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## The Middle-Income Trap : Some Asian Experiences and Lessons

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### Abstract

*What explains why only a handful of countries which have attained middle-income level have subsequently been successful in attaining income convergence with high-income countries, while most of their peers falter? The problem most face has been labelled as the "Middle-Income Trap." How, precisely, does the trap impact once-promising economies, and can China, the world's second largest economy, escape the trap? Are there examples China can emulate? The following pages elucidate these issues.*

The "middle-income trap" is an economic twilight zone in which economies that have already moved out of poverty and low income by attaining middle-income status (per the World Bank designation, the "middle income" refers to when a country achieves per capita gross national income of between US \$1,000 and \$12,000), cannot seem to jump to the next affluent "high-income" stage. An economy is deemed to be "trapped" when its growth momentum slows down and it becomes perpetually stuck in the middle-income range.<sup>1</sup> The trap is triggered simultaneously from two sides. On one side, rising wages, together with weak or stagnant productivity, render the middle-income economy uncompetitive with low-income and low-wage economies, especially in low-skill and labor-intensive assembly-based production. On the other side, the weak human capital base (at least compared to advanced economies) and limited productivity and innovation capability make them unable to compete with the advanced high-income and high-wage economies, especially in technology-intensive goods and services.

### Moving Up Is Hard

Unlike moving from a low-income to a middle-income economy, jumping to the next stage to a high-income country is far more difficult. This is not only because the initial advantages and endowments such as low-cost labor and easy technology adoption tend to disappear once these countries reach middle-income levels. Shifting from accumulation-driven growth into productivity-driven growth is difficult. A recent World Bank study (2012) reveals that despite concerted efforts, very few countries actually make the leap to high-income status. In fact, only 13 of the 101 countries deemed to be "middle-income" in 1960 had made the transition to "high-income" by 2011. The few success stories include South Korea, Hong Kong and Singapore, while the casualties of the trap are numerous. The ones that have languished include once fast-growing economies such as Malaysia, the Philippines, and Thailand, among others. According to a study by the Asian Development Bank

(Felipe 2012), in 2010, out of 52 middle-income countries, 38 were "lower middle-income" with per capita GDP between \$2,000 and \$7,250, and 14 were "upper middle-income" with per capita GDP between \$7,250 and \$11,750. Per the study, a lower middle-income country "has to attain an average growth rate of per capita income of at least 4.7 percent per annum to avoid falling into the lower middle-income trap," and an upper middle-income country "has to attain an average growth rate of per capita income of at least 3.5 percent per annum to avoid falling into the upper middle-income trap" (ibid.: 1). The study found that 35 out of the 52 middle-income countries were in the middle-income trap -- specifically, 30 have been in the lower middle-income trap for over 28 years, while five have been in the upper middle-income trap for over 14 years (ibid.: 1). However, eight out of the remaining seventeen middle-income countries not in the trap in 2010 are at risk of falling into the trap -- three into the lower middle-income trap and five into the upper middle-income trap (ibid.: 1). As Figure 1 demonstrates, moving up from middle-income to high-income is difficult, with only a handful of countries successfully making the jump since 1960.

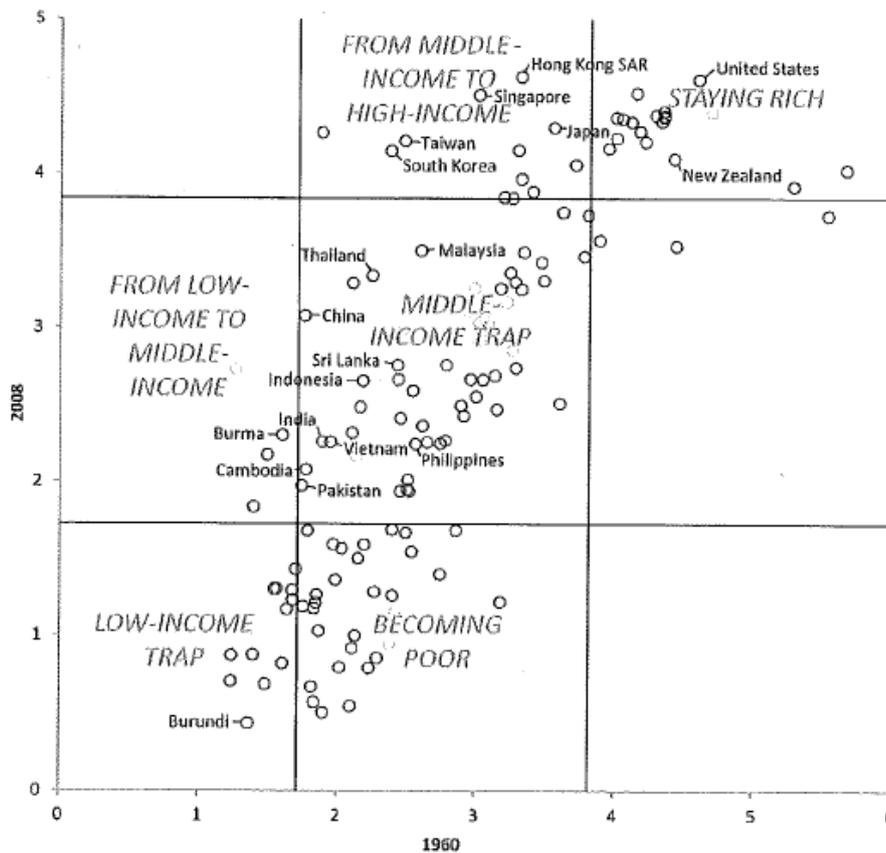
### **Caught in the Trap: Malaysia and Thailand**

The cases of Malaysia and Thailand -- once part of Asia's high-flying "Newly Industrialized Countries" or "NICs" -- are illustrative of why some countries are unable to move up the value chain. For some three decades before the Asian financial crisis of 1997, Malaysia had been among the best performing economies in the world, rapidly transforming itself from a backward plantation-based economy with a GDP per capita of around \$260 into a prosperous middle-income country with an impressive per capita GDP of just over \$8,000. Indeed, Malaysia's leaders proudly announced that by 2020 the country would join the ranks of the upper-income nations. However, Malaysia has not only struggled to recover from the 1997 crisis, its economy now seems inexorably caught in the middle-income trap and unable to make the leap to advanced income status. What went so terribly wrong? There are purely economic factors, including declines in both domestic and foreign investment and a shortage of human capital skills within the country to propel the economy forward. However, as Woo (2009) points out, Malaysia's challenges have been compounded by the country's outdated affirmative action policies, which have negatively impacted economic investment and growth. Specifically, the New Economic Policy (NEP), introduced in 1971 to assist the majority native Malays, or bumiputem, by providing them preferential access via explicit quotas in education, business and employment, including requiring both domestic and foreign companies to employ at least 30 percent Malays, has not only outlived its usefulness, it has become a huge burden on sustained economic growth. The granting of special privileges to a particular group has not only spawned cronyism and rampant corruption, it has also served to underutilize the skills and potential of the Chinese and Indian minorities -- who respectively comprise 23.7 percent and 7.1 percent of Malaysia's 28 million citizens. Frustrated and increasingly alienated by the government's discriminatory policies, the Chinese and Indian minorities have been voting with their feet by

emigrating in droves. For Malaysia, this drain of both human talent and capital (as the Chinese and Indian minorities are among the best educated and active in the country's commerce), has had a deleterious impact on economic growth -- in particular private sector investment, which declined from 32.7 percent of GDP in 1995 to 9.3 percent in 2007 (ibid.). Woo aptly notes:

By focusing too much on the redistribution of income and not enough on the generation of income, NEP rejects meritocracy and institutionalizes racism, thereby preventing full mobilization of human resources (e.g., denying top leadership positions to Chinese and Indians amounts to employing less than 60 percent of the national talent pool). [Having] ethnic quotas on ownership structure either discourages successful Chinese Malaysian firms from tapping the local stock market to fund expansion, or drives Chinese Malaysian firms to move their headquarters to foreign lands. This is why, unlike the Taiwan case, there are very few Malaysian firms that have moved from producing import-substituting (import-competing) goods to become major exporters of these goods. (2009: 1)

Figure 1: The Middle-Income Trap (per capita GDP relative to the United States, log of %, 1960 vs. 2008)



Source: Concept from World Bank 2012, using data from Maddison 2010.

Similarly, for some two decades prior to the Asian financial crisis of 1997, Thailand's GDP grew at an average annual rate of 8.5 percent. However, since the crisis, growth rate has declined to 4 percent. Although a sharp contraction of private investment was an immediate factor in the decline (as it reduced aggregate demand and incomes), the inability of Thai firms to diversify and upgrade their businesses and products—that is, move up the technological and productivity ladder—has been the real problem. While Thailand successfully moved from a low-income agrarian economy to an open middle-income economy specializing in export-oriented labor-intensive manufactured goods and services, moving to the next stage has proven difficult. Although Thailand has maintained prudent open-market policies with respect to international trade and foreign investment, has a relatively transparent and friendly business investment environment, has a good regulatory system, and has very good physical infrastructure in terms of roads, ports, power supply and telecommunications, what it lacks is the human capital base needed to move upward. Thailand has a largely urban workforce, whose average real incomes are significantly higher than low-income competitors, but its woefully ineffective and poorly-funded primary and secondary education system, including its universities, are not producing the skilled workers so necessary to move up to the next stage.

### **China at a Crossroads**

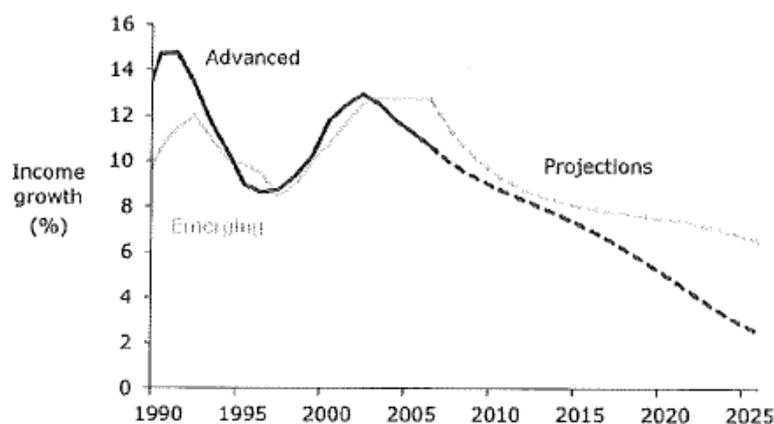
According to the Asian Development Bank (2012), China, after notching an impressive average annual growth rate of 9.9 percent from 1980 to 2011, is now firmly a lower middle-income country, as it has seen its per capita gross national income skyrocket from \$220 in 1980 to \$4,930 in 2011.<sup>2</sup> Undoubtedly, the stakes for China are high as it is now at a crossroads. If China fails to make the transition to a high-income country, there is concern that it may become trapped not as a middle-income country but as a *lower* middle-income country, with a per capita GDP hovering perennially around \$4,500 to \$5,000.<sup>3</sup> If this were to happen, China would not only have missed the opportunity to become relatively rich, but also continue to suffer the indignities that plague many lower middle-income countries: protracted low growth and political discontent.<sup>4</sup> Hence, the key challenge facing China is whether it can move past the middle-income trap and become a high-income economy over the next few decades.

What can and must China do to overcome the hurdles, and what must it assiduously avoid? What lessons can China learn from countries that have made the difficult transition? The following sections address these questions.

First, the good news: China's economy has some real strengths. The country has foreign-exchange reserves of over \$3 trillion and is burdened with only modest budget deficits. Nevertheless, Malkin and Spiegel (2012) predict that an economic slowdown is inevitable as China becomes an established

middle-income country. However, its vast geographical size, and, in particular, the country's "uneven development" may help it escape the middle-income trap (ibid.: 1). Specifically, Malkin and Spiegel suggest that growth in China's more-developed provinces may slow to 5.5 percent by the end of this decade, but this decline will be compensated by a more robust 7.5 percent growth in the less-developed provinces (ibid.). Nevertheless, they caution that China should not become complacent, as the country's long-term growth projections show a downward trend.<sup>5</sup> Their analysis (Figure 2) highlights both the observed and forecast growth for the two types of regions ("advanced" and "emerging" provinces) since 1990. Clearly, in the developed provinces, the forecast slowdown is rapid. This means that in a few years China's growth "will be concentrated primarily in the Chinese interior rather than in the more advanced areas near the coast" (ibid.: 4).

**Figure 2:** Observed and Forecast Growth: Advanced and Emerging Regions of China



Source: Malkin and Spiegel (2012). Used with permission.<sup>6</sup>

Now the bad news: for starters, constrained external demand in the United States and other advanced economies has already (and will continue to) negatively impact China's exports. Also, China's massive investments in fixed assets are already producing diminishing returns—not only because of over-investment and massive misallocation of resources, but also because as the marginal productivity of capital declines, excessive reliance on factor accumulation only produces diminishing returns. China's state-owned enterprises, which dominate the industrial and manufacturing sector, are not only less profitable than many of the small private sector companies, they are also inefficient, with a poor track record for innovation and profitability. Indeed, given the size of its economy, China has very few companies with international reputation. The bulk of China's high-tech exports are produced by foreign firms. Similarly, the blessings of demographic dividend, bestowed on China and a number of East Asian economies are a one-time boost. Like Japan before it, now for China the demographic window of opportunity is fast closing (Bosworth 2012).

Not only is the large pool of surplus rural labor that provided the engine of China's export-led boom fast shrinking, in urban China growth in labor cost, as measured by real wage growth, has been

consistently exceeding growth in labor productivity since 2008 (Cai 2012; Zhuang 2012). With China's working-age population likely to peak in a few years (Zhuang 2012), and coupled with a rapidly aging population, labor cost will become even more expensive. Eichengreen et al. (2013) point out that economic slowdown is more likely for countries that maintain undervalued exchange rates (and Chinas currency manipulation and neo-mercantilist strategies have been the subject of much criticism), because it "provide[s] a disincentive to move up the technology ladder."

How can China avoid the middle-income trap? In its ambitious 12th Five-Year Plan (2011-15), Beijing has targeted seven strategic sectors as investment priorities. These are green energy and environmental protection, next generation information technology, bio- technology, advanced equipment manufacturing, new energy, new materials, and new- energy vehicles. If these targets are to be realized, there is broad consensus that China must simultaneously invest in human capital to upgrade worker skills to enhance productivity and innovation, and reform the institutional order to allow for greater individual creativity and experimentation. Although China has a good track record when it comes to overall student enrollment, and in recent years has increased financing for education, these have not effectively translated into improved educational outcomes. Like Malaysia and Thailand, Chinas educational system is not producing enough skilled workers needed for knowledge and technology-intensive sectors. To mitigate, Beijing will have to invest massively in its educational system at all levels to dramatically improve not only the quantity, but, more importantly, quality so essential to successfully compete in a high-tech and knowledge-based economy. Eichengreen et al. (2013) note that growth 'slowdowns are less likely in countries where the population has a relatively high level of secondary and tertiary education and where high-technology products account for a relatively large share of exports." The implications are clear: growth in China, in particular its move from a low-cost to a high-value economy, cannot be achieved by simply adding more capital and labor. Rather, growth will increasingly be driven by productivity improvement through innovation and skills upgrading. For this to occur, investment would need to flow into sectors with the highest returns on capital. Of course, this also means that the financial sector must improve credit allocation and ensure that productive firms have access to essential financing.

Beijing will also have to limit government intervention in the economy, especially the states pervasive control over the financial sector, and provide real incentives for private enterprise. Moreover, the authorities will have to directly confront the pervasive problem of corruption and establish a well-regulated and transparent institutional legal and administrative system essential for private enterprise to thrive. Without such changes, China will not be able to climb the technological ladder to the coveted high-income status. Finally, China will have to "rebalance its economy" by reducing its current investment and export-led growth model to one that is based on domestic consumption. Of course, a successful shift to domestic demand will first require a more equitable

income distribution. China's Gini coefficient increased from 0.3 in the early 1980s to between 0.47 and 0.49 by mid-2000—among the highest in the world (Lardy and Borst 2013)<sup>7</sup> Such a high level of inequality severely limits household consumption, and coupled with the absence of a social safety net, especially in health care and education, forces households to engage in discretionary savings.

### **Some Lessons from South Korea**

None of these reforms will be easy to implement. However, they are not impossible, either. Here, the experience of South Korea provides some instructive lessons for China. In a relatively short time, the South Korean economy went from a per capita income level of around \$2,000 in 1960 to a GDP per capita of \$28,000 (in PPP) by 2008. South Korea's sustained investment in improving its human capital base, in particular the expansion of both secondary and tertiary education, has been essential to its successful transition from middle-income to high-income status (Eichengreen et al. 2013; World Bank 1993). Yet the pathologies associated with South Korea's excessively state-controlled economy were the key factor why the Korean economy succumbed so easily to the 1997 Asian financial crisis. Specifically, "crony capitalism" rooted in the ubiquitously corrupt relationship between the country's chaebols (or large industrial conglomerates, which share similarities with China's state-owned enterprises), the banking sector and the state created systemic structural distortions in the economy (Sharma 2003). However, in the aftermath of the crisis of 1997, the Korean authorities embarked on a broad and ambitious goal to radically clean up their economy. Unlike their American European and Japanese counterparts, who have been only too happy to kick the proverbial can down the road or buy time via massive stimulus spending, the Korean authorities showed purpose and resolve and opted to implement painful, yet necessary, structural reforms.

For example, attempts to reform the country's powerful chaebols were met with much resistance. Yet the authorities were able to weaken, if not break, the paternalistic (and favorable) relations these monopolies received from the state, including easy financing from state-owned banks. Chaebols which failed to measure up or were deemed beyond repair were dealt with strictly, such as in the case of the once all-powerful Daewoo Group, which was forced to undergo humiliating bankruptcy and restructuring in 1999. The dissolution of the Daewoo Group (the fourth largest chaebol in South Korea), was a stern warning to others that no company was "too big to fail." Such bold measures have helped transform the consolidated chaebols into world-class firms. Similarly, painful yet necessary labor market reforms were implemented to raise productivity and to make Korean exports more competitive internationally.

Reforming the country's heavily regulated financial sector also proved challenging. Yet studiously following the recommendations of the 1997 "Presidential Commission on Financial Reform," the Korean authorities put in place far-reaching reforms, including promptly closing a number of

problem banks and restructuring 12 of the 32 largest banks through mergers and recapitalization; increasing the existing banks' capital requirements; strengthening the viable banks' balance sheets by providing them much-needed liquidity in order to get them to restart lending; establishing the Financial Supervisory Commission (FSC) in 1998 and the Financial Supervisory Service (FSS) in 1999 to enhance prudential regulation; establishing the Korea Deposit Insurance Corporation (KDIC) in 1996 to insure bank deposits, including deposits in securities companies, insurance companies, merchant banks and savings banks to limit the problems arising from systemic risk; creating a publicly funded corporation (the Korea Asset Management Corporation, KAMCO) to purchase non-performing loans; and enhancing the Bank of Korea's financial and regulatory powers to improve transparency and oversight, and reduce political influence. In addition, swift adjustments in fiscal and monetary policies, including prudent depreciation of the real exchange rates, helped boost recovery.

Tackling the economy structural problems head-on (rather than engaging in quick fixes), the Korean economy rebounded quickly to rapid economic growth by late 1998. Indeed, Korea's experience shows that the middle-income trap is not destiny. To the contrary, countries which are proactive by putting in place prudent policies and implementing necessary reforms can overcome the so-called middle-income trap.

## Notes

1. Drawing on data in the Penn World Table (which reports per capita incomes for 189 countries over six decades), Eichengreen et al. (2011, 2013), define "fast growth" as 3.5 percent or higher. Countries that maintain per capita GDP growth of at least 3.5 percent a year on average for seven years are considered fast growth economies. On the other hand, "slow growth" means that average growth is at least 2 percentage points slower in the subsequent seven years compared to the previous seven. The authors also find slow-downs tend to bunch at particular levels of income.

2. According to Woo's (2012) "Catch-Up Index" (CUI), China became a middle-income country in 2007-2008. It now faces "five major types of middle-income trap" vulnerabilities, including "(a) fiscal stress from the nonperforming loans generated by the interaction between the lending practices of the state banks and the innate desire by state enterprise managers to over-invest and embezzle; (b) the frequent use of macro-stabilization tools that hurt long-term productivity growth; (c) flaws in socio-political governance that exacerbate social tensions; (d) ineffective management of environmental challenges that threaten sustainable development; and (e) inept handling of international economic tensions that could unleash trade conflict" (ibid.).

3. Indeed, Eichengreen et al. (2013) show "that a larger group of countries is at risk of a growth slowdown and that middle-income countries may find themselves slowing down at lower income

levels than implied by our earlier estimates.”

4. It is not the case that countries caught in a middle-income trap will not experience any growth. Rather, growth will continue, but at a pace that is much lower than if these countries had graduated to the high-income level.

5. Malkin and Spiegel's (2012) predictions are based on broad statistical analysis. They divide China's provinces into high- and low-income, and then, using data from a group of selected high-growth Asian economies (Hong Kong, Japan, South Korea, and Taiwan, from 1950 to 2009), conduct statistical analysis to predict expansion rates for both the high- and low-income provinces based on their current income levels. The authors note that “[o]ur results indicate that growth of the wealthier portion of China is likely to slow, but substantial room remains for continued growth in China’s interior. For example, among the advanced Chinese provinces, average growth is predicted to slow to 7% in the five years beginning in 2016. However, growth among China's emerging provinces is not expected to fall to that rate until sometime during the five years beginning in 2024. Thus, the emerging Chinese provinces are predicted to enjoy more than an additional decade of high growth before succumbing to the middle-income trap” (2012: 2).

6. Data calculated from CEIC database and Penn World Table, Version 7.1. Image reprinted from the Federal Reserve Bank of San Francisco FRBSF Economic Letter, October 15, 2012. The opinions expressed in this article do not necessarily reflect the views of the management of the Federal Reserve Bank of San Francisco, or of the Board of Governors of the Federal Reserve System.

7. A common measure of inequality, the Gini coefficient varies between 0 (complete equality) and 1 (complete inequality). In the case of China, after almost a decade of delay, Beijing finally released annual Gini coefficients statistics going back to 2003 (Lardy and Borst 2013).

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