been a virtue in Confucianism, probably sharpened by the need for survival in a land with high population pressures and frequent natural disasters. Second, Deng himself was one of the first generation of political leaders who started the socialist revolution and introduced the planned economy to China. In an authoritarian regime, the power of a leader is not delineated by his/her formal, official position, but based mainly on the personal trust and prestige that a leader receives from the people.¹⁵ If a leader is to renounce policies that he or she pursued in the past, he may lose his/her prestige in people's minds.¹⁶ Therefore, it was rational for Deng to adopt a tinkering strategy of reform and opening up of the system instead of a comprehensive overhaul or a complete replacement of the system. Vietnam and Lao also adopted a gradual, dual-track reform approach. In both countries, as in China, the first-generation revolutionaries, who had brought socialism and planned economies to their countries, initiated the transition. In Eastern European and former Soviet Union countries, the leaders were all second- or even third- or fourth-generation leaders when they adopted the shock-therapy approach to transition from the planned system. They were not accountable for the introduction of the planned system and could replace the old system with a new one in a wholesale way.

Finally, what can we learn from China's experience? When China started the transition in 1978, pessimism about China's future prevailed and, even up to recent years, the coming collapse of the Chinese economy was a repeated theme in the economics profession. Myrdal did not review China's situation in his *Asian Drama*; if he did, he would most likely have been pessimistic. In fact,

¹⁵ In his final years, Deng's only formal title was as honorary chairman of China's Bridge Society. He was, however, the de facto supreme leader until his death. Similarly, Mao Zedong was regarded as the ultimate leader by members of the Chinese Communist Party for more than 10 years before he was elected chairman in the party congress in 1945, due to his extraordinary wisdom and strategy in the revolution against the Nationalist Party and the fight against Japanese invasion.

¹⁶ In China, a leader's prestige is accumulated through the merits of his/her contributions to the people and the nation during his/her career, and people's trust of his/her wisdom to provide good guidance for the nation's future. If a political leader openly admits that he/she made a mistake in a major policy in the past, his/her prestige and authority will be damaged. This was the main reason Chairman Mao stepped aside from the central stage of power in 1962 after admitting his mistakes in the Great Leap Forward, and was the motivation for him to launch the Cultural Revolution to regain power.

following the Second World War the economic profession's view of East Asia's future was gloomy. The irony is that China, East Asian economies, and Mauritius were all considered as basket cases by the economics profession, but beat the odds to be the most successful newly industrialized economies. Moreover, the developing countries that followed the development approach based on the prevailing theories advocated by the economics profession all performed poorly. The dominant development thinking was structuralism when development economics became a sub-discipline of modern economics following the Second World War. The import-substitution strategy, advocated by structuralism, was adopted widely in Latin America, Africa, and South Asia in the 1950s and 1960s. The economies of these countries performed poorly. Their income gap with advanced countries widened instead of narrowed. After the 1970s, neoliberalism replaced structuralism as the dominant thinking in the economics profession. The transition approach based on neoliberalism was the Washington Consensus, which advocated the use of shock therapy to establish a well-functioning market economy by simultaneous implementation of marketization, privatization, and stabilization. Eastern European and former Soviet Union countries, as well as many developing countries in the 1980s and 1990s, followed this approach, resulted in 'lost decades' of lower average growth rates and higher frequencies of crises than before the transition. On the contrary, the strategies of the few economies that performed well in development—for example, the East Asian economies' export-oriented strategy in the 1950s and 1960s, and China's gradual, piecemeal dual-track approach—were considered the wrong approaches by the mainstream economics profession.

Why was the economic profession's perception of developing countries in general pessimistic? Why did the developing countries in general fail by following the guidance of mainstream theories to formulate their development and transition policies, and why were the few successful economies' development and transition policies in general considered wrong? The reasons are likely because the economics profession always uses high-income countries as the reference to see what developing countries do not have and cannot do well. Developing countries do not have advanced industries and their market institutions do not perform well compared to advanced countries. Based on the above observations, the mainstream theories in their policy recommendations advise developing countries to own what advanced countries have and to do what advanced countries are doing. The intentions are good but the results are disappointing.

Using high-income countries, especially an ideal high-income country, as a reference, a developing country must be inefficient and beset with traditional, low-productivity industries and backward or distorted institutions. However, these seemingly inefficient industries and institutions are either endogenous to its stage of development—for example, traditional agriculture and the related agrarian institutions—or the legacy of previous policy interventions, such as inefficient state-owned enterprises and related government interventions. Without understanding the roots of the endogeneity in industries and institutions and appropriate theories to guide the change of endogenous phenomena, economists often become pessimistic about developing countries. Myrdal's outlook about the Asian countries is an example. The repeated predictions by the economics profession about the coming collapse of the Chinese economy over the past 40 years is another example. Pessimism arises because the structural backwardness and distortions not only cause the market to be inefficient and the government to be ineffective, especially compared to the ideal case, but they are also rigid and hard to eliminate.

The mainstream theories fail to guide successful development and transition because in general those theories neglect the endogeneity of backwardness and distortions in developing and transition countries. To have successful development and transition in developing countries, it is essential for the economics profession to change the reference from developed countries to developing countries themselves. From the experiences of the Chinese and East Asian economies in the last half-century, successful development in a country should start with what a country has

and what the country can do well. What a country has refers to the country's endowments, such as an abundant labour force, at a given time, and what the country can do well based on its comparative advantage and endowments. The state's development and transition policy is to mobilize the limited resources under the state's command proactively and pragmatically for the purpose of removing bottlenecks in hard and soft infrastructure to facilitate the country's comparative advantage to become the country's competitive advantage in domestic and international markets. This is exactly what the new structural economics, which I advocate as the third edition of development economics, intends to achieve (Lin 2011; 2012b; 2012c; Lin and Monga 2017). If the state in a developing country can play such a facilitative role in its catch-up and/or transition process, the country can be competitive and grow dynamically even though it is beset by a backward or distorted structure, and can change from a low-income country to an industrialized high-income country within one or two generations. As Keynes (1935) said, 'it is ideas, not vested interests, which are dangerous for good or evil'. The Chinese experiences in the past half-century suggest, as long as the ideas for development and transition are right, every developing country can be optimistic about its future.

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