

# DEMYSTIFYING CHINA'S ECONOMIC GROWTH: RETROSPECT AND PROSPECT

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## Abstract

*This chapter provides both a retrospective and prospective view of China's economic growth since 1978. It starts with a review of China's economic spurt from the reforms of the late 1970s, before investigating how this success has been driven by the demographic dividend, high savings rate, outward-oriented development strategy, as well as rising total factor productivity. The chapter then studies the challenges arising from a diminishing demographic dividend, growing structural imbalance, as well as macro instability and financial risk, which threaten the sustainability of China's economic growth. Finally, the chapter suggests some pillars to maintain sustainable economic growth and avoid the middle-income trap, including deepening reforms in the financial, household registration and education systems; accelerating structural rebalancing; and replacing massive stimulus with mini-stimulus.*

## Introduction

Since the economic reforms and opening up policy launched in 1978, China has experienced a massive, protracted and unprecedented economic upsurge, which is sometimes described as the “China miracle” (Lin et al., 1996). Thereby, China has been transformed from a remarkably closed and poor agrarian society into an open global economy within the past three decades. The average 10 per cent growth rate of gross domestic production (GDP) has lifted China's GDP per capita (in constant 2005 dollars) from less than \$200 in 1978 to more than \$3,500 in 2013 (World Bank, 2013), promoting China from the low-income group into the upper-middle income group, as well as dramatically reducing the proportion of absolute poverty (Ravallion and Chen, 2004). China has already grown to become the second largest economy in the world, representing the engine of growth in the Asian area and the top contributor to global growth (Huang, 2011; Lin, 2011).

Despite consensus on the extraordinary economic success, its sources remain open for interpretation. Various analytical frameworks have been developed by economists to explain the key to this

success, such as the demographic dividend – e.g. the rising share of working-age population – (Cai, 2010; Cai and Lu, 2013), the transition to comparative-advantage-oriented development strategy (Lin et al., 1996), allowing incremental growth of the private sector activities while maintaining support to State-owned enterprises (SOEs) (Naughton, 1995), the “dual track strategy” (transform to market-oriented while also supporting planned activities) (Brandt and Rawski, 2008), taking over the growth model of East Asia (Sachs and Woo, 2000), as well as asymmetric product and factor market liberalization (Huang, 2010).

Most recently, the steady deceleration of economic growth, the growing structural imbalance, macro instability and financial risks have led to expectations of a downward growth potential. Economic growth slowed down after the 2008 financial crisis, decreasing to 7.7 per cent in 2013. The Chinese Government adjusted the target growth rate from above 8 per cent to around 7.5 per cent in 2011 for the first time and has maintained this target rate ever since. In addition, many think tanks and

economists gauge China's expected growth potential to be around 7 per cent in the late-2010s and less than 7 per cent in the 2020s (World Bank and the Development Research Center of the State Council, 2012; Eichengreen et al., 2012; Zhuang et al., 2012). China's economy is believed to be turning to a new model of growth and development, whose most basic features are growth rate slowdown, structural rebalancing and industrial upgrading (Garnaut et al., 2013). However, it remains subject to debate whether China can maintain a robust growth rate. Lin (2011) believes that China can still potentially achieve a dynamically rapid growth rate of 8 per cent for another 20 years or more by relying on the

advantage of backwardness, which is also supported by Perkins and Rawski (2008).

What contributed to China's economic spurt in the past reform period? How was the rapid growth pace maintained? Moreover, what factors challenge the sustainability of China's current and further economic growth? How should the Chinese Government move forward its transition? In this chapter, we will address these questions by looking back at China's past economic performance and the corresponding driving forces, as well as exploring the present and future challenges that threaten the sustainability of China's economic growth.

## I. China's economic growth performance: Retrospect

### A. China's economic growth performance

Although the industrialization process started ever since the establishment of People's Republic of China, which initiated China's economic recovery, the economic performances before and after 1978 significantly differ, with the post-1978 growth model outperforming the one established after the Second World War in many respects.

To start with, the real GDP growth rate reports a remarkable 10 per cent on average between 1980 and 2010, compared to 6.7 per cent during the previous post-war period (chart 1). As a result, the gap between China and the United States in terms of GDP reduced, with China's GDP relative to the one of the United States increasing from less than 10 per cent in 1980 to more than 75 per cent in 2013. Indeed, China now is the second largest economy in the world.

As a result of its extraordinary economic performance, China's share of global GDP has increased from less than 1 per cent to more than 9 per cent during the last three decades (World Bank, 2013), with China having jumped from the fifth strongest contributor to global growth to being ranked first (Lin, 2011). In addition to China's outstanding economic performance in calm periods, China withstood the shocks and maintained rapid growth during both the East Asian financial crisis in 1997-1998 and the current global crises starting in 2008. Moreover, China's dynamic growth in the current global crises was a main driving force for the global recovery.

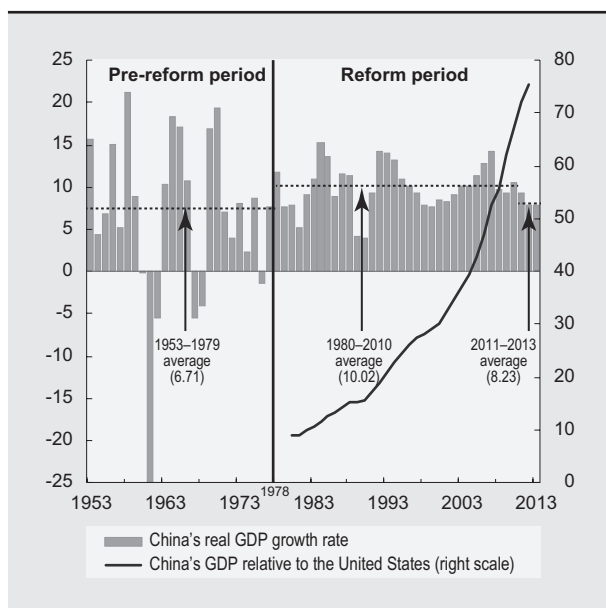
In respect to GDP per capita, the story is much more significant. Prior to 1978, China reaped a 3.6 per cent real GDP per capita growth rate, which slightly outperformed the United States and India yet left China far behind some of its Asian neighbours (chart 2). After 1978, the whole picture changed tremendously, with China's relative economic size expanding. Since 1978, China has achieved remarkably rapid economic growth, with real per capita GDP growing at more than 8.5 per cent annually on average (World Bank, 2013). The high growth rate has significantly closed China's income gap with the United States, with China's GDP per capita having increased from 2 per cent to 17 per cent of that of the United States (chart 2). China's dramatic economic success has also obviously reverted its lagging-behind State into a rapid catching-up trend with Japan and the Republic of Korea, greatly shortening its economic distance to them. Furthermore, China's output rose much more quickly than that of India, pushing China's GDP per capita from less than 50 per cent of India's in 1978 to more than its double in 2010 (chart 2).

Alongside buoyant GDP per capita growth, a huge decrease in the poverty ratio has been achieved in the past three decades. The proportion of the population whose income is less than \$1.25 per day declined to 11.8 per cent by 2009, compared to 84 per cent in 1981 (World Bank, 2013). 678 million people were lifted out of poverty during this period, benefiting from China's dramatic economic development (World Bank, 2013).

Chart 1

## CHINA'S GDP: GROWTH AND RELATIVE TO THE UNITED STATES, 1953–2013

(Per cent)



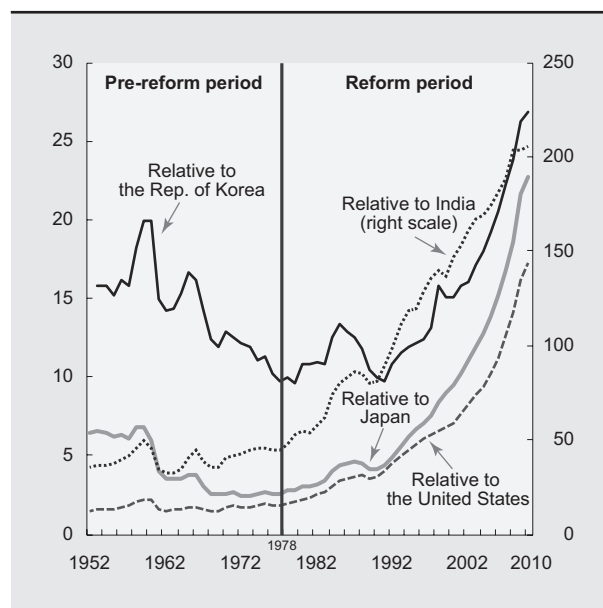
**Source:** Authors' calculations, based on National Bureau of Statistics of China; and *Wind* database.

**Note:** Relative GDP measure uses purchasing power parity conversion. GDP growth rates in this chart are not necessarily consistent with the data that appear in table 1, in particular for the early years, which present more conservative GDP growth rate estimates.

Chart 2

## CHINA'S GDP PER CAPITA RELATIVE TO OTHER SELECTED NATIONS, 1952–2010

(Per cent)



**Source:** Authors' calculations, based on *Penn World Table 7.1* database.

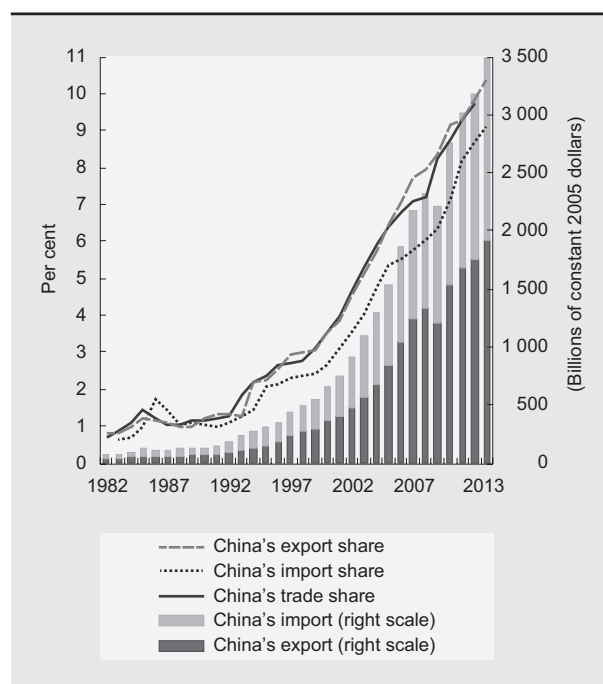
**Note:** Relative GDP per capita measures use purchasing power parity conversion.

Besides the economic gain, China has achieved a marked increase in its world market shares in both trade and international capital flows. China has experienced rapid growth in both imports and exports during the past three decades, especially since China joined the World Trade Organization (WTO) in 2001 (chart 3). China's exports and imports have both expanded more than 140 times their value since the beginning of the economic reform. Its export share in the world market, i.e. China's exports to other countries in the world as a percentage of world exports, increased from below 1 per cent in 1980 to 10 per cent in 2013, while its import share in the world market increased from below 1 per cent in 1980 to 9 per cent in 2013. The trade surging has lifted China to become the largest exporter, second largest importer and second largest trade country in the world.

China's opening up also provides the country access to much-needed advanced technology. Foreign direct investment (FDI) inflow to China rapidly increased and China has been the top FDI destination among developing countries since the mid-1990s. In

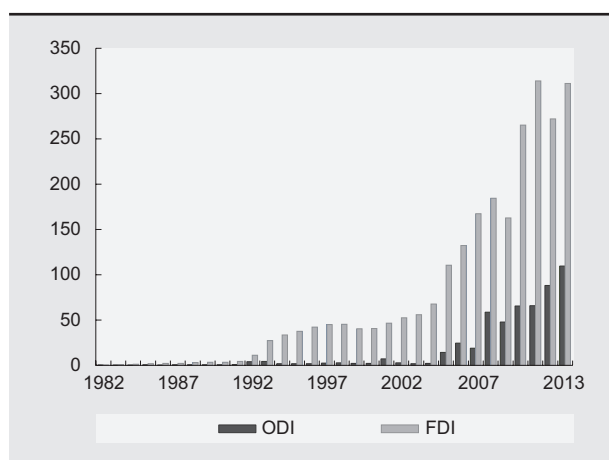
Chart 3

## CHINA'S TRADE AND ITS SHARE IN THE WORLD MARKET, 1982–2013



**Source:** Authors' calculations, based on World Bank, *WDI* database.

**Chart 4**  
**FOREIGN DIRECT INVESTMENT AND OUTWARD DIRECT INVESTMENT OF CHINA, 1982–2013**  
*(Billions of dollars)*



**Source:** Authors' calculations, based on State Administration of Foreign Exchange of China.

2012, China's FDI accounted for almost 40 per cent of total FDI inflows to low- and middle-income countries (World Bank, 2013). In addition, owing to the "going out" strategy implemented at the beginning of the 2000s, China's outward direct investment (ODI) has also surged. During the past decades, China's ODI flow has raised from \$2.9 billion to \$109.7 billion in 2012 (chart 4), ranking China as the third largest source of ODI in the world at present, according to the Ministry of Commerce of China (2012).

### **B. Interpretation of China's rapid economic growth**

How has China achieved such remarkable economic success in the post-reform period? To investigate this question, we first examine the sources of GDP growth from the supply side. China's growth is commonly considered to be primarily driven by capital accumulation. Therefore, serious doubts have been raised about the role of productivity progress in this kind of growth model, as well as the sustainability of growth (Kim and Lau, 1994; Krugman, 1994; Young, 1994). However, this view has more recently been challenged, given that total factor productivity (TFP) has also been found to play an important role in China's sustained growth, especially in the years before the 2008 crisis (Kuijs, 2009; Park and Park, 2010; Perkins and Rawski, 2008; Wu, 2011 and 2014).

A growth accounting exercise briefly delineates the diverse patterns of China's economic growth before and after the reform. While the pre-1978 growth was mainly led by capital investment rather than productivity improvements, growth thereafter has been derived from both (table 1). After 1978, physical capital grew at a higher growth rate than other inputs and TFP; indeed, it remains the first contributor to the rapid economic growth. TFP has grown at more than 3 per cent annually, which evidences productivity enhancement. Moreover, China's TFP growth rate also outperformed its Asian neighbours from the 1990s onwards (table 2). Although there remains a heated debate about the role of TFP in China's growth, which reaches hardly any consensus, Wu (2011) obtained a 3.7 per cent annual TFP growth rate on average in the post-reform period after surveying 74 studies by employing the method of meta-analysis.

### **C. Underlying driving forces**

In the last three decades, China's sustained economic growth has stemmed from two major sources: capital accumulation and productivity growth. Whether China can maintain that growth model depends on the sustainability of these two major driving forces. Therefore, explaining the fundamental factors that drive them is crucial to look forward. No single factor can explain the whole story of China's economic model. The most important underlying forces are the demographic dividend, high savings rate, outward-oriented development strategy and improvement in productivity.

#### **1. Demographic dividend**

Since the very beginning of the economic reform in the late-1970s, the growth of the working age population has accelerated and the proportion of working age population in the total population increased until 2010. This increase not only directly guarantees abundant labour supply and low wages, but has also reduced the dependence ratio (the ratio of the dependent population to the working age population) from a high level of almost 80 per cent in the 1970s to below 40 per cent in 2010 (chart 5). The low dependence ratio contributes to maintaining a high savings rate, which forms the condition for a high growth rate of capital accumulation (Cai, 2010). In addition, the unlimited labour input ensures that the heavy capital accumulation can support a prolonged

**Table 1**  
**CHINA'S ANNUAL GDP GROWTH AND ITS DETERMINANTS, 1952–2012**  
 (Percentage points)

	Periods	GDP	Labour	Physical capital	Human capital	Total factor productivity
Perkins and Rawski (2008)	1952–1978	4.4	1.9	5.8	2.5	0.5
	1995–2000	8.6	0.9	10.5	1.6	3.2
	2000–2005	9.5	1.0	12.6	1.8	3.1
	1978–2005	9.5	1.9	9.6	2.7	3.8
Wu (2014)	1952–1977	4.3	1.0	3.3	0.5	-0.5
	1991–2001	10.4	0.2	5.7	0.5	3.7
	2001–2007	11.3	-0.5	6.1	0.5	4.8
	2007–2012	9.3	-0.2	7.7	0.4	1.3
	1978–2012	9.8	0.3	5.5	0.5	3.2
Kuijs (2009)	1978–1994	9.9	3.3	2.9	0.5	3.0
	1995–2009	9.6	1.0	5.5	0.3	2.7

**Source:** Authors' calculations, based on Perkins and Rawski (2008); Kuijs (2009); and Wu (2014).

**Note:** The growth rate of GDP equals to the factor-share-weighted sum of its four components: labour, physical capital, human capital and TFP. For comparability, the accounting results are based upon the official data from Wu (2014). The accounting exercise of GDP growth rate is under the assumption of Cobb-Douglas production function. GDP growth rates in this table are not necessarily consistent with the official data that appear for instance in chart 1, in particular for the early years, which are usually believed to overestimate the GDP growth rate.

**Table 2**  
**ANNUAL TOTAL FACTOR PRODUCTIVITY GROWTH, SELECTED ECONOMIES AND COUNTRY GROUPS, 1992–2007**  
 (Percentage points)

	Non-Asian G5	Japan	NIEs	China	ADEs
1992–1997	0.20	-0.99	1.71	3.1	-0.05
1997–2002	0.17	-1.04	-0.94	2.5	-1.08
2002–2007	0.31	0.98	2.35	6.6	1.93

**Source:** Authors' calculation, based on Park and Park (2010).

**Note:** *Non-Asian G5* refers to France, Germany, the United Kingdom and the United States.

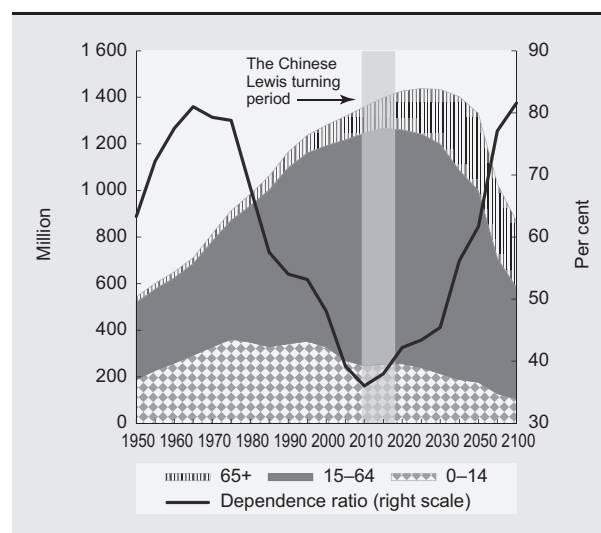
*NIEs* refers to Hong Kong (China), the Republic of Korea, Singapore and Taiwan Province of China.

*ADEs* stands for Asian developing economies and refers India, Indonesia, Malaysia, Pakistan, the Philippines, Thailand and Viet Nam.

GDP growth, as it prevents marginal return on capital from diminishing (Bai et al., 2006; Cai and Zhao, 2012; Cai and Lu, 2013).

Moreover, increasing labour mobility will further strengthen the contribution of the unlimited labour supply, as mobility ensures the industrial

**Chart 5**  
**POPULATION IN CHINA, AGE STRUCTURE AND DEPENDANCE RATIO, 1950–2100**



**Source:** Authors' calculations, based on United Nations, Department of Economic and Social Affairs (UN/DESA), *World Population Prospects, the 2012 Revision*; and Cai and Lu (2013).

transition from agriculture to manufacturing and services, as well as from rural to urban areas (Brandt and Rawski, 2008). Factor reallocation across industries

and regions thereby promotes total productivity (Brandt et al., 2008; Brandt and Zhu, 2010; Zhu, 2012). Finally, low labour costs owing to the (temporarily) unlimited supply of labour emerged as China's comparative advantage in the global markets, driving China into the typical export-led growth model.

## 2. *High savings rate*

China maintains a high domestic savings rate, which is used to fund its unusual investment ratio. To understand the role of investment in the growth model, explaining the high savings rate behaviour is crucial. In the early-2000s, the main contributor of the increasing savings rate was the high and rising household savings rate, which is believed to have been promoted by several factors: firstly, the demographic structural change that we discussed above; secondly, the underdeveloped social welfare system, which promotes high precautionary savings; moreover, the low interest rate on savings deposits under financial repression policies, which hinders household interest income and thus induces household to save more to compensate for the income loss (Lardy, 2008 and 2012). Finally, an imbalanced sex ratio leads families with sons to raise savings to be more competitive and attractive for marriage (Du and Wei, 2010; Wei and Zhang, 2011).

Between 2004 and the crisis, corporate savings largely expanded, accounting for approximately half of China's national savings by 2007 (Bayoumi et al., 2010). According to Hofman and Kuijs (2006), it is the high corporate savings that make China stand out in terms of its savings rate in the mid-2000s. Several factors are behind the high savings by enterprises: on the one hand, within an underdeveloped financial system, firms increase retained earnings to fund their investment, which thus raises the corporate savings rate (Allen et al., 2005; Guariglia et al., 2011); and on the other hand, a dividend policy that prevents households from sharing enterprises' retained earnings, especially low dividend payments by SOEs due to large-scale agency problems, further drives up corporate savings (Hofman and Kuijs, 2006; Bayoumi et al., 2010).

## 3. *Outward-oriented development strategy*

China might be one of the most impressive cases of outward-oriented development strategy in terms of economic growth. Prior to 1978, China was essentially isolated from the rest of the world,

with domestic demand, and particularly domestic investment, representing the main source of economic growth. The economic reform and opening up policy launched at the end of the 1970s made China's economy gradually open to the rest of the world. In 1988, China switched its typical import substitute strategy in the early reform period to an export-oriented development strategy by applying the "big import and big export" model (Lin et al., 1996). Since China's access into WTO in 2001, its export share in GDP and trade share in the world market have both substantially surged (chart 3). The export-oriented strategy has provided China with a good opportunity to utilize its comparative advantages and the advantages of backwardness to gain more economic efficiency, create employment opportunities and eventually bring about better economic welfare.

As one of the most important pillars of the outward-oriented development strategy, FDI inflows have been greatly encouraged since the early-1990s, giving an impetus to exports and representing a source of technological progress. To create more employment opportunities given an inefficient domestic financial market, many local governments tend to rely on FDI. In order to attract more FDI, they usually offered foreign-funded enterprises (FFE) preferential tax treatment, enthusiastically supplied FFEs cheap or even provided free land for factory building and other stimulating facilities (Branstetter and Lardy, 2006). As a result of these encouragement policies, China became the largest FDI destination country in the emerging market world from the mid-1990s. It is noted that by facilitating processing exports, which account for more than 50 per cent of the total export in China in recent years (Koopman et al., 2012; Xing, 2014), the huge FDI inflows have become one of the main propellants to export growth in the country. Moreover, it also improves technology progress through spillover effects.

## 4. *Sources of growing TFP*

The increase in TFP during the entire reform period before the global crisis is attributable to the technology progress and the improvements in resource allocation efficiency. First of all, technological progress enhances productivity. China's progress in manufacturing technology mainly stems from either the learning effect with the advantages of backwardness (Lin et al., 1996) or spillover effects of FDI (Tian, 2007) in the early decades. More recently,

innovation and human capital improvement resulting from enhanced education have also begun to play an important role (Fleisher, et al., 2010). Meanwhile, China's agricultural production efficiency has been greatly improved as a result of the rural economic reform, providing incentives for peasants by reinstating the link between effort and reward (Lin, 1992).

Second, improvements in factor allocation efficiency due to reallocation across regions and sectors have facilitated TFP growth (Brandt et al., 2008; Brandt and Zhu, 2010; Cai, 2010). By promoting and

expanding the activities of market-oriented private sector and strengthening market competitiveness, the State sector reform has improved the resource allocation efficiency and productivity. Moreover, market-oriented pricing reform ensures more efficient resource allocation, especially in the markets for products. On the other hand, the partial liberalization in the factor markets provides incentives for entities and sometimes overcomes market failure (Huang, 2010). However, some authors observe that factor misallocation remains, constraining China's TFP gains (Hsieh and Klenow, 2009).

## II. Prospect of China's economic growth: Challenges

### A. Growth slowdown after the global crisis

The 2008 global crisis was like a watershed for China's economic growth, whereby the GDP growth rate fell from a high of 14.2 per cent in 2007 to below 10 per cent in 2008 and 2009. Although the government stimulus policy pushed the growth rate back to above 10 per cent in 2010, this was not sustained and it glided down again in 2012 and 2013 to below 7.7 per cent. The GDP growth rate has declined by

1.8 percentage points on average from the pre-crisis to post-crisis period (table 3). This slowdown trend has prompted concerns about the prospect of China's economic growth. What are the causes of the recent growth slowdown? Is this deceleration a cyclical phenomenon? We will analyse the GDP performance from both the demand and supply side.

Firstly, from the demand side, through decomposing the expenditure of GDP, we find that the GDP

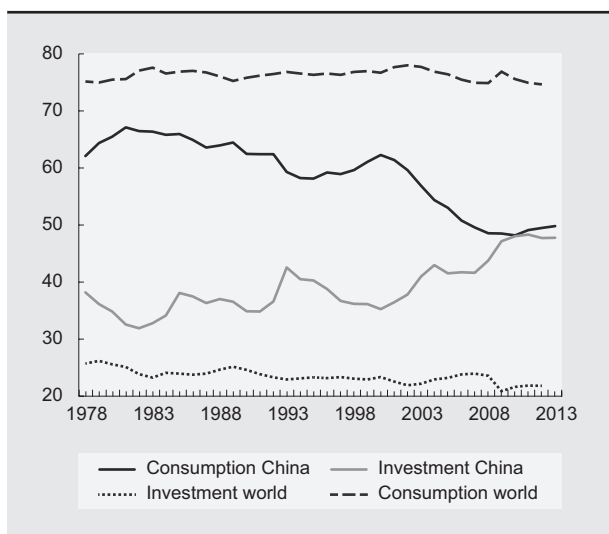
**Table 3**  
**AVERAGE ANNUAL GDP AND EXPORT GROWTH IN CHINA AND THEIR CONTRIBUTORS, 2001–2013**  
(Per cent)

	Contributors to GDP growth				Contributors to export growth		
	Annual growth rate of GDP	Total consumption	Investment	Net export	Annual growth rate of export	World total exports	China's export share in the world total exports
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
2001–2007	10.81	4.41	5.16	1.24	25.42	12.05	11.94
2008–2013	8.98	4.45	5.05	-0.5	11.48	6.09	5.07
Change	-1.83	0.04	-0.11	-1.74	-13.94	-5.96	-6.87
Contribution share of the change	100	-1.95	5.85	95.19	100	42.79	49.29

**Source:** Authors' calculations, based on National Bureau of Statistics of China.

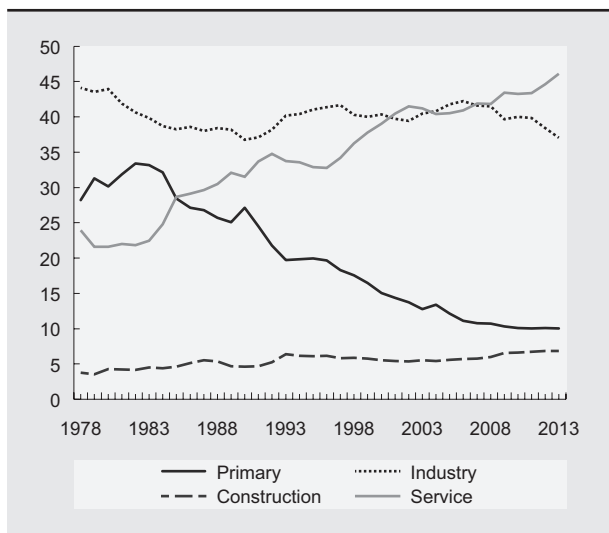
**Note:** Total consumption refers to private and public consumption. Figures in column 2 to 4 measures the average contributions of consumption, investment and net export to GDP growth rate and to the change of GDP growth rate from the period of 2001–2007 to 2008–2013. Figures in columns 6 and 7 measure the average contributions of the world total exports and of changes in China's export market share to China's export growth rate and to the change of China's export growth rate from the period of 2001–2007 to 2008–2013. Figures in the last row measure the shares of consumption, investment and net export in contributing to the GDP growth rate decrease from the period of 2001–2007 to 2008–2013, as well as the shares of the world total exports and China's export market share in the world in contributing to the decrease of export growth from the period of 2001–2007 to 2008–2013.

**Chart 6**  
**CONSUMPTION AND INVESTMENT IN CHINA AND WORLD ECONOMY, 1978–2013**  
*(Per cent of GDP)*



**Source:** Authors' calculations, based on National Bureau of Statistics of China; and *Wind* database.

**Chart 7**  
**CHINA'S ECONOMIC STRUCTURE, 1978–2013**  
*(Per cent of GDP)*



**Source:** Authors' calculations, based on National Bureau of Statistics of China; and World Bank, *WDI* database.

slowdown is chiefly led by the falling contribution of net exports, which accounts for 95 per cent of the decline in the average GDP growth rate (table 3). Therefore, understanding the net export behaviour is crucial to explain the recent GDP slowdown. The decrease in the growth rate of net exports is mainly because growth rate of exports decreased more than

that of imports. Further decomposing the export growth rate depicts a different picture from what is commonly viewed. Accordingly, the decreasing rate in exports growth is not only explained by the cyclical external demand (measured as the world total export) shock after the crisis, but is also led by slower gains in the market share. Put simply, if we roughly view China's export share in the world as China's export competitiveness, then the export growth rate slowdown is not just a cyclical adjustment, but might also challenge the sustainability of export-oriented model in the long run.

Although the investment growth rate has decreased on average to a rather small degree, its share in GDP sharply increased from an average of 40.4 per cent before the crisis to as high as 48.3 per cent in 2011 (chart 6). The Government's massive stimulus after the crisis can well explain this trend of switching from falling to rising. During the same period, the consumption growth rate slightly increased.

Secondly, from the supply side, the main change emerges in the growth rate of capital accumulation and TFP. While the former plays a more important role in the post-crisis rather than the pre-crisis period, the latter sharply declines (table 1). After adjusting the official data, Wu (2014) even obtained a negative TFP growth rate in the post-crisis period.

The increase in the capital accumulation growth rate is also attributed to the Government's stimulus policy and the acceleration in infrastructure investment. However, the reason for the declining TFP growth rate is not so clear. After the crisis, a fall in the share of the industry sector is mirrored by a rise in the share of the service sector (chart 7). Together with the fact that the manufacturing sector outperforms the service sector in terms of the TFP growth rate (Wu, 2011), this might provide a possible answer to the TFP slowdown. In addition, the investment inefficiency after the stimulus package and the diminishing of the dividends of opening up could offer further explanations.

**B. Challenging factors**

As we have discussed above, the slowdown of GDP growth after the crisis is not only driven by cyclical factors or the by-product of the stimulus policy, but also by structural factors that cause a reduced export competitiveness and productivity



growth rate. Therefore, can China sustain its previous miracle growth pattern from the long-run perspective? We will explore this by investigating the factors that challenge China's economic prospects.

### 1. *Diminishing demographic dividend*

Firstly, the demographic dividend has been diminishing following the decline of the fertility rate and the ageing of the population. Chart 5 indicates that as the growth rate of the working age population decreases, the dependence ratio reached the lowest point in 2010 and has subsequently switched to increasing. Therefore, as previously discussed, the contributions of the demographic dividend to China's economic growth have been diminishing.

As the working age population stops growing, all three supply factors of GDP are negatively affected. First, the increase in the dependence ratio pulls back the high savings rate. In addition, the limited supply of labour can no longer prevent the diminishing capital return. Without labour reallocation, the productivity growth rate is also affected. Moreover, labour shortages might push up wages, and thereby manufacturing costs, which impairs China's comparative advantage in the world export market and hinders investments.

In fact, as China passed the Lewis turning point or the Lewis turning period (from 2004, when labour shortages first appeared and migrants' wages started to increase, to 2010–2015, when the number of the working age population peaked), all the trends described above have been evident in China, i.e. labour shortages, diminishing returns on capital, and a declining savings rate (Cai and Lu, 2013). Demographic structural change will lead to a slowdown of the potential growth rate (Cai, 2010; Cai and Lu, 2013). The potential growth rate will fall to an average of 7.2 per cent during the 2011–2015, before gliding again to 6.1 per cent during 2016–2020, according to the estimate by Cai and Lu (2013).

### 2. *Growing structural imbalances*

Behind the economic performance achievement, significant structural imbalances have prevailed in China over the past thirty years; in particular, a continuously increasing high investment ratio, decreasing consumption ratio, over-dependence on external demand, a prolonged weakness of the service sector,

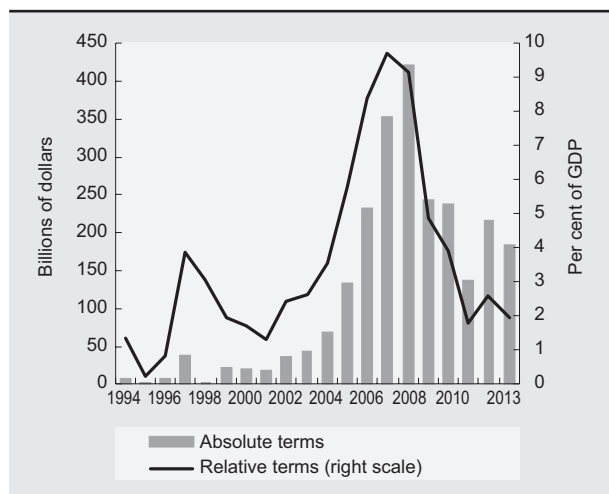
worsening income inequality and severe environmental degradation, which have resulted as by-products of the past growth model. Indeed, these structural imbalance problems have threatened the sustainability of economic growth.

First, the investment share of GDP is already unusually high, whereas the consumption share is very low. The investment share has been steadily rising from less than 30 per cent before the reform to almost 50 per cent after the crisis (chart 6). This share is much higher than the world average (around 20 per cent), as well as the average of Asian economies at around 25 per cent (Huang and Wang, 2010). Contrary to the sharp rise in the investment ratio, the consumption (private and public) share has fallen from more than 60 per cent at the beginning of the reform to less than 50 per cent recently, which is below the world average level of around 75 per cent (chart 6), as well as that of Asian and newly industrialized economies (NIEs) (Huang and Wang, 2010). This declining consumption share is particularly led by the declining private consumption from around 50 per cent to around 36 per cent, which is much less than the average of 60 per cent among emerging market economies (Dorrucci et al., 2013).

Such a high investment share and a low consumption share could dim the GDP outlook in several ways. First, high investment shares often increase risks of overheating, bubbles and over-capacity. The experiences of some East Asian economies with investment share higher than 40 per cent and strong economic growth, such as Singapore in the 1980s, Malaysia and Thailand in the 1990s, increased the likelihood of financial crisis years later (Huang and Wang, 2010). Secondly, a too low consumption ratio might cause social and political problems as households cannot sufficiently benefit from the economic development. Lastly, the investment-led growth model is not sustainable, driven by several factors. For instance, the diminishing return of capital cannot support high capital accumulation speed as before. "One-off windfalls" from both the Chinese corporate restructuring and WTO entry could fade, while the per capita capital stock has been rising (Ma et al., 2012). The obvious natural upper bound on the investment share also prevents it from continuing to grow. Moreover, in an international comparison, Dorrucci et al. (2013) found that although Japan, the Republic of Korea, and other NIEs had enjoyed a prolonged increase in investment since their economy took off, without exception all of them

Chart 8

## CURRENT ACCOUNT IN CHINA, 1994–2013



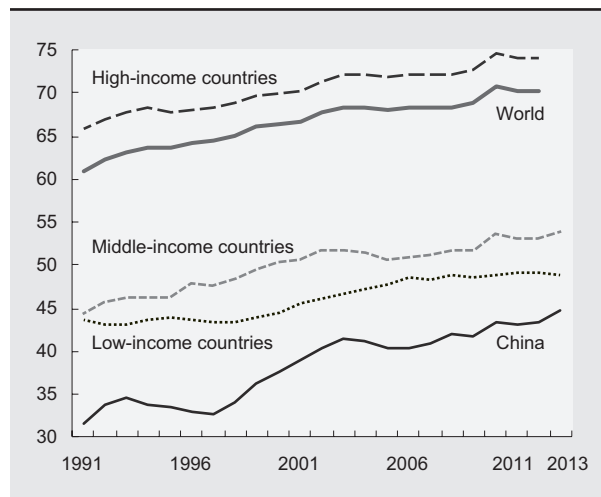
**Source:** Authors' calculations, based on National Bureau of Statistics of China.

had experienced declining investment shares after reaching a peak of almost 40 per cent.

Second, the external imbalance influences China's growth prospects. China's reliance on net exports has led to a huge current account surplus, reaching its highest point (9.7 per cent of GDP) in 2007 (chart 8). The high dependence on export exposes China's economic growth sustainability to external demand shocks. A huge current account surplus led to an accumulation of a huge amount of foreign reserves under a rigid exchange rate regime. Notably, partly due to the American financial crisis and partly due to the internal structural adjustment, China's current account surplus has steadily decreased since 2009, having already fallen to 2.0 per cent in 2013. The pressure from excessive dependence on external demand has been reduced.

Third, the sectoral structure is imbalanced in two ways. Firstly, the development of the service sector has been significant, but still lags behind. The share of the industrial sector has remained steadily around 40 per cent since the mid-1990s, while the share of the service sector witnessed a rapid growth and steadily increased from less than 25 per cent at the early reform period to around 40 per cent in the 2000s before the crisis and 46.1 per cent in 2013. However, it still lagged behind its average share in low and middle economies, let alone the high-income economies (chart 9). In particular, services such as finance, logistics, information technology, education,

Chart 9

SIZE OF THE INDUSTRIAL AND SERVICE SECTORS, CHINA AND SELECTED COUNTRY GROUPS, 1991–2013  
(Per cent of GDP)

**Source:** Authors' calculations, based on National Bureau of Statistics of China; and World Bank, *WDI* database.

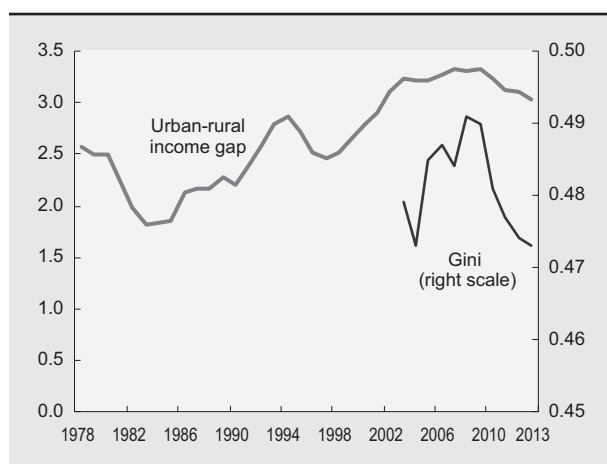
health care and pensions industries remain in short supply. Secondly, the structure is also imbalanced within manufacturing. While there is generally over-capacity within the traditional manufacturing industries such as the heavy chemical industry, steel, equipment manufacturing and the coal and solar industry (Anderlini, 2013), high-end manufacturing, new energy and environment friendly products remain in short supply (Zhang, 2013).

Fourth, income inequality in both dimensions among households and regions has deteriorated. The urban-rural income ratio increased from a low of 1.82 in 1983 to 3.3 in 2009 and the Gini coefficient has also come close to 0.5 in recent years, according to official data (chart 10), although it is even higher according to some other estimates. Rising inequality is emerging as one of the primary concerns of the Chinese Government. The good news is that the latest reading shows a reduction in income inequality in terms of both the urban-rural gap and the Gini coefficient.

Income inequality in China is also embodied among regions. While the eastern coast provinces, especially the big cities, have stepped into high-income level, the western and middle provinces remain underdeveloped, especially the rural areas. Geographical disparity among provinces, measured as the coefficient of variation of real per capita

Chart 10

## URBAN-RURAL GAP AND GINI COEFFICIENT IN CHINA, 1978–2013



**Source:** Authors' calculations, based on State Administration of Foreign Exchange of China.

income, shows a trend worsening from the early-1980s (Song, 2013). Moreover, intra-provincial inequality has also increased, contributing about 63 per cent of the overall increase in regional inequality during 1997–2007 (Cheong and Wu, 2012).

Last but not least, China is facing unprecedented challenges of high resource consumption and severe environmental degradation (Zhang, 2013). Scarcely restrained by the environmental protection institutions, the spectacular economic development over the past two decades has dramatically depleted China's natural resources and produced skyrocketing rates of pollution, in particular in the air and water. For example, along with China's rapid growing export, the CO<sub>2</sub> emissions embodied in the exports have rapidly risen. For example, the CO<sub>2</sub> emissions embodied in China's exports to the European Union increased fourfold from 1995 to 532.35 Mt in 2006, accounting for 8.85 per cent of China's CO<sub>2</sub> emissions (Yan et al., 2011). The environmental degradation has caused significant public health problems, mass migration, economic loss and social unrest (Economy, 2011). Therefore, China now faces great challenges in balancing its economic goals with environmental sustainability (Zhang, 2013).

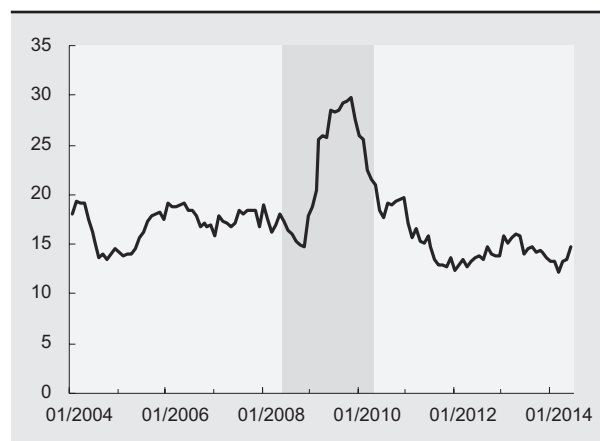
### 3. Macro instability and financial risk

Macroeconomic instability and rising financial risk have increased the burden on the transition. First, the recent rapid development of local government

Chart 11

## GROWTH OF BROAD MONEY (M2) IN CHINA, JANUARY 2004–JUNE 2014

(Per cent)



**Source:** Authors' calculations, based on State Administration of Foreign Exchange of China.

**Note:** Data refer to year-on-year change.

financing platforms (LGFPs) has increased the vulnerability of the macro-economy and the financial system, aside from prompting great concerns. After the 2008–09 global financial crisis, the Chinese Government introduced a fiscal stimulus package comprising 4 trillion Renminbi (RMB), in response to the enormous negative external shock. A large number of infrastructure projects represented by railways, highways, airports and subways were approved. In order to ensure that these projects remain on schedule, monetary authorities released a large amount of money and banking regulators loosened credit standards. Therefore, broad money (M2) and credit surged in 2009 and 2010 (chart 11).

The credit expansion triggered a rapid proliferation of LGFPs, as the central Government only contributed RMB 1.18 trillion, with the rest being provided by local governments (Shih, 2010; Lu and Sun, 2013). At the end of 2010, the stock of local government debt reached RMB 10.7 trillion, marking the equivalent of 27 per cent of GDP in 2010, among which LGFP debt was around RMB 4.97 trillion, according to the National Audit Office of the People's Republic of China (2011). By the end of 2012, outstanding LGFPs loans amounted to RMB 9.2 trillion, accounting for 13.8 per cent of the total outstanding loans in the banking industry, as estimated by the China Banking Regulatory Commission. The recent rapid development of LGFPs has increased the fiscal and financial risks and prompted great concerns. On

the one hand, LGFPs loans are exposed to the mismatch between the revenue and expenditure of local governments, with the fiscal gap being exacerbated by the fiscal stimulus (Lu and Sun, 2013). On the other hand, it has also rendered local governments, banks and the economy vulnerable to the volatility of the real estate market, as sale of land use rights constitutes the principal source of LGFPs' future debt payment (Lu and Sun, 2013).

Another concern about financial risk emanates from the real estate sector and shadow banking. The property price booms have recently been cooling off, suggesting that real estate investment might collapse. Broadly described as "credit intermediation involving entities and activities (fully or partially) outside the regular banking system" according to the Financial Stability Board (2013), shadow banking has been rapidly rising in China at an annualized rate of 34 per cent since the end of 2010, as estimated by Standard & Poor's (2013). The total shadowy loans was estimated to amount to RMB 2.29 trillion at the end of 2012, equivalent to 44 per cent of GDP and 34 per cent of the total outstanding loans in the banking industry in 2012 (Standard & Poor's, 2013). The

rapid development of informal finance, which would be hazardous, has also prompted significant concerns.

Although the stimulus policy brought an economic rebound in 2010, it produced large after-effects. The slowdown of investment growth rate itself placed pressure upon the GDP growth rate, while over-capacity and the debt risk stimulated by these policies further hindered new investment. Moreover, to maintain their projects, LGFP and those large firms with over-capacity further finance themselves at a high interest rate, which drives up the capital cost and thereby reduces the profits and investment of private and small firms.

In sum, from the demand side, given that the investment and export-led growth models are unsustainable, the way out is to rebalance to domestic demand and improve investment efficiency. From the supply side, potential output growth rate is declining due to the diminishing demographic dividend and investment inefficiency, whereby productivity improvement represents the chief remedy. Furthermore, any reform policy should take consideration of current macroeconomic and financial risks.

### III. Policy implications

Although China's past growth model is not sustainable and the previous rapid growth rate is unlikely to be maintained, it does not necessarily signify a crash of the Chinese economy. International experience indicates that when a fast growing economy reaches a certain income level, it will transit to a slowly growing development stage (Eichengreen et al., 2012);<sup>1</sup> therefore, transition to a new growth model is normal. The key challenge is how to transform the economy successfully to that sustainable and lower growth model and avoid growth stagnation. Historically, despite having enjoyed high growth rates when taking off, most of the middle-income economies suffer from growth stagnation and become trapped at the level of middle-income countries (Gill and Kharas, 2007; World Bank, 2012). How could China transit its past growth model to the new norm and avoid the middle-income trap?

#### A. Deepening reforms

In order to successfully transit China's past growth model to the new norm and avoid economic stagnation, the country requires deepening reforms in various areas, whose importance has been broadly realized. In late 2013, the Third Plenum of the 18th Party Congress authorized a comprehensive economic reform programme and established the decisive role of the markets in the allocation of resources. The programme mainly involves reforms in the government functions, State ownership, and the financial, fiscal, service and urbanization areas.<sup>2</sup> In early 2014, Premier Li Keqiang's Work Report to the National People's Congress outlined policies to deepen these reforms and accelerate progress towards a new model, which considers an increase in consumption and service's shares in the economy

and the relative incomes of the poorer, as well as a decrease in environmental damage.

Given its current economic challenges, China should find new ways to increase its labour supply and improve TFP. First, it is crucial to deepen the reforms in the household registration system. Given the labour shortage resulting from the diminishing demographic dividend, the household registration system would promote labour participation by accelerating mobility between rural and urban areas. Second, it is key to further liberalize the financial system, which involves the areas of the banking sector, interest rate, direct financing, exchange rate formation and capital account convertibility. This liberalization is beneficial in terms of eliminating capital distortions, improving investment efficiency and thereby improving TFP, although it should not be made at the expense of prudential regulation. Thirdly, China should accelerate industrial restructuring. Given the large disparities in productivity among industries and subsectors within industries, restructuring would improve TFP as a whole. In addition, China should also focus on technology progress by encouraging innovation and strengthening intellectual property protection. Finally, China should speed up reforms in the education system, including improving vocational education, which would help to optimize the employment and industrial structures. Besides, there are also some other reforms authorized in the area of legal and administrative systems, social welfare, democracy and ecological civilization. Indeed, it is important to deepen all these reforms.

However, the challenge is how to maintain macro and financial stability. Although these reforms would help the sustainability of economic growth and stability in the long run, they might create short-term instability; for instance, interest rate liberalization might push up capital costs and increase inflation pressure, while capital account opening might expose China more to global economic and financial shocks. When further deepening these reforms, both the sequence and timing are important. First, the sequence of reforming should be focused on ensuring that all such reforms are coordinated with each other. For example, to further liberalize the financial sector, the order of liberalization of interest, the banking sector, exchange rate and then the capital account should be well followed (McKinnon, 1993),

otherwise China may be exposed to huge financial risks or even crisis. In addition, timing is important, as there are always preconditions for further reforms. Take capital account liberalization as an example, for which stable macroeconomic conditions, a sound fiscal system and a developed financial system are all important preconditions. Therefore, only with these conditions in place should China put forward the reforms in capital account opening.

## **B. Structural rebalancing**

Structural rebalancing is crucial. First, rebalancing between investment and consumption is crucial, given that the over-dependence on external demand has been greatly improved since the crisis; nevertheless, this rebalancing will not be as rapid as expected. On the one hand, consumption promotion strongly depends on improvements in the reforms in the social security system, education, housing and the reduction in inequality, which would take time to realize. On the other hand, it is inevitable for China to maintain its high investment share in the short run (Ma et al., 2012). Therefore, the only remedy is to enhance investment efficiency.

Secondly, to develop the service sector and accelerate industry restructuring, the key solution is to deepen the domestic marketization reform, and especially the factor markets reform. Marketization reform is helpful to speed up the restructuring, as well as solving the over-capacity problem by optimizing resources allocation. Again, further opening up of the service sector would facilitate its development, especially based upon the previous successful practice in opening up manufacturing. In addition, some industrial policy for emerging industries would be beneficial to foster their development, although such type of policy really needs to reduce government intervention after some period.

However, it is arduous to promote industrial restructuring in China. Restructuring might be thorny in the short term as business failures, bankruptcies and unemployment may increase. Therefore, maintaining macroeconomic stability is crucial to create the conditions for deepening reforms and restructuring. Finally, some other rebalancing policies, such as urbanization and rural construction to reduce income inequality, are also important.

### C. Taking mini-stimulus policies

China's growth rate has been lowering since early 2010, partly due to the European debt crisis. In 2014, according to the National Bureau of Statistics of China, GDP growth rate reached 7.4 per cent, the slowest since 1989. In order to avoid further slow-down, Chinese authorities announced a mini-stimulus package, including cutting down tax for small- and medium-size enterprises, increasing government investment in the railway network and low-income housing construction. In the short run, such mini-stimulus policies are important: on the one hand,

they are capable of balancing the multiple targets of maintaining economic growth, adjusting structure, promoting reforms and improving livelihood; while on the other hand, as mini-stimulus policy is difficult to be expected and observed, it reduces the potential disturbing impact of speculative activities of investors on the economy. In addition, mini-stimulus policy is less likely to influence the stability of economic growth when it phases out, thus creating limited negative after-effects. Moreover, it helps to maintain the stability of monetary and fiscal policy. In the near future, prudent monetary policy with moderate liquidity and relatively loose fiscal policy should be the basic policy mix.

## IV. Concluding remarks

China has achieved remarkable economic performance for more than three decades since the initiation of the reform in the late-1970s. This miracle has been led by investment and export from the demand side, as well as capital formation and TFP improvements from the supply side. The demographic dividend, high savings rate, the outward-oriented development strategy, technological progress and improved resource allocation efficiency have been the main underlining driven forces.

However, the diminishing demographic dividend, structural imbalances, as well as the macro-economic instability and financial risk created by the stimulus policy after the recent global crisis have all challenged China's economic growth prospects. In fact, the recent growth slowdown is not only caused by the external cyclical shock, but it also reflects structural problems in the Chinese economy.

Several pillars are needed to maintain a sustainable economic growth and avoid the middle-income

trap. First, further deepening of the reforms is needed in the household registration system, financial system, industrial structure, education system and some other reforms in law, politics, social welfare, democracy and ecological civilization. Second, the continuation of structural rebalancing is necessary, which mainly involves rebalancing towards domestic demand and industrial restructuring. However, as consumption increasingly depends on other economic and social reforms in China, the rebalancing between investments and consumption is slow. Therefore, promoting investment efficiency is the main remedy. Sectoral rebalancing should focus on both the development of the service sector and reducing imbalances within the industry sector. Finally, rather than a massive stimulus policy as implemented in China in 2009 and 2010, mini-stimuli policies that create fewer after-effects should be implemented in the near future. When executing such reforms policies, the sequencing of the reforms and the relationship between long-term growth, structural rebalancing and short-term macroeconomic stability should be well focused.

## Notes

1 Eichengreen et al. (2012) found that rapidly growing economies were found to slow down significantly by at least 2 percentage points when their per capita income level reaches about \$17,000 in 2005 constant international prices.

2 Decisions of the Central Committee of the Communist Party of China at the Third Plenum of the 18<sup>th</sup> Party Congress are available at: [http://www.china.org.cn/china/third\\_plenary\\_session/2014-01/16/content\\_31212602.htm](http://www.china.org.cn/china/third_plenary_session/2014-01/16/content_31212602.htm).

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