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The Chinese model of development: A special East-Asian path of development for avoiding the middle-income trap?

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Abstract

Over the past couple of years, China has made formidable efforts to shift to new sources of economic growth, modernise the structure of its economy, accumulate human capital, and boost local innovation in order to graduate to a high-income economy. However, the pace of growth has slowed down in the past few years, entailing the risk of the country being stuck in a so-called middle-income trap (MIT). This paper reviews China's chance of avoiding the MIT by analysing four groups of factors – three quantitative and one qualitative – and using Japanese and South Korean development as reference points. The paper concludes that China is likely to be able to avoid the MIT and is expected to move into the high-income (HI) band within 7–8 years thanks to its achievements and structural reforms that have already begun. However, the paper also raises the question whether China will be able to avoid the 'post-trap' situation – the high-income trap – that has already trapped Japan and South Korea in the HI band.

Keywords: middle-income trap; Varieties of Capitalism; development; China; 'third way'; Chinese model

1 Introduction

Japan in the 1950s and many other developing countries in Asia and Latin America in the 1960s, 1970s, and 1980s produced spectacular and rapid economic growth and development, partly through government-led measures to promote exports and to protect certain industries. A few decades later, China took similar steps to develop its own economy. However, some of the growth of the above-mentioned Asian or Latin American economies sooner or later slowed down, then stagnated. The official name of this phenomenon – the middle-income trap (MIT) – was coined in the twenty-first century (Gill & Kharas, 2007; Kharas & Kohli, 2011). While MIT as an analytical framework is the subject of intense scholarly debate, avoiding the MIT has become part of official Chinese political discourse, and the question whether this is avoidable under the current state-led model is at the heart of analysts' concerns (see for instance Lin & Zhang, 2015, or the 13th Five-Year Plan [2016–2020]).

However, to date China is far from having reached a status of economic stagnation, although economic growth has undoubtedly slowed down, triggered by several factors, including the COVID-19 pandemic. Now the question is whether China – as a result of its domestic problems such as an aging society, regional inequality, public debt, and the current pandemic – will suffer the same fate as Brazil, Mexico, Indonesia, Thailand and Malaysia, and will not be able to cope with structural problems and maintain productivity growth.

The main question explored in this article is whether China will be able to avoid the MIT. The analysis is based on both quantitative and qualitative factors and uses Japanese and South Korean development as a reference point. Drawing on a systematic review of the literature, the author maps existing easy-to-measure indicators that quantify China's progress in shifting to a new development trajectory, as well as some hard-to-quantify factors that can only be circumscribed using general and qualitative terms. The purpose of this paper is to contribute to the burgeoning literature and analyse the chances of Chinese development leading to a high-income economy. The paper also raises the question whether China will be able to avoid the 'post-trap' situation – the high-income trap – that has already trapped Japan and South Korea in the high-income (HI) band: this involves slowing growth, an aging society, increasing inequality, a decline in innovation potential, polarized society, and political tension.

The article is structured as follows. The next section outlines the theoretical background, with particular reference to the MIT and the Varieties-of-Capitalism (VoC) literature. This is followed by a brief description of the methodology. Drawing on the framework presented in the theory and methodology sections, the next section presents the four groups of factors of Chinese development. The main arguments are then brought together in the discussion section, and this is followed by a short conclusion and description of implications.

2 Theoretical background

In this section, the author outlines the theoretical background, with particular reference to two theoretical frameworks, the middle-income trap phenomenon, and the Varieties of Capitalism (VoC) concept.

2.1 Framing the middle-income trap concept in East Asia

The term 'middle-income trap' was first mentioned by Gill & Kharas (2007) to refer to the examples of Latin America and the Middle East in connection with the economic renaissance of East Asian countries. In line with later authors (Yusuf & Nabeshima, 2009; Ohno, 2010), the former pointed out that maintaining growth in middle-income countries can pose serious challenges that can only be overcome with appropriate economic and institutional reform, including innovation, new technologies, and education. Since then, several authors (Eichengreen et al., 2011; 2013; Kharas & Kohli, 2011; Lin, 2011; Felipe et al., 2012; Didier et al., 2016; Jayasooriya, 2017) have attempted to explain why countries are stuck in the MIT. According to the majority of them, the underlying reasons are that countries run out of economic growth factors as determined by Lewis's dual sector model on sectoral change (1954) – that is, cheap labour and the opportunity for technology adoption.

The term 'middle-income country' therefore generally refers to countries that have produced rapid growth over a long period of time and thus have become middle-income countries relatively fast, and within this category they have quickly moved from the lower to the upper level. Nonetheless their further catching-up to the high-income level has not always been successful and a majority of them are stuck at the middle level. Most studies do not provide a precise definition, but rather describe the potential characteristics of MIT. For example, Aiyar et al. (2013) mention five groups of factors as possible attributes of MIT: the quality of institutions; demographic characteristics; infrastructure; the macroeconomic environment and policies; and the structure of the economy. Felipe et al. (2012) also highlight the role of trade, including diversified and qualitatively sophisticated exports, as well as the role of structural transformation. In addition to demographic and macroeconomic variables, other authors (e.g. Eichengreen et al., 2013; Jayasooriya, 2017; Glave & Wagner, 2017) also mention the role of human capital and education, as well as the role of innovation and new technologies.

The author took the World Bank classification thresholds[1] as a basis for this study, assuming that China is in the upper-middle income (UMI) band, but is gradually approaching the high-income (HI) category (see Figure 1).

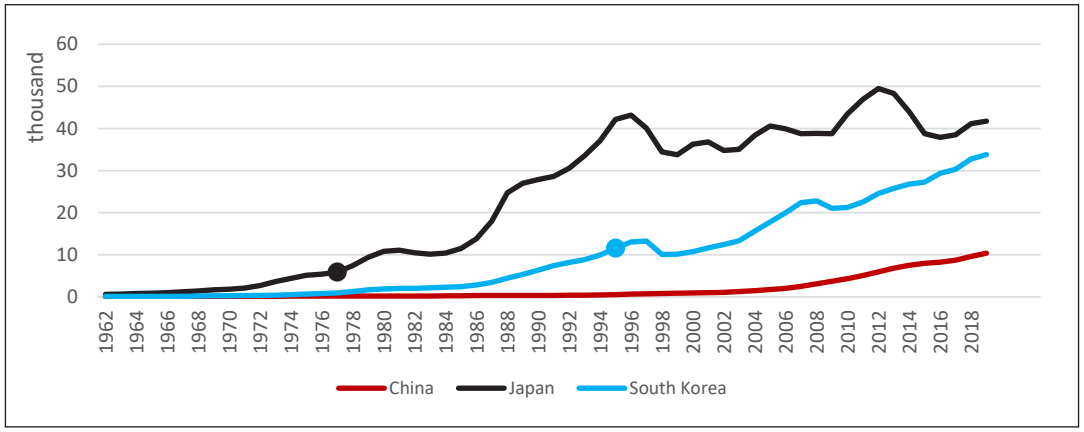

Figure 1 GNI per capita in Japan, South Korea, and China, 1960–2019 (thousand dollars)

Source: World Bank
Note: points indicate the year of entering the high-income band.

Asian Development Bank economists (Felipe et al., 2012) examined the growth of 124 countries based on the Maddison (2010) database, supplemented by the World Economic Outlook (WEO) 2011 growth data. According to their findings (see Table 1), when focusing on East

[1] According to the classification of the World Bank, we can differentiate between low income (LI), middle-income – including lower-middle income (LMI) and upper-middle income (UMI) categories – and high-income (HI) countries. Based on the current thresholds, a country is in the low-income category if its Gross National Income (GNI) per capita is below $1,036; countries in the middle-income group are those where GNI per capita is between $1,036 and $12,535 (in the LMI category if GNI is between $1,036 and $4,045 and in UMI category if GNI per capita is between $4,045 and $12,235); while all countries with a GNI per capita of above $12,535 are considered high-income countries.

Asian cases (although in different periods), South Korea was able to climb up from the LMI to the UMI category within 19 years, while for China this process took 17 years. Japan, on the other hand, spent 35 years in the lower-middle income band. China has been in the UMI band since 2009. Accordingly, one of the next challenges the Chinese government is facing is managing the transition to the HI category, a challenge that has been identified in various statements by Chinese leaders in recent years. According to Lin (2021), by 2025 China will likely cross the threshold and enter the high-income economy band.

Table 1 Japan, South Korea, and China: entry into different income categories

	Year of entering LMI band	Year of entering UMI band	Year of entering HI band
Japan	1933	1968	1977
South Korea	1969	1988	1995
China	1992	2009	(?)

Source: World Bank and Felipe et al. (2012)

2.2 An East Asian variety of capitalism?

The VoC approach tries to understand the systemic variation in developed capitalist economies' politico-economic institutions (Amable, 2000). As opposed to the Washington consensus and traditional neoclassical approaches that assume convergence among economies, it emphasizes the existence of different capitalist trajectories (Hall & Soskice, 2001) and distinguishes two main types of national political economies: Liberal Market Economies (LME) and Coordinated Market Economies (CME). The literature, however, does not provide conclusive evidence concerning the applicability of the VoC approach to Asian economies, while a few authors try to position these economies in – or in between – the aforementioned types of capitalism. Witt and Redding (2013) claim that only Japanese capitalism can be integrated into the VoC approach, while the economies of other countries are fundamentally distinct to Western types of capitalism. They underlined the large diversity of Asian economies according to various factors related to VoC. As far as the analysed countries are concerned, China belongs to the (post-)socialist category, Korea is an advanced Northeast Asian economy, while Japan forms a group in itself. Other authors highlight further factors that influence Asian capitalism: for example, Andriesse et al. (2011) propose a link between regional VoCs and global value chains in Asia, while there are papers which locate one (Korea: Condé & Delgado, 2009; China: Witt, 2010) or more (Hoen, 2013) Asian economies on the spectrum of either the LME–DME line, in an extended VoC model, or analyse them according to the areas defined in the VoC approach.

Regardless of their fit (or lack thereof) with pre-existing VoC types, the East Asian development that unfolded from the 1960s onwards, including the Japanese, Taiwanese, and Korean economic miracle, opened a new chapter for economic theories: the concept of the developmental state was born, and the concept of various ways of 'catching up', wherein

state intervention and support play an important role, became gradually accepted (see Johnson, 1982; Amsden, 1989; Wade, 1990; Birdsall et al., 1993). After the Asian financial crisis in 1998, the popularity of the developmental state model began to decline (Ricz, 2019), but the subsequent analyses often highlighted the importance of the economic engagement of the state in East Asian economies.

East Asian countries indeed share several similarities in their development. Significant investment in human resource development, as well as the ability to absorb new technologies, are just a few of these common features. Although a high population density and scarcity of natural resources are thought to be a disadvantage rather than an economic advantage, during the twentieth century these factors have conditioned these countries to act and develop, preventing complacency or the postponement of the decisions necessary for development. Furthermore, East Asian countries share additional, non-economic commonalities, including ethnic and linguistic homogeneity, being relatively compact – i.e., undivided – geographical units, having a manageable population size, and Confucian traditions

3 Methodology

A number of characteristics have been mentioned above that can play a significant role in avoiding MIT through strong potential or effective economic policies. The majority of these indicators need to be considered when answering the question whether China will be able to avoid the MIT and shift to a new development trajectory. Drawing on a systematic review of the literature – considering the relevant MIT and VoC literature, the author's knowledge of the East Asian region, as well as the main features of Chinese, Japanese, and Korean development – the author maps pre-existing indicators that both quantify and qualify China's progress in this endeavour, drawing parallels with previous successful examples of the development of Japan and South Korea. For the latter purpose, current Chinese data is compared with data from Japan and South Korea in 1977 and 1995, respectively, given that the two countries became HI countries in these years. In addition to the reference years, we also compared Chinese data with the latest Japanese and Korean numbers to obtain a more nuanced picture of the magnitude of China's backlog. We used datasets from international organizations such as the World Bank and OECD, as well as national statistics.

Regarding the methodological steps, first, the author created three quantitative groups of factors to be analysed through the lens of the MIT framework. These are (1) the characteristics of structural transformation; (2) demographics; and (3) the role of education and innovation. Irrespective of China's current growth deceleration, these quantitative indicators suggest the highly effective implementation of a seemingly over-ambitious roadmap of catch-up and achievement of high-income status. The author found, however, that besides these easy-to-measure indicators that are used in international comparisons, some hard-to-quantify factors that can only be circumscribed in general and qualitative terms also need to be considered. Therefore, the author decided to pick a fourth – qualitative – factor: (4) the role of the state; that is, the analysis of institutional and political aspects using the Varieties of Capitalism (VoC) approach (see Table 2).

Table 2 Quantitative and qualitative approaches in the analysis

quantitative		**qualitative**	
framework: middle-income trap (MIT) literature		framework: Varieties of Capitalism (VoC) literature	
1) Specificities of structural transformation	• structure of economy • share of trade, consumption and investment • savings, public debt and capital inflows	4) Role of the state: the analysis of institutional and political aspects	• political system • role of direct state intervention in the economy (state ownership and informal control) • various mechanisms of economic coordination (market, bureaucratic, ethical)
2) Demographic characteristics	• population growth • aging • activity rate		
3) Factors of education and innovation	• PISA results, secondary and higher education indicators • R&D expenditure, TFP, high-tech export, patents		

4 Chinese development factors in the light of Japanese and Korean examples

Drawing on the framework detailed above, this section reviews each of the four groups of characteristics in four subchapters, presenting the current situation in China, and drawing parallels with Japanese and Korean development or highlighting the absence of related factors.

4.1 The characteristics of structural transformation: the structure of the economy and the drivers of productivity

According to the structuralist school of development economics – Lewis (1955), Kuznets (1966), Kaldor (1967), and Chenery and Taylor (1968) – economic growth represents the process of the structural transformation of production. This includes the transfer of resources – labour and capital – from lower to higher productivity sectors, typically from agriculture to industry and services. Considering the above, in its own specific way all the three examined East Asian economies are in an advanced stage of development, as the predominance of the secondary and tertiary sectors shows (see Figure 2). Comparing the current Chinese data with those years that Japan and Korea became HI countries – 1977 and 1995 –, the primary, secondary, and tertiary sector to GDP ratios are at comparable levels. In the context of structural transformation, it should be noted that according to the International Labour Organization the share of people employed in agriculture is still significant in China, at least 27 per cent of total labour force (compared to 3.7 and 5 per cent in Japan and Korea, respectively) – i.e., the surplus of labour from the agricultural sector has not moved to the industrial sector (as predicted by the Lewis model).

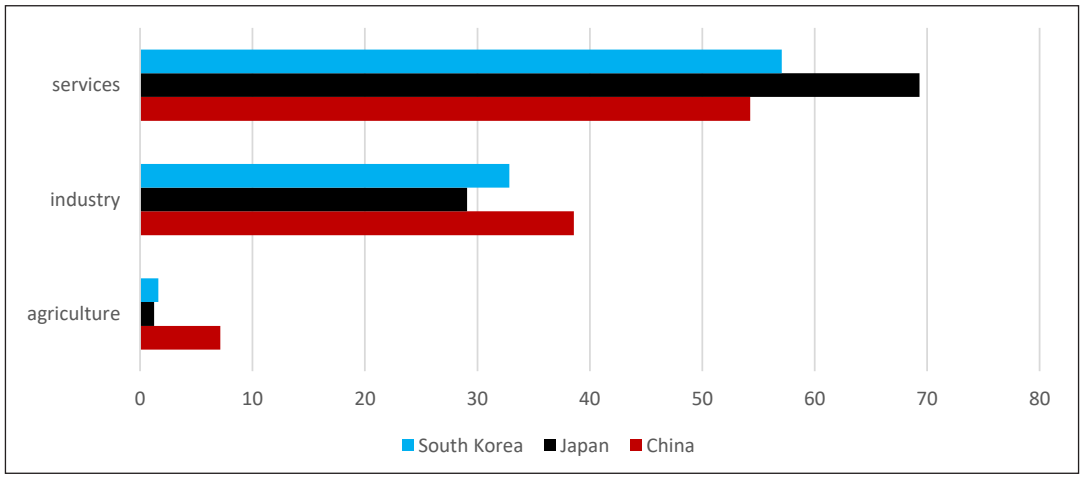

Figure 2 Sectoral contribution to GDP in Japan, South Korea, and China, 2019 (per cent)

Source: World Bank

For Japan and South Korea, when entering the HI band the productivity growth required for continued economic growth was primarily driven by innovation and new technologies, while structural transformation had already occurred. The Chinese economic miracle was, however, driven mainly by structural transformation – the redistribution of the above-mentioned production factors and investments; i.e., the transfer of labour from low-productivity to high-productivity sectors, or from state-owned to privately-owned companies. Similarly, the Chinese leadership is addressing the current economic challenges through structural transformation, and transforming the economy from an export- and investment-driven one to a domestic consumption-driven economy that is based more on the tertiary rather than the secondary sector (see, for instance, the 13th Five-Year Plan [2016–2020]).

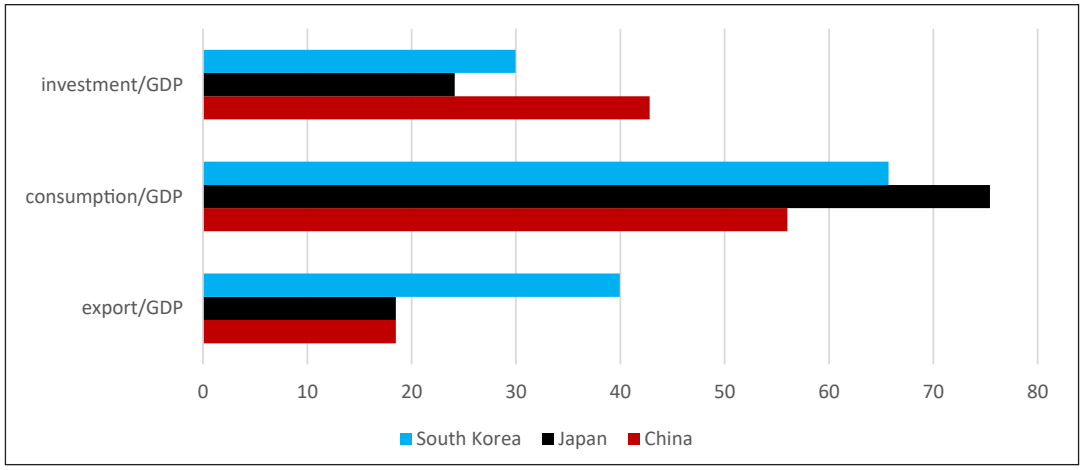

Figure 3 Savings, investment, consumption and exports as a percentage of GDP in Japan, South Korea, and China, 2019

Source: World Bank

Consumption-to-GDP ratios stabilized at around 50 percent in Japan and Korea several years before reaching the HI level, while the ratio of investment-to-GDP steadily declined in the years prior to reaching the threshold. For China, there has been some decline in the investment-to-GDP ratio since 2014, but is still at a much higher level than in the other two East Asian countries currently, and even higher than in those countries in 1977 and 1995 (31 and 37 per cent, respectively) when they entered the HI band. In the case of the export-to-GDP indicator, it should be noted that – in terms of trade-to-GDP ratios – Japan was a much less open economy in 1977 than Korea in 1995 and in both countries exports started to increase significantly after they entered the HI band. In the case of China, however, this ratio has been decreasing since 2006, with the exception of some minor rebounds. As far as gross savings are concerned, China is well ahead of the other two, even it used some of its reserves following the 2008 economic crisis to avoid a more severe economic slowdown.

According to Felipe et al. (2012), the more diversified a country's exports and the more capable it is of producing and exporting sophisticated products, the more likely it is that the country will be able to develop, compared to those countries that are successful in a single sector. A positive example is Korea, which became a successful exporter in several sectors, unlike, for example, the Philippines or Malaysia, which have only been successful in certain segments of electronics. Therefore, with regard to commercial structure, there are many parallels in terms of composition and proportions in Japan and Korea: computing and ICT devices, machines, and various transport equipment account for more than half of exports, but chemicals, metals, and precision equipment also represent a significant share. There are a number of similarities with China, although China remains competitive with many low-cost, labour-intensive products, too, resulting in a significant share of such products in Chinese exports. Consequently, although China's largest export products are electrical machinery and equipment, metals, furniture, and textile products continue to play a major role.

The biggest challenge for China in terms of further development is perhaps the large amount of investment in the internal market, which – unlike in the Japanese and Korean case – does not necessarily stimulate efficiency and competitiveness, but serves political – state, corporate or party policy – goals (Szalavetz, 2010), such as the preservation of the stability of the state and the Communist Party. Consequently, support for state-owned enterprises has, in many cases, ignored real economic performance.

4.2 Demographic characteristics

In East Asia, the engine of rapid growth was always fuelled by the young and increasing labour force, therefore the age distribution of the population is a factor that indeed determines development (see Bloom et al., 1999; Mason, 2001; Aiyar et al., 2013). An aging society is challenge common to all three countries, despite the fact that their roots are different: while it was the natural consequence of development in Japan and Korea, it has been artificially triggered in China with the 'one child policy'. However, the author assumes that even without the one child policy China would probably have reached the current population level and age distribution somewhat later.

For Japan and South Korea, when entering the HI band, the annual growth rate of the population was around 1 percent, and this then declined further (see Figure 4). In Japan, the rate is already negative, while in Korea and China it is expected to peak in around 2030. However, there has been a slight positive shift in China, thanks to the government's new policy of 'one family, two children'.

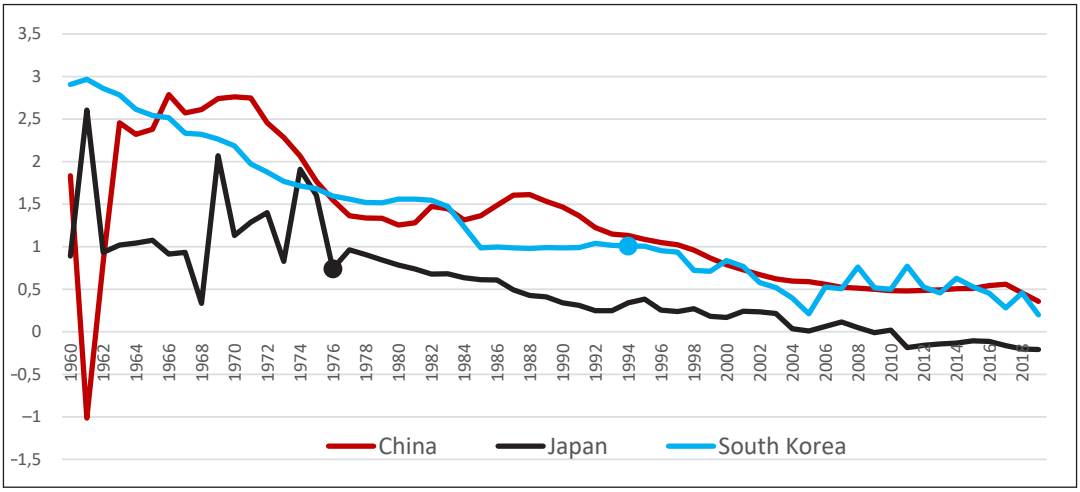

Figure 4 Annual population growth rate in Japan, South Korea, and China, 1961–2019 (per cent)

Source: World Bank

Note: points indicate the year of entry into the high-income band

In addition to the differences in the major triggers of aging, the degree of aging also differs between China and the two HI East Asian economies. In China, only after 2050 will a quarter of society be made up of people over the age of 65, while in Japan this is already a sad reality, and Korea will soon face similar problems, as indicated in the most recent census. If we compare the three countries according to current data, the age dependency ratio is the most favourable in China while the worst in Japan. As Figure 5 shows, the aging of the population is relatively slower in China, but its rate is already worse than in the other two countries at similar stages of development, i.e., in 1977 and 1995. The situation is similar for children (0–14 years), only the trend is declining – i.e., there are fewer young people for every 100 elderly citizens: 24.5 in China, 21.3 in Korea, and only 18 in Japan. However, for Japan and Korea, this indicator was well over 30 when they entered the HI category.

As a result of the growing number of elderly people and decreasing number of young people in the population, the active working-age population (15–64-year-olds) is also decreasing in all three countries. In China, this group has been declining since 2010 and currently accounts for 72.2 per cent of the total population. According to IMF estimates, over the next three decades the size of the working age population in East Asia may fall by hundreds of millions. For China, this means approximately 170 million fewer workers (Amaglobeli & Shi, 2016), which is likely to influence the rate of productivity growth.

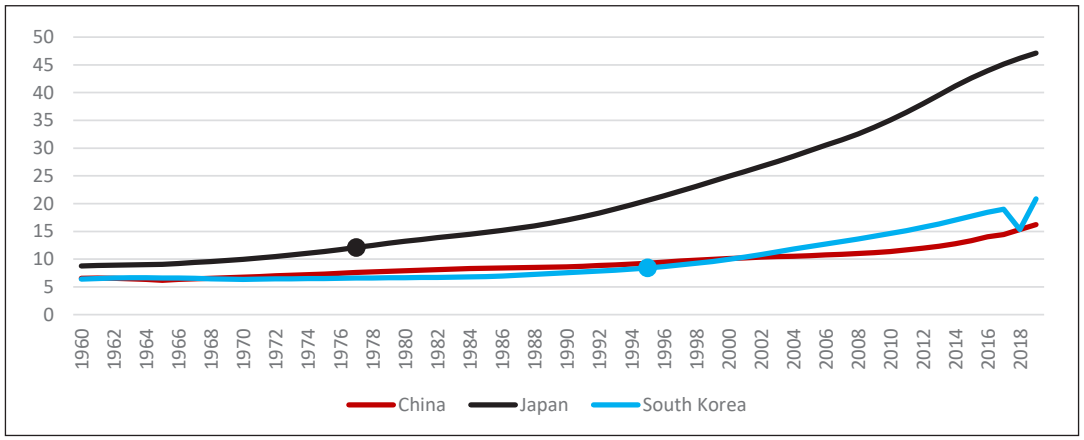

Figure 5 Age dependency ratio (old) in Japan, South Korea, and China, 1960–2016 (per cent)

Source: World Bank

Note: points indicate the year of entry into the high-income band

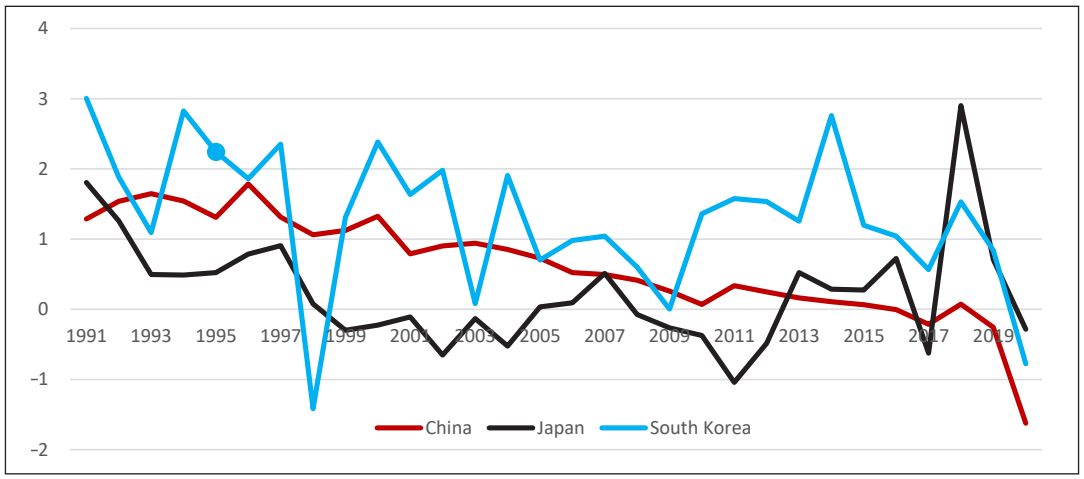

Figure 6 Labour growth rate in Japan, South Korea, and China, 1991–2020 (per cent)

Source: World Bank

Note: points indicate the year of entry into the high-income band

Regarding the decline in labour market participation in China, it should be noted that this is not only the result of population decline, but may also be influenced, for example, by the rapid expansion of higher education in the 1990s, the previous withdrawal of women from the labour market, as well as a general decline in labour market participation with all age groups. For example, with the expansion of higher education, young adults will enter the labour market later, but with better qualifications and, as a result, will contribute to future productivity growth. Furthermore, this process can also increase the mobility of the workforce, which also implies the possibility of increasing economic efficiency. In the case of

China, the labour market inactivity of some active-age people, for example women, is clearly the result of the development of the last ten to fifteen years, which has enabled Chinese families to reach a certain level of prosperity. In this regard, China has also been following in the footsteps of Japan and Korea.

The Chinese labour force will indeed continue to decline in the long term, but at the same time its productivity is growing at a rapid pace, as the accumulation of human capital in China is close to that of the developed economies, not to mention the positive effects of robotization, which is also spreading China-wide.

4.3 The role of education and innovation

Eichengreen et al. (2014) have shown that slower growth is less common in countries where most of the population has at least a secondary education. They also emphasize the role of 'high-quality human capital' (as opposed to 'poor quality'), which is indispensable for high value-added activities and for the successful management of structural transformation (see also Tho, 2013, p. 110). Likewise, Flaaen et al. (2013) as well as Jimenez et al. (2012) found a correlation between avoiding the MIT and the spread of secondary education and, as a consequence, a stronger middle class.

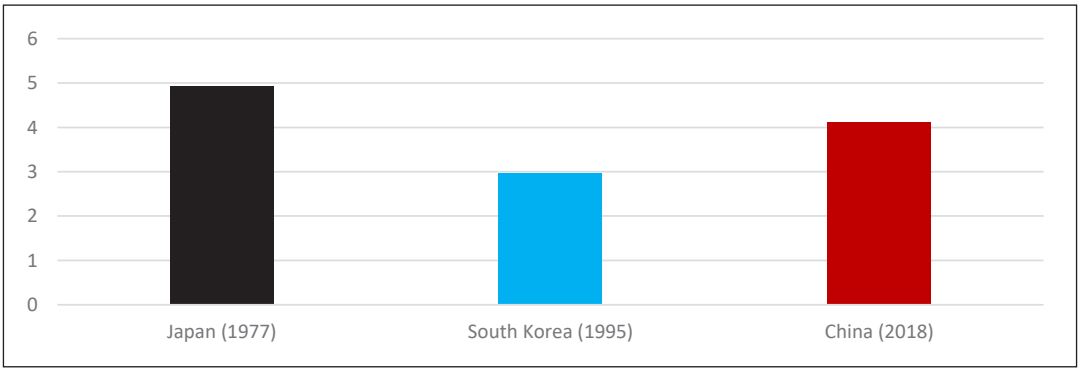

Figure 7 Japanese, South Korean, and Chinese spending on education as a percentage of GDP

Source: World Bank (for Japan and South Korea), National Bureau of Statistics and OECD (China)

With regard to government spending on education (see Figure 7), China has made significant progress since the beginning of the twenty-first century: while in 1999 less than 2 percent of GDP was spent on education, in 2016 the figure was already 5 percent. If we compare this with respective data for Japan and Korea when entering the HI category, we can conclude that China is not lagging behind at all. Regarding participation in education (see Table 3), enrolment rates are traditionally high in East Asia, typically above the OECD average. China's figures for 2010 are close to those of the previous Japanese and Korean reference levels, but below them, while 2015 OECD data for China show more development. However, in terms of the level of education, catching up by 2010 was not so obvious in terms of secondary and tertiary education (see Table 4).

Table 3 Enrolment rates in Japan, South Korea (percentage of total population)

	Year	Primary education	Secondary education	Higher education
Japan	1975*	99	90.47	24.60
South Korea	1995	95	96.00	52.00
China	2010	100	83.00	23.00
China (OECD)	2015	100	94.29	43.39

Source: Barro-Lee Educational Attainment Dataset and OECD

* Data for 1977 was not available

Table 4 Level of education in Japan, South Korea, and China Education Ratio (per cent)

	Year	Age group		Uneducated	Highest completed level of education					
					Primary school		Secondary school		Higher education	
					total	completed	total	completed	total	completed
					(as a percentage of 15-to-64-year-olds)					
Japan	1975	15	64	0,2	40.9	28.9	46.5	27.3	12.4	6.7
South Korea	1995	15	64	2.7	12.4	11.9	60.7	45.9	24.1	12.9
China	2010	15	64	2.6	20.8	13.1	71.8	24.7	4.8	2.6

Source: Barro-Lee Educational Attainment Dataset and OECD

* Data for 1977 was not available

Although more recent data on Chinese education was not available at the time of writing this paper, based on the author's own experience there has been significant development in China both in the field of secondary and higher education since 2010. According to data from the National Bureau of Statistics, China, eight million students graduated from Chinese universities in 2017, nearly ten times as many as in 1997. Fresh graduates are almost immediately absorbed by the labour market: over 90 per cent of them are employed within six months. Behind this significant increase a combination of several factors can be found: the new requirements of the growing middle class and the demands of economic growth have had the same effect as government policies explicitly aimed at broadening higher education. Nevertheless, the share of graduates in secondary and higher education in China is still lagging behind the reference data for Japan and Korea. One of the potential explanations for this is the relatively large proportion of people – 27 per cent – employed in the primary sector, since there is probably less demand for secondary and tertiary education. In the long term, however, the proportion of people working in the agricultural sector will decrease, while the proportion of graduates in secondary and higher education is expected to increase further.

In order to measure the quality of skills acquired in education, the author used the results of PISA surveys in the three countries. The first such survey was conducted in 2000 and China did not participate that time, but only from 2015. Although it is not possible to compare the current Chinese data with the usual reference data of 1977 and 1995 for Japan and Korea, respectively, it is hard to find any backlog, since China's scores were already above the OECD average (see Table 5) according to 2015 data, and ahead of those of Japan and Korea by 2018. At the same time, it is important to emphasize that PISA results may show a more positive picture of the quality of education than the reality, while the students who are surveyed do not necessarily represent the whole country.[2]

Table 5 Japanese, South Korean, and Chinese PISA results, 2018 (2015)

	Science	**Reading**	**Mathematics**
OECD average	489 (493)	487 (493)	489 (490)
Japan	529 (538)	504 (516)	527 (532)
South Korea	519 (516)	514 (517)	526 (524)
China	590 (518)	555 (494)	591 (531)

Source: OECD

In addition to the PISA results, the quality of the education system can also be measured by the recognition of educational institutions, such as the position of universities in international rankings. Here, too, China performs well: in the 'World University Rankings 2020' – for example, two Japanese universities (University of Tokyo – ranked 36, Kyoto University – 65) and two Korean universities (Seoul National University – 64, Sungkyunkwan University – 89) were listed together with three Chinese universities (Tsinghua University – 23, Peking University – 24, University of Science and Technology of China – 80) in the first 100.

As mentioned earlier, apart from the spread and quality of education, the MIT literature highlights the role of innovation, too. Lin & Zhang (2015:45) emphasize that innovation is a 'key driver of long-run growth, one that is particularly important for middle-income countries'. Zhuang, Vandenberg and Huang (2012) also conclude that, in order to avoid the MIT, continuous industrial development can ensure innovation and the shift from a low-cost to a high-value-added economy. There are dozens of books and studies on the innovation capacity of the East Asian countries and the relationship between innovation and economic growth, therefore the author limits the analysis to those factors that are relevant based on the MIT literature and draws conclusions on the basis of total factor productivity, R&D expenditure, number of patents, and high-tech exports.

Technological development and innovation can be illustrated by total factor productivity (TFP), which measures productivity calculated by dividing total production by the weighted average of inputs, i.e., labour and capital. Eichengreen et al. (2012) explained 85

[2] This is especially the case for China because, with the permission of the OECD, the sample is selected from the most developed and urbanized regions of China (Beijing, Shanghai, Jiangsu and Zhejiang) rather than the whole country.

percent of economic slowdown as due to a decline in the growth rate of TFP, while the decline in labour and capital played a relatively minor role. Bulman et al. (2014) and Jitsuchon (2012) also found that countries that successfully avoided the middle-income trap showed relatively high TFP growth; consequently, TFP-driven growth – rather than input-driven growth – could be one of the cornerstones of economic growth in developing countries (Tho, 2013).

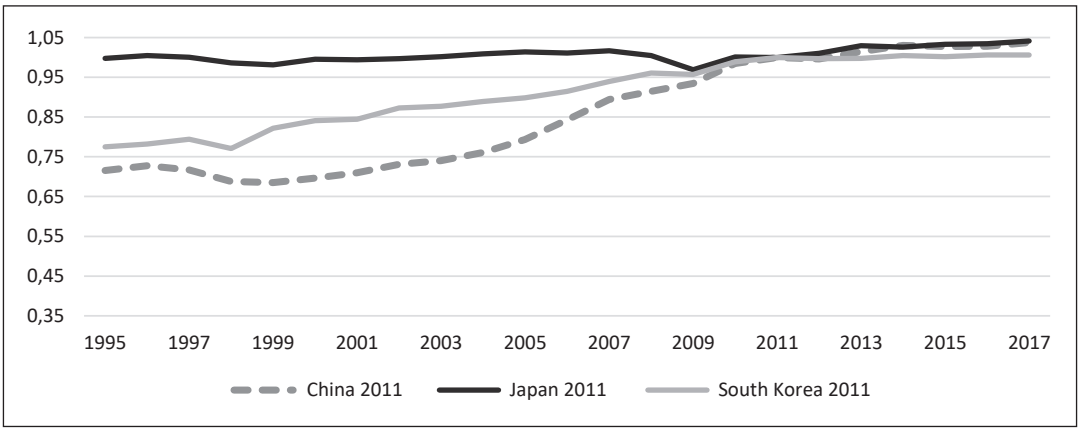

Figure 8: Total factor productivity (TFP) growth at constant prices (2011 = 1) in Japan, South Korea, and China, 1995–2017

Source: University of Groningen, Penn World Table (Feenstra et al. 2015)

The TFP data calculated – and collected up to 2017 – by the University of Groningen support the above-described conclusions, as Chinese TFP has indeed been growing steadily in recent decades (see Figure 8).[3] Chinese TFP growth exceeded that of its competitors until 2010, when the pace of TFP growth started to slow down sharply in all countries. However, as far as the level of TFP is concerned, Figure 5 shows that, despite this relatively rapid growth, catching up has not started yet: China still lags far behind both its US and East Asian competitors, although the latter – i.e., Japan and South Korea – have not caught up either.

R&D expenditure, which has a strong effect on TFP growth, is also a significant element based on the literature that maps the results of economic development: this expenditure is mentioned in connection with and independently of TFP. Figure 9, using data from the World Bank, shows Chinese R&D expenditure as a percentage of GDP: the progress over the past two decades is striking. Although China's performance is still lagging behind, for example, Japan and South Korea, where R&D spending is traditionally high, China's R&D expenditure as a percentage of GDP is close to the levels of the European Union, Australia, and Singapore.

[3] It should be noted, however, that the TFP database compiled by the University of Groningen is one of the most optimistic databases, especially when it comes to Chinese data, so this result is more of an assumption than a clear conclusion. For instance, according to the OECD (2019), there was a significant decline in TFP starting from 2012.

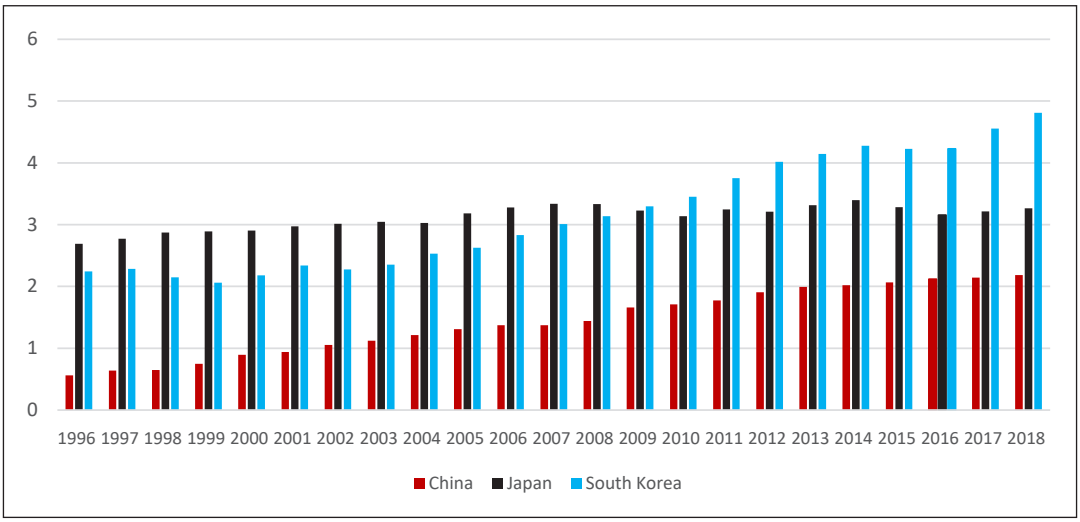

Figure 9 R&D spending as a percentage of GDP in Japan, South Korea, and China, 1996–2018

Source: World Bank

Although differences among government policies and the domestic regulatory environment make it difficult to compare patent applications and cross-country subsidies, it is worth noting that in 2016, according to the World Intellectual Property Organization (WIPO), China's State Intellectual Property Office (SIPO) processed 42.8 per cent of global patent applications. With more than 1.3 million registrations, China processed more than twice as many registrations as the United States, four times as many as Japan, and six times as many as South Korea.

Finally, it is also worth examining the development of China's high-tech exports (Figure 10). According to Felipe et al. (2012), the more diversified a country's exports and the more capable it is of producing and exporting sophisticated products, the more likely it is that the country will be able to develop, compared to those countries that are successful in a single sector. A positive example is Korea, which became a successful exporter in several sectors, unlike, for example, the Philippines or Malaysia, which have only been successful in certain segments of electronics. Eichengreen et al. (2013) concluded that the chance of a growth slowdown is lower among countries that produce high-tech products, while Felipe et al. (2012) also found that countries that managed to avoid the middle-income trap are characterised by a relatively more diversified and sophisticated export basket.

As far as the share of sophisticated products is concerned, according to the latest available Chinese data, nearly 24 percent of manufacturing exports are exports of high-tech products. This proportion is well above the world average (16 per cent) and also exceeds that of developed countries (in the case of the USA, the EU, and Japan, it is around 13–14 per cent).

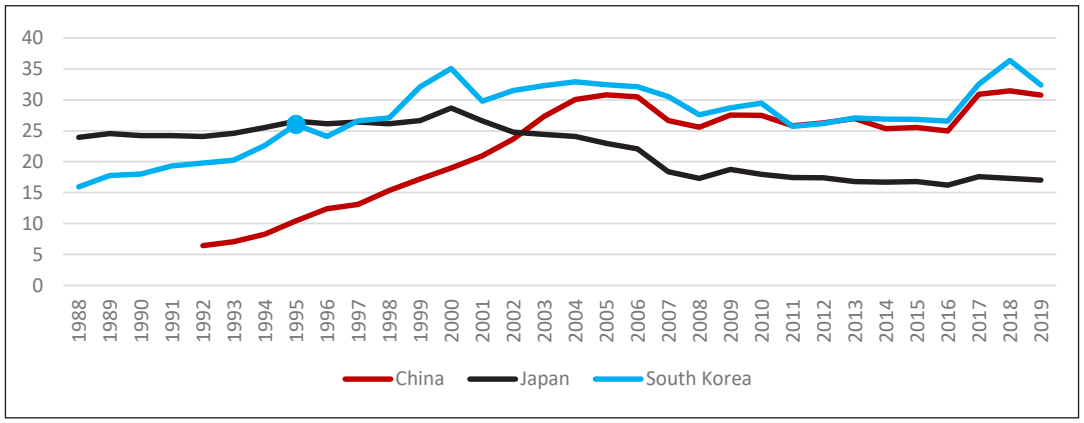

Figure 10 Japanese, South Korean, and Chinese high-tech exports as a proportion of manufacturing exports (per cent), 1988–2016

Source: World Bank, own calculations

Note: points indicate the year of entering the HI band

4.4 Role of the Chinese state: An analysis of institutional and political aspects

As mentioned in the theory section of this paper, most states in Asia may be defined as developmental states or predatory states (Johnson, 1982; Evans, 1995), with some of them representing hybrid cases. According to Witt & Redding (2013), China, for example, combines predatory elements, in which top leaders and their families use the state to enrich themselves. Based on this study, only Japanese capitalism can be integrated into the VoC approach, forming a group in itself, while China belongs to the (post-)socialist category and Korea is a so-called advanced Northeast Asian economy.

In this section, the author briefly analyses whether the Chinese political model is a fixed and static system or a flexible and dynamic one – a hybrid solution with its own values – that reflects its ability to address the challenges associated with the transition to high-income status. To answer this, the three main elements of the system paradigm (Kornai, 2000) should be examined; that is (1) the political system, (2) the role of direct state interventions in the economy, and (3) various mechanisms of economic coordination. Nölke et al.'s (2015) state-permeated market economy model uses five elements to analyse the impact of the state: labour relations, education, and the transfer of innovations have already been analysed in previous chapters, while we briefly analyse corporate governance and finance here.

Regarding the political system, there is a broad debate about China's politico-governmental form, with contributions from around the world. When summarizing the opinions about this, different approaches are identifiable. According to one of them, China has for a long time possessed the main characteristics of a capitalist system, although the size of the state-owned sector remains huge, while in its politico-governmental form it is clearly a dictatorship in all respects (Kornai, 2016). China has an authoritarian regime that scores

14 according to Freedom House's Freedom in the World ranking[4] (its East Asian neighbours, Japan and South Korea score 96 and 84, respectively). Kornai (2016) emphasizes that capitalism is a necessary but not sufficient condition for democracy, but he also adds that there is no clear sign that China is displaying more democratic tendencies, although the transition from socialism to capitalism began decades ago.

A different view is that China began a transition from socialism to capitalism and from dictatorship to democracy long ago, but it did so very slowly and cautiously. Therefore, this process will take a long time, but the final form will be more capitalist than socialist. This interpretation does not exclude the possibility of a slow transition towards less repressive politico-governmental forms. Indeed, the most optimistic expectation is that the transition ends in democracy, or as the author of this paper calls it, *'sinocracy'* – that is, democracy with Chinese characteristics. The Chinese themselves – together with other scholars – consider the Chinese system to be a unique formation that is semi-socialist and semi-capitalist at the same time. According to Kolodko (2018, pp. 21–22) the 'capitalism versus socialism' distinction is becoming more and more deceptive, as it is not the various '-isms' that provide the key to understanding the heart of the matter, but the '…with Chinese characteristics' element. Naughton (2017, p. 21) also adds that China can be viewed as moving towards a 'very particular flavour of socialism that is authoritarian and top-down, but with a market economy based primarily on private ownership'. This formation indeed differs from autocracy or dictatorship – therefore, China can be considered the main manifestation of a *'third way'*. The Chinese *'zhongti xiyong'* principle – that is, the idea that the traditional Chinese elements are the base; the practical solutions can be taken from the West – also supports this idea, but a famous pronouncement of Deng Xiaoping's can also be referred to: 'It doesn't matter whether a cat is black or white, as long as it catches mice.'

Concerning the role of direct state intervention in the economy, the concentration of economic power is indeed significant in all of the East Asian countries, but China is paradigmatic in terms of the state control of major corporations. As Székely-Doby (2017) points out, while the economies of East Asia, including Japan and South Korea, have created economies of scale through genuine international competition with their 'national champion' companies, in the case of China – with time-varying intensity – the preservation of the stability of the state and the Communist Party of China appears among the guiding aspects, and as a result the support of state-owned enterprises has, in many cases, ignored real economic performance. Nölke et al. (2015) emphasizes that the case of China is unique since there is neither classical top-down control nor a 'single guiding enterprise' model such as the South Korean Chaebol or Japanese Keiretsu models.

The Chinese model is characterized by multiplexity; i.e., the presence of multiple business systems: besides the often non-competitive and indebted state-owned enterprises (SOEs), there are profit-oriented and competition-driven state-controlled enterprises (such as *China Mobile*) as well as private firms (*Huawei, Lenovo, and Geely*) that have also been able to became successful companies on the Chinese market as well as globally. Moreover, such non-

[4] A country or territory is awarded 0 to 4 points for each of 10 political-rights indicators and 15 civil liberties indicators, which take the form of questions; a score of 0 represents the smallest degree of freedom and 4 the greatest degree of freedom. The aggregate score of a country is between 0 and 100, where 0 is the least free, and 100 is the most free.

state national firms are considered 'national champions' in China (Naughton, 2007; Ten Brink, 2013). Apart from the IT sector, which is deeply integrated into global production networks, most industries in China are dominated by national (state-owned, state-controlled, or Chinese private) capital, not by foreign multinationals. Chinese firms primarily use domestic funds and bank credit for their operations, partly because major banks are also not privately, but state-owned. As a result, global capital markets play a minor role in funding new investments (Nölke et al., 2015).

There are different views about the characteristics of the above-mentioned Chinese state control. One refers to the already-mentioned state-permeated market economy (Nölke et al., 2015), wherein mechanisms of loyalty and trust between members of state-business coalitions are based on informal personal relations. Witt & Redding (2013) consider the Chinese system to be one which combines predatory elements with personal relations. Informal relations – so-called *guangxi,* the network of mutually beneficial relationships which can be used for personal and business purposes – indeed play a unique role in Chinese corporate as well as political relationships.

Regarding mechanisms of economic coordination, the decision-making in most Asian states is usually statist. Statist, however, does not necessarily mean purely top-down decision-making in the case of China, which is characterised by a mixture of top-down statism with a strong bottom-up element. These bottom-up elements are provided by the local variations of central institutions – or even informal institutions – which often supersede formal institutions (Witt & Redding, 2013), making the whole system more flexible. Successful institutional innovations diffuse across different localities and inform national-level institutional change (Xu, 2011).

5 Discussion

When reviewing China's chances of avoiding the MIT, we have shown that the current development – based on the large internal market, accompanied by the development of human capital and business incentives – is indeed suitable for transforming the Chinese modernisation trajectory. However, it is not necessarily accelerating China's economic growth. So far, the Chinese economy's performance indicators are determined by traditional drivers (such as infrastructure investment and new export-oriented production capacities) rather than by new growth drivers. In addition, the shift to more resource-efficient, higher value-added production will result in significant structural losses, which could adversely affect growth rates.

When analysing the first group of factors (structural transformation), the paper has pointed out that while productivity growth was primarily driven by innovation and new technologies in Japan and South Korea, China's economic miracle was mainly driven by structural change: the redistribution of production factors and investment, such as redirecting labour from low- to high-productivity sectors. Based on the data and processes analysed in this section, we can conclude that China is still in the process of structural reform, and this is expected to continue for a long time. By contrast, Japan and Korea were already successfully restructured when they entered the HI band. Consequently, the paper concludes that since the surplus of labour from the agricultural sector has not yet been completely

transferred to the industrial sector, China still has reserves to fuel its structural transformation. However, investment in the internal market can endanger efficiency and competitiveness.

In the case of the second group of factors (demographic characteristics), even if the three countries are at different stages of development, similar trends can be observed, especially when it comes to the ageing of societies. However, the very nature of ageing is different: it was artificially induced in China (the 'one child policy'), while in Japan and South Korea it was a natural consequence of development. The level of ageing is not the same, either: although the Chinese workforce will continue to decline in the long term, this trend might be offset by rapid growth in labour force productivity.

The most prominent as well as promising group of factors are those of education and innovation. China has made formidable efforts in recent years to improve the quality of and access to education, showing that it is definitely on the right track and is likely to be able to provide – and even expand – the human capital needed for further development, while its chances in the field of innovation are exceptionally good, as China is not lagging behind Japan or Korea at all.

When it comes to the fourth group of factors, in terms of political as well as institutional aspects China seems to operating differently from pre-existing models and represents a unique model on its own. This model can be characterized by a sustained – or even never-ending – transition from socialism to capitalism / from dictatorship to democracy. State control over corporations is significant is all areas, but this rather involves a mixture of top-down and bottom-up control, wherein multiplexity, informality, and personal relations also play an important role. Since this system is not borrowed from other nations but a 'specialty' of Chinese development and provides sufficient flexibility in the system, it might be able to provide internal stability in the long term – a vital element in the catching-up process.

6 Conclusions and implications

The study contributes to the theory and literature about the uniqueness of Chinese development by analysing four groups of factors – (1) the characteristics of structural transformation; (2) demographic characteristics; (3) the role of education and innovation; and (4) the role of the state, including the analysis of institutional and political aspects – and uses Japanese and Korean development for comparison. The paper concludes that, overall, and based on the analysed groups of factors, China is likely to be able to avoid the MIT, and is expected to move to the HI band within 10 years, thanks to its achievements and structural reforms that have already begun. The findings enhance the understanding of the Chinese way of development, highlighting both the specificities that differ from other East Asian ways of development, as well as similarities to these.

During the analysis of the above-mentioned groups of factors, relevant observations have been made as regards China's forthcoming challenges that future research should definitely address: namely, whether China will be able to avoid the 'post-trap' situation that trapped Japan and South Korea in the HI band. Stagnation, negative growth, and deflation have affected Japan for a quarter of a century, and are increasingly threatening South Korea, too. This 'high-income trap' (HIT) can be characterized by slowing growth, an aging society,

increasing inequalities, and a decline in innovation potential, and often lead to a polarized society and political tension, all of these being major challenges for governments. The HIT does not really differ from the basic problems of the MIT: growth in advanced (East Asian) countries has run out of steam; their development has stalled while economic and institutional reforms have either proved to be ineffective or have only given temporary momentum to the economy.

For the time being, China is benefiting from these processes: while high-income countries are lagging behind in, for example, innovation, China is constantly moving up global value chains. The Chinese economy has undergone profound changes over recent years, both in terms of objectives and structure. While we do not yet see the results of the structural reforms that have been introduced gradually over the years, their impact will certainly increase the quality of the country's economic development. With the 'new normal' of Chinese growth (6–6.5 per cent), in line with World Bank estimates, China's development will continue to be twice the world average and a multiple of the growth rate expected in developed countries – at least for a while: China, although currently an upper-middle-income country that is just knocking on the high-income door, already shares many of the attributes of countries in the high-income trap, as listed above, and a stagnating/slowing Chinese economy will definitely have a direct impact on both developed and emerging regions.

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