China's Growth Miracle: Past, Present, and Future

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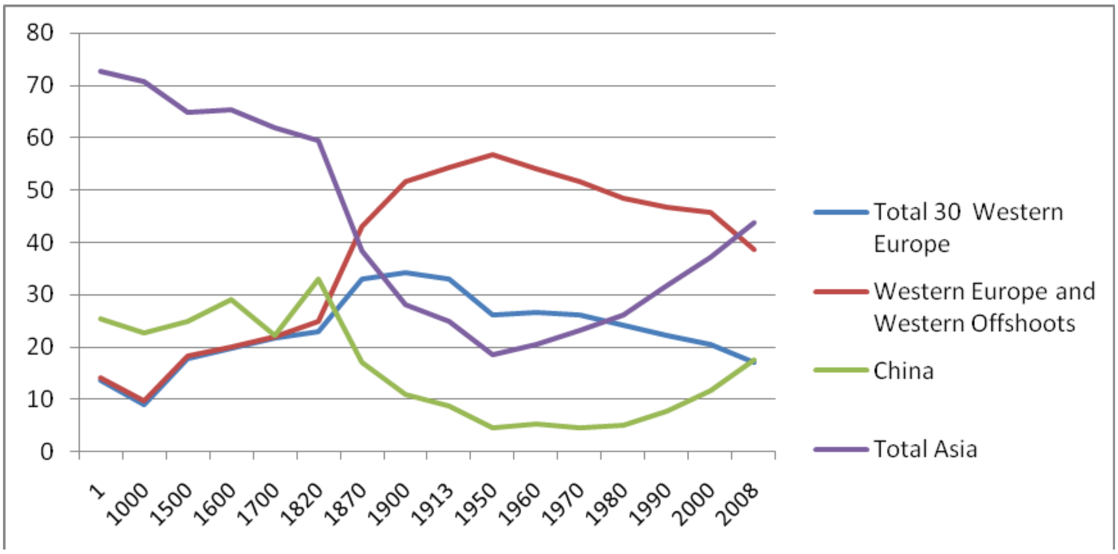
Over the past 35 years, China has achieved extraordinary economic performance thanks to the market-oriented reforms and opening-up. By the end of 2012, China became the second largest economy by GDP size (nominal and PPP terms) just after the United States; The GDP per capita also reached to $6075 in 2012, up from $205 in 1980; Regarding the openness, as the largest exporter and second largest importer, China has accumulated $3.3 trillion in foreign exchange reserves, ranked top in the world. Meanwhile, China has been remaining the largest recipient of Foreign Direct investment (FDI) among the developing countries for the last two decades and more recently, came to become the No.5 exporting country judged by the outwards FDI. Nowadays, as a major driver of the global growth, the incremental contribution of China has surpassed that of the U.S. All the above phenomena can be undoubtedly summarized as China's growth miracle..

1. Growth performance of China's economy

Figure 1: GDP based on 1990 International GK dollar, share of world total (%)



Notes: 1. Data come from Maddison historical GDP data: http://www.ggdc.net/maddison/Maddison.htm.

2. The international GK dollar, sometimes known as the international dollar, is a hypothetical unit of currency that has the same purchasing power parity that the U.S. dollar had in the United States at a given point in time (eg. 1990).

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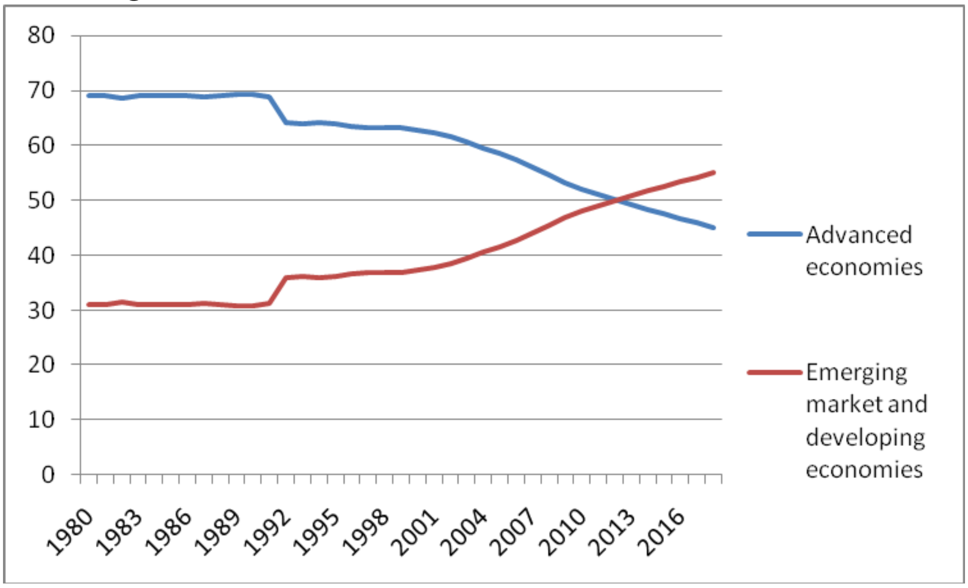
As can be seen in Figure 1, from AD 1 to the middle of 19th century, China' share of world GDP remained about 25%, exceeding that of Western European countries. In particular, around 1820, this share rose to 33%, a record high level over the past two millenniums. Nevertheless, China's economy had long stagnated since then, resulting in a decline of its relative GDP size vis-à-vis the world and a record low level, 4.6%, in 1950. Subsequently after three decades of drastic economic fluctuations, around 1980, China started rapid economic growth, resulting in the rise of its GDP share of the world total, from 5.2% in 1980 to 17.5% in 2008.

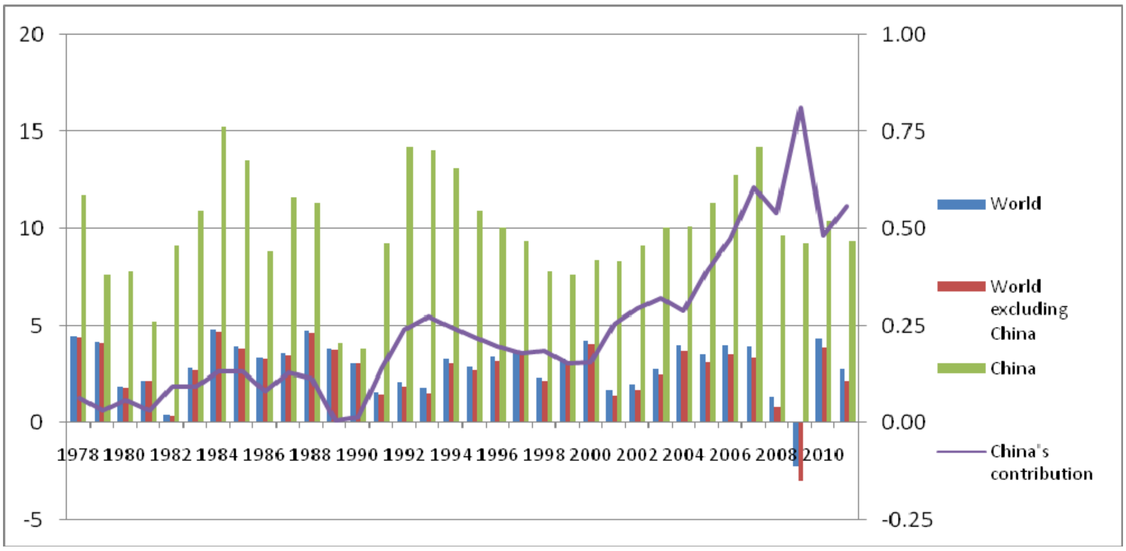
Figure 2: GDP based on PPP, share of world total (%)



Notes: 1. Data come from World Economic Outlook Database, April 2013, IMF.

2. According to the figure, in 2013, the emerging and developing economies' share of world GDP will for the first time exceed that of advanced economies.

Figure 3: China's contribution to world GDP growth (%)

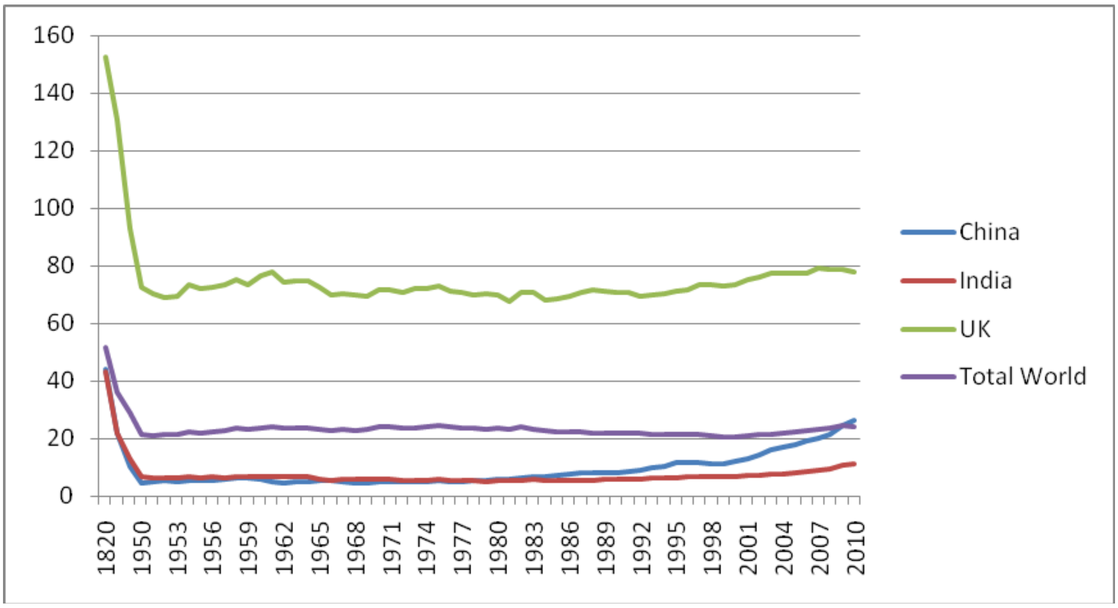


Notes: 1. Data come from World Development Indicators, April 2013, World Bank.

2. Left hand coordinate: GDP growth rate of the "World", "World excluding China", and "China"; right hand coordinate: "China's contribution" which equals the difference of the GDP growth rate of the "World" and that of "World excluding China".

As illustrated in Figure 3, from the 1978, China's GDP grew faster than that of the world total, without exception. It means that the contribution of China to the world GDP growth remains positive, and tends to be increasingly important since the 1990s. For instance, in 2011, the growth rate of world economy is 2.73%, of which 0.56% is due to China.

Figure 4: Catch-up of GDP per capita (1990 Int. GK $): US =100



Notes: 1. Data come from Updated Maddison historical GDP data: http://www.ggdc.net/maddison/maddison-project/data.htm.

2. As defined by Woo (2012), once the GDP per capita of a country falls into the range of 20% to 55% of that of the US, it can be viewed as a middle-income economy. Actually, in 2008, China's GDP per capita reached to 21.5% of that of the US, and thus listed in the middle- income economy. In addition, China overtook India in 1978, and the world average in 2009 in terms of GDP per capita.

Over the past three decades, China's growth miracle can be viewed as the most impressive, lasting, and complex in terms of institutional changes and constraint conditions in the human history of economic growth, which is generally praised by both prestigious international organizations and economists. However, it should be stressed that such miracle is by no means costless. It is highly needed to reexamine the characteristics of China's growth based on the experiences of the last 30 years, and to promote the transformation of growth mode towards a well balanced and sustainable development path.

1. Main factors determining China's economic growth

China's growth miracle has been intensively discussed abroad and at home. We will consider the four main factors as follows:

(1) Gradual economic reforms.

The intrinsic character of the gradualism strategy is to incrementally introduce the market institutions without drastically damaging the vested interests. During the process, the forces of the market permeate the traditional planning system through the effects of 'trickle-down'.

At the 14th CPC National Congress held in October 1992, the goal of the economic reforms has been set to establish a socialist market economic system. At the Third Plenary Session of the 14th CPC National Congress, the overall planning of the further market-oriented reforms has been launched. From 1991 onwards, six fields of reforms of great importance have been performed along this strategy.

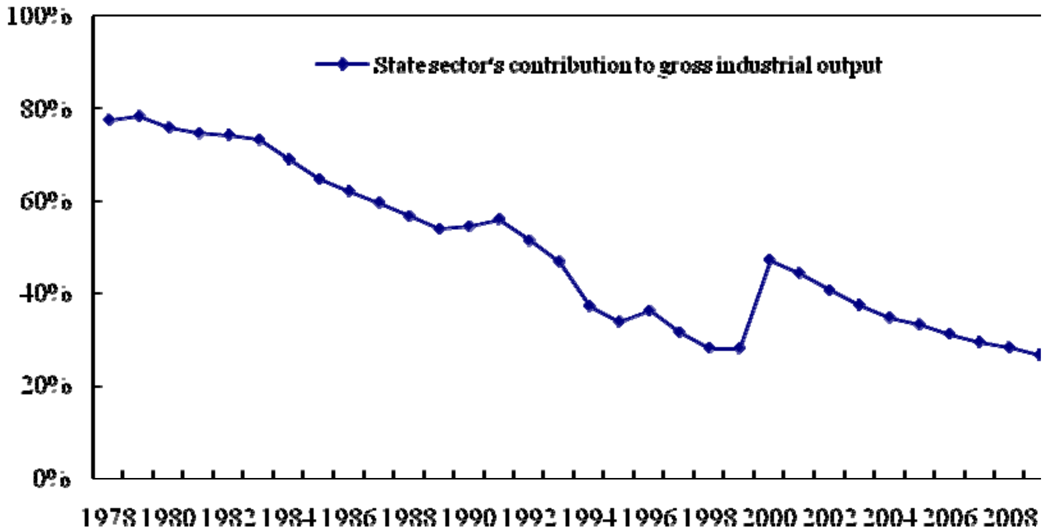
a. Fiscal reforms. In the history of China, for the first time we introduce the de facto fiscal federalism under the principle of expenditure- revenue matching, which is mainly characterized by a system including central taxes, local taxes, and central- local sharing taxes.
b. Reforms in financial sector. Before 1978, as the only bank in China, the People's Bank of China (PBC) was playing two roles at the same time, the central bank and a business bank. From 1978 onwards, after three waves of reform, the PBC has been turned into a sole monetary authority whose duties are to set and carry out monetary policies. A modern financial sector has formed, which is composed of business banks, policy banks, investment banks, trust and insurance companies and so on. Meanwhile, the financial markets have been developed with the emergence of capital, monetary, foreign exchanges, and gold markets.
c. Exchange rate reforms. In China, exchange rates used to be significantly different under the foreign trade, financial, regulated and black market systems. In 1994, China started adopting a managed floating exchange rate system after unifying the above four different rates.
d. A market-based macro prudential system has been established on the basis of the fiscal and financial reforms.
e. Since the 1980s, private investment has been allowed, successively, in the consumption goods markets, capital goods markets, and in 1994, the financial sector.
f. Transforming the functions of the government, and promoting the construction of legal system.

Thanks to the above reforms, China's economy experiences impressive changes in favor of marketization. In fact, as far back as1996, 81% of the production materials, and 93% of retail sales, had already been traded according to the market pricing mechanism. From Figures 5,6,7,8, and 9, a clear trend of market-oriented transformation can be identified.

Figure 5: China's Marketization Index

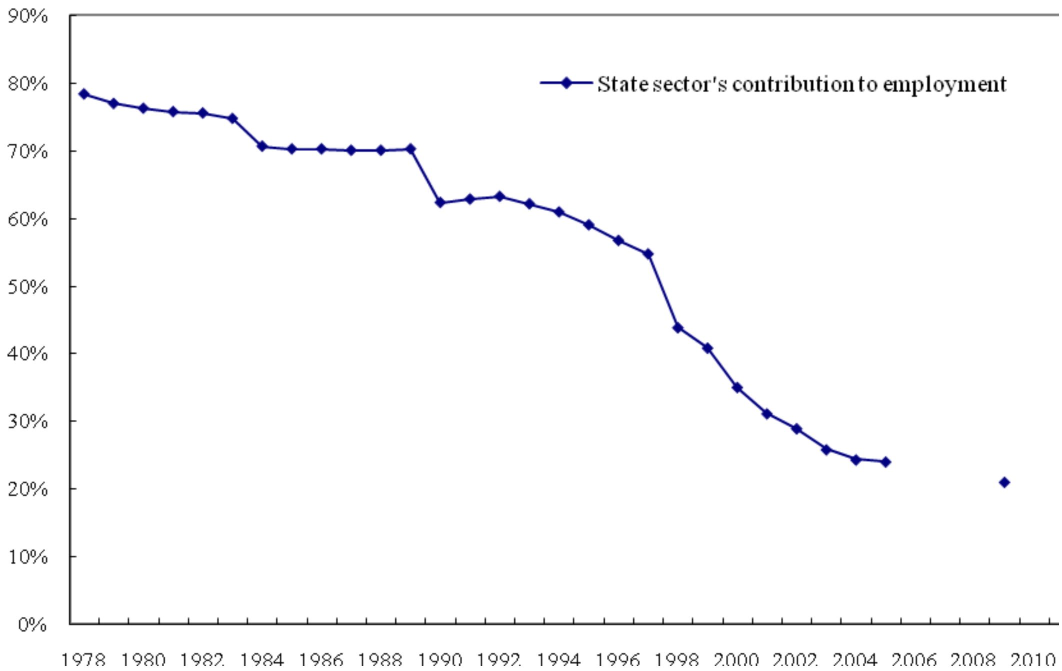
Data source: National Economic Research Institute, China's Marketization Index Database.

Figure 6: State-owned sector, share of gross industrial output (%)



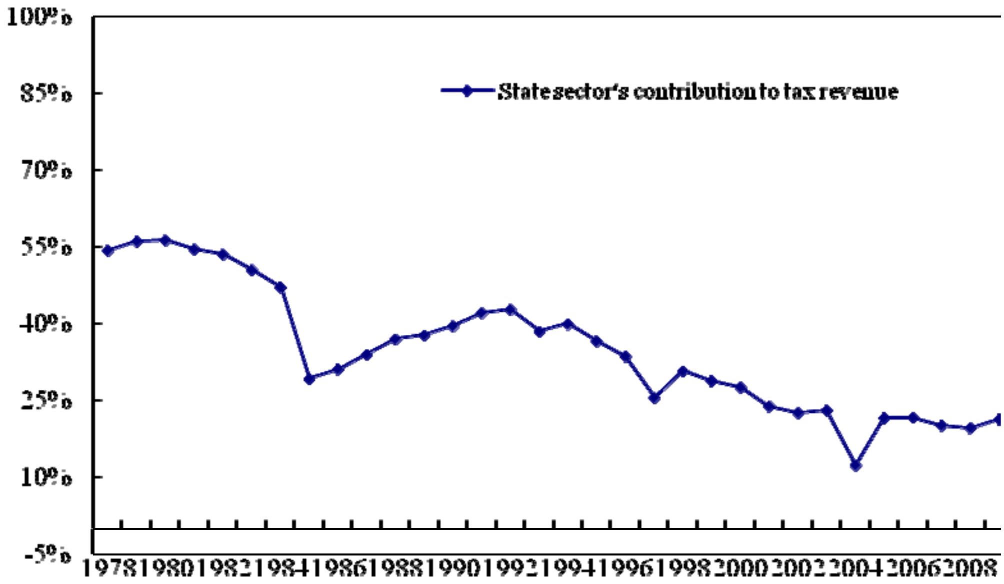
Data source: China Industry Economy Statistical Yearbook, 2011.

Figure 7: Contribution of state-owned sector to the total urban employment (%)



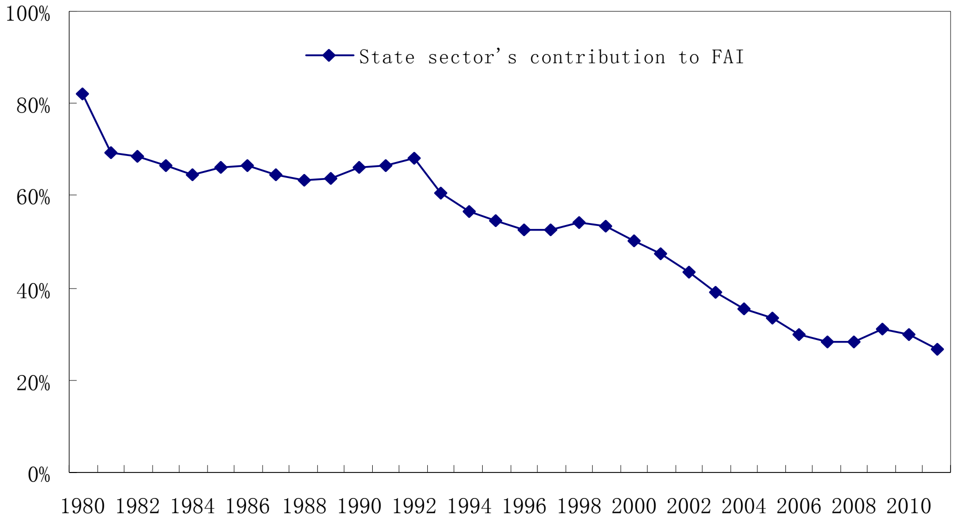
Data source: National Bureau of Statistics of China.

Figure 8: Contribution of state-owned sector to the total tax revenue (%)



Data source: China Industry Economy Statistical Yearbook, 2011.

Figure 9: Contribution of state-owned sector to the total fixed assets investment (%)

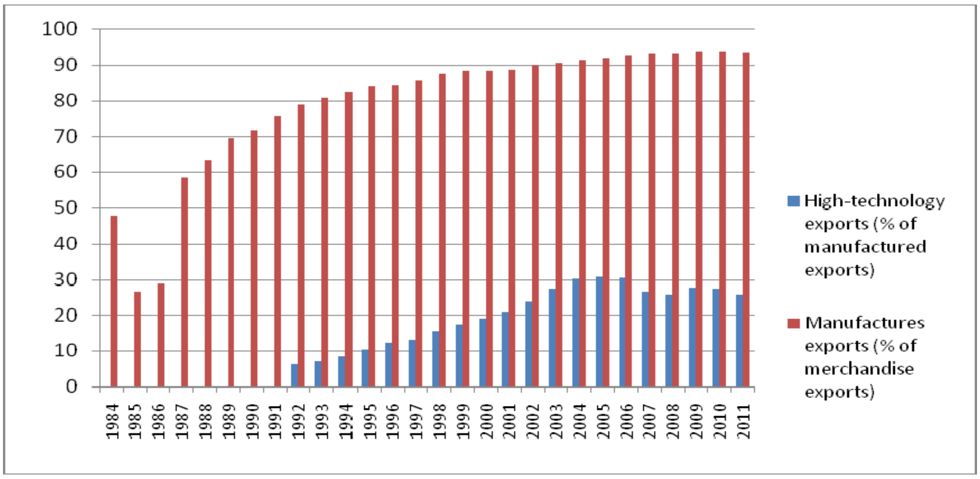


Data source: National Bureau of Statistics of China.

(2)Constant opening-up

Another indispensable factor explaining China's growth miracle is constant opening-up, which is equally guided by the principle of gradualism. Regarding the space structure, the markets successively opened up from the special economic zones, economic and technological development zones, coastal economic development zones, riparian regions, inland regions, and finally the whole China; regarding the industrial structure, from the advantaged manufacturing industry, to the less advantaged agriculture and service industries. In 2001, China's entry into the WTO can be regarded as a milestone: China's opening up transformed from selective policy measures to widespread and deep institutional arrangements. Since then, China has integrated into the labor division of the global market system, under which China and the rest of the world benefit from each other.

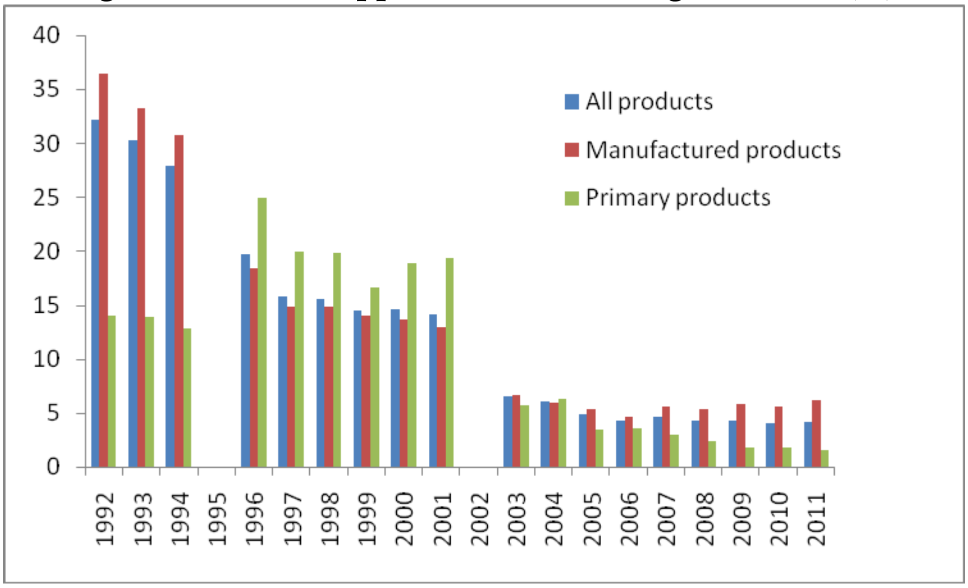
Figure 10: China's export structure



Notes: 1. Data come from World Development Indicators, April 2013, World Bank.

2. As the 'World Factory', China's manufactured goods account for over 90 % of all exported goods of the country. Moreover, the relative share of high-technology goods was increasing since the 1990s. This trend stopped, however, in recent year, indicating a less sophisticated export structure.

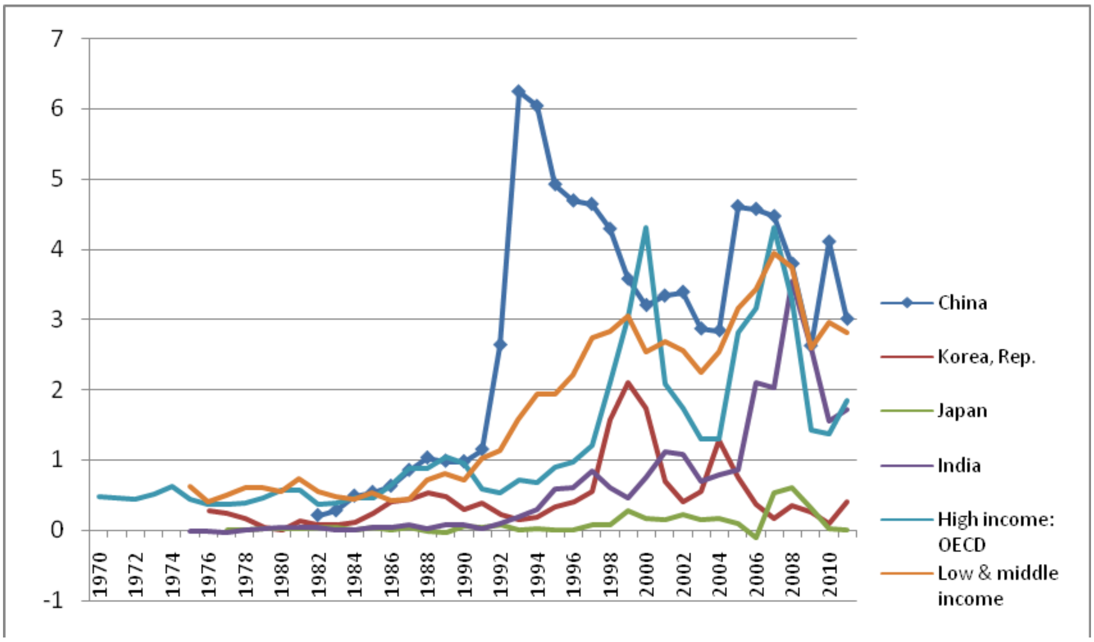
Figure 11: China's applied tariff rate, weighted mean (%)



Data source: World Development Indicators, April 2013, World Bank.

As shown in Figure 11, since the 1990s, China's tariff rates gradually decreased. In particular, after the entry into WTO in 2001, the rates significantly declined. Nevertheless, compared to other countries, the rates for manufactured products remain high, and those for primary products appear low. For instance, in 2010, the rates applied to all the products, manufactured products, and primary products are 4.0%, 5.6%, and 1.8%, respectively. Those for the developing countries as a whole, are 4.3%, 5.2%, and 2.7%, respectively.

Figure 12: International comparison: FDI net inflows (% of GDP)



Data source: World Development Indicators, April 2013, World Bank.

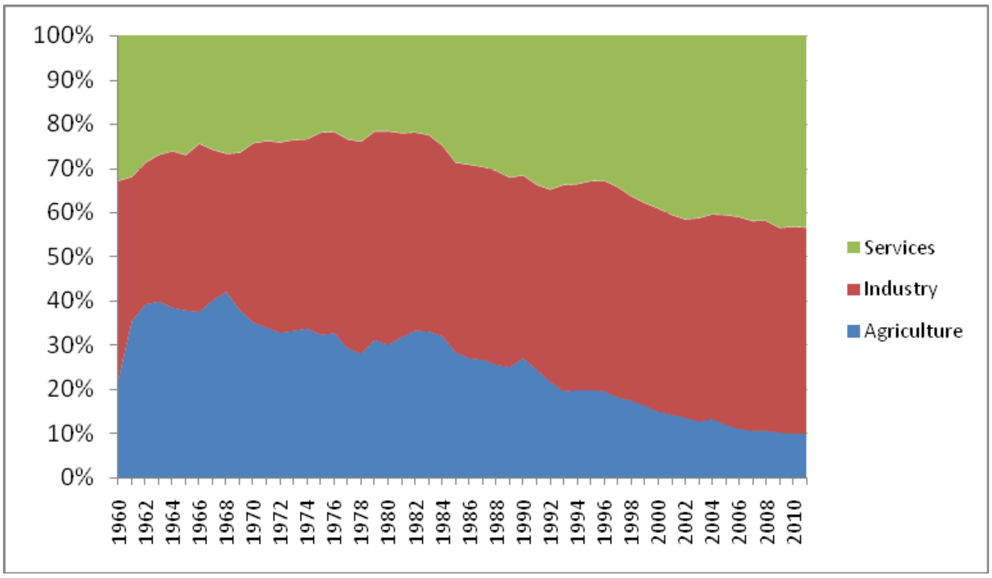
From 1992 onwards, the absolute and relative sizes of the FDI inwards of China rose significantly. In 1991 China only attracted $4.37 billion of FDI, accounted for namely 1.15% of GDP, while in the next year, the two indicators increased to $11.16 and 2.64%, respectively. In 1993, they further jumped to $27.52 and 6.25%, respectively, enabling China to become the largest recipient of FDI among developing countries. In some years (such as 2003), China even overtook the US and became the No.1 recipient among all countries.

(3) Continuously improved economic structures

Since 1987, the major drivers of China's economic growth are the industrialization and urbanization. By changing the industrial and spatial structures, both the two processes improve the allocation efficiency of the production factors in China.

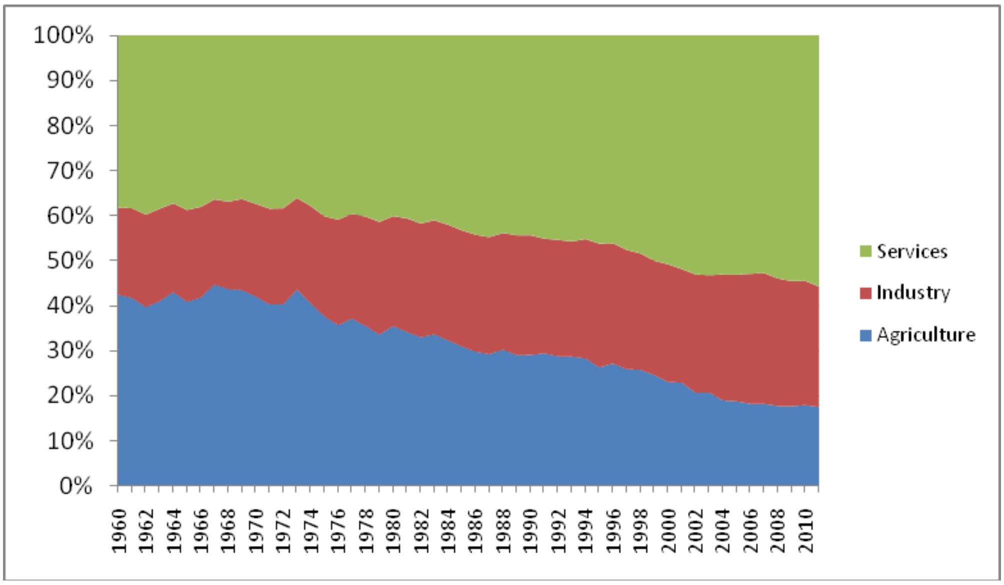
a. Since the 1970s onwards, China's industrialization process accelerates. As shown in Figure 13.1, over 1960-1969, on average, the industrial value-added accounted for only 35.2% of China's GDP. However, this share rose to 44.5% in the 1970s, and since then remains stable. In the meantime, the share of service sector constantly increases at the expense of the decline of agriculture sector. By way of comparison, as another huge developing country, India experiences a less dramatic structural change, characterized by a relatively small industry sector, and large service and agriculture sectors. We consider that for a developing country, bigger size of industry tends to help absorb more labors and support the urbanization, and thus can be viewed as an advantage.

Figure 13.1: Industrial structure: China (value-added as % of GDP)



Data source: World Development Indicators, April 2013, World Bank.

Figure 13.2: Industrial structure: India (value-added as % of GDP)



Data source: World Development Indicators, April 2013, World Bank。

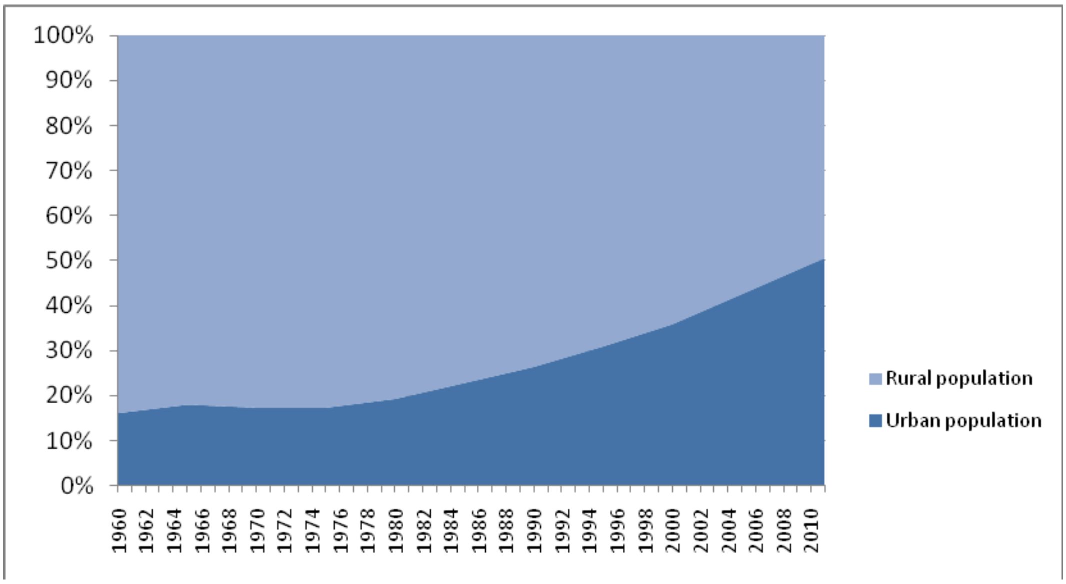
Table 1: Comparison of China-India industrial structure: value-added as % of GDP

China:	1960-1969	1970-1979	1980-1989	1990-1999	2000-2011	1960-2011
Agriculture	37.2	32.3	29.4	20.5	12.0	25.7
Industry	35.2	44.5	44.3	45.4	46.5	43.3
Service	27.7	23.2	26.3	34.1	41.5	31.0
India:	1960-1969	1970-1979	1980-1989	1990-1999	2000-2011	1960-2011
Agriculture	42.2	38.6	31.7	27.4	19.4	31.4
Industry	19.9	22.3	25.5	26.1	27.3	24.3
Service	37.8	39.1	42.8	46.5	53.3	44.3

Data source: World Development Indicators, April 2013, World Bank

b. Urbanization. The process of urbanization is another driver of China's economic growth. Judged by the urban population's share of the total population, over the period of 1960-1978, it slightly increased from 16.2% to 18.6%. In 2000, however, it almost doubled and jumped to 35.9%. In particular, in 2011, it reached to 50.5%, exceeding that of rural population for the first time (see Figure 14). Since 1978, the relative size of urban population tends to gain one percent each year, and to accelerate from the 1990s. Nevertheless, the urbanization level in China still remains low: As shown in Table 2, over 2000-2011, the urban population only accounted for 43.2% of the total. Moreover, about 180 million rural migrant workers though taken as urban population who cannot enjoy equal urban public service (like health insurance, social security, education, and etc.) actually are not the urban residents. If taking this into consideration, the real urbanization ratio is just about 35%, even lower than the half of the average for the developed countries and still lower than the average for the developing countries. It is to stress that such low urbanization level also implies that China has large potential for supporting its future growth through this driver.

Figure 14: China's urbanization in terms of population (% of total)



Data source: World Development Indicators, April 2013, World Bank.

Table 2: International comparison: Urbanization in terms of population (urban population's share of the total, %)

Country\Year	1960-1969	1970-1979	1980-1989	1990-1999	2000-2011	1960-2011
China	17.4	17.8	22.5	30.6	43.2	26.9
India	18.7	21.2	24.2	26.5	29.4	24.2
United States	71.7	73.7	74.4	77.0	80.8	75.7
Japan	67.3	74.7	76.7	77.9	85.7	76.8
Germany	71.8	72.5	72.8	73.2	73.4	72.8
Developed countries	66.3	70.5	72.8	75.0	78.4	72.8

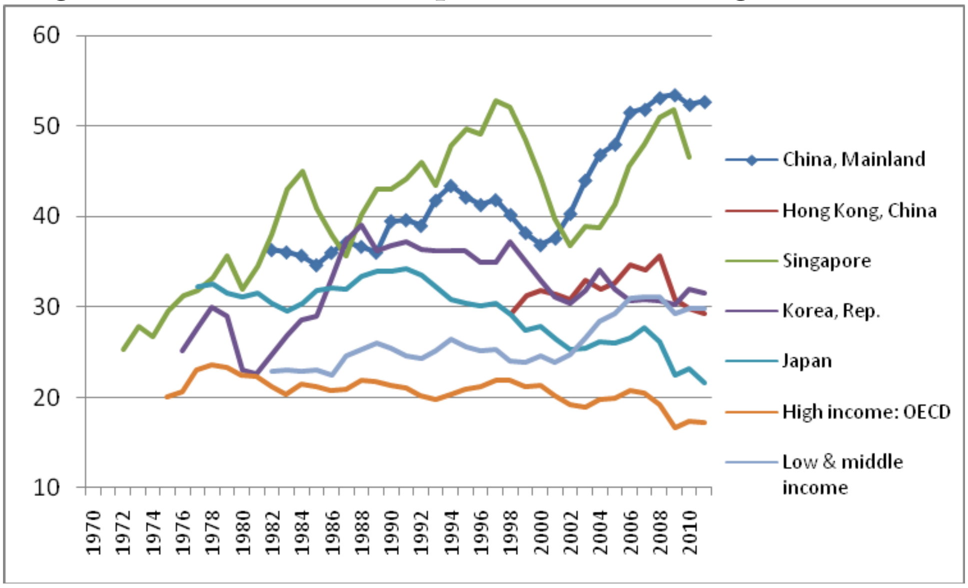
(OECD)						
Developing countries	25.7	28.8	33.3	38.0	43.5	34.2
World	35.1	37.7	40.9	44.5	49.3	41.8

Data source: World Development Indicators, April 2013, World Bank.

(4).High savings and investment

In the framework of development economics and theory of economic growth, the level of savings is a major determinant of long run growth. Many international observers view high savings as successful experience supporting China's rapid growth. Historically, during the process of industrialization, as the income grows, the savings rate (ratio of savings to GDP) tends to increase. However, China is not just following such a general trend, but appears to have much higher savings rate than those in other countries. As can be seen in Figure 15 and Table 3, the average rate of the world is slightly higher than 20%, less than half of that in China, which is averaged 47.4% over the past decade and overtakes that of Singapore.

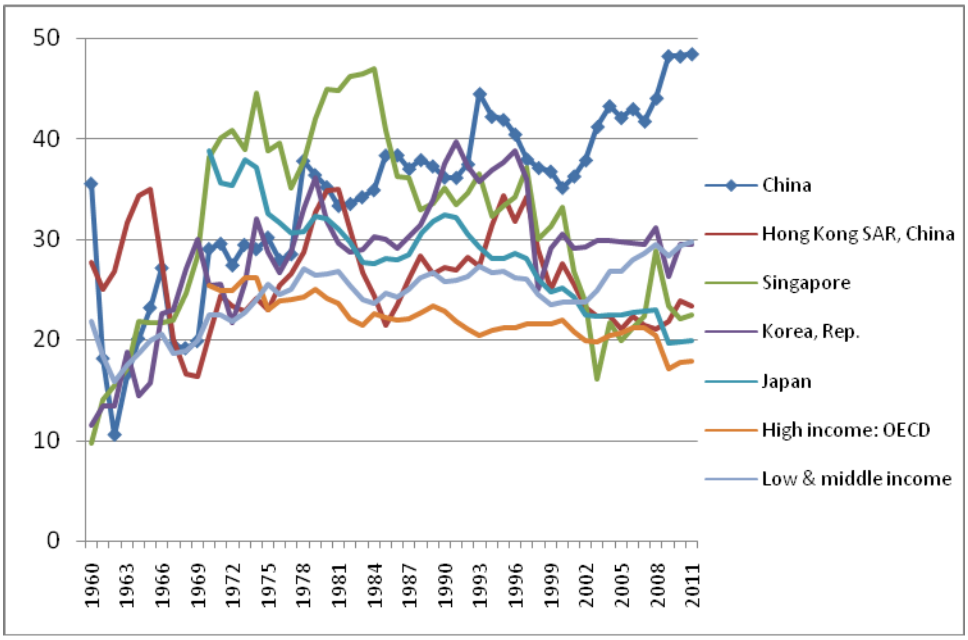
Figure 15: International comparison: Gross savings (% of GDP)



Source: World Development Indicators, April 2013, World Bank.

The tremendous amount of savings strongly supports the investment which spurs the long run rapid growth (see Figure 16), without triggering severe inflation.

Figure 16: International comparison: Gross capital formation (% of GDP)



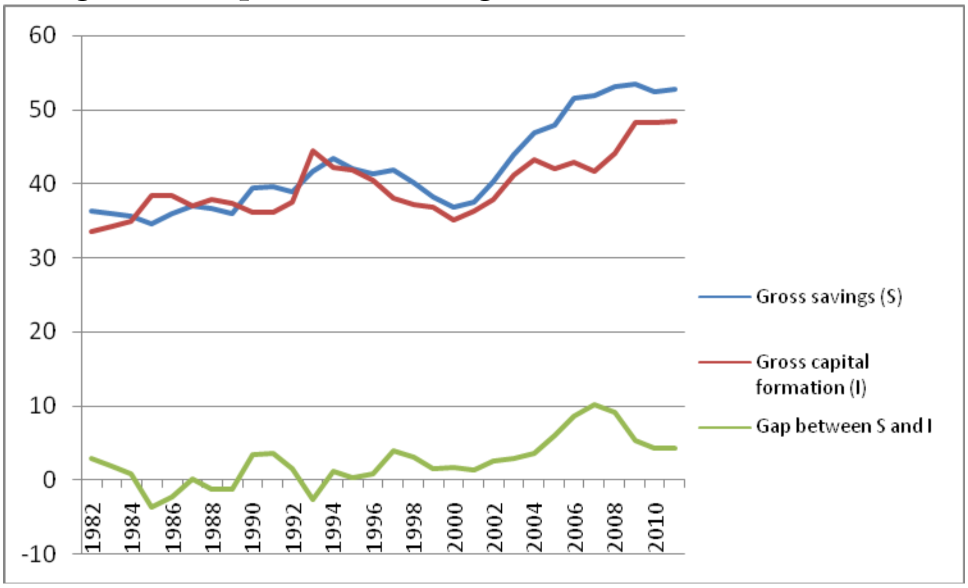
Source: World Development Indicators, April 2013, World Bank.

Table 3: International comparison: Ratio of savings to GDP, %.

Country\Year	1960-69	1970-79	1980-89	1990-99	2000-2011
China		30.5	34.7	40.9	47.4
United States	19.9	19.6	17.8	17	14.0
Japan	35.3	35.6	31.8	30.7	25.4
Korea	8.7	22.3	26.5	35.1	31.5
Singapore	-4	28.6	41.7	48.2	43.9*
Malaysia	21.9	27.1	30.2	40.7	35.5
Thailand	18.7	22.3	31	35.3	29.6*
India	12.5	17.9	20.5	23.6	31.6*
Egypt				22.6	19.9
South Africa	23.5	25.5	25	16.7	15.4
Brazil	16.8	19.35	19.8	16.8	16.6
Argentine		26.5		14.9	24.4#
United Kingdom		20	17.6	15.7	14.4
Germany		23.8	20.6	21.4	22.6
France		24.1	18.9	19.8	19.6
East-Asia		27.8	31.6	36.4	29.5
European Union	12.9	24.8	24.1	22.6	20.2
High income	25.6	25.5	23.1	22.8	19.6
Middle income		25.3	25.7	25.3	28.5
Low income	11.3	17.3	19.6	20.7	22.6*
World	24.5	25.3	23.4	23.1	21.0

Notes: 1. Data come from the Reuters database and World Development Indicators, World Bank. 2.* , data for 2000-2010; # ,data for 2005-2011.

Figure 17: Gap between savings and investment (% of GDP)



Source: World Development Indicators, April 2013, World Bank.

In addition, it is noteworthy that the savings rate remains generally higher than the investment rate over the reforms era. This phenomenon helps explain China's accumulated trade surplus and a large amount of holdings of foreign assets.

2. The future of China's growth

Regarding the future of China's growth, we could still follow the four perspectives given above.

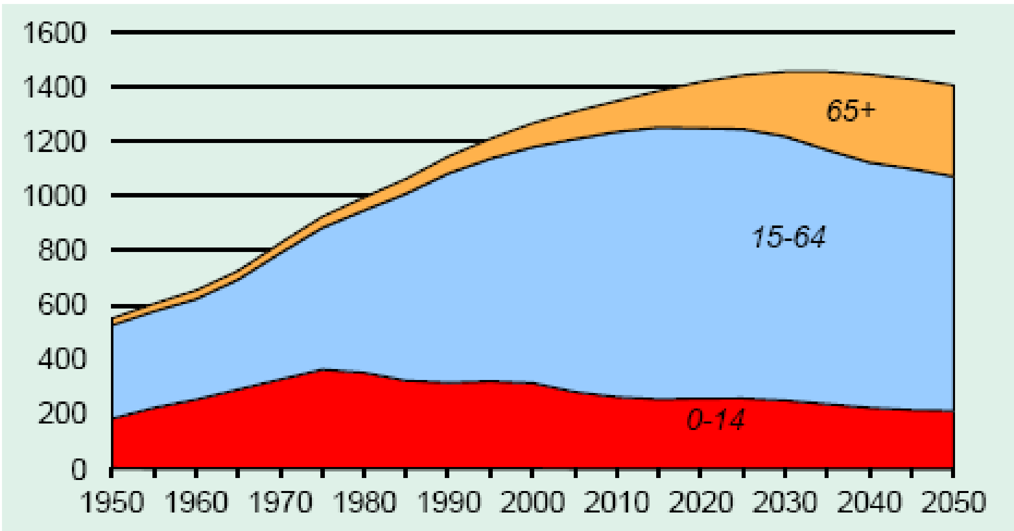
Reforms. To gain the 'reform dividend', we need to launch reforms in new domains. There is no doubt that the market-oriented reforms constitute the most crucial factor to support China's growth in the future. The key here is to properly deal with the relationship between government and markets. The latter will be expected to play the fundamental role in the allocation of economic resources.

Opening-up. In view of the TPP, TTIP, and the recent Japan-Europe trade talks, new rules of global markets are forming. It is noticed that such new rules, which to a large extent point at China, tend to establish higher barriers on the international business. The most significant barriers are the alleged 'market economy status' and 'competitive neutrality'. Under these external pressures, China needs to keep promoting marketization reforms, which support the long run growth.

Industrialization and urbanization. Thanks to the development over the last three decades, China has basically accomplished industrialization, which is not only an important driver of economic growth, but also spurs the process of urbanization. Looking ahead, China's industrialization will follow a new path relying on green industry, information technique, intelligence, and servicization. Meanwhile, China's urbanization will focus on the coordinated urban-rural development, modernization of agriculture, and equalization of public services.

Savings and investment. In the future, both the savings and investment rates seem to remain high compared to other countries. Although the former will still exceed the latter, the gap tends to be narrowed. On the one hand, China should make more effort to improve the efficiency of investment. This concern is of paramount importance given the fact that facing the tendency of population ageing (see Figure 18), the contribution of 'population dividend' to economic growth is disappearing, and consequently the savings tend to be reduced. On the other hand, China will balance its demand structure by boosting domestic consumption.

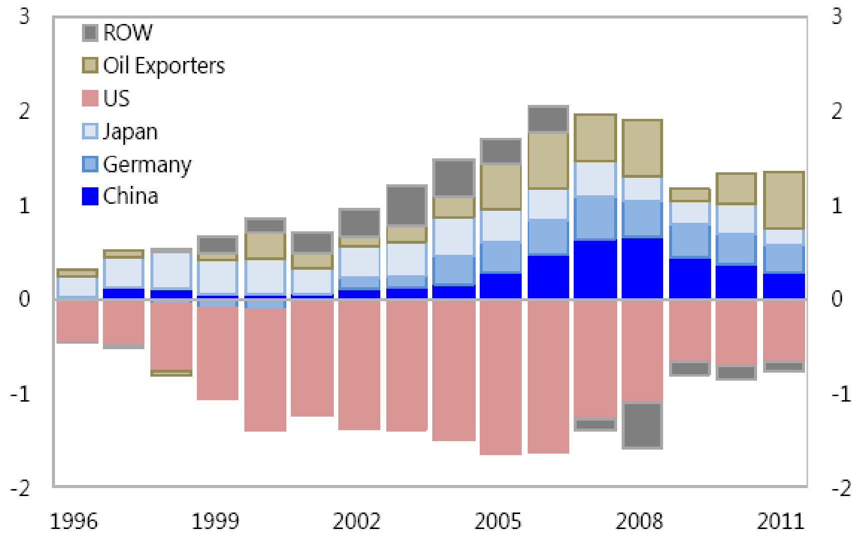
Figure 18: China's demographic transformation (Population in millions)



Data source: United Nations Population Database.

From an international perspective, the narrowing of China's investment gap is associated with the narrowing of China's trade surplus, thereby benefiting the rebalance of the global economy (see Figure 19). It has actually happened since 2009.

Figure 19: Global imbalances (% of world GDP)



Data source: IMF database.

After witnessing rapid growth over the last three decades, China's economic expansion tends to slow down from 2012. According to the macroeconomic model of the Chinese Academy of Social Sciences (CASS), the potential growth rate is in the range of 7.8%-8.7% during 2011-2015, 5.7%-6.6% during 2016-2020, 5.4%-6.3% during 2021-2030.

Table 4: Scenario analysis: Growth accounting for future growth in China

Period	α	1- α	Potential growth rate of GDP (%)	Capital growth (%)	Labor growth (%)	TFP	Effects of energy saving and emission reduction
2011-2015	0.7	0.3	7.8-8.7	10-11	0.8	0.2	-1
2016-2020	0.6	0.4	5.7-6.6	9-10	-1	0.3	-1
2021-2030	0.5	0.5	5.4-6.3	8-9	-0.5	0.4	-0.5

Source: CASS Macroeconomic Research Program.

It is obvious that according to the 'slowing down' scenario illustrated above, China will still maintain its leading position around the world in terms of growth. To achieve this goal, we need to keep promoting the reforms, especially properly dealing with the relationship between government and markets. Clearly, both market-oriented reforms and government reforms are of great importance.

Regarding the market-oriented reforms, the key is to promote the marketization of production factors, which encompasses the reforms in the land system, interest rate determination, development of capital markets, and the integration of urban-rural markets.

Regarding the government reforms, on the one hand, the government needs to reduce its intervention in the micro-level economic activities, promote deregulation and administrative decentralization, break up monopolies, and improve the efficiency of functioning. On the other hand, the government should take responsibility for the non-profit public investment, education, and other public goods and services.

Currently, Chinese government and scholars are studying the key steps and domains, as well as the road map and planning of the reforms for the next 5-10 years. This task is expected to be finished by the end of this year. We believe that as the reforms advance, China will witness its fourth decade of impressive economic growth of high quality.