6. The Middle-Income Trap and China's Growth Prospects

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Introduction

China reached the upper-middle income level in 2012 by the World Bank's criterion. There has been increasing debate about whether China's growth will be sustainable in the future. Will China follow the countries—notably, some in Latin America—that have fallen into the so-called 'middle-income trap': a situation in which a country's catch-up process stops once its per capita income reaches the middle-income level?

While the term 'middle-income trap' has been widely used, there is no precise definition of what it really means, and the understanding of the characteristics of the trap is also inadequate. This chapter is aimed at providing a general description of the middle-income trap and, drawing on the comparison between China and those successful economies in history, discusses China's prospects of avoiding the trap.

Section two provides a brief introduction to various approaches to defining the middle-income trap, and, using a case of success, Korea, as a benchmark, we show that both the relative-income criterion and the absolute-income criterion suggest the existence of this trap. Section three turns to the characteristics that distinguish those 'successful' economies from the 'failed' ones. It first provides a framework for analysis that synthesises the neoclassical economic growth model, the endogenous growth model, the structural change model and the political economy model. It then compares the successful and failed economies on several key growth drivers identified by the framework. It finds that among various economic, social and political indicators, investment, education, demographic structure, the manufacturing sector and income distribution are the most relevant to the middle-income trap. Drawing on these observations, section four compares China's characteristics with those of successful countries in history. By and large, China is quite similar to these countries in many aspects, providing a positive outlook for China's future growth, but some of China's distinctions, including its exceptionally high saving and investment rates and rising income inequality, pose some potential risks to the sustainability of its economic growth. We conclude in section five.

What is the middle-income trap?

The notion of the middle-income trap was proposed in a World Bank report, *An East Asian Renaissance: Ideas for Economic Growth* (Gill and Kharas 2008), and in Kharas and Kohli (2011). In these and other works the authors describe the middle-income trap as a situation in which 'countries that avoid the poverty trap and grow to middle-income levels subsequently stagnate and fail to grow to advanced-country levels' (Kharas and Kohli 2011, p. 281). A precise definition of the trap, however, is not as straightforward as it seems at first glance. We have to set an appropriate criterion for identifying the failed countries which accord with the above description, but there is always some arbitrariness behind a criterion.

In general, three approaches are used in recent discussions. First, some literature relates the middle-income trap to growth slowdowns (for example, Eichengreen et al. 2013). The middle-income trap can be redefined as a phenomenon in which fast-growing economies slowed significantly before their per capita GDP reached the high-income level. Eichengreen et al. (2013) find that while there was considerable dispersion in per capita income at which slowdowns occurred, two ranges are more common: one in the range of $10 000–11 000 and the other $15 000–16 000 (2005 purchasing power parity [PPP] dollars). The growth slowdown is, however, not equivalent to the original meaning of the middle-income trap. Slowdowns could be a natural outcome of growth itself, as predicted by classic growth theory. They can also happen for cyclical reasons. What really matters is the *stage at which* the growth slowdown occurs. Thus, the key to tackling this problem is a definition of income levels, which forms the foundation of the next two approaches.

The second approach classifies countries by their *absolute per capita income* and investigates their long-term transition between different income groups. The World Bank's income classification system is the most widely used to accomplish such a task. Per capita gross national income (GNI) is considered the best single indicator of a country's economic capacity. The Bank explains that $480, $1940 and $6000 (at 1987 price levels) were established as the original thresholds for lower-middle income, upper-middle income and high income respectively, and the Bank updates these thresholds annually according to the international inflation rate. In other words, the *real* income levels defined by this method remain constant over time.

Using this criterion, we describe the income transition of 104 countries (the largest set of countries with available data) between 1970 and 2010 in Figure 6.1. The horizontal axis represents real per capita GNI (in log terms) in 1970 and the vertical axis in 2010, respectively. The three horizontal lines indicate the three income thresholds described above, and so do the three vertical lines. Thus, the quadrant is divided into 16 parts, each of which represents a type of income transition. For example, China lies in the sub-area in which the first column overlaps with the third row (count from the origin), indicating that China moved from the low-income group in 1970 to the upper-middle income group in 2010. The figure shows that most countries realised growth in an absolute sense, although only 13 countries declined during this period. In comparison with the large group of countries stuck at the middle-income level, however, only 16 middle-income countries in 1970 entered the high-income group by 2010.

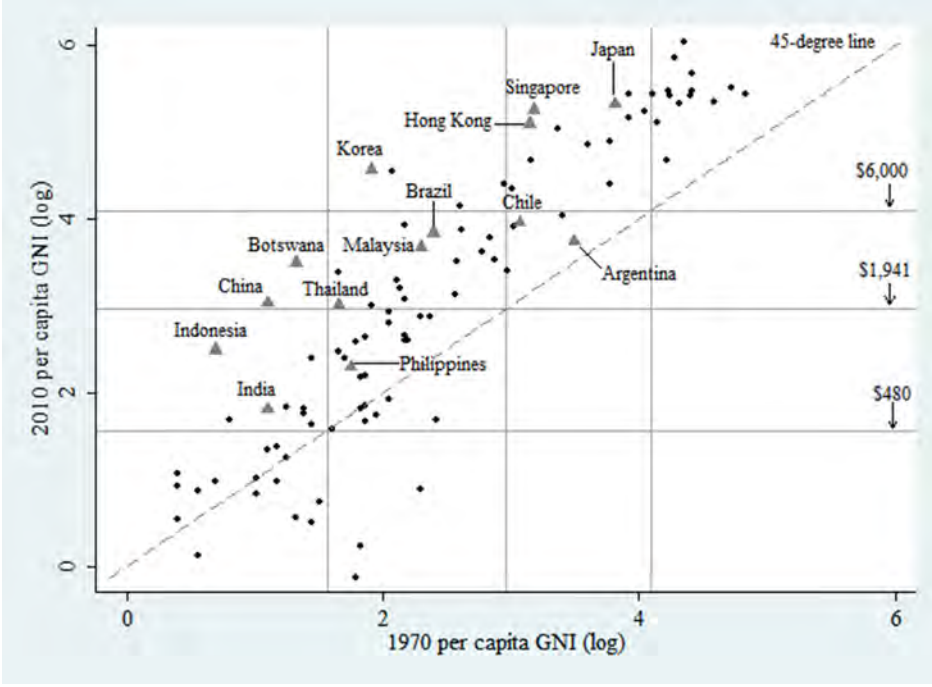

Figure 6.1 (Absolute) Income Transition in the World, 1970–2010

Source: World Bank (2013).

Despite the convenience offered by the absolute criterion, one may be concerned that this approach fails to reflect whether a less-developed country has caught up with more developed countries. A *relative-income* classification system provides a remedy in this sense. We define a country's relative income as the ratio of its absolute per capita income to that of the United States; however,

a key difficulty arises when we consider how to establish the thresholds for middle-income and high-income groups. In order to reduce the arbitrariness as much as possible, we attempt to find a benchmark country which is generally believed to have successfully caught up with developed countries from a lower-income stage, and make our thresholds consistent with the relative income level of this benchmark at each stage. Korea, a case of success, may serve this purpose. The Korean economy took off in the early 1960s when its per capita income was 7 per cent of the American level. It then rose to 44 per cent of the American level in the mid 1990s when the World Bank accepted Korea as a high-income country. We then set these two levels of relative income as the thresholds for the middle-income and high-income groups, respectively. This approach tells us whether a country ever achieved Korea's initial relative income and whether it finally reached Korea's relative income in the mid 1990s. In short, it shows whether a country has succeeded in raising its relative income as well as Korea has achieved.

Figure 6.2 presents the income transition in the world between 1960 and 2010 using the above relative criterion. The results can be explained in the same way as those of Figure 6.1. The only difference here is that we turn to using relative instead of absolute income. Among the 88 low-income or middle-income countries in 1960, only 23 raised their relative income by at least 10 percentage points, and only 12 crossed the threshold for high-income countries. In contrast, more than half failed to narrow their income gap relative to the United States.

Despite the differences, the absolute-income criterion and the relative-income criterion draw some robust conclusions. First, the middle-income trap does exist. Most of the middle-income countries of 1960 or 1970 have failed to escape from this group. The exceptions are few. Japan, the 'Four Little Dragons' of East Asia and a few southern European countries are cases of success, while Brazil, Argentina, the Philippines and Malaysia are cases of failure.

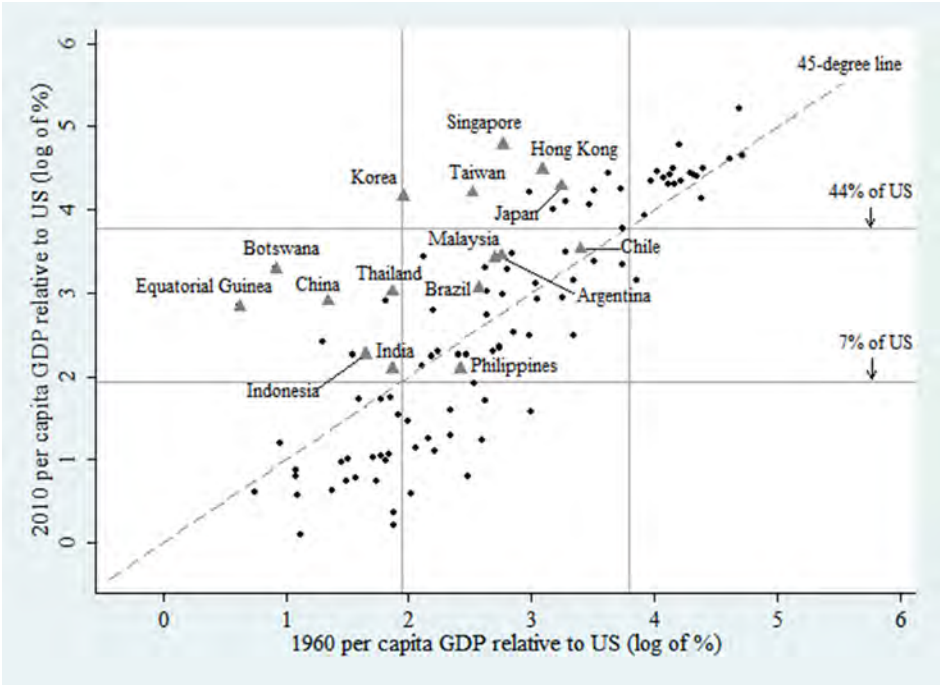

Figure 6.2 (Relative) Income Transition in the World, 1960–2010
Source: Penn World Table (*PWT 8.0*).

What characteristics distinguish 'successes' from 'failures'?

Since the middle-income trap does exist for whichever criterion we use, the next question is what characteristics distinguish those successful countries from the failed ones. In this section, we compare a series of economic, social and political indicators between the two groups of countries, and summarise their key differences.

Before we start the comparison, we provide a framework synthesising the neoclassical growth model, the endogenous growth model, the structural change model and the political economy model. In the standard Solow–Swan model, capital accumulation is the key driver of economic growth before a country reaches its steady state of growth. So the first set of indicators we use for our comparison includes consumption, savings and investment. Then, according to the endogenous growth model, human capital accumulation and technological change are two key drivers of economic growth. The second set of indicators we include for our comparison comprises education, health conditions and

demography in a country/region. Unlike other similar studies, we put more emphasis on the role of structural change in defining a country's path to economic prosperity. It has already been established by theory and empirical work that structural change in a country takes the following trajectories: the share of agricultural employment (output) in total employment (national GDP) declines over time; the share of service employment (output) in total employment (national GDP) increases over time; and the share of manufacturing employment (output) in total employment (national GDP) follows an inverted U-shaped curve—increases first and then declines after a certain point. The most interesting pattern is the inverted U-shaped curve of the manufacturing sector. If a country reaches the turning point too early, or if its employment share does not increase to a certain level, that country may not be able to complete its industrialisation process and therefore may more easily fall into the middle-income trap. Related to this, we also look at a country's export structure. There has been a long debate on whether the export-led growth model helps a developing country to successfully catch up with advanced countries. We look not only at how much a country exports, but also what a country exports. In particular, we compare a country's manufacturing exports with its primary goods exports. Finally, we also consider some of the implications of the political economy model. In particular, we want to see if democracy is necessary and if corruption and political instability are detrimental for a country to leap over the middle-income trap. We also look at how income inequality differs between the successful and the failed economies. Our approach is empirical. We want to look at as many indicators as possible to identify the necessary conditions for a country to avoid the middle-income trap.

Two points are worth mentioning. First, to improve the comparability between the two groups, our comparison starts in the year when a country reached the middle-income level instead of a specific calendar year. We determine this starting point for each country according to its absolute income level. Since the data for GNI per capita provided by the World Bank are usually missing for observations in early years, we use data of GDP per capita from the Penn World Table (*PWT 8.0*) instead. To make it consistent with our definition in section two, we still use Korea as a benchmark, and choose $2000 (2005 PPP dollars) as the threshold.[1] Korea reached this level of income when it was classified as a middle-income country according to the World Bank criterion. Thus, a number of countries with high initial levels after World War II (mainly the highly developed economies in Europe and North America) are excluded from our analysis.

1 We also check the robustness by changing this threshold to $1500 or $2500, but the result does not differ much.

Second, we need to determine an appropriate length of time for comparison—that is, a 'normal' number of years a country spends in the middle-income category. Once we determine this number, we also set a threshold for failure. In other words, the failed countries usually spent significantly more years at the middle-income stage than this number.[2] Once again, we use typical successful countries as a benchmark. With just a few exceptions, most successful economies spent less than 30 years in the middle-income stage. For example, Korea, Taiwan and Japan stayed in the middle-income stage for 24, 29 and 27 years, respectively.[3] Instead, typical failed economies usually stayed in this category for more than 30 years, and some of them have been trapped for 40 or 50 years. Thus, we set 30 years[4] after entry into the middle-income group as the comparable time span. Actually, following the above steps, a new 'axis of time' has been established, and then we calculate the *within-group* average of each indicator for the two groups in a specific year on this axis.

Investment and savings

Figure 6.3 compares the shares of saving and investment in GDP between the two groups. The saving rate of the failed group ('*stay in middle*') remains at a relatively stable level while that of the successful group ('*from middle to high*') rose significantly from 15 per cent—almost the same level as the failed group—to 35 per cent within the first two decades. High saving inevitably led to high investment. The investment rate of the successful group rose quickly above 40 per cent during the corresponding period. In comparison, the failed group experienced only a modest increase.

Interestingly, the figure also indicates that the investment ratio of the successes has been higher than that of the failures at the starting point, while their saving rates were still comparable then. The difference between saving and investment arises from the portion of net exports, as shown in Figure 6.4. The successful group initially had a higher ratio of (merchandise) trade deficits, implying more capital inflows at their early stage of development.

2 In section one, we just generally discuss the long-term income transition after World War II instead of explicitly establishing such a threshold.

3 Using Korea as a benchmark, we set $15 000 as the threshold for high income.

4 Certainly, there is some arbitrariness when we use this number as the threshold for failure. We check robustness by changing it to 35 or 40 years. The result does not differ much.

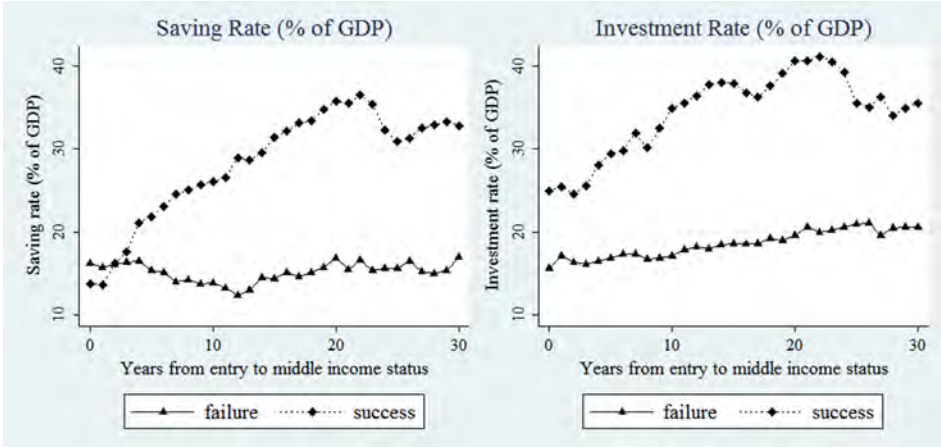

Figure 6.3 Savings and Investment

Source: Penn World Table (*PWT 8.0*).

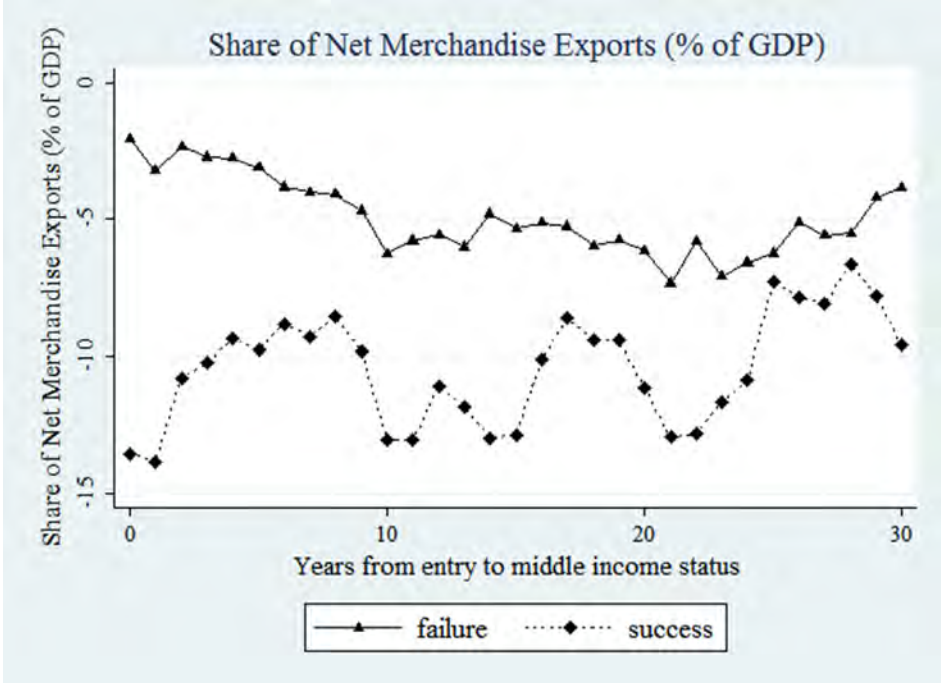

Figure 6.4 Net Merchandise Exports

Source: Penn World Table (*PWT 8.0*).

Manufacturing sector

Figure 6.5 presents the ratio of manufacturing value added to GDP in the two groups. A remarkable distinction arises: except for the early period, the manufacturing sector in the successful group had a much larger share than in the failed group. The general rule of structural change tells us that the development of the secondary sector should follow an inverted U-shaped curve. The successful group followed this rule. On average, its members reached the highest point of this curve in the twentieth year after they entered the middle-income stage; however, the path of the failed group fluctuated during the corresponding period. The trapped countries failed to complete their industrial transformation despite various supporting policies.

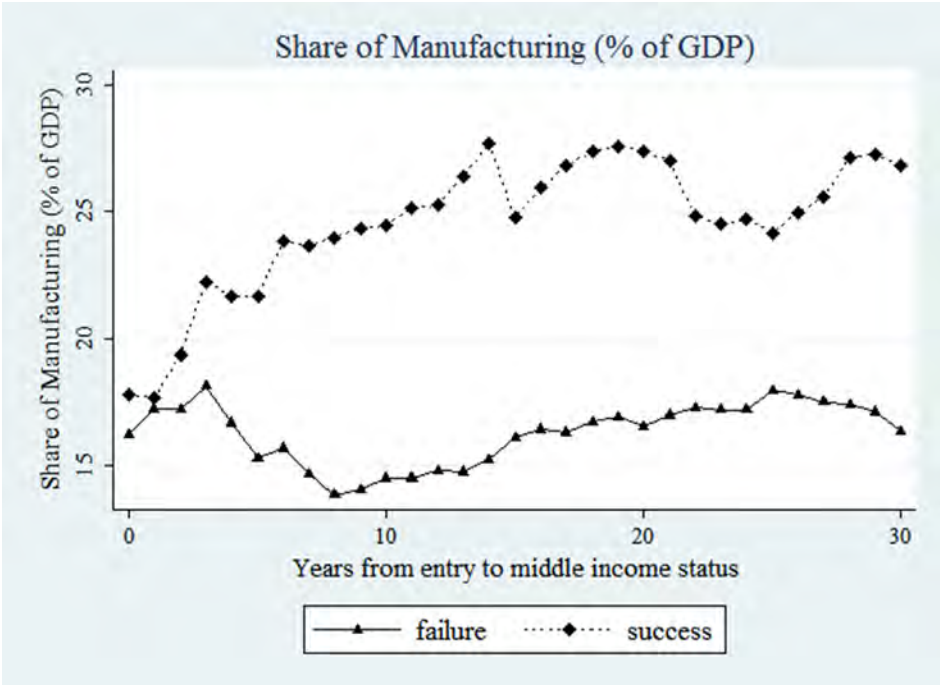

Figure 6.5 The Manufacturing Sector
Source: World Bank (2013).

Trade openness

Trade openness, defined as the ratio of total trade to GDP, is shown in Figure 6.6. It is surprising to find this share is much higher in the failed group than in the successful group, and this relationship emerged before they reached the middle-income level. The successful group has, however, experienced

a significant rise in trade openness throughout their middle-income stage while the failed group stayed almost flat. Therefore, it seems that trade is a consequence, not a cause, of growth. Alternatively, it could be that the *level* of trade does not matter for growth in a middle-income country, but the *growth* of trade does.

Figure 6.6 Trade Openness

Source: Penn World Table (*PWT 8.0*).

Trade patterns

Figure 6.7 shows how the trade patterns of the two groups changed over time. We calculate the Balassa index of revealed comparative advantage (RCA) for primary goods and manufactured goods. RCA is the proportion of a country's primary (manufactured) goods exports divided by the proportion of the world's primary (manufactured) goods exports. The result shows that the successful countries had a higher RCA for manufactured goods exports but a lower RCA for primary goods exports—that is, they were more specialised in exporting manufacturing goods. In contrast, the failed group was more specialised in exporting primary goods. More intriguingly, this distinction emerged before they attained middle-income status. This suggests that the difference in trade

patterns between the two groups may not be an outcome of their divergence in economic growth in the middle-income stage, but was more likely to be a 'predetermined' condition arising from their previous development.

From Figures 6.6 and 6.7, we see that what a country exports is more important than whether it exports at all as far as economic growth is concerned. Exports of manufacturing help economic growth because the manufacturing sector has higher technological growth rates than primary goods sectors. In addition, the export of manufacturing goods has no limit while the export of primary goods is constrained by the stock of natural resources.

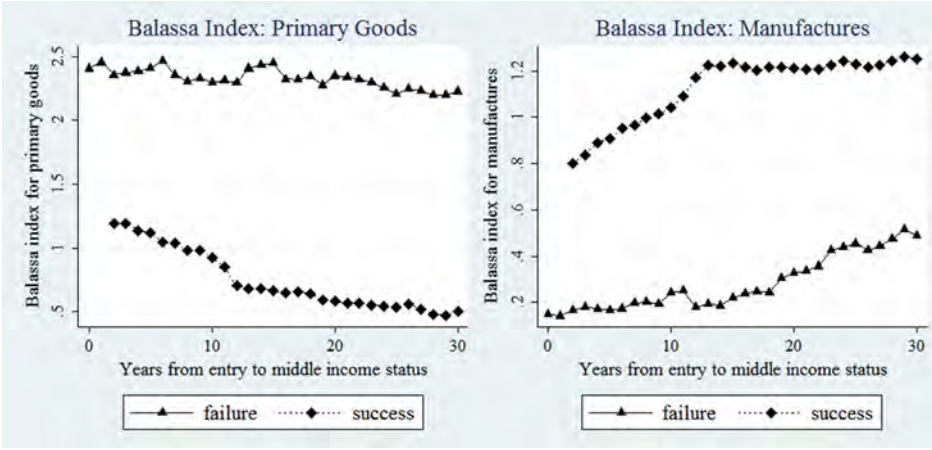

Figure 6.7 Trade Pattern: RCAs

Source: United Nations, Comtrade (<http://comtrade.un.org/>).

Note: The first two observations of the successful group have been dropped because the data are unavailable for most countries in this group.

Education

Figure 6.8 shows marked gaps in the level of education between the two groups. Two measures—average years of total schooling and average years of secondary schooling—are presented here. Both groups experienced a significant increase in the average schooling years, but the successful group had a higher level of education than the failed group, and this gap existed throughout the whole time span. In this sense, the level of education, which to a large extent represents the human capital accumulation of a country, is likely to be a driving force behind economic growth.

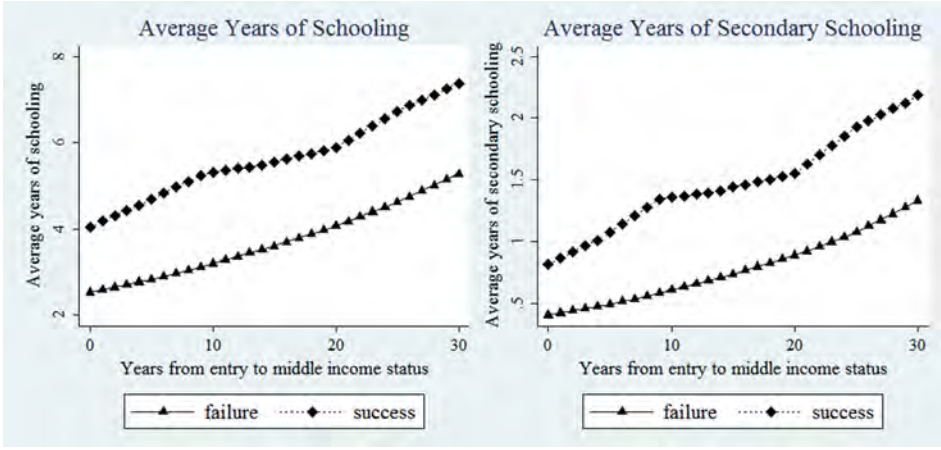

Figure 6.8 Average Years of Schooling: Total and Secondary

Source: BarrodLee Dataset v.1.3 (Barro and Lee 2010).

Demography and health

Figure 6.9 shows how the two groups of countries differ in demographic structure and life expectancy. The dependency ratio, defined as the ratio of dependents—people younger than 16 or older than 64—to the working-age population, declined in both groups; however, the decrease of the successful group was much sharper, and the gap between the two groups widened over time. On the other hand, both groups of countries raised the life expectancy of their population by about 10 years during the three decades; however, the level in the successful group was higher than in the failed group, and their gap remained about eight years throughout the whole period.

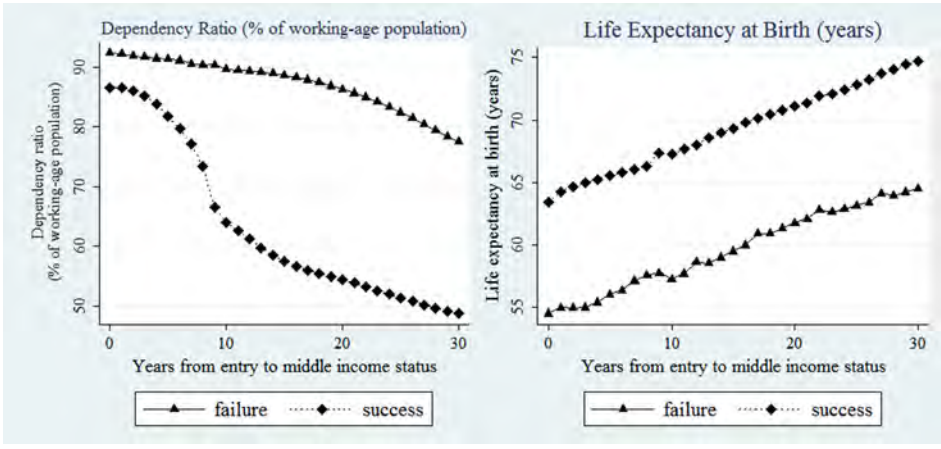

Figure 6.9 The Dependency Ratio and Life Expectancy

Source: World Bank (2013).

Income inequality

Income distribution is an important factor that may affect the process of economic development, though the relationship is quite controversial. Table 6.1 displays the average income Gini coefficients of the two groups. Since the data for Gini coefficients are unavailable for many years, we divide the whole period into three decades and calculate the average for each decade. Obviously, the failed group had a more unequal distribution of income throughout the 30 years, indicating that severe inequality may hinder a country moving out of the middle-income trap. This is consistent with the historical experience in some typical cases of failed countries, such as Brazil and the Philippines.

Table 6.1 Income Inequality

Group	Income Gini coefficient			
	First decade	Second decade	Third decade	30 years average
Failure	50.0	51.4	49.7	50.9
Success	35.4	35.2	35.6	35.4

Source: UNU–WIDER (2008).

Democracy and conflicts

Figure 6.10 (left-hand panel) compares the level of democracy between the two groups. We use the aggregate democracy index provided by *Polity IV* (Center for Systemic Peace 2012), which indicates to what extent a country's polity is democratic. Interestingly, there is no obvious distinction in this index between the two groups during the initial period. The divergence occurred at the later stage of development—that is, about 20 years after a country became a middle-income country. If we look at the democracy index of the two groups at the end of the 30-year span, the successful group did have a more democratic polity than the failed group. In this sense, democracy is more likely to be the outcome of economic growth than a necessary condition for it.

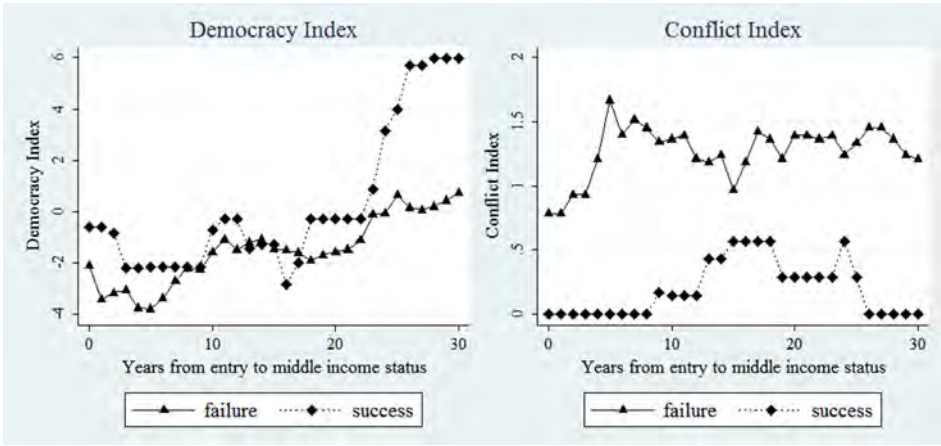

Figure 6.10 Democracy and Conflict

Sources: Center for Systemic Peace (2012); Marshall (2010).

Figure 6.10 (right-hand panel) compares conflicts in the two groups. The conflict index is obtained from the Major Episodes of Political Violence (MEPV) dataset and indicates how many domestic and international conflicts a country has in a specific year. Despite peaks in the middle of the time span, the successful group generally had fewer conflicts than the failed group throughout the 30-year span.

In summary, the successful economies are generally characterised by high saving rates, deeper industrialisation, high levels of education, more favourable demographic structures, a peaceful environment and more equal distribution of income. Most of these factors have long been established as key drivers of economic growth. The new finding is about industrialisation. We find strong evidence that deeper industrialisation in terms of both its duration and its share in the national economy helps a country to overcome the middle-income trap. Related with this finding, a country which is more specialised in exporting manufacturing products is more likely to overcome the middle-income trap than a country which is more specialised in exporting primary goods. These findings are pertinent to China, which we will turn to in the next section.

It is also worth mentioning that failed economies have failed for various reasons while the successful economies share strong commonalties, just as Tolstoy said in the opening of his novel *Anna Karenina*: 'Happy families are all alike; every unhappy family is unhappy in its own way.' A failed economy may share some of the success factors with the successful economies, but a key negative factor may put it in the middle-income trap. One of the examples is the Philippines. It was regarded as a star among developing countries in the early 1960s, which was why the Asian Development Bank (ADB) set up its headquarters in Manila.

In the early 1960s, the average Filipino enjoyed an income five times that of the average Chinese. Today, the fortunes of the two countries have been reversed: the average Chinese enjoys an income twice that of the average Filipino. It is widely recognised that the failure of the Philippines has been caused by its rigid social structure, which is still dominated by powerful families. Other countries may have failed for other reasons. The bottom line is, there are no universal causes for countries failing to escape the middle-income trap. For this reason, our approach to find the commonalties among the successful economies is better than regression-based analysis. Take the example of education. It is one of the commonalties among the successful economies; however, some of the failed economies also have relatively high levels of educational attainment among their population, yet one key failure may just hold them in the trap. As a result, a regression-based analysis would find that education is not a driver for a middle-income country to grow rapidly; but this may be caused only by a 'sticky' failure factor such as the rigid social structure in the Philippines.

Will China be able to avoid the trap?

In 2011, China's per capita GDP rose above $8000 (2005 PPP dollars). Korea reached the same level in 1987 and maintained an annual growth rate of 8.3 per cent in the next decade. It was also during that period that Korea crossed the World Bank's threshold for high-income countries. Will China be able to follow the development path of Korea and avoid the middle-income trap? In this section, we discuss how China is comparable with those successful economies described above, and the risks confronting China. A better understanding of these issues will provide us with a more reasonable sense of China's future growth.

Similarities

High saving and high investment

China has experienced a remarkable rise in saving and investment since the 1990s, as shown in Figure 6.11. This trend has been even sharper recently, which has raised serious concerns. This phenomenon should be viewed from two perspectives. On the one hand, as we have shown previously, a rising saving rate is among the most significant characteristics of successful economies in their rapid-growth stage. On average, their saving rate increased from 15 per cent at the starting point to a peak of 35 per cent at the end of the second decade. In this sense, China's performance in this field is similar to that of the successful economies in recent history. In addition, a rising saving rate is not a feature

specific to the early period, but a long-term one. It existed almost throughout the entire middle-income stage in the successful economies. Because China is still far from the high-income threshold, its saving and investment rates will probably remain at relatively high levels for some time.

It is, however, worth noting that China's saving rate rose to 50 per cent by 2011—an amazing level even compared with the successful economies. For example, during the rapid-growth period, Korea's highest saving rate was around 40 per cent. A large set of literature has attempted to interpret this puzzle from various aspects, such as precautionary savings, rising housing prices and income distribution. A detailed discussion of this issue is beyond the scope of this chapter. Our comparison just reminds us to view the impact of China's high saving rates cautiously.

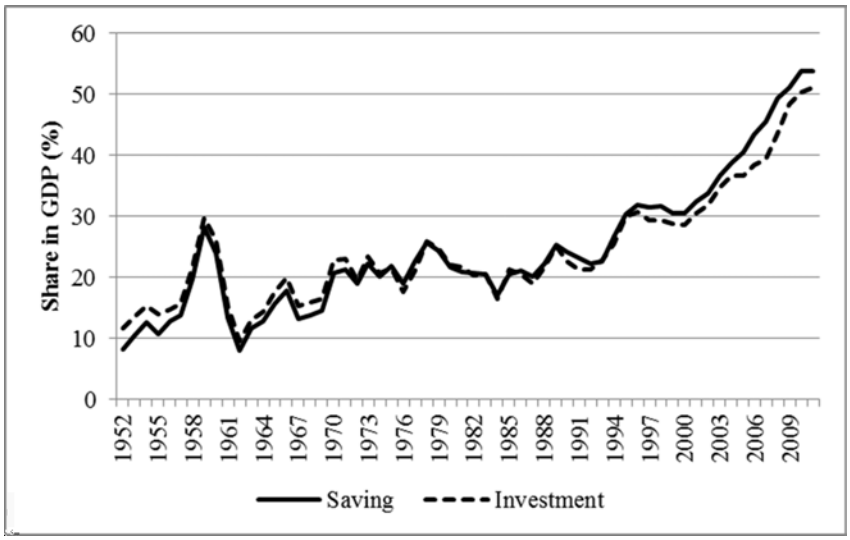

Figure 6.11 China: The Saving Rate and Investment Rate, 1952–2011
Source: Penn World Table (*PWT 8.0*).

Manufacturing-led growth

We have shown that the successful transition from an agriculture-based economy to a manufacture-led economy is of great importance for middle-income countries. As a legacy of its command economy, China has a high share of the manufacturing sector relative to its initial income level. Figures 6.12 and Figure 6.13 present the shares of the primary sector, secondary sector and tertiary sector in GDP and total employment. Except for the 1980s, the secondary sector maintained a stable share in GDP during the reform era. Its share in employment followed a different path. It stabilised around 23 per cent between 1986 and 2002, but has begun to rise since 2003, probably because China's accession to the World Trade Organisation (WTO) ignited a new wave of industrialisation in

China. No matter which measure we use, it is certain that the secondary sector plays a dominant role in China's economy, which is similar to the experience of successful economies at the same stage of development.

The performance of China's secondary sector during the transitional period also stands in marked contrast to some Latin American countries which have experienced 'de-industrialisation' in their transition era. Their industrial sectors established in the import-substitution era have suffered continuous decline since the 1980s. In this sense, China has managed its economic transition more smoothly and established a firm foundation for its fast growth.

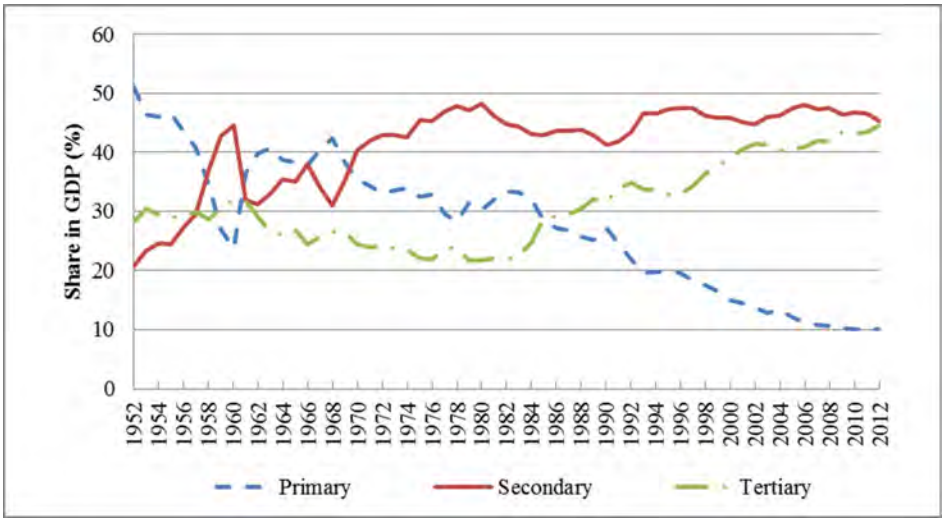

Figure 6.12 China: Shares of Three Sectors in GDP, 1952–2012

Source: National Bureau of Statistics at <http://www.stats.gov.cn>.

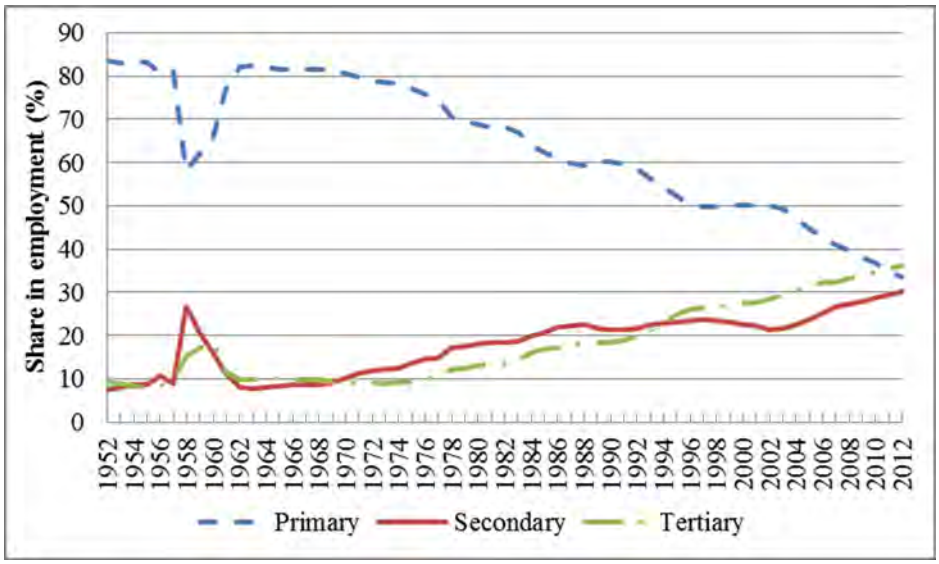

Figure 6.13 China: Shares of Three Sectors in Employment, 1952–2012

Source: National Bureau of Statistics at <http://www.stats.gov.cn>.

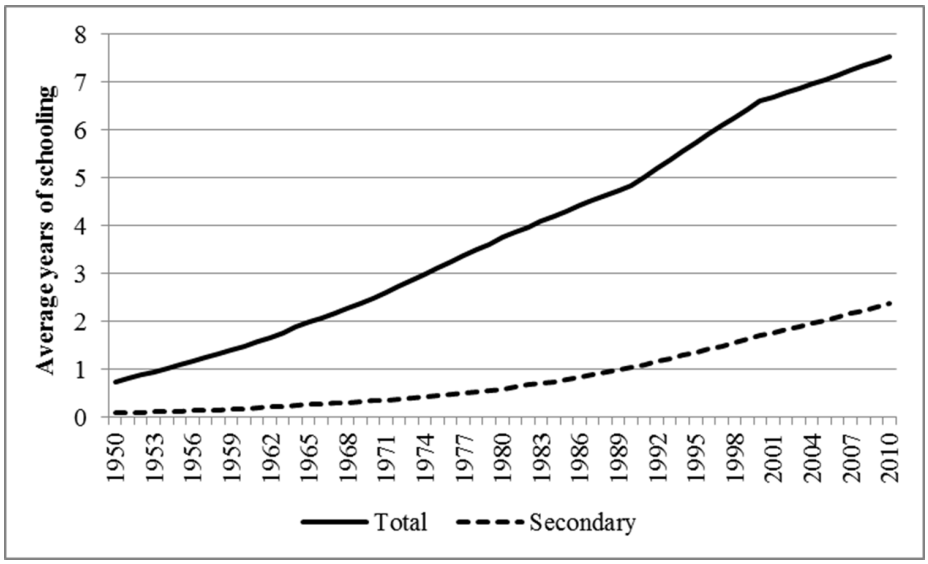

Figure 6.14 China: Average Years of Schooling, 1950–2010

Source: Barro–Lee Dataset v.1.3 (Barro and Lee 2010).

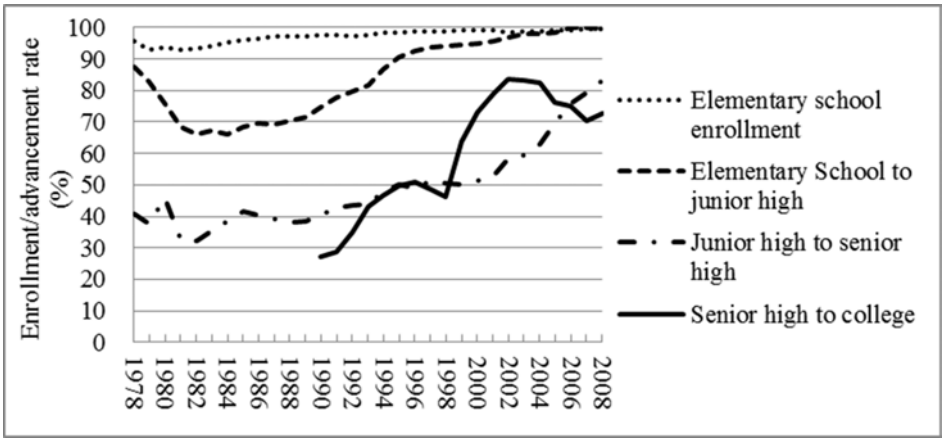

Figure 6.15 China: Enrolment Rates and Advancement Rates, 1978–2008
Source: NBS (2010).

Human capital formation

One of China's achievements by 1978 was a higher level of education, as shown in Figure 6.14. In 1982, the average years of total schooling in China reached four years—similar to the initial level of the successful country group. It continued to rise steadily afterwards, and achieved 7.54 years in 2010. As for the enrolment and advancement rates, China also did a good job (Figure 6.15). Despite some fluctuations, the general trend for these indicators was significant improvement. In 2008, most children advanced to junior high school, and 80 per cent of them also advanced to senior high school.

Demographic dividends

Similar to other successful economies in East Asia, China's dependency ratio has declined dramatically during the past four decades, as shown in Figure 6.16. The demographic dividend from this structural change in population is one of the most significant factors that accounts for China's past economic achievements. Recently, there has been considerable debate about whether this dividend has been exhausted. In fact, the one-child policy forced China to experience its demographic transition more rapidly than other countries in history. In 2011, China's dependency ratio fell to 36 per cent—almost the same level as today's Korea, but China's per capita GDP was just equal to 30 per cent of that of Korea. Thus, it is a reasonable concern that China will gradually lose its advantages in demography. We will, however, have to wait until 2030 for China's dependency ratio to rise above that of some major countries such as India. It is also worth noting that there is still a large rural population in China. At the macro level,

agriculture still employs 30 per cent of China's total labour force, although its share in national GDP is not much more than 10 per cent (see Figures 6.12 and 6.13). In light of China's incomplete structural change, labour movement from the countryside to the city will provide a powerful push for future economic growth.

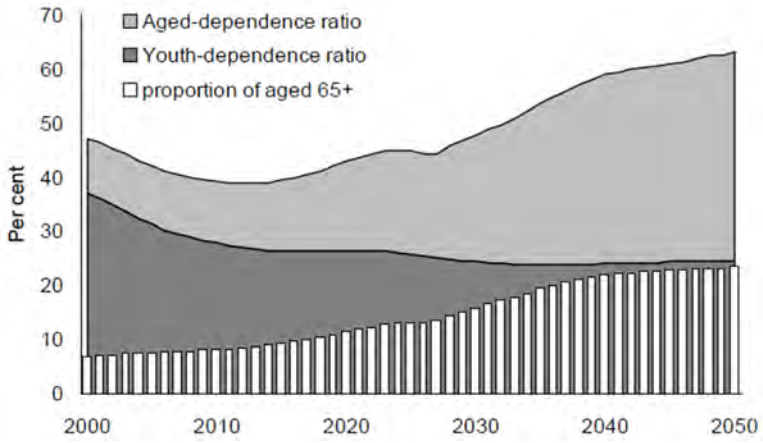

Figure 6.16 Demography in China

Source: Cai and Wang (2005).

Macro-economic stability

The failed economies are usually characterised by macro-economic instability, which is extremely detrimental to economic growth. Compared with other transitional economies, China's performance in this field is much better. Figure 6.17 presents China's inflation rate between 1978 and 2010. The highest peaks occurred in the late 1980s and between 1992 and 1995. The former was caused by price reform, and the latter reflected the investment frenzy after reform resumed in 1992; however, these high-inflation periods did not persist for long. After 1995, inflation became much milder, indicating more prudent economic management by the Government.

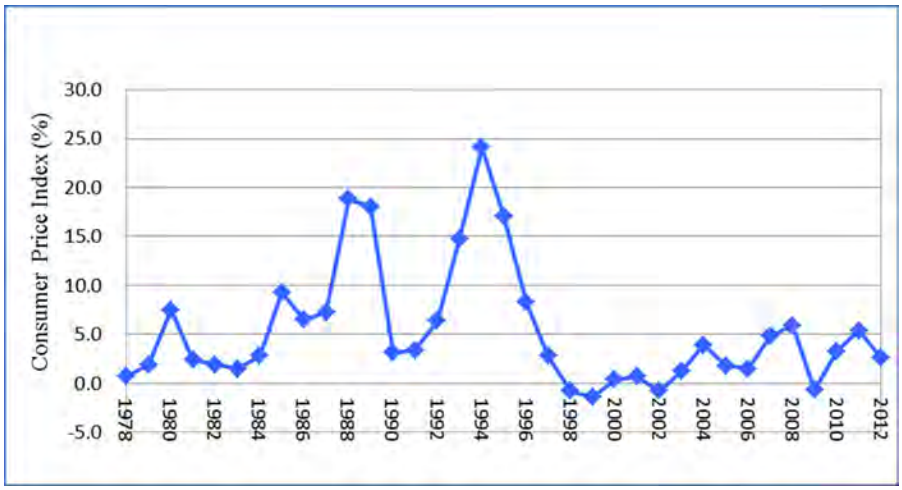

Figure 6.17 Inflation Rates, 1978–2012

Source: National Bureau of Statistics at <http://www.stats/gov/cn>.

Macro-economic stability is also reflected in the fiscal policy of China's Central Government. Figure 6.18 shows the Central Government's deficits and debts. The share of deficits in GDP remained at a relatively stable level over the observable period. The deficit–revenue ratio reached the peak, 45 per cent, in 2000, in response to the Asian financial crisis. Since then it has declined, except for 2008 and 2009, when the GFC resulted in another wave of stimulus policies, although it was much milder. In a word, China's government has been more successful over time in maintaining a stable macro-economic environment, which is crucial for sustainable growth.

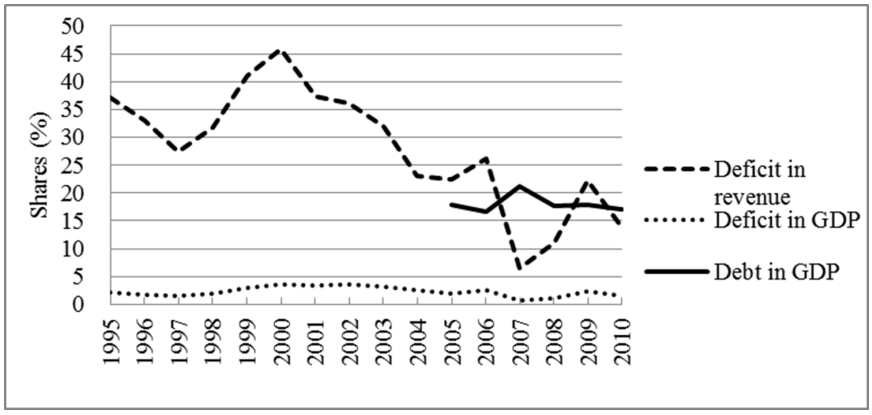

Figure 6.18 Central Government Deficits and Debts, 1995–2010

Source: NBS (various years).

The risk: rising inequality

The most remarkable distinction between China and the successful economies lies in its worsening income distribution. Figure 6.19 clearly presents such a trend. The Gini coefficient of income increased significantly in rural and urban areas as well across the whole country. For the whole country, the income Gini coefficient rose from less than 0.30 in the early 1980s to 0.45 in 2007. It continued to rise until 2010 when it began to decline slightly. Today, the income Gini coefficient is around 0.48 according to the official statistics and 0.50 according to independent studies. Despite considerable debate over the calculation of Gini coefficients, it is widely recognised that China has rising inequality and it has reached a relatively high level in recent years.

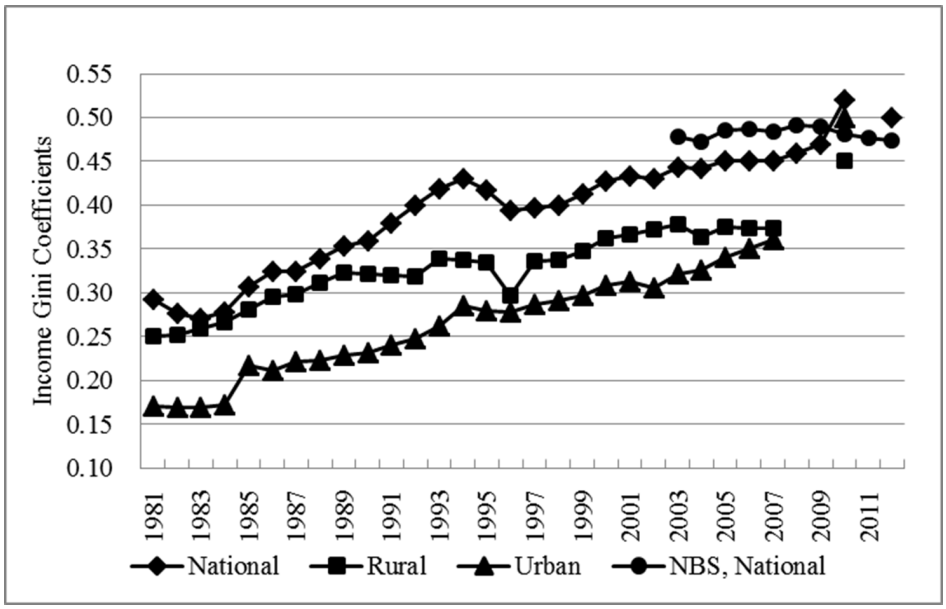

Figure 6.19 Income Gini Coefficients, 1981–2012

Sources: Cheng (2007); Li and Luo (2011); ISSS (2010, 2012); NBS (2013).

China's rising and high inequality stands in stark contrast with the equal distribution achieved by the successful economies in East Asia. For example, Korea limited its income Gini coefficients to around 0.30 throughout its rapid-growth period. While this difference may arise from some of China's specific historical and social features and should be interpreted with caution, it still rings an alarm bell for China's policymakers.

While inequality may delay a country's economic growth for various reasons, it is the education channel that may pose the most serious challenge for China. Although China produces seven million university graduates each year, the bulk of its floor workers, most of whom are migrants from the countryside, have low educational attainment. Evidence from the Chinese Family Panel Studies (CFPS), a national longitudinal survey conducted by Peking University, shows the average years of schooling of rural youth aged between 21 and 30 were barely more than seven years in 2010 (Yao forthcoming). That is, the majority of rural youth did not finish middle school before they entered the labour force. Their education is far from enough for China to successfully fulfil its ambition to transform into a knowledge-based economy. It will also hinder China avoiding the middle-income trap. For one thing, it is almost certain that with their current education, the migrant workers' income will never reach 45 per cent of the American level. Because migrant workers and farmers account for 60 per cent of China's labour force, this deficiency will inevitably hold China back from achieving high-income status.

Low educational attainments in the countryside are mostly related to the low income rural residents have to endure. The average rural resident earns less than one-third of the income enjoyed by the average urban resident. This gap is so large—the largest in the world—that many rural residents are discouraged to even try to jump over it. On the other hand, the current growth of wage rates in China has led to a paradoxical consequence: it discourages rural families from continuing their children's education. Many rural families take their children out of school and send them to cities to work for a salary of between RMB2000 and RMB3000 per month because this is a good income by their living standards. This will, however, have a greatly detrimental effect on these children's long-term income capabilities. If China were to be trapped in the middle-income group, it would be because the country has been defeated by its current success.

Conclusion

This chapter provides a comparative analysis of the middle-income trap and China's prospects for growth. The existence of the middle-income trap is confirmed by both the absolute-income and the relative-income criteria. Based on our definition using absolute income levels, we make a series of comparisons between the successful economies and the failed ones. Our descriptive analysis shows that the successes are generally characterised by high saving rates, robust manufacturing sectors, high levels of education, more advantageous demographic structures, a peaceful environment and more equal income distribution. China

is quite similar to those successful economies in all of these aspects except for its rising inequality. Therefore, China still has great potential for growth, but some deliberate policies on income distribution are needed.

In particular, China should pay more attention to increasing the education levels of rural youth and providing adequate training to migrant workers. Currently, the provision of education is mostly a local affair. It is highly recommended that the Central Government takes over the mandate and fully funds 12-year education in the country. Improving human capital has many more longer-term benefits than investing in physical capital, as many empirical studies have indicated. China's Central Government should shift its spending from helping local governments finance their infrastructure building to directly financing local education.

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This text taken from *Deepening reform for China's long-term growth and development* , edited by Ligang Song, Ross Garnaut, Cai Fang, published July 2014 by ANU Press, The Australian National University, Canberra, Australia.