

MIDDLE-INCOME TRAP: REFLECTION ON MALAYSIA'S ECONOMIC DEVELOPMENT AND POLICY IMPLICATIONS

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Abstract

This paper comprehensively reviews the literature on “middle-income trap” and reflects upon the case of Malaysia’s middle-income transition with attention to drawing relevant policy implications. The review looks into the discussions on middle-income trap and its causes from both economic and institutional perspectives. The investigation on Malaysia is conducted through the analysis of structural change and sources of growth in comparison with the performance of the two Asian Tigers, South Korea and Taiwan. Malaysia achieved remarkable growth during its lower-middle-income stage, but was “trapped” in the upper-middle-income years as its growth declined substantially. The slowdown was driven by the significant decline in private investment, resulted mainly from the outflow of capital together with decreasing inward FDI. This was somehow triggered by macro uncertainties from the Asian Financial Crisis leading to pervasive pessimism among investors about the economic prospects, coupled with the long-lasting unfavorable business environment due to discriminatory policies favoring the Malays and the crowding-out of government-linked corporations. Malaysia consistently faced multiple structural issues throughout its middle-income stage, including sluggish total factor productivity growth, relatively modest structural change, slow industrial upgrading and premature deindustrialization, which had root in the slow upgrade of human capital, technological capabilities, indigenous capacity, and the integration with the FDI sector. Low and lower-middle-income nations like those of ASEAN region should pay strategic attention to all these issues from the early years of their economic catch-up endeavors in order to overcome unforeseen shocks and maintain sufficient growth momentum for middle-income transition.

Keywords: middle-income trap; private investment; human capital; technological capabilities; Malaysia



Introduction

Economic development is a transformational process that requires continuously upgrading and shifting the production of goods and services toward higher value-added activities. But many countries have been unable to sustain this process because they failed to cope with the emerging requirements of the higher stages of development. This implies the success of a nation in moving from low to middle income does not guarantee a smooth transition from middle to high income. In fact, most countries in Latin America and the Middle East reached middle-income level during the 1960s and 1970s and have stuck there ever since. According to a study of the World Bank, of 101 economies classified as middle income in 1960, only 13 managed to achieve high income by 2008 (Agénor & Canuto, 2015). Similarly, Spence (2011) observed that since 1975 only a few countries were able to exceed the threshold of \$10,000 (2005 PPP\$) in per capita income, while many remained in the range of \$5,000-\$10,000.

The concern about particular challenges at the middle-income stage was noticed by Garrett (2004), but it was not until the World Bank's 2007 report that the concept of "middle-income trap" was first coined (Gill & Kharas, 2007). MIT countries are those that fail to adapt their growth strategies to the prevailing structural characteristics of their economies as they progress to higher income levels. Two types of common "traps" are usually facing the middle-income nations. On the one hand, many middle-income countries still maintain

their old growth strategy based on labor-intensive, export-led manufacturing despite the comparative disadvantage of rising wages. On the other hand, prematurely leapfrogging into knowledge economies when lacking necessary conditions such as high-quality universities, human resource, venture capital, and robust regulatory environment, would not enable middle-income countries to transition to innovation-driven economies (Gill & Kharas, 2007, 2015).

Malaysia has been frequently regarded as a typical case of MIT. The country was among the economies that made up the so-called "East Asian miracle" in economic development history, implying the superior performance of the eight high-performing Asian economies between 1965 and 1990 (World Bank, 1993).¹ Malaysia was expected to be in the next wave of economies joining the league of emerging high-income nations following the four Asian Tigers. The prediction, however, turned out to be over-optimistic as the following two decades witnessed its significant growth slowdown, hindering the country from becoming an advanced economy.

This paper offers a comprehensive review of literature on middle-income trap and examines the case of Malaysia. The study focuses on investigating Malaysia's economic performance over its middle-income years and the factors that have "trapped" the country in this particular income stage. Insights from the economic growth journey of Malaysia, a relatively successful mid-size economy in Southeast Asia, provide useful policy

¹ These economies include Japan, the "Four Tigers" (Hong Kong, Singapore, South Korea, and Taiwan), and three newly industrialized countries (Indonesia, Malaysia, and Thailand).



implications for developing countries in their efforts to achieve sustained robust economic performance and successfully manage their middle-income transition.

The paper proceeds as follows. Section 2 examines empirical evidence and the causes of MIT. Section 3 investigates the performance of Malaysia's economy with the analysis on the economic factors underlying its middle-income slowdown, followed by in-depth discussion about the causes in Section 4. Section 5 concludes and draws policy implications.

Empirical evidence and causes of middle-income trap

The emergence of the MIT concept has motivated intensive debate without coming to a clear consensus among scholars. The following provides detailed discussion about empirical evidence and the causes of MIT.

Empirical evidence

Studies aiming to identify countries falling into MIT are generally based on two approaches. The absolute approach aims to quantify the income range, growth rate or time span that MIT countries have experienced. In the study of 124 countries over 1950-2010, Felipe (2012) posited that a country needs 28 years with per capita income growth of 4.7% annually to move from lower-middle to upper-middle income and another 14 years with a growth rate of 3.5% to graduate from upper-middle to high income. The study suggested a country as being stuck in MIT when it

could not reach the middle-income level within the respective time span. In an updated study, however, Felipe et al. (2017) rejected the existence of MIT as a generalized phenomenon. Instead, they simply distinguished the economies according to their speed of transition from middle to high income. The study revealed the median time of 45 countries successfully transforming from lower-middle to upper-middle income was 55 years, and the median time of 30 economies transitioning from upper-middle to high income was 15 years. These two thresholds served as the criteria to classify a middle-income economy as slow or fast transition. By defining MIT as growth slowdown, Eichengreen et al. (2012, 2014) investigated the income levels at which the slowdown is more likely to occur for middle-income economies. The 2012 study showed that the slowdown mostly occurred around the income range of \$15,000-\$16,000 in 2005 PPP\$, while the 2014 study revealed another possibility of \$10,000-\$11,000. Aiyar et al. (2018) also examined growth slowdown and found 123 slowdown episodes of 138 countries in 1955-2009 and the higher frequency of slowdown experienced by middle-income nations compared to low- or high-income groups.

Another stream of MIT studies was based on the relative approach by investigating the dynamics of catching up of middle-income countries with advanced economies. With the same approach, Agénor et al. (2012) and World Bank (2013) identified countries stuck in MIT as those that were unable to exceed the range between 5% and 45% of the US per capita income in about 50 years (1960-2008), while Woo (2012) proposed the range of 20%-55%. Similarly, Bulman et



al. (2017) set the middle-income range between 10% and 50% of the US per capita GDP, and posited that a country was stuck in middle-income if it remained in this range during 1960-2009. They found no evidence for unusual stagnation at any particular middle-income level, and argued that the determinants of growth at middle-income level differ from those at low income, and countries stuck in MIT are those that fail to make adjustments to adapt to growth requirements of higher income stage. Similarly, from the group of 127 countries during 1950-2008, Im and Rosenblatt (2015) examined the probability of a country moving into the next income category and revealed that the likelihood of the transition from lower-middle to upper-middle income is similar to that of the transition from upper-middle to high income, and thus failed to support the existence of a particular trap at middle-income stage.

Causes of middle-income trap

Economic perspective

Most of the explanations on the causes of MIT mainly derive from traditional economic models, identifying the factors driving growth such as structural change, investment, human capital, and innovation. The first is the slowdown of structural change, which is associated with the dual-sector model dated back to Lewis (1954). Low-income economies tend to gain substantial growth from structural transformation through reallocating capital and labor from agriculture to more productive activities. This effect, however, weakens considerably when these economies

reach middle-income level (Eichengreen, 2011; Agénor & Canuto, 2015).

The second, which is partly a consequence of the first, is the decline of investment due to deteriorated competitiveness of the economy when it encounters the “Lewis turning point” (LTP) but lacks capabilities to develop higher value-added activities. LTP is an economic situation when unskilled labor released from the agricultural sector is exhausted and wages start to rise rapidly (Gill & Kharas, 2015; Cai, 2012). The labor-intensive industries, therefore, would become less competitive and finally decline. In such a case, the FDI in labor-intensive industries would shift to other countries with lower wage level, and domestic investment in such industries would also shrink. If the economy lacks the conditions such as quality labor or technological capabilities necessary for fostering higher value-added activities, the decline in investment from FDI and domestic investors would eventually lead to growth stagnation.

The third is the failure to resume momentum by shifting to endogenous growth driven mainly by upgraded human capital, technological capabilities, and management capacity. As discussed above, facing the LTP requires restructuring the economy through boosting intra-industry productivity and shifting to higher value-added activities, which in turn requires new skill sets and technological capabilities. Ohno (2009) posited that the MIT countries were usually the ones that failed to upgrade human capital and technological capabilities, and their indigenous sectors were unsuccessful in mastering technology and management capabilities



allowing them to replace foreigners in major activities of production and become exporters of high quality products. In contrast, Eichengreen et al. (2014) found lower frequency of growth slowdown in countries that have relatively large share of population with higher secondary and tertiary education. Bulman et al. (2017) also evidenced that economies escaping the middle income experienced higher total factor productivity (TFP) growth.

Institutional perspective

While economic development literature provides understanding about the proper policies and conditions necessary for overcoming slowdown in middle-income countries, the obvious question would be why many of these economies have been unable to offer such policies and conditions. Wang (2016) argued that the existing stakeholders may not be receptive to policy changes necessary for the new stage of development if their interests are endangered. That is, one needs to look into the political economy of the transition process in the context of middle-income economies, which sheds light on the underlying institutional constraints that may hinder growth.

In general, there has been a consensus that democracy is a necessary condition for transition from middle to high income. As Gill and Kharas (2015) argued, at low income level, authoritarianism can be better for growth as it can provide decisive leadership to speed up the transformational process. However, at middle-income level when the economy becomes more complex, greater institutional stability is necessary, which is better provided by a democracy. A democratic regime ensures not only conducive conditions for growth such as

control of corruption, transparency, and the rules of law but also responsive bureaucracies and good governance necessary for effective implementation of growth strategies (Rudengren et al., 2014).

Some discussions on institutional issues, drawing from the successful experiences of late comers such as South Korea, Singapore, Taiwan, and Ireland, stressed the importance of some minimal political requisites such as political will, long time horizons of political leaders, broad societal consensus, business-government collaboration, and some degree of inclusive politics for enacting necessary policies (Flehtner & Panther, 2015). Unfortunately, many middle-income countries seemed to lack such requisites and were stuck in MIT.

It is observed, however, that the nature of the required upgrading policies during middle income seems to be the key challenge that hinders necessary reforms. Doner and Schneider (2017) argued that, in essence, upgrading policies such as promoting quality education and R&D at the middle-income stage are much more challenging than the earlier factor-driven growth policies focusing largely on the mobilization and accumulation of capital and labor. Such upgrading policies to get closer to the technological frontiers take more time to implement, require the participation of numerous stakeholders, and demand more technical and site-specific information than reforms that can be accomplished by the one-off decisions. These characteristics of upgrading policies demand more sophisticated institutional arrangements for successful implementation (Hanson, 2008; Doner & Schneider, 2017). Doner and Schneider posited that building such



institutional arrangements requires the presence of “pro-upgrading coalitions”, in which key stake-holders act toward the shared purposes. Such coalitions, however, are unlikely to exist in many middle-countries due to misalignment of interests.

Malaysia’s economic performance and middle-income trap

This section examines the long-term economic performance of Malaysia over the past five decades. We first provide an overview of Malaysia’s growth and discuss the transition of the country through the middle-income stage. Then we investigate the economic factors underlying the significant growth slowdown, which may hint some structural issues of the economy. The performance of Malaysia is contrasting to that of the two Asian Tigers, South Korea and Taiwan, wherever possible. The two Tigers and Malaysia are comparable in terms of size and development level in 1960s. In later decades, among the mid-size economies making up the East Asian miracle, South Korea and Taiwan were the most successful, followed by Malaysia, which makes the comparison reasonable.

Malaysia: in the middle-income trap?

Malaysia achieved remarkable economic growth during its early decades of development after regaining

independence in 1957. The economy picked up speed from sluggish growth of below 3% on average in the 1950s to about 6% in the 1960s to above 8% in the 1970s before slowing down to below 5% in 1981-1986. Growth, however, recovered its momentum and surged to above 9% in 1987-1997, enabling Malaysia to transition into the upper-middle-income stage. The eruption of the Asian Financial Crisis (AFC) marked the start of a new course of development for Malaysia – a prolonged period of slowdown. The economy suffered severely from the AFC, with GDP dropped by -7.4% in 1998, followed by a significant slowdown in subsequent years. Malaysia was hit hard again by the Global Financial Crisis (GFC) with GDP contracted by -1.5% in 2009, making a decade of stagnation of below 4% growth during 1998-2009 before bouncing back slightly to above 5% in the recent period 2010-2016.²

The growth pattern of Malaysia generally resembled those of the two sizeable Asian Tigers, South Korea and Taiwan (Figure 1). These economies performed well for almost four decades since 1960, except for the stagnation in 1980s, and all experienced significant slowdown with similar growth rates after the AFC. The key difference, however, was that the two Asian Tigers commanded a higher growth rate of 2% points or more, which enabled them to achieve high-income status before the AFC. With lower growth rate, in contrast, Malaysia could only attained upper-middle income by this critical juncture. The following discuss the transition of Malaysia’s economy and the fall into MIT.

² These calculations are based on data of The Conference Board (2017).

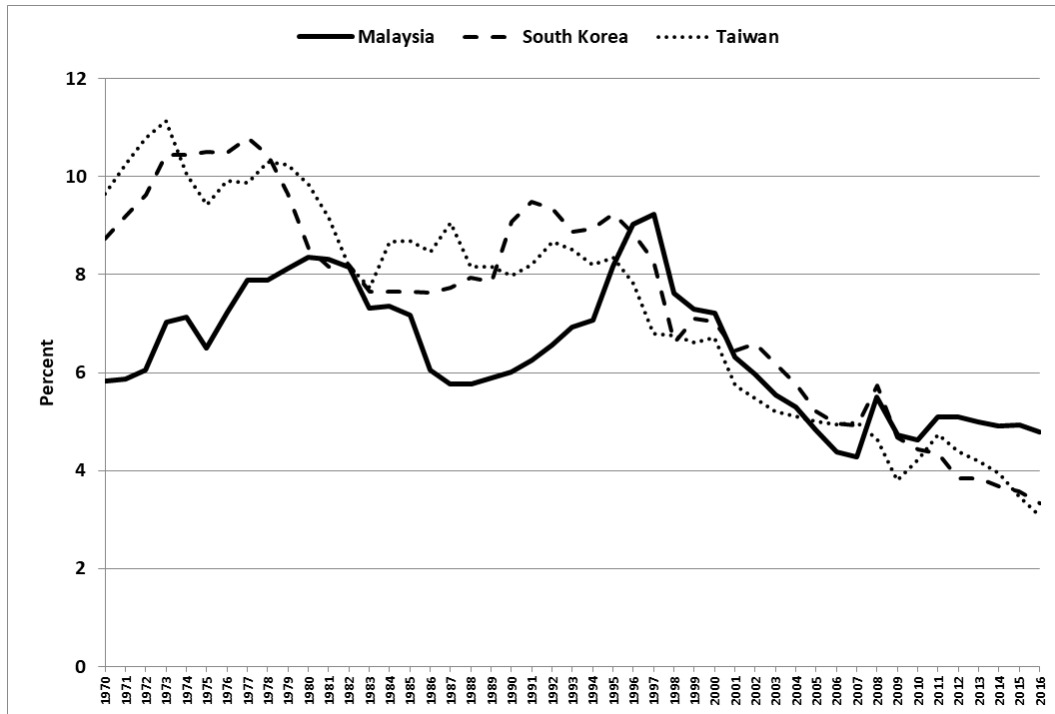


Figure 1 GDP growth (10-year moving average), 1970-2016

Source: Author; data from The Conference Board (2017)

Malaysia has been pointed out as a typical case of slow transition (e.g., Felipe et al., 2017) or MIT (e.g., Woo, 2012; World Bank, 2013), whether from absolute or relative approach. The country maintained a higher income level than those of South Korea and Taiwan for most of the two decades from 1950 to 1970. According to income categorization of Felipe et al. (2017), Malaysia transitioned from low to lower-middle income in 1969, the same time with South Korea and two years after Taiwan, and reached the thresholds of upper-middle income in 1996 and high income in 2015. It is noted, however, that it took 46 years for Malaysia to go through the middle income compared to 26 years of South Korea and Taiwan.

This comprised 27 years in lower-middle income and 19 years in upper-middle income, compared to only 19 and seven years of the two Tigers over the respective income ranges (Figure 2A). With 27 years of transition through lower-middle income, the country experienced a fast transition during this period according to Felipe et al. (2017). However, the 19 years in upper-middle income, nearly three times compared to those of the two Tigers, imply Malaysia indeed underwent a slow transition over the past two decades.

The performance of Malaysia looked even less impressive when examined from the relative approach, i.e. in terms of economic catch-up. Malaysia's relative GDP per capita stood still at



about 14% of the US level throughout the 1950s and the 1960s before catching up moderately in the 1970s to reach 20% in 1980, followed by a stagnation during 1980-1987. The relative income level increased dramatically in the following decade to 30% in 1997 before being hit hard by the AFC, and stagnated again throughout the first decade of the 21st century. The relative income only recovered to the level before the AFC (30%) in 2010, and then rose to 35% in

2016 (Figure 2B). It is noted that the current income level of Malaysia is less than a half of those of South Korea and Taiwan. With the relative income level of 35% in 2016 far below the threshold of around 50% of the US level and the long lasting middle-income transition of over 50 years, it can be concluded that Malaysia has been caught in the MIT, according to Woo (2012) or World Bank (2013).³

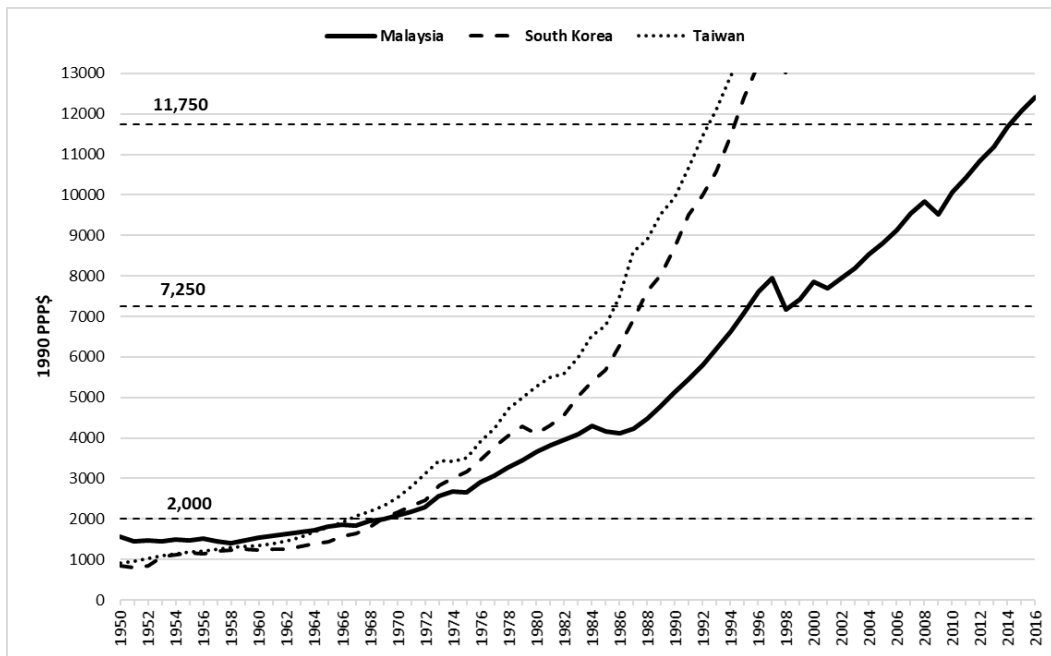


Figure 2A GDP per capita, 1950-2016

Source: Author; data from The Conference Board (2017)

³ As of 2017, the World Bank still categorized Malaysia as a middle-income economy, the status the country has achieved since 1992. This categorization is based on both income and non-income measures. See Felipe et al. (2017) for more details.

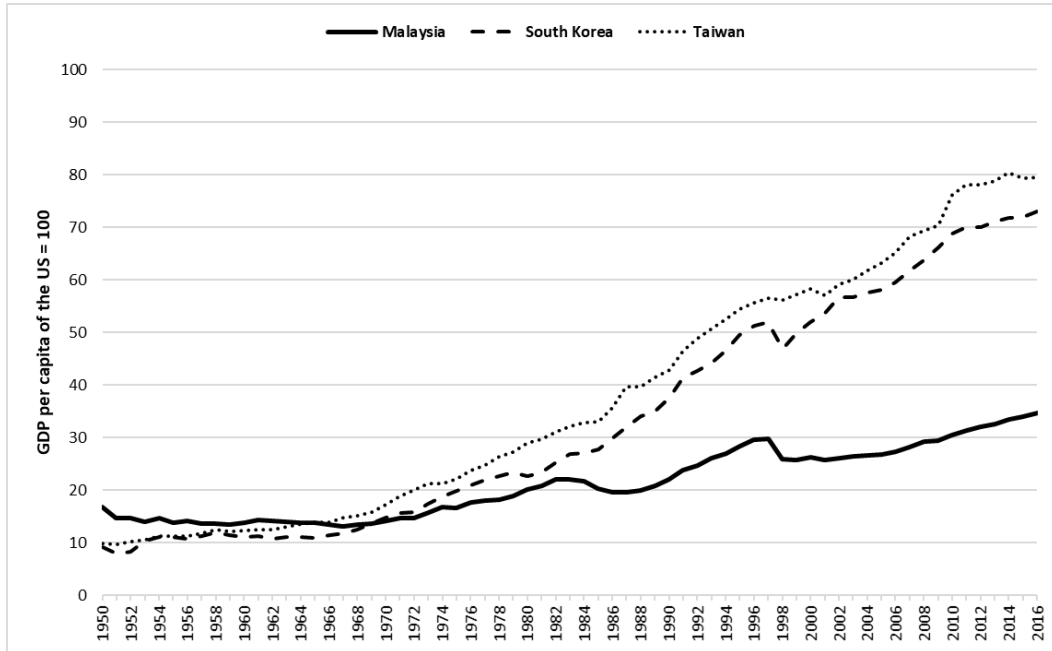


Figure 2B GDP per capita relative to the US: Malaysia vs. two Asian Tigers

Source: Author; data from The Conference Board (2017)

Economic factors underlying Malaysia’s slowdown

This subsection further examines the economic factors underlying the slowdown of the Malaysian economy. The investigation is conducted through the comparative analysis of structural change and sources of growth with a focus on its middle-income stage, 1969-2015. For the sake of analysis, the performance of Malaysia is contrasting to that of the two Asian Tigers in comparative income stages following the categorization by Felipe et al. (2017).

Structural change approach

Malaysia underwent structural transformation that dramatically altered its economic structure, especially during the lower-middle-income transition. The

economy in the 1960s was mainly dominated by agricultural activities accounting for over 40% of GDP, nearly twice as much as that of the industrial sector (World Bank, 2017). Like the two Asian Tigers, the subsequent decades witnessed the substantial shrinkage of primary sector, while other sectors rose accordingly (Table 1). Together with this process was the aggressive integration into the world economy, with merchandise trade increasing steeply from about 80% of GDP in the 1970s to 190% in 2000 before declining to 130% in 2015, making Malaysia one of the most open economies in the region. The integration was driven by the country’s export-oriented growth strategy, which strongly promoted manufacturing activities, from light manufacturings such as food processing and garments in

the early years to more sophisticated ones such as information and communication technology (ICT) hardware in the 1980s, resulting in sharply rising export especially from the mid 1980s. The merchandise export as a percentage of GDP increased from 40% in the early 1970s to 50% in 1986 to about 80% before the AFC before peaking at over 100% around 2000 and then declining gradually to 67% in 2015 (World Bank, 2017). This growth strategy was

facilitated by deliberate policies of attracting FDI, particularly in export-oriented industries such as ICT hardware, with inward FDI stock as a percentage of GDP rising steeply from about 20% in 1980s to over 50% in 2000 before declining to 30%-40% in the following years (UNCTAD, 2017). It is noted that the degree of integration of Malaysia in terms of international trade and FDI attraction was far higher than that of the two Asian Tigers.

Table 1 Economic structure by income stage

| | Malaysia | | | South Korea | | | Taiwan | | |
|------------------------------------|----------|------|------|-------------|------|------|--------|------|------|
| | 1970 | 1996 | 2015 | 1970 | 1988 | 1995 | 1970 | 1986 | 1993 |
| <i>GDP share (%)</i> | | | | | | | | | |
| Agriculture | 31.1 | 11.8 | 8.4 | 29.0 | 10.2 | 5.9 | 16.9 | 5.6 | 3.7 |
| Mining | 6.7 | 4.4 | 8.9 | 1.6 | 0.9 | 0.4 | 0.9 | 0.4 | 0.5 |
| Manufacturing | 12.9 | 26.1 | 22.6 | 19.0 | 30.5 | 28.3 | 28.9 | 39.4 | 29.3 |
| Utilities | 2.3 | 2.6 | 2.7 | 1.4 | 2.8 | 2.3 | 3.7 | 4.6 | 3.3 |
| Construction | 3.9 | 6.6 | 4.8 | 5.1 | 6.3 | 9.0 | 3.8 | 3.7 | 5.0 |
| Services | 43.1 | 48.5 | 52.7 | 43.8 | 49.4 | 54.1 | 45.8 | 46.3 | 58.3 |
| <i>Employment share (%)</i> | | | | | | | | | |
| Agriculture | 40.0 | 19.4 | 11.8 | 50.3 | 20.7 | 11.8 | 40.9 | 16.9 | 11.4 |
| Mining | 1.6 | 0.4 | 0.8 | 1.3 | 0.9 | 0.1 | 1.0 | 0.4 | 0.2 |
| Manufacturing | 12.4 | 22.8 | 16.1 | 12.6 | 26.6 | 22.7 | 20.3 | 33.6 | 28.2 |
| Utilities | 0.6 | 0.5 | 0.5 | 0.3 | 0.3 | 0.3 | 0.7 | 1.0 | 1.0 |
| Construction | 5.3 | 8.5 | 9.9 | 2.9 | 6.1 | 9.4 | 4.2 | 6.8 | 10.0 |
| Services | 40.2 | 48.4 | 61.0 | 32.6 | 45.4 | 55.6 | 32.8 | 41.3 | 49.2 |

Source: Author's calculation; data from Asian Productivity Organization (2020)

Compared with the two Asian Tigers, three significant differences from the pattern of Malaysia's structural change stand out. First, the pace of transformation was lower than that of the two Tigers. As the economy progressed, Malaysia generally had a similar economic structure for major sectors

compared to those of the two Tigers, but it took longer time for such a transformation. For instance, during the lower-middle-income stage, the employment share of agriculture sector shrank by -0.8% annually, compared to -1.6% for South Korea and -1% for Taiwan. On the other hand, the



employment share of manufacturing and services sectors expanded by 0.5% and 0.3% per annum, respectively, compared to 0.8% and 0.7% of South Korea. Second, Malaysia maintained a sizeable mining sector in terms of GDP share throughout its development (in the range of 3%-16%), suggesting that the country has been lastingly dependent on its rich natural resources despite great effort of diversification.

Third, the industrialization of the Malaysian economy, measured by manufacturing share in terms of output and employment,⁴ was weaker than those of the two Tigers. Malaysia achieved industrialized status around 1990 in terms of both output and employment, more than a decade after South Korea. Its industrialization peaked around 2000 with manufacturing share of 29% for output and 24% for employment, before deindustrializing in the 2000s.⁵ In terms of output, the peak share was much lower than that of Taiwan and comparable with

that of South Korea. The two Tigers, however, still maintained a high level of output share of nearly 30% until recent years, while Malaysia has deindustrialized considerably (Figure 3A).⁶ Therefore, Malaysia's industrialization stage in terms of output, lasting for about 15 years, was significantly shorter than those of the two Tigers. Similar trend was also observed for Malaysia's manufacturing employment share with considerably lower peak (Figure 3B). In addition, the industrialization period in terms of employment only lasted for about 10 years compared to 15 years of South Korea, while Taiwan still maintained a large manufacturing sector in its labor force until recent years. It is worth noting that South Korea and Taiwan started to deindustrialize in the first half of the 1990s when they almost attained high income status, while Malaysia's deindustrialization occurred around 2000 when the country was in early years of upper-middle-income stage.

⁴ An economy is industrialized if any 7-year moving average of manufacturing shares in output and employment are at least 18% each (Asian Development Bank, 2013).

⁵ A country is deindustrialized if the difference between the maximum manufacturing shares of the series and the average during the last decade is at least 5% points (Asian Development Bank, 2013).

⁶ It is noted that, according to the definition of Asian Development Bank (2013), in terms of output, South Korea has not deindustrialized, while Taiwan has deindustrialized but its output share has been on increasing trend in recent years. To some extent, this implies these two economies experienced industrial upgrading towards higher value-added activities.

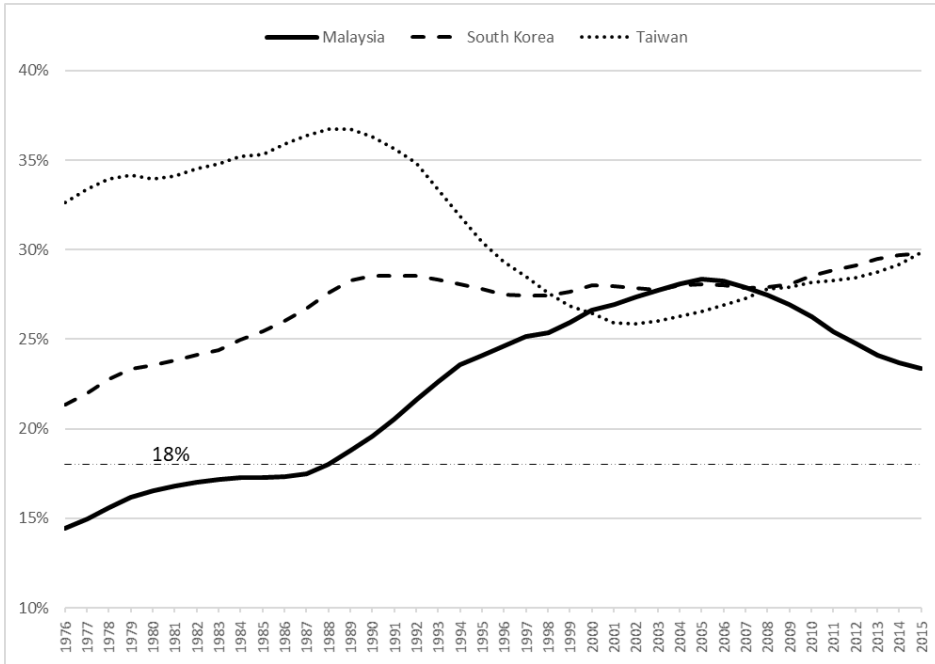


Figure 3A Manufacturing output share (7-year moving average)

Source: Author; data from Asian Productivity Organization (2020)

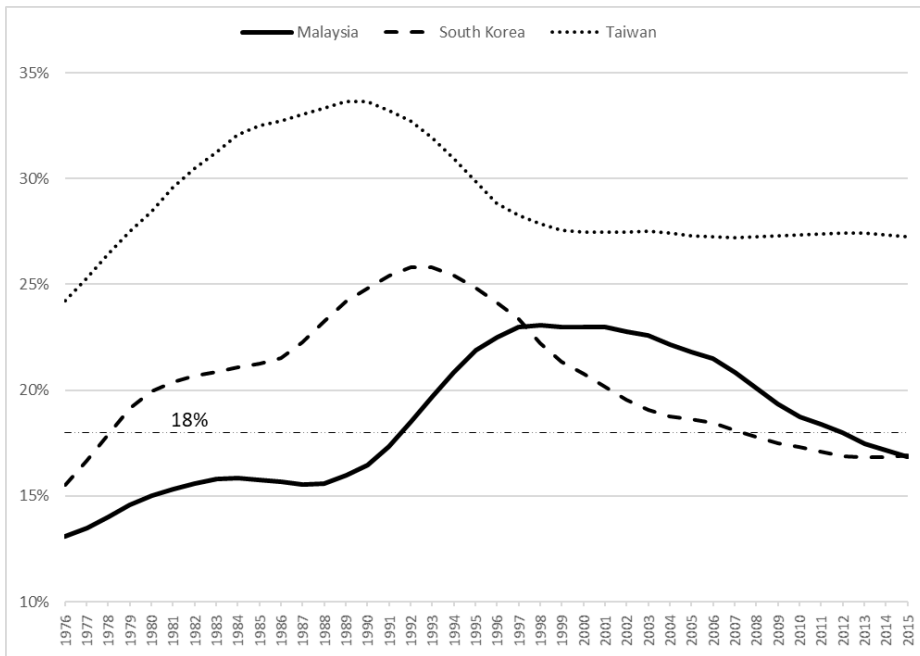


Figure 3B Manufacturing employment share (7-year moving average)

Source: Author; data from Asian Productivity Organization (2020)



To better quantify the contribution of structural change to Malaysia's growth, the shift-share analysis, which decomposes labor productivity growth into two sources, within effect and between effect (or structural change effect), is conducted.⁷ The within effect captures within-sector productivity improvement, which is driven by capital deepening, technological progress, or reduction of misallocation across plants, while the between effect captures the reallocation of employment among sectors (McMillan & Rodrik, 2011). The shift-share analysis for the two sub-periods of Malaysia's middle income in comparison with South Korea and Taiwan is presented in Table 2. The following findings stand out. First, compared to South Korea and Taiwan,

Malaysia experienced a significant gap in labor productivity growth of 2%-2.5% points in lower-middle income and of 3.4%-4.5% points in upper-middle income, indicating a clear trend of relatively low labor productivity improvement in the latter period. Second, structural change played a marginal role in driving labor productivity growth of Malaysia throughout the middle-income transition, especially in lower-middle income when it is expected to play a more significant role. Third, the manufacturing sector of Malaysia, a key player of industrialization along the middle-income stage, contributed less than 1% point of within-sector effect to the overall labor productivity enhancement, which was significantly lower than the respective contributions of South Korea and Taiwan.

⁷ See, for example, Timmer and de Vries (2009) and Vu (2017) for the methodology.

Table 2 Contribution of structural change to labor productivity growth in middle-income stage: Malaysia vs. South Korea and Taiwan

| | Panel B Measured in contribution share (Economy's ALP growth = 100) | | | | | | | | | | | | | | | | | |
|--|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| | Panel A Measured in % points | | | | Malaysia | | | | South Korea | | | | Taiwan | | | | | |
| | Malaysia | | South Korea | | Taiwan | | Malaysia | | South Korea | | Taiwan | | Malaysia | | South Korea | | Taiwan | |
| | Lower-middle income | Upper-middle income | Lower-middle income | Upper-middle income | Lower-middle income | Upper-middle income | Lower-middle income | Upper-middle income | Lower-middle income | Upper-middle income | Lower-middle income | Upper-middle income | Lower-middle income | Upper-middle income | Lower-middle income | Upper-middle income | Lower-middle income | Upper-middle income |
| | 1970-1996 | 1996-2015 | 1970-1988 | 1988-1995 | 1970-1986 | 1986-1993 | 1970-1996 | 1996-2015 | 1970-1988 | 1988-1995 | 1970-1986 | 1986-1993 | 1970-1996 | 1996-2015 | 1970-1988 | 1988-1995 | 1970-1986 | 1986-1993 |
| Economy | 4.54 | 2.32 | 6.55 | 5.72 | 7.06 | 6.83 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| <i>Within effect</i> | <i>4.51</i> | <i>2.04</i> | <i>5.12</i> | <i>4.62</i> | <i>5.39</i> | <i>5.95</i> | <i>99.3</i> | <i>89.3</i> | <i>78.2</i> | <i>84.3</i> | <i>76.4</i> | <i>87.1</i> | <i>99.3</i> | <i>89.3</i> | <i>78.2</i> | <i>84.3</i> | <i>76.4</i> | <i>87.1</i> |
| Agriculture | 0.73 | 0.32 | 1.05 | 0.47 | 0.60 | 0.29 | 16.0 | 16.6 | 16.1 | 8.2 | 8.5 | 4.3 | 16.0 | 16.6 | 16.1 | 8.2 | 8.5 | 4.3 |
| Mining | 0.61 | 0.16 | 0.05 | 0.26 | 0.06 | 0.09 | 13.5 | 7.3 | 0.8 | 4.5 | 0.8 | 1.3 | 13.5 | 7.3 | 0.8 | 4.5 | 0.8 | 1.3 |
| Manufacturing | 0.95 | 0.85 | 1.26 | 2.05 | 2.01 | 1.72 | 20.9 | 32.8 | 19.3 | 35.9 | 28.4 | 25.2 | 20.9 | 32.8 | 19.3 | 35.9 | 28.4 | 25.2 |
| Utilities* | 0.13 | 0.08 | 0.21 | 0.03 | 0.25 | 0.13 | 2.8 | 2.5 | 3.2 | 0.6 | 3.5 | 1.9 | 2.8 | 2.5 | 3.2 | 0.6 | 3.5 | 1.9 |
| Construction | 0.25 | -0.01 | 0.21 | 0.36 | 0.14 | 0.24 | 5.5 | 1.1 | 3.2 | 6.3 | 2.0 | 3.5 | 5.5 | 1.1 | 3.2 | 6.3 | 2.0 | 3.5 |
| Services** | 1.84 | 0.64 | 2.33 | 1.65 | 2.33 | 3.48 | 41.3 | 39.7 | 57.4 | 44.5 | 56.7 | 63.8 | 41.3 | 39.7 | 57.4 | 44.5 | 56.7 | 63.8 |
| Trade, hotels and restaurants | 0.71 | 0.20 | 0.74 | 0.07 | 0.65 | 0.95 | 15.7 | 8.6 | 11.3 | 1.2 | 9.3 | 13.9 | 15.7 | 8.6 | 11.3 | 1.2 | 9.3 | 13.9 |
| Transport, storage and communications | 0.19 | 0.27 | 0.38 | 0.38 | 0.25 | 0.28 | 4.2 | 11.7 | 5.8 | 6.7 | 3.6 | 4.2 | 4.2 | 11.7 | 5.8 | 6.7 | 3.6 | 4.2 |
| Finance, real estate and business services | 0.48 | -0.13 | 0.60 | 0.56 | 0.37 | 0.97 | 10.6 | -4.8 | 9.2 | 9.9 | 5.2 | 14.2 | 10.6 | -4.8 | 9.2 | 9.9 | 5.2 | 14.2 |
| Community, social and personal services | 0.45 | 0.31 | 0.60 | 0.63 | 1.06 | 1.27 | 10.0 | 13.5 | 9.2 | 11.0 | 15.0 | 18.6 | 10.0 | 13.5 | 9.2 | 11.0 | 15.0 | 18.6 |
| Between effect | 0.03 | 0.28 | 1.43 | 0.90 | 1.67 | 0.88 | 0.7 | 10.7 | 21.8 | 15.7 | 23.6 | 12.9 | 0.7 | 10.7 | 21.8 | 15.7 | 23.6 | 12.9 |

Note: *Utilities comprise electricity, gas and water supply; **Services is aggregated from four industries: Wholesale and retail trade, hotels and restaurants; Transport, storage and communications; Financial intermediation, real estate, renting and business activities; and Community, social and personal services.
Source: Author's calculation; data from Asian Productivity Organization (2020)

With regard to manufacturing, the structural transformation of this sector in Malaysia was mainly driven by the high tech sector, while the medium and low tech sectors changed marginally especially with respect to GDP share.⁸

As shown in Table 3, over the last decade of the 20th century, the high tech sector, almost represented by the ICT hardware industry, expanded 6.4% points (from 4.5% to 10.9%) in terms of GDP share, while the decline of -1.4% points of the low tech sector was offset by the gain of 1.3% points of the medium tech sector. Similarly, the high tech sector gained 40% points in terms of exports as a percentage of GDP over the same period, while the medium tech sector expanded moderately and the low tech sector

decreased slightly. The first 15 years of the 21st century witnessed the opposite trend for the high tech sector as it declined substantially almost to the position it held in 1990. The low tech sector also shrank slightly in the two measures, while the medium tech sector maintained its GDP share and expanded its exports. As changes of agriculture and mining in merchandise exports were small, the primary driver of Malaysia's merchandise exports was the manufacturing with the lion's share of 80%-90%, which was in turn dependent largely on the ICT hardware industry. That is, Malaysia might not have diversified its manufacturing advantages enough for sustaining its exports amidst the intense global competition.

Table 3 Malaysia's manufacturing sector in GDP and exports

| | GDP share | | | | | Exports as % of GDP | | | | |
|---------------|-----------|-------|-------|-------|-------|---------------------|-------|-------|-------|-------|
| | 1990 | 1996 | 2000 | 2010 | 2015 | 1990 | 1996 | 2000 | 2010 | 2015 |
| Manufacturing | 22.9% | 26.1% | 29.2% | 23.7% | 22.6% | 47.8% | 67.7% | 94.2% | 66.8% | 58.1% |
| High tech | 4.5% | 7.4% | 10.9% | 6.6% | 5.3% | 20.0% | 37.2% | 60.6% | 28.8% | 22.5% |
| Medium tech | 11.2% | 12.4% | 12.5% | 12.3% | 12.5% | 11.5% | 15.6% | 19.7% | 24.6% | 25.1% |
| Low tech | 7.2% | 6.3% | 5.8% | 4.7% | 4.8% | 16.3% | 14.9% | 13.9% | 13.4% | 10.5% |

Note: The values of GDP share of the high tech sector include electrical machinery and apparatus.

Source: Author's calculation; data from Asian Productivity Organization (2020) and WITS (2020)

The above observations about Malaysia's manufacturing are consistent with Rasiah (2011) and Rasiah et al. (2015), which claimed that the country indeed faced premature deindustrialization with a declining trend in manufacturing value-

added and trade performance in the 2000s. Rasiah also pointed out that manufacturing's labor productivity slowed down, with the key industries such as electric-electronics, textiles and transport equipment experiencing either

⁸ The categorization of manufacturing goods by technology level follows the definition of OECD (2011).

negative or low productivity growth after 2000. This pattern of structural change is a worrying signal for Malaysia as labor seemed to shift from agriculture and manufacturing to low-productivity services, which might deteriorate the growth of the economy-wide labor productivity (Rodrik, 2016). The recent data shows that labor productivity growth of the two backbone sectors of the economy – manufacturing and services – stagnated at about 2% since the GFC (Figure 4). More importantly, Malaysia seemed to have not fully developed its

manufacturing capabilities which facilitate robust structural change and industrial upgrading. As a piece of evidence, though ICT hardware was the most important driver of Malaysia’s merchandise exports (accounting for 35%-55%), its share of domestic value-added in export value was far lower than those of the two Asian Tigers (Figure 5). That is, the country seemed to lack the capabilities enabling it to participate in higher value-added activities of the value chain of this product.

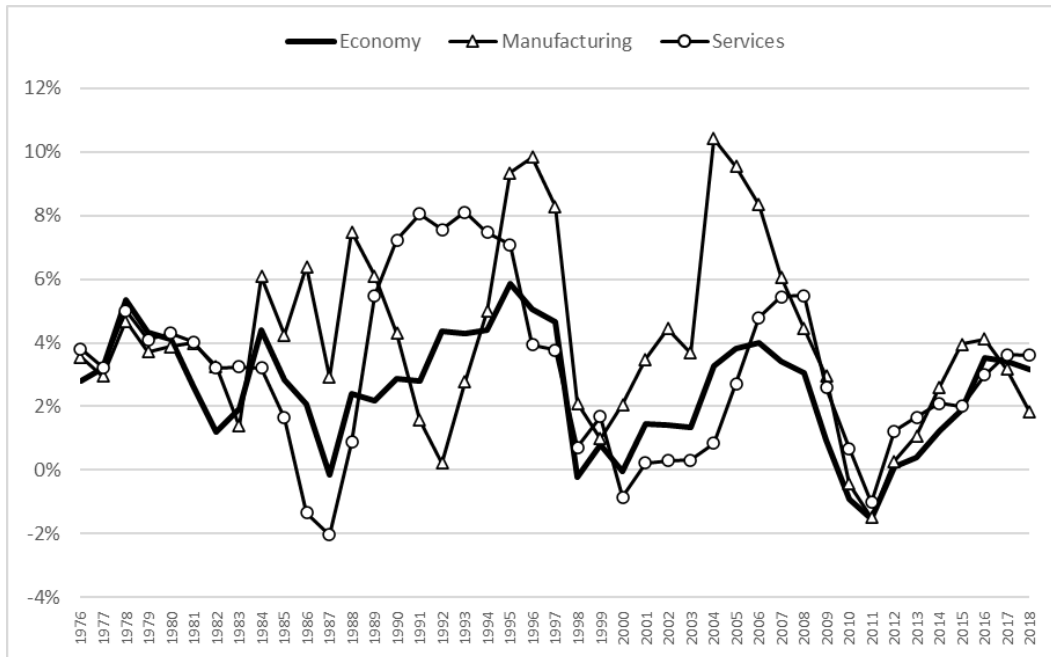


Figure 4 Malaysia’s labor productivity growth (3-year moving average)

Source: Author; data from Asian Productivity Organization (2020)

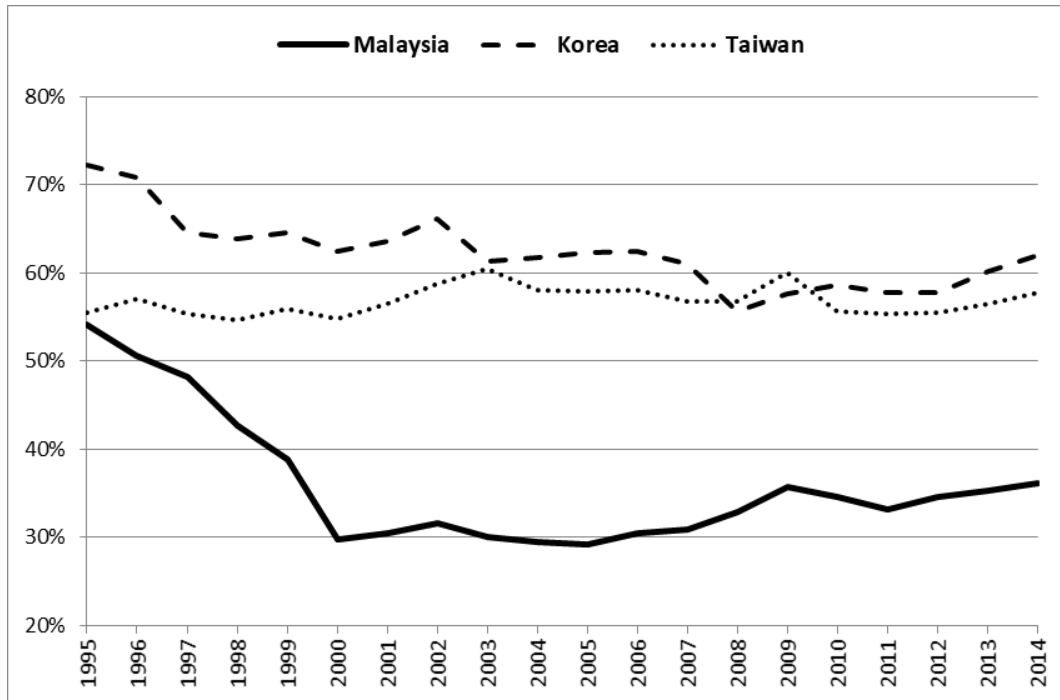


Figure 5 Share of domestic value-added in exports of ICT hardware products

Source: Author, data calculated from OECD (2016)

Sources of growth approach

Another way to assess the performance of the Malaysian economy is to look into its sources of growth. Adopting the growth accounting framework, GDP growth can be simply decomposed into the growth of hours worked and average labor productivity (ALP). GDP can also be decomposed into the contribution of capital input, labor input (hours worked and labor quality) and total factor productivity (TFP) (Jorgenson et al., 2003; Vu, 2013). The decomposition exercise is conducted using data from the Conference Board Total Economy Database, and results are reported in Table 4A.

Malaysia's growth drivers, in general, were similar to those of the two Asian

Tigers during the lower-middle-income stage. All three economies experienced strong employment expansion, contributing over 3% points to GDP growth of above 7%. Malaysia's labor productivity improvement, however, underperformed by about 1% points, which mainly explained the gap of over 1% points in GDP growth between Malaysia and the two Tigers (Table 4A, Panel A). More specifically, capital accumulation was the dominant driver, especially for Malaysia and South Korea with a contribution of over 6% points. Labor input followed, contributing about 2% points, of which Malaysia's labor quality enhancement was significant. In contrast to Taiwan with 1% point of TFP improvement, both Malaysia and South



Korea experienced TFP deterioration of over 0.6% points over this stage (Table 4A, Panel B). It can be said that Malaysia and South Korea had similar growth drivers during the lower-middle-income stage, with South Korea having stronger capital accumulation.

The upper-middle-income stage witnessed the decline in growth of all three economies, but Malaysia experienced a steep drop of nearly 3% points compared to less than 1% point of the two Tigers (Table 4A, Panel A). During this stage, while Malaysia still maintained employment growth of 2.5% higher than those of the two Tigers, its ALP growth decreased by a half to 2%, making a gap of about 4% points in ALP growth with the two Tigers.

The revealed sources of growth indicate that, while the decreased contribution of labor input was offset by less negative TFP growth, Malaysia's drop in GDP growth was almost due to the reduced contribution of capital input, resulting in a gap of 2% points with South Korea and nearly 1% point with Taiwan in this measure. This was caused by the steep decline in investment in Malaysia after

the AFC, which will be discussed more in Section 4. It is also noted that, while TFP growth made remarkable contribution to the two Tigers' growth (1.3% points for South Korea and 2.1% points for Taiwan), Malaysia continued its negative TFP growth, though less severe, in this latter stage (Table 4A, Panel B).

Regarding the TFP deterioration of Malaysia in both lower- and upper-middle-income stages, one may argue that the negative TFP growth might be attributed to the major shocks the economy experienced in 1985-1986, 1997-1998 or 2007-2008, and may not fully reflect the efficiency improvement and technological progress of the economy in normal condition. However, Table 4B, presenting the sources of growth during high performance periods without shocks, indicates that the contribution of TFP to Malaysia's growth was modest and far below those of the two Tigers. This implies TFP enhancement played an insignificant role during Malaysia's middle-income transition.

Table 4A Sources of GDP growth during middle-income stage

| | | Panel A | | | Panel B | | | | |
|--|--------------------------|---------|--------|--------|----------------------------------|-------------|-------|---------|------|
| | | GDP | Hours | ALP | Sources of GDP Growth (% points) | | | | |
| | | Growth | Growth | Growth | Capital | Labor Input | | | TFP |
| | | (%) | (%) | (%) | Input | Total | Hours | Quality | |
| Malaysia | Lower-Middle (1969-1996) | 7.35 | 3.45 | 3.89 | 6.28 | 1.72 | 1.30 | 0.43 | - |
| | Upper-Middle (1996-2015) | 4.44 | 2.47 | 1.97 | 3.30 | 1.29 | 0.88 | 0.41 | 0.66 |
| South Korea | Lower-Middle (1969-1988) | 8.45 | 3.68 | 4.77 | 7.03 | 2.04 | 1.76 | 0.28 | - |
| | Upper-Middle (1988-1995) | 7.96 | 2.03 | 5.92 | 5.36 | 1.35 | 1.13 | 0.22 | 0.63 |
| Taiwan | Lower-Middle (1967-1986) | 8.66 | 3.22 | 5.44 | 5.47 | 2.14 | 1.80 | 0.34 | - |
| | Upper-Middle (1986-1993) | 7.90 | 1.74 | 6.16 | 3.98 | 1.77 | 1.05 | 0.72 | 1.06 |
| <i>Gap between Malaysia and two Tigers</i> | | | | | | | | | |
| with | Lower-Middle | -1.10 | -0.22 | -0.88 | -0.75 | -0.32 | -0.47 | 0.15 | - |
| South Korea | Upper-Middle | -3.52 | 0.44 | -3.96 | -2.05 | -0.06 | -0.25 | 0.19 | 0.03 |
| with | Lower-Middle | -1.32 | 0.23 | -1.55 | 0.81 | -0.41 | -0.50 | 0.09 | - |
| Taiwan | Upper-Middle | -3.46 | 0.73 | -4.19 | -0.68 | -0.48 | -0.17 | -0.31 | 1.72 |
| | | | | | | | | | 2.31 |

Source: Author's calculation; data from *The Conference Board (2017)*

Table 4B Sources of GDP growth during high performance period

| | | Panel A | | | Panel B | | | | |
|-------------|-------------|---------|--------|--------|----------------------------------|-------------|-------|---------|------|
| | | GDP | Hours | ALP | Sources of GDP Growth (% points) | | | | |
| | | Growth | Growth | Growth | Capital | Labor Input | | | TFP |
| | | (%) | (%) | (%) | Input | Total | Hours | Quality | |
| Malaysia | (1987-1996) | 9.03 | 3.90 | 5.13 | 6.61 | 2.01 | 1.47 | 0.54 | 0.42 |
| South Korea | (1982-1991) | 9.24 | 2.34 | 6.90 | 5.11 | 1.45 | 1.24 | 0.21 | 2.68 |
| Taiwan | (1982-1989) | 8.78 | 2.51 | 6.27 | 3.33 | 2.01 | 1.48 | 0.53 | 3.44 |

Source: Author's calculation; data from *The Conference Board (2017)*

Wye and Ismail (2012) tracking Malaysia's sources of growth at industry level over a long period from 1972 to 2005 also noted that the role of TFP is less prominent, especially in economically significant services such as health, education, and professional.

Ahmed (2009) examining the Malaysian manufacturing sector in 1970-2001 showed that labor productivity of the sector experienced a low growth trend associated with the declining contribution of TFP. Ahmed also posited that productivity growth of the



manufacturing sector was input-driven rather than TFP-driven. This trend was unhealthy for Malaysia because the advancement of labor quality, reflecting the capabilities of the labor force, and of TFP, to large extent capturing the technological capabilities and efficiency of the economy, plays decisive roles in boosting productivity growth particularly when the economy progresses to higher income with already high level of capital accumulation.

Discussion on the causes of Malaysia's middle-income trap

This section provides an in-depth discussion on the causes of Malaysia's sluggish growth, continuing the analysis in Section 3. Before that, it is necessary to understand the overarching institutional setting – the New Economic Policy (NEP) – that shaped the long-term development journey of Malaysia.

The Malaysian government introduced the NEP in 1971 in response to the 1969 ethnic riots, with affirmative action policies in favor of the majority Bumiputera (Malays and indigenous ethnics) who were at economically disadvantageous position compared to the Chinese and Indian. While targeting poverty reduction for the general population, the NEP aimed at eliminating economic disparity between the Bumiputera and other ethnics by addressing the concerns of the former about employment, income distribution, and ownership of wealth, and promoting the formation of a Bumiputera commercial and industrial community. The NEP set the target of raising

Bumiputera corporate ownership to 30%, reducing corporate ownership by other ethnics to 40%, and capping foreign ownership at 30% by 1990 (Webster, 2014).

Under the NEP, the Bumiputera were entitled to many privileges in a wide range of areas. They were reserved for large shares of quotas for public sector jobs and university admission, while the Bumiputera businesses were given priorities including access to government contracts. The NEP required private companies to reserve at least 30% of their shares and employment, including manager positions, for the Bumiputera. For manufacturing activities, private firms in this sector were subjected to getting government licenses in line with the NEP, which required the companies at certain size to comply with the minimum 30% rule of Bumiputera reservation in terms of equity, employment, board of directors, and distributor appointment. Conforming with the rule ensured not only the legal operation but also the access to formal government incentives, government contracts and participation in exports. Most of the policies under the NEP, which officially ended in 1990, continued in subsequent national policy programs and had significant effect on Malaysia's long-term performance. Though these policies have promoted equity and political stability conducive to development, to a certain extent they might have hindered growth (Tan, 2014).

The distortions resulted from the discriminatory policies are believed to have stunted investment, and thus growth, of Malaysia (Menon, 2014). The Bumiputera quota on ownership structure disincentivized successful Chinese



Malaysian firms to expand their production to avoid the NEP's restrictions or drove them to move their headquarters to foreign lands (Woo, 2009). According to Henderson and Phillips (2007), successive Malaysian governments used this measure to limit capital accumulation among wealthy Chinese Malaysian and contain their influence on the economy. Consequently, unlike the Taiwan case, very few Malaysian firms were able to transform from import substituting goods producers to major exporters of these goods (Woo, 2009).

The second factor that hindered investment of both domestic and foreign investors was the crowding out from the heavy presence of government-linked corporations (GLCs) characterized with close ties to government agencies, opaque operation and lack of pressures for upgrading (Menon, 2014; Hill et al., 2012; Gomez, 2012; Woo, 2009). These GLCs held dominant role in many key industries, including utilities (93% in terms of market share), transportation and warehouse (80%), agriculture, banking, communication, and retail trade (over 50%). Menon (2014) argued that,

as most of these industries are neither strategic nor natural monopolies, the heavy presence of GLCs could not be economically justified. Menon and Ng (2013) also evidenced that the GLC's share of 60% or higher in an industry would discourage private investment in that industry.

Though the two discouragements had existed for long, the outbreak of AFC was indeed a critical juncture, which exacerbated the situation and fundamentally changed the course of investment and growth of Malaysia. In fact, the private investment flow – both foreign and domestic – into the economy declined sharply after AFC and the trend persisted until recent years. As shown in Figure 6, while public investment remained stable at around 10% of GDP, private investment dropped 15%-20% points, from about 25%-30% before the crisis to around 10% after that, which cut total investment flow by nearly a half from about 40%-45% to 20%-25% of GDP. This explains the fall in the contribution of capital input to GDP growth during Malaysia's upper-middle-income stage as pointed out in Table 4A.

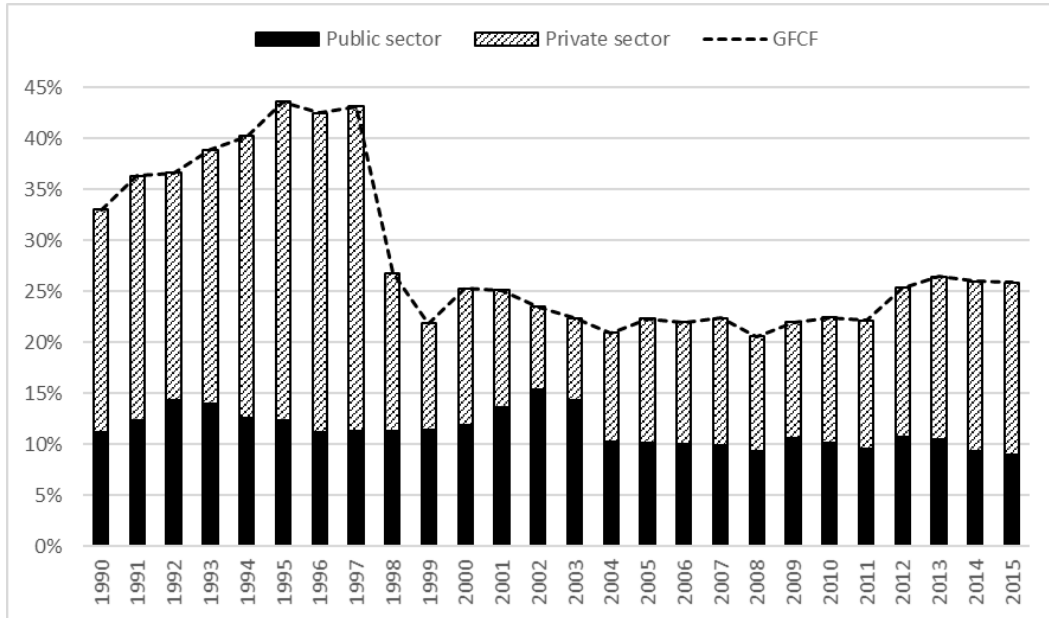


Figure 6 Malaysia's gross fixed capital formation as a percentage of GDP, 1990-2015

Source: Author; data from World Bank (2020)

The dynamics of financial flows may provide some hints of the causes of declining private investment in Malaysia in the recent period. The FDI inflow of Malaysia decreased significantly after the AFC, and only resumed the 1997 level in 2006 in absolute terms and continued to increase in subsequent years, with a fall in 2009 due to the GFC. As a percentage of GDP, however, the inflow after 2000 was only 3%-4%, well below the level of 6%-8% during 1990-1997. The FDI outflow also plunged during 1998-2003 but rebounded strongly with a record high of 6.5% in 2008 and maintained at 4%-5% in subsequent years, compared to about 2%-3% before AFC (Figure 7). The combination of the decline in FDI inflow and the rise in FDI outflow obviously led to investment contraction, but it might only account for a small part of the fall of

private investment (10%-15% of GDP) after AFC. A more persuasive explanation in this vein could be the massive outflow of illicit capital from both foreign and domestic investors, making Malaysia the third among the top ten in the world (after China and Mexico) and the second among the top five in Asia (China, Malaysia, the Philippines, India, and Indonesia), despite its modest population (Menon, 2014). The flow was estimated to range from US\$12.5 billion to US\$64.4 billion per annum, accumulating to US\$285 billion for 2001-2010 (Kar & Freitas, 2012). The figure was as significant as 80% of gross fixed capital formation and 18% of GDP of Malaysia, on average, during this period. According to the Global Financial Integrity, the underlying drivers included generic structural and governance issues such as political

instability, rising income inequality, and pervasive corruption, and, in particular, the significant discrimination in Malaysia’s labor market, which motivated the move of people and unrecorded capital out of the economy (Kar & Curcio, 2011).

In short, it is believed that the distorted business environment due to discriminatory policies and GLCs’ crowding-out have long discouraged private investment. And the eruption of

the AFC associated with macro uncertainties exacerbated the situation, creating pervasive pessimism among investors about the country’s economic prospects. All these factors not only discouraged the inflow of foreign investment but might also have triggered the wave of domestic and foreign investors to relocate their capital through formal and informal channels to foreign lands where they found more favorable environment and better business opportunities.

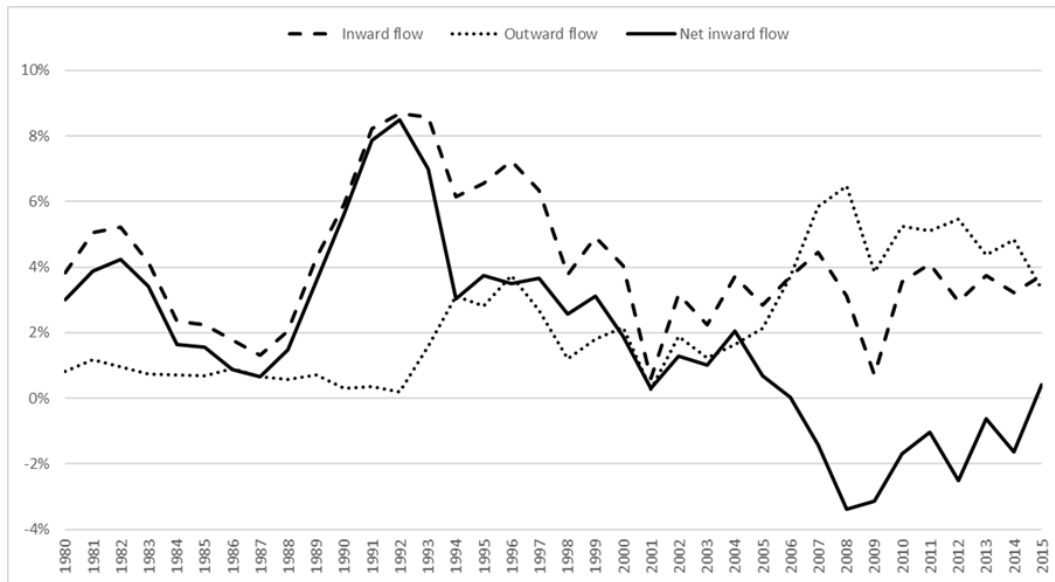


Figure 7 Malaysia’s FDI flows as a percentage of GDP, 1980-2015

Source: Author; data from UNCTAD (2017)

Underlying the weak investment associated with the less favorable macro conditions of the Malaysian economy is a more structural issue – slow industrial upgrading, which involves the promotion of quality human capital, innovation, and

the spillover effect on the indigenous sector.

Regarding human capital development, Malaysia has achieved significant progress, with mean years of schooling of adults improving from four to ten over the past three and a half decades. But the



problem of Malaysia might lie on skill acquisition, not general education. Empirically, Asian Development Bank (2008) revealed from a survey in 2003 that manufacturers in Malaysia pointed to inadequate skilled workers as the top obstacle for doing business. The root cause of the problem might not be the lack of education expenditure or universities and colleges, but quality, access and recruitment constraint. Besides the race for quantity of training institutions at the expense of quality, there was also a mismatch between the skills generated in local vocational and higher education institutions and the demand of the labor market (Fleming & Søbørg, 2014; Menon, 2014; Hill et al., 2012). The race-based quota system granted entry to post-secondary education in favor of the Bumiputera might have excluded many more qualified candidates or included unqualified ones, resulting in suboptimal allocation (Lee & Nagaraj, 2012). This discriminatory policy was also applied for recruitment, which motivated not only oversea students of Chinese and Indian ethnics to stay abroad but also local professionals of these communities to look for better opportunities in foreign countries. This made Malaysia a net exporter of skills, though hosting a huge amount of unskilled migrant labor accounting up to a quarter of its workforce (Rasiah et al., 2015). Malaysia has been in urgent need of education reforms, but the division among the ruling coalition and the strong party-state merger remained a formidable political challenge for such reforms (Fleming & Søbørg, 2014).

With respect to innovation, the government has put effort to upgrade the country's innovation capabilities, but the results seemed to be far below expectation. In terms of R&D investment, it seems that Malaysia did not spend sufficiently especially in its early years of middle income. While the lack of data on R&D expenditure before 1996 does not facilitate a comparison with advanced economies at comparable stages of development, it is observed that, when turning into high income, this spending as a percentage of GDP of South Korea (2.24% in 1996) was significantly higher than that of Malaysia (1.3% in 2015), which suggests South Korea's R&D investment was much stronger than Malaysia's during their middle-income transitions (Table 5).

The available data also indicates that Malaysia considerably trailed China (and even India in early years) on R&D investment despite its higher income level. When Malaysia attained upper-middle-income status in 1996, its R&D expenditure was only 0.22%, which suggests the spending was even smaller in its lower-middle-income years. In contrast, the figure of China was 0.56% in 1996 and rose rapidly to 1.37% in 2006 to 2.07% in 2015. Malaysia only speeded up its R&D spending in the recent decade, from 0.61% in 2006 to 1.3% in 2015 (Table 5). The gap in R&D expenditure between the two economies may explain to some extent the gap in R&D outcomes as evidenced by the number of patent and industrial design applications in Figure 8.

Table 5 Research and development expenditure as a percentage of GDP

| | 1996 | 2000 | 2006 | 2010 | 2015 |
|-------------|------|------|------|-------------------|------|
| Japan | 2.69 | 2.91 | 3.28 | 3.14 | 3.28 |
| South Korea | 2.26 | 2.18 | 2.83 | 3.47 | 4.22 |
| Singapore | 1.32 | 1.82 | 2.12 | 1.93 | 2.18 |
| China | 0.56 | 0.89 | 1.37 | 1.71 | 2.07 |
| Malaysia | 0.22 | 0.47 | 0.61 | 1.04 | 1.30 |
| Thailand | 0.12 | 0.24 | 0.23 | 0.36 ^a | 0.62 |
| India | 0.64 | 0.76 | 0.80 | 0.79 | 0.69 |

Note: ^ain 2011; Source: World Bank (2020)

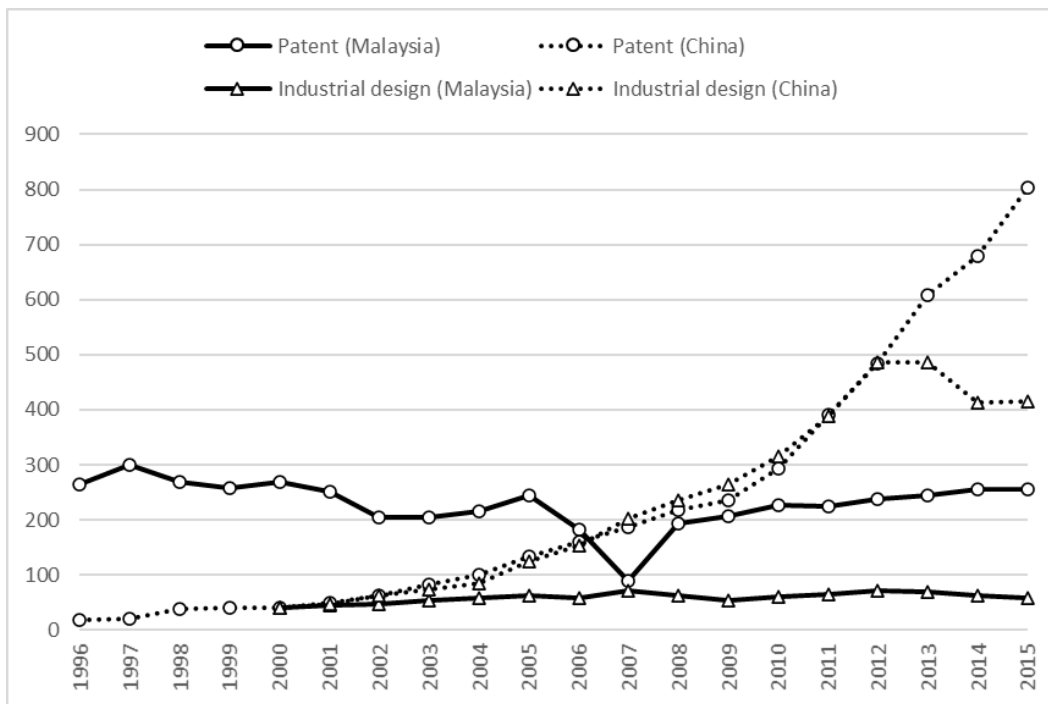


Figure 8 Number of patent and industrial design applications (per one million population)

Source: Author; data from World Bank (2020)

The weakness of Malaysia's innovation capacities has the root in the slow building of a culture of excellence and innovation as accomplished by South Korea and Taiwan (Yusuf & Nabeshima, 2009a). This culture underlined the importance of STEM (science,

technology, engineering, and math) education, skill acquisition, and R&D, which shaped the orientation of vocational and tertiary training institutions, research centers, as well as business sector. The strategy, materialized through government's



tangible incentives, not only enhanced the quality of the labor force but also promoted innovation in line with the market demand, which was crucial for retaining competitive edge and fostering structural transformation. In Malaysia, the regulatory environment influenced by the NEP has hindered the competition among universities, which undermined the efforts to enhance the quality of teaching and research (Lee & Nagaraj, 2012). In the business sector, while the GLCs had little incentive to engage in innovation, it is unexpected that most local private firms and multinational corporations (MNCs) only conducted R&D marginally. For instance, only 1% of the total electronics MNCs conducted design and R&D activities in 2007 (Rasiah et al., 2015).

One reason was the market structure with major conglomerates dominating the industrial landscape, which dampened competition, raised entry barriers for new firms with creativity, and discouraged the innovation initiatives of existing ones. For the MNCs, the influx of cheap migrant workers guaranteed the profitability of their labor-intensive assembly activities, which relaxed the pressure of upgrading, particularly risky R&D activities amidst the lack of necessary conditions such as quality human resources (Yusuf & Nabeshima, 2009a; Rasiah et al., 2015). In addition, ineffective vertical industrial policies that supported selective industries might discourage innovation activities. As noted by Otsuka and Natsuda (2016), in the automotive industry, the government provided strong backing for the national producers Proton and Perodua but not the local parts and components manufacturers. With orientation to the domestic market, these producers had

less incentive to innovate and mainly focused on assembly of imported materials, failing to become even regional brands. At the same time, local parts and components manufacturers missed the opportunity to upgrade their capabilities to participate in the automotive value chain.

The upgrade of the domestic firms' capabilities and strengthening their linkages with the FDI sector remained a key challenge of Malaysia. While the goal of FDI policy was to seek spillovers for skill development and technology transfer, the interaction between the FDI sector and the rest of the economy has been modest at best. FDI firms in the electronics industry in Penang, for instance, engaged primarily in low value-added activities facilitated by abundant low-skilled migrant workers largely from Indonesia with limited demand for local technicians and engineers (Henderson & Phillips, 2007). Yusuf and Nabeshima (2009b) posited that though there existed some diffusion of knowledge and skills from labor turnover at the MNCs to the local economy and linkages with local suppliers mostly for low-tech products, the expected outcomes on increased local value-added, technological upgrade, and new start-ups were not achieved. They also argued that both sides faced obstacles that hindered the promotion of the linkages. On the one hand, partnering with local suppliers requires the MNCs to bear high transaction costs for cultivating them, which might not be preferable to the option of maintaining a small number of competent suppliers. On the other hand, new suppliers usually lack necessary capabilities and are subjected to high costs for developing products, marketing to MNCs and getting certifications. Therefore, only few



domestic firms were able to meet the requirements to enter the MNCs' value chains. At best the Malaysian domestic firms could only become second- or third-tier suppliers of less sophisticated parts and components.

The Malaysian government have been ineffective in urging the MNCs to adjust their business model to the one that engages in more R&D activities and partners more with local suppliers as long as the existing one remained satisfactorily profitable. The main reason was that the government worried, amidst the intense competition on FDI attraction, MNCs would move away if the rules requiring local sourcing were strongly enforced (Yusuf & Nabeshima, 2009a).

Conclusion and policy implications

This paper comprehensively reviews the literature on middle-income trap, a phenomenon observed for many middle-income countries that failed to transition from middle to high income, and reflects upon the case of Malaysia's middle-income transition with the aim of drawing relevant policy implications. The literature reveals that the investment slowdown often occurring at middle-income due to several factors, including deteriorated competitiveness of labor-intensive industries associated with rapidly rising wages, may significantly hinder growth. This is usually coupled with the lack of necessary conditions of quality human capital and technological capabilities, which hampers the structural transformation toward higher value-added activities. These factors, however,

are usually affected by the underlying context-specific institutional constraints. Unfortunately, radical reforms for upgrading the necessary conditions for boosting growth require the pro-upgrading political coalitions that may be often unavailable in middle-income nations.

Malaysia achieved remarkable growth during its lower-middle-income transition, compared to the two sizeable Asian Tigers – South Korea and Taiwan. The country was “trapped” in its upper-middle-income years, which was marked by the eruption of the AFC as the turning point altering the course of Malaysia's development. The slowdown was driven by the consistent decline in private investment, resulted primarily from the outflow of capital besides the decrease in inward FDI. The outbreak of the AFC associated with macro uncertainties somehow led to pervasive pessimism among investors about the economic prospects, which triggered the relocation of capital to foreign lands. This was coupled with the long-lasting unfavorable business environment due to discriminatory policies in favor of the Bumiputera and the crowding-out of GLCs. Throughout its middle-income years, the economy consistently faced many structural problems, including sluggish TFP growth, relatively modest structural change, slow industrial upgrading as well as premature deindustrialization. These had root in the slow upgrade of human capital, innovation and indigenous capacity, and the ineffective exploitation of spillovers from the FDI sector.

Malaysia may not expect its private investment to recover to the level as high as in the pre-AFC period. Therefore,



while it is always necessary to improve the business environment for attracting investment, particularly eliminating the market distortions as mentioned above, the growth drivers should shift to enhancing the quality of labor force and TFP. The country needs more radical reforms especially in building quality human capital, technological capabilities and indigenous capacity. These reforms are expected to be tough given Malaysia's political conditions, requiring the mobilization of pro-upgrading coalitions as Doner and Schneider (2017) suggested.

The reflection upon the case of Malaysia's middle-income transition suggests the following policy implications for low and lower-middle-income nations, especially those of the ASEAN region engaging with the East Asian FDI- and export-led model.

First, the top priority requiring persistent efforts is to continuously upgrade the fundamentals for economic development, including human capital, innovation capabilities and indigenous capacity, which enables to sustain healthy structural transformation to higher value-added activities and effectively exploit the spillovers from and integrate with the FDI sector.

Second, regarding the institutional and political settings, besides the stability in general, it is always necessary to build pro-upgrading coalitions for formulating and implementing policies to support the upgrade of the fundamental factors. While often remaining a challenge for traditional democracies to come to consensus for upgrading efforts, it is indeed an advantage for authoritarian

states like Vietnam if they are able to proactively democratize and build consensus for upgrading policies that would enable the country to speed up its structural reforms and economic catch-up.

Third, it is essentially important to build a conducive business environment that guarantees a fair playing field for all stakeholders – be it state-owned, private, or foreign sector. While ensuring sufficient support for the FDI sector, it is crucial to effectively nurture the indigenous sector, which requires deliberate strategies to promote its technological capabilities and integration with the FDI sector and the world economy.

Finally, the governments have to be prepared for managing unforeseen shocks and resilience, which is decisive to maintain the optimism of the public and the domestic and foreign investors about the economic prospects of the nations. The recent military coup in Myanmar, the increasing risk of military conflict in the East Sea (South China Sea) facing Vietnam, or the recent global Covid-19 pandemic may disrupt the countries' growth momentum and change the course of their economic development if their leaderships do not take enough sound actions.

Policy makers in low and lower-middle-income nations like those of ASEAN region should pay strategic attention to all these issues from the early years of their economic catch-up endeavors in order to overcome unforeseen shocks and maintain sufficient growth momentum for successfully managing the middle-income transition.



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