

# **Growth Potential and Monetary Policy Orientation in China's Economic Transition Period**

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**Abstract:** After the international financial crisis of 2008, China faced external economic shocks on the one hand and structural and growth momentum changes brought about by the transition of the growth phase on the other hand. In addition, China still needs to continue promoting the economic and financial reforms. Among all the issues, the growth-phase transition is the foothold of China's macro economic and monetary policies. The setting of economic development goals and the formulation of regulatory policies including monetary policies require objective analysis and understanding of the catch-up space and growth potential of the Chinese economy at this stage. As a catch-up economy, GDP per capita is an essential element in determining the growth potential. The previous academic research based on international experience comparison has emphasized this point, but it ignores the expansion of the technology frontier caused by the growth of the early-developing developed countries by applying the static rules to the dynamic problems in a simplistic way. The international comparison based on the absolute level of GDP per capita underestimates China's growth potential, while an international comparison based on the relative level of GDP per capita overestimates China's growth potential. An objective analysis of China's growth potential needs to take into account the catch-up rules, changes of technological backgrounds, specific national conditions, and the international environment. Unleashing growth potential in the near future requires dealing with the relationships between real growth rates and potential growth rates, conventional growth momentum and new growth momentum, governments and markets. With the gradual shift of monetary policies in major economies, major changes shall take place in the international economic and trade environment, and China's macroeconomic management and monetary policies also need to be adjusted accordingly. However, the fundamental problem in the near term is still how to cope with the changes brought about by the transformation of the growth phase.

Since the international financial crisis broke out in 2008, the financial and monetary policies of the world's major economies have moved from crisis relief to quantitative easing, and are now gradually shifting toward tightening. As the Fed has raised interest rates continuously, the global capital market has felt the slight chill in the air. The European Central Bank will gradually reduce the amount of debt purchases before the end of the year, and is expected to withdraw from the quantitative easing next year. From the past ten years, China's monetary policies have undergone similar changes with other countries. At the beginning of the crisis, China's stimulus package included large-scale money supply and credit expansion. As economic growth improved, the money supply tightened. Since 2017, taking into account the potential risks brought about by high leverages ratio, the Chinese government has further strengthened financial supervision, and the money and credit

supply has been further tightened. In the middle of 2018, due to the impact of internal growth performance and the deterioration of the external economic and trade environment, the monetary and credit policies were fine-tuned. However, unlike other countries, China's growth phase has undergone a turning point in the past decade. China's monetary policy decision-making is made in the context of crisis response, transition of the growth phases, and promotion of financial reform and opening up. At present, at a new starting point, to understand China's monetary policy orientation still requires the analysis in the context of the transition of the growth phases, the furthering of the financial reform and opening up, the changes in the international economic and trade environment, and the normalization of global monetary policies. Among them, the most important and most controversial is the analysis of the growth potential of the transitional period of China's growth phases. This is because the monetary policy benchmark can only be determined when there is a proper understanding of the growth potential and a judgment on the potential economic growth rate. On this basis, the benchmark scenario can be adjusted according to the intensity on opening up and reform in the economic and financial fields, changes in the international monetary policies, and changes in the economic and trade environment.

Since 2011, China's economic growth rate has continued to decline. The GDP growth rate in 2017 was slightly higher than the previous year. In 2018, the economic growth rate may be slightly lower than that of 2017. In the next few years, China's economic growth will still face difficulties such as high leverage ratio, sluggish demand, and unstable confidence and there are uncertainties in the growth prospects. In the process of this round of growth rate decline, the momentum, structure and internal and external environment of China's economic operation have undergone significant changes to which the short- and medium-term analytical framework has not been able to give an effective explanation and it needs to be analyzed in the context of the growth-phase transition. At the stage when the growth rate began to decline, the Chinese academic community had a heated discussion on the mechanism of the growth-phase transition and the potential growth rate. As the growth rate gradually stabilizes, the view that China will maintain medium-to-high-speed growth in the long run has been widely recognized. However, this judgment relies to a large extent on the actual performance of economic growth in the recent two years, and the basis of theoretical analysis still needs to be further strengthened. At the same time, the findings and debates in the previous theoretical research need to be further explored. The fact that the theoretical analysis is not deep enough has resulted in the susceptibility of the estimation of future growth prospects to the economic situations in real economy-related evaluations. If there is a boom, confidence in the future will be sufficient; and if the economy turns worse, confidence will be shaken.

In the past few years, the Chinese government has also summarized the new situations and new features in the economic operation in a timely manner, and has put forward major judgments such as “the simultaneous emergence of the slowdown in economic growth, making difficult structural adjustments, and absorbing the effects of previous economic stimulus policies”, “new normal” and “turning to high-quality development”. The core issue highlighted in these judgments is the transition of the growth or development phases. In fact, the changes in economic reality in recent years have also provided new enlightenment for theoretical analysis.

The transition of China's economic growth phases not only reflects the basic laws of the catch-up economies as late comers, but also reflects the impact of the technological progress and the international environment. It also reflects the country-specific characteristics of China's economic and social development. Combining related factors, and unifying theoretical logic and historical logic is of great significance for the proper understanding of the growth law of the transition to high-quality development stage and dealing with the important relationships in the economic operation.

### **I. The level of development is the fundamental factor determining the growth potential of catching up countries.**

From a historical perspective, China's development is a transition from an agricultural country to an industrialized modern country and is also a catch-up process from the absorption of international advanced technologies to independent innovation as a late comer. The law of industrialization and the law of catching up are the main theoretical basis for analyzing the potential growth rate in the transition of growth phases, while the core variable is the level of economic development.<sup>1</sup>

The previous academic discussions mainly proceeded from the above ideas, and two of them were the most representative. First, China's economic growth prospects are closely related to the relative level of GDP per capita compared to that of developed countries. Judging from the development experience of East Asian economies, when compared with the United States, China's GDP per capita is relatively low, and there is huge room for improvement. In the future, it can still maintain high growth for a long period of time<sup>2</sup>. Second, from the international experience, the absolute level of GDP per capita at constant price in the economic development has an important impact on the demand structure and thus the potential growth rates of the economy. China has reached the absolute level of GDP per capita where the economic growth rate will see a period of change, so the potential growth rate will witness stepped declines.<sup>3</sup>

Both of these viewpoints accurately take the level of GDP per capita as the starting point of analysis, and combine theoretical analysis with international comparison. However, due to the different indicators and perspectives selected, they have reached completely different conclusions. It should be pointed out that the differences on the growth prospects are not only manifested in theoretical analysis and international comparison, and both of these viewpoints can find relevant evidence in the real economy. For example, the significant gap between China and developed countries in terms of household consumption and rural infrastructure development seems to indicate that the development space can be transformed into a faster economic growth rate, thus supporting the first view. At the same time, the weakening of traditional industries, lack of investor confidence, and continued decline in economic growth rate in recent years seem to support the second view.

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<sup>1</sup> Zhang Junkuo, et al.: "Into the Next Round of Chasing: From Quantity Expansion to Quality Upgrade", China Development Press, 1st edition, August 2014. P.8.

<sup>2</sup> Justin Yifu Lin: "Demystifying the Chinese Economy", Peking University Press, 2nd edition, September 2014. P.16.

<sup>3</sup> Liu Shijin, etc.: "'Middle-income Trap'vs 'High-income Great Wall': Real Challenges to and Strategies of China's Economy ", CITIC Publishing House, the first edition in November 2011. P.8.

In fact, the key to the formation of contradictions is not whether to choose the absolute level of GDP per capita or the relative level of GDP per capita, but because the application of international experience does not consider the impact of changes in the technological backgrounds of different eras on the connotations of the absolute and relative levels of GDP per capita.

**(1) When the technology frontier is fixed, the same analysis conclusion will be obtained from the relative and absolute levels of GDP per capita**

**1. The absolute level of GDP per capita determines the demand structure and investment behavior of residents, which in turn affects the potential growth rate of catch-up countries**

The satisfaction of human needs is a physiological phenomenon, and there is a progressive relationship from basic subsistence needs to high-level spiritual needs. For example, we must first satisfy the basic needs for food, clothes, housing and transportation, and then we will consider more needs in tourism, education, and culture etc. As the income level increases, the industrial upgrading brought about by the changes in demand presents certain regularity. In the 1970s, the famous economist Simon Kuznets studied the proportion of the three major sectors in 57 countries in the total demand, and believed that there is a certain correlation between its trends of change and the GDP per capita levels.<sup>4</sup>

Different demand structures call for different production systems, and the technological progress and accumulation modes contained therein are also different. For example, the products needed for living and commuting are houses and automobiles, and the supporting production system is a heavy chemical industry with high capital intensity. In the stage of rapid growth of such demands, capital accumulation and technological progress are simultaneously advancing at a relatively fast pace, thus driving rapid economic growth. When such material demands become stable, it will be followed by the stage of rapid development of tourism, education, culture and other life service industries, capital accumulation and technological progress will slow down, and the potential growth rate will gradually decline.

**2. The relative level of GDP per capita affects the catch-up space and technology introduction potential of the latecomer countries, thus affecting the potential growth rate.**

From a supply perspective, GDP per capita often represents labor productivity. In addition to technologically advanced countries, there is no step-by-step constraint on productivity gains. Different from the consumption structure upgrade, when the production technology is introduced in the latecomer countries, they can start from the low-end technologies or directly from the middle and high-end technologies, and there is no rigid constraint in the order. For example, TV technology appears to be later than cars, but developing countries can introduce TV production equipment first and introduce automobile production equipment later. For example, the train transportation technology is developed from ordinary railways to high-speed railways, but the latecomer countries can directly introduce high-speed rails. International experience shows that with the large gap with frontier countries in terms of GDP per

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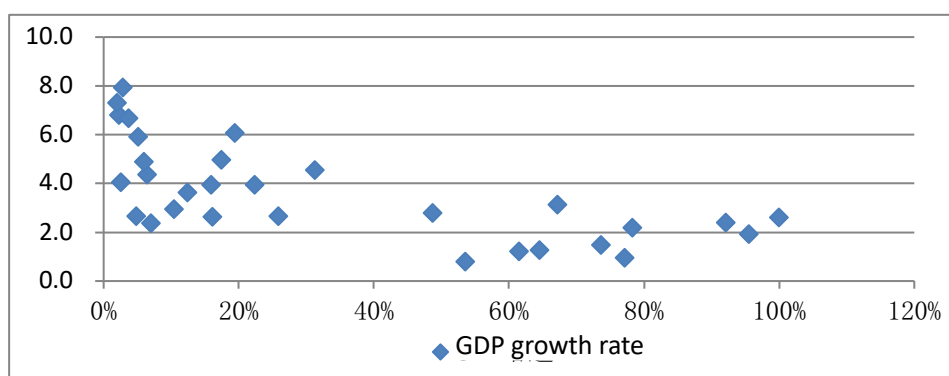
<sup>4</sup> Simon Kuznets: "Economic Growth of Nations: Total Output and Production Structure", The Commercial Press, 2nd edition, November 1999. P.130.

capita, there will be more technologies and industries that can be introduced simultaneously by the latecomer countries, and the higher intensity for achieving the compressional or catch-up growth.

### 3. The window period in which the relative level of GDP per capita has an effect on the potential growth rate

The rate at which the catch-up space determined by the gap of relative GDP levels is converted into potential growth depends largely on the stage of development of the catch-up country. When catch-up countries are in the stage of rapid growth in material demand, there is much room for economic growth through technology introduction. When it is in the stage of rapid growth in service demand, the space for promoting economic growth through technology introduction will become smaller. This is because the different demand structure will affect the industrial investment intensity and technology conversion mode. The investment in the manufacturing industry is strong, technological progress can be achieved through equipment investment; but the investment intensity of the service industry is low, technological progress can only rely more investment on human capital. Figure 1 shows the gap of the GDP per capita of 30 countries with that of the United States and the correspondence with their GDP growth rate in 2015<sup>5</sup>. It can be seen from the sample shown that countries with GDP per capita below 20-30% of GDP per capita of the US are more likely to achieve higher economic growth rates. These countries are mainly middle-income countries, with rapid growth in material consumption and a high industrial share. In countries with high incomes, regardless of the relative level of GDP per capita standing at 40%, 50% or 80% of US GDP, there is no trend change in economic growth. This shows that after the GDP per capita reaches a certain level relative to the frontier countries, the impact of the corresponding catch-up space on the potential growth rate will be reduced.

Figure 1: GDP growth rates and relative levels of GDP per capita



Source: World Bank

### 4. In static analysis, the relative and absolute levels of GDP per capita are unified, and jointly determine the catch up space and potential growth rate

<sup>5</sup> The 31 countries in the Figure are Argentina, Egypt, Australia, Pakistan, Bulgaria, Poland, Germany, France, the Philippines, South Korea, Canada, Czech Republic, Romania, Malaysia, the United States, Mongolia, Myanmar, Mexico, Nigeria, Japan, Thailand, Turkey, Singapore, New Zealand, Italy, India, Indonesia, the United Kingdom and Vietnam. GDP is based on the nominal value of the 2015 dollar, and the growth rate is the year-on-year growth rate.

In the case of a fixed level of development in frontier countries, the absolute value and relative value of GDP per capita in the latecomer countries displays a one-to-one correspondence. The absolute value in the sense of demand structure, and the relative value from the perspective of the space for technology introduction jointly determine the catch up space and potential growth rates of the latecomer countries. It should be noted that even if the frontier countries do not develop, as a result of their development and their rising GDP per capita levels, the potential growth rates of the latecomer countries will change correspondingly as the demand structure and the technology introduction space change. Even in this case, there is a theory that a certain level of development and a certain potential growth rate share a one-to-one correspondence. In static situations, whether from the relative level or the absolute level, the conclusions obtained through theoretical analysis and international comparison should be consistent.

However, as pointed out at the beginning of this section, international comparisons often involve changes in historical periods and the development of frontier countries themselves. From the abstract meaning of growth analysis, this change is mainly reflected in the different technical backgrounds faced by latecomer countries. It is precisely due to the lack of consideration of the advancement of technological frontiers that international comparisons based on absolute levels tend to underestimate development potential, while international comparisons based on relative levels tend to overestimate development potential. A proper understanding of the impact of development levels on catch up space and potential needs to move from the static analysis to dynamic analysis of technological background changes.

### **(I) Changes in technical background, the growth potential corresponding to absolute or relative GDP per capita is different**

The growth law obtained through the inductive analysis of the relative level and the absolute level of GDP per capita cannot be easily compared internationally in the dynamic analysis of technological background changes, and needs to be analyzed according to the situation.

#### **1. Upon the advancement of technology, the demand and production structure represented by the absolute level of GDP per capita will change correspondingly, and the simple international comparison will underestimate the growth potential**

From the perspective of the absolute level of GDP per capita, in different historical periods, the structure of the consumption levels at comparable price will undergo changes. Although the basic law of upgrading from low-end consumption to high-end consumption and from material consumption to service consumption has not changed, its specific composition will change with technological progress. For example, in order to meet the needs for housing, the variety and quantity of household appliances deployed in residential buildings of Japan in the 1970s and in China today vary greatly. Calculated according to the absolute level of GDP per capita at comparable prices, China's current level is similar to that Japan in the early 1970s and South Korea in the mid-1990s, which means a stage of economic structural change and growth<sup>6</sup>. However, due to advances in technology over the past few decades,

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<sup>6</sup> Liu Shijin, etc.: "Middle-income Trap vs 'High-income Great Wall': Real Challenges to and Strategies of

more new technologies and products have emerged in China's economic operations. Compared with the same development stage of Japan and South Korea, China is stronger than Japan and South Korea back then in the development of new industries, but its development in some traditional fields is still insufficient. For example, when Japan underwent its growth rate transition in 1974, the urbanization rate was 56.8%. When Korea underwent its growth rate transition in 1997, the urbanization rate was 79.7%. In 2011, the urbanization rate of China's permanent residents reached 51.3%, but the registered population was only 34.7%. The traditional driving force of urbanization has not yet been fully released.

From a supply perspective, technological advances will have an impact on the production structure that satisfies consumption. For example, the introduction of new chemical materials such as PVC will replace the original traditional metal materials, and the development of electronic technology will make the domestic tape recorders, traditional cameras and other industries disappear. The sparing effect from technological advances has led to a reduction in investment, which has reduced the driving forces of traditional demands for growth. On the other hand, technological advances have led to a reduction in product costs, which will increase the consumption of residents at the same income level. These technological background changes remind us that China should take into account structural factors when using the absolute level of GDP per capita to analyze the growth-phase transition and future growth potential.

Under the condition of the same absolute levels of GDP per capita and affected by technological progress, there are differences in both demand and industrial structure, which have great policy significance. When China is in the same transition period of growth rate based on the absolute value of GDP per capita as Japan and South Korea, China's traditional demand and industrial development will be less mature than that of Japan and South Korea. Because traditional demands and industries have higher economic driving forces, this can explain why the falling range of the growth rate in China's transition period is lower than that of Japan and South Korea, or the growth potential is higher than that of Japan and South Korea. On the other hand, it can also explain why the widespread supply shortages in the areas of domestic infrastructure development and consumption can be observed in China during the transition of the growth rates.

**2. Due to the development of frontier countries, latecomer countries with the same relative levels of GDP per capita will have higher absolute levels of GDP per capita, and simple international comparisons will overestimate the growth potential**

With the technological advancement and development of frontier countries, although they have the same relative levels of GDP per capita, catch-up countries will have higher absolute levels of GDP per capita. As pointed out in the previous section, when the absolute amount of GDP per capita reaches a certain level, the proportion of service demand increases significantly, and the catch-up space represented by the relative gap does not necessarily translate into a higher potential growth rate. According to Angus Maddison, China's current GDP per capita comparing to that of the United States is just as Japan's GDP per capita in the early 1950s comparing to

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China's Economy ", CITIC Publishing House, the first edition in November 2011. P.10.

that of the U.S.,<sup>7</sup> but it does not mean that China will continue to grow like Japan at high rates for more than 20 years at the current level. Because from the 1950s to the present, the United States has developed for more than 60 years, and the absolute level corresponding to the relative level has increased significantly. In fact, when Japan's economic indicators recovered to pre-World War II levels in 1955, it was considered to be the starting point for post-war high growth, while China has now grown for more than 30 years.<sup>8</sup> When China uses international experience, due to the development of the frontier countries and technological progress, it has actually involved the dynamic analysis of the catch-up problems. While in the case of dynamic analysis, the absolute levels of GDP per capita no longer have a one-to-one correspondence with the relative level, which results in a contradiction in the international comparative analysis.

On the whole, the absolute level analysis under static conditions may underestimate the future growth potential of China, and the relative level analysis may overestimate China's future growth potential. Although China has entered the growth rate transition period based on the international experience of the absolute level of GDP per capita, the historical background of technological progress has enabled China to have better growth conditions. Although China is still at a relatively low level when compared to the United States according to the international experience of the relative level of per capita, it is impossible to maintain a high level of growth for a long time because the material consumption has been fully utilized. At the same time, considering the relative level and absolute level, when only judging from the international comparisons, after China's growth rate transition, its potential growth rates should be higher than post-transition levels of Japan in the early 1970s and South Korea in the mid-1990s, and lower than the levels of Japan from the 1950s to the 1970s.

## **II. The national conditions and the international environment will also affect the growth potential**

### **(I) From the perspective of national conditions, China has a higher potential growth rate after the transition in the growth phase**

As a developing economy with a huge size, China has its own unique national conditions in the process of catching up with the developed economies. After the transition phase, China can strive to achieve higher potential growth rates.

#### **1. The transitional characteristics from a planned economy to a market-based economy enable China to have more dividends from institutional improvements after the transition in the growth phase**

China is transitioning from the planned economy to market economy. With the deepening of the commitment to the market-oriented reform, China has achieved rapid growth. After the phase transition, there is still a lot of potential for the market to continue to deepen. First, China still has a large amount of production resources that have not fully unleashed into the market. For example, the economic value of

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<sup>7</sup> Justin Yifu Lin: "Demystifying the Chinese Economy", Peking University Press, 2nd edition, September 2014. P.16.

<sup>8</sup> Kiyoshi, Hamano, et al., "Nihon keizaishi, 1600-2000", Nanjing University Press, August 2010, 1st edition, p. 189.



rural housing sites and construction land has not been fully developed. Second, due to the lag of reform, banks and monopolistic state-owned enterprises have not fully exerted the efficiency that market entities should have. Third, the monopoly and basic fields are not fully open and the production efficiency is low, thus reducing the overall efficiency of the economy. Fourth, as the service industry accelerates its opening up to the outside world, technological advances in domestic production and circulation will enhance the overall economic efficiency. Finally, the impact of the marketization process on residents' economic awareness and behavior is gradually unfolding. The central and western regions of China are being more influenced by business culture, which will affect the future growth potential through the more market-oriented behavior of micro-subjects.

## **2. The huge market space provides favorable conditions for China to cultivate new industries and enhance international competitiveness**

The important difference between China and Japan & Korea is the huge domestic market size. If the proper strategic measures are adopted, the market will play an important role in cultivating new industries and enhancing international competitiveness. From a supply perspective, the fundamental reason for South Korea's failure to become a global production platform like Japan in the high growth stage is that its size is too small and its production resources are limited. Through quantitative calculations, the OECD believes that China has replaced Japan as a global production platform in 2005. East Asian countries have shifted their main export destinations for intermediate goods from Japan to China.<sup>9</sup> This node status of the global production system brings important opportunities for industrial development and competitiveness. The large domestic market of China can reduce the entry costs of new industries through scale advantages, and enterprises with international competitiveness can be cultivated. For example, the rapid development of companies such as Baidu and Alibaba in China mainly benefited from the vast domestic market. During the period of high growth, China has extensive economic and technological cooperation with foreign countries. After entering the stage of high-quality development, China can rely more on the huge domestic market to share research and development costs and improve the competitiveness of innovative industries.

## **3. Unbalanced development between urban and rural areas and regions contains new impetus for economic growth**

The economic imbalance in the eastern, central and western regions of China is a problem in the development process, but it also creates conditions for the industries to transfer and extend their life cycle within the country, thus lengthening the time for the release of the advantages. East Asian countries have shown a flying geese pattern in the process of economic development. Some production links were first established in Japan, then moved to South Korea, and moved to China in the past few years. For small countries, as GDP per capita increases, rising factor costs will force industries and companies to move across borders. However, industrial transfer between different regions of China has played a synergistic advantage and is more conducive to sustained economic growth.

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<sup>9</sup> OECD: "Industrial Policies in A Changing World", Shanghai People's Publishing House, 1st edition, January 2015. P.66.

There is a clear gap between the marketization level of production factors and the level of public infrastructure development between urban and rural areas in China, showing the characteristics of dual development. The vast rural areas have a large number of production factors that are not fully market-oriented, and there is a huge demand for infrastructure development. At present, it is possible to adjust the traditional concepts of industrialization, improve the utilization efficiency of rural construction land and housing sites by transferring the movable production factors (capital and technology) in urban areas to the non-movable production factors (land) in rural areas, and at the same time, enrich sources for rural infrastructure development funds and release the development potential of the vast rural areas.

It should be pointed out that the characteristics of large sizes of its economy and strong spillover effects will also have an adverse impact on China's development. First, domestic demand will significantly raise the prices of international bulk commodities, which will constrain China's development. Second, as China is a large producer of the world, the international market has relatively insufficient demand, which restricts the expansion and release of China's production capacity. Third, after the transition of the growth phase, its large population and the large size of its economy will make it impossible for one or two high-growth industries to support the medium- and high-speed economic growth, and innovations and breakthroughs need to be made in a wider range of fields.

## **(II) Changes in the international environment have brought about new opportunities and challenges for China's development**

The catch-up of the latecomer economies is achieved in different international economic environments. In the decades after the Second World War, the international economic structure, industrial characteristics, and technological conditions have undergone tremendous changes. If we ignore the differences in the international development environment, it is difficult to apply historical experience scientifically to contemporary China.

### **1. The international economic structure has undergone major changes. The share of developing countries in the global economy exceeds that of developed countries and will provide new space for demand**

After the 1990s, the engine of world economic growth gradually shifted from developed countries to developing countries. Since 2003, more than half of the global economic growth has come from non-OECD members. In the first decade of this century, 83 developing countries have GDP per capita growth rates that are more than twice that of OECD members. The industrialization process in developing countries has an important impact on global trade growth and capital flows. In the past 20 years, the world merchandise trade has expanded by nearly four times, while South-South trade has increased by more than 10 times. The rapid industrialization of developing countries has significantly expanded the global demand and is conducive to China's future economic development<sup>10</sup>.

It should be emphasized that the positive performance of economic growth in low- and middle-income countries largely results from China's economic growth.

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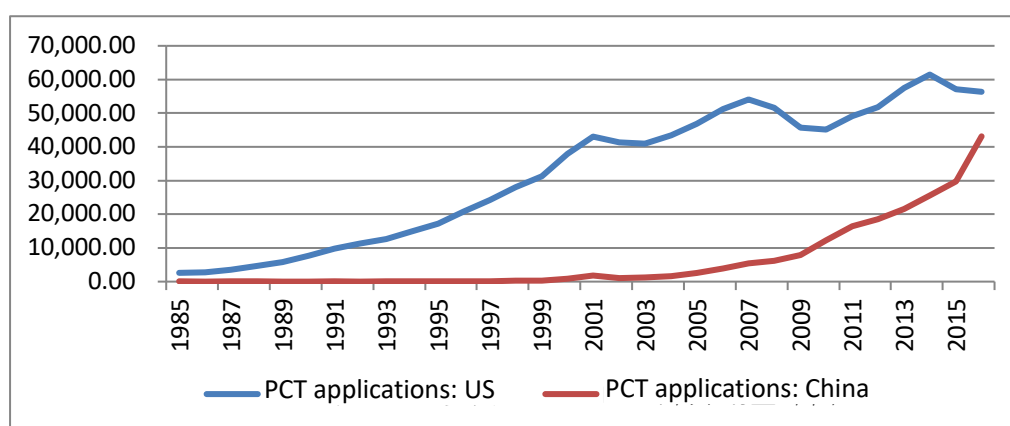
<sup>10</sup> OECD: "Industrial Policies in A Changing World", Shanghai People's Publishing House, 1st edition, January 2015. P.1-3.

OECD research shows that over the past decade or so, China's resource imports have increased the income of these countries, and China's infrastructure investment in these countries has helped them to overcome the development bottleneck. Trade, capital and technology exchanges between China and developing countries have profoundly affected the development of low- and middle-income countries and formed positive feedback on China's development.

**2. The development of the Internet and other new technologies has created conditions for China to achieve higher potential growth.**

New technologies at home and abroad have entered a stage of explosive growth. Technological developments in the fields of Internet, communications, bioengineering, and new energy enable latecomer countries to bypass the technical barriers previously set by companies of developed countries and directly enter new international industries. The growth and development of China's Tencent, BYD and other companies are all benefit from new opportunities brought about by technological advancement. Internet transformation in the manufacturing sector can free up new growth space. The technological progress in the traditional service sector is slow, and as the proportion of the service industry increases, it will affect the speed of China's total factor productivity. However, the penetration of the Internet into service fields such as employment, sales, and housekeeping can greatly increase production efficiency and operational efficiency of the services, and bring new momentum to China's economic growth. According to OECD data, China's R&D investment as a percentage of GDP has exceeded the EU average in 2012. In 2006, China's PCT applications accounted for only 7.6% of the US, and by 2016 the patent applications accounted for 76.4% of the US (Figure 2). These changes reflect the rapid increase in the importance of new technologies in economic growth.

**Figure 2: Changes in the number of patent applications in China and the United States**



Source: WIPO

**3. Global value chain adjustment has increased pressures on China's efforts to expand the international market**

After the international financial crisis, improving the competitiveness of the real economy has become an important issue in the structural adjustment of countries. The energy revolution has brought about a sharp drop in production costs, and the rapid

development of intelligent manufacturing and robotics has opened up new advantages and new spaces for manufacturing in developed countries. Under the wave of “re-industrialization”, developed countries are dominating high-end manufacturing on the one hand and rebuilding competitiveness in the mid-end market on the other. Some emerging market economies are encouraged by the success of China's export-oriented strategy and concentrate their strengths on developing manufacturing industries, attracting external investment from countries including China, and using low-cost advantages to seize the low-end share in the world market. Under the “bilateral squeeze” of developed countries and emerging market economies, China’s export competitive advantage has been greatly eroded. In addition, the political atmosphere of protectionism and isolationism in the past two years has made some developed economies more sensitive to the loss of manufacturing jobs and the decline in market share, and these economies adopted various trade barriers to protect their domestic markets. Intensified competition in the international market and anti-globalization trends will have a negative impact on China's future development.

### **III. How to fully release the growth potential of the new growth stage**

The transition of the growth phase is the result of the interaction between the objective law and the characteristics of the times after the catch-up has reached a certain level. It is an insurmountable stage of China's modernization process. China must respect the economic laws and refer to the experience of other countries, recognize the unsustainability and rigid constraints of the original development model, and objectively analyze its own economic characteristics and characteristics of the times, promote innovative development with open ideas, and achieve the historic leap of China from an upper-middle income country to a high income country. In this process, it is necessary to correctly understand and deal with several important relationships in economic development.

#### **(I) Correctly understand the relationship between the current actual growth rate and potential growth rate**

The change in growth rate is a direct manifestation of the transition of the growth phase, and it is also the first problem that needs to be faced when it comes to understanding and leading the new normal. However, what is the potential growth rate after the phase transition is difficult to answer accurately. Although the international comparison can provide a reference, the historical environment and national conditions are very different, and the reference value is quite limited. Through the traditional supply and demand space analysis, the potential growth rate can be roughly estimated. However, the room for growth brought about by institutional adjustments, new technologies, and new industries is difficult to measure accurately when the estimate is made. Finding and building a platform for sustainable growth in the new normal is actually a process of exploring potential growth. In periods of high growth, potential growth can be obtained through historical data analysis. Upon entry into the new normal, the potential growth rate needs to be created in the reform and discovered in the regulation. This change has made it necessary for China to reconsider the relationship between potential growth and actual growth.

##### **1. Due to the impact of the economic situations, the current actual growth rate cannot directly reflect the potential growth rate in the medium and long term**

Since the reform and opening up, China has experienced three rounds of business cycles. The expansion period of the most recent cycle started in 2001 and lasted until 2007. The international financial crisis that erupted in 2008 affected the natural evolution of the cycle and resulted in the rapidly dropping growth rate. Under the influence of the crisis response policies, the economic growth rate in 2010 rebounded to as high as 10%. After 2011, the economy entered a contraction phase and has continued to this day. Different from the past, the contraction phase of this cycle overlaps with major adjustments in the economic structure, making it more difficult to determine the potential growth. However, corporate and government liabilities are at a high level, manufacturing investment is at a low level, and the international market is still not fully restored. These key indicators reflect that the current economy is still near the bottom of the cycle, and the economic growth rate at this time cannot directly reflect the potential growth rate in the medium and long term.

## **2. Macroeconomic regulation and control policy increased economic growth by increasing investment in infrastructure and maintaining loose money supply**

Faced with the continued slowdown in growth and the risk-prone situations during the transition period, the government has emphasized the bottom-line thinking, increasing infrastructure investment, and stabilizing economic growth by expanding aggregate demand. At the same time, maintaining a relatively loose money supply creates an enabling environment for economic transformation and risk prevention. The implementation of active macroeconomic regulation and control policies has increased the actual economic growth rate at the cost of pushing up the levels of social liabilities and leverage ratios. This is also the proper meaning of regulating the economy through inter-temporal allocation of resources, but in this context, the current real economic growth rate is not the speed at which the economic system operates by relying on spontaneous forces.

## **3. The comprehensive furthering of reform is still advancing, the effect has not yet fully manifested, and the growth potential has not been fully released**

The high growth over the past 30 years can be largely attributed to the release of the institutional dividends for reform and opening up. At present, the degree of marketization in most economic sectors in China is already high, but market-oriented reforms in key areas and basic areas are still in progress. For example, in the field of energy resources involving a wide range of areas, the market access reform is still advancing, and the level of competition is still not high; the efficiency of the financial system is low, and the space for further reforms is still large; and the opening up of the service sector is entering a period of rapid expansion. With the gradual emergence of the roles of reform and opening up in terms of efficiency improvement and cost reduction, it will help to increase the potential growth.

Among the above three factors, the economic situations and the insufficient implementation of reforms have a depressing effect on the actual growth rate, and the government's macroeconomic regulation and control has a positive effect on actual growth. The current economic performance is not a natural reflection of the potential growth. China can neither regard the decline in growth caused by inadequate reforms and economic conditions as insufficient potential, nor can it mistake the short-term

effects of policy stimulus as the growth potential. The potential growth rate of the new normal shall be obtained by furthering reform and opening up, and shall not be realized automatically, or be simply copied from the actual growth.

## **(II) Maintaining a proper understanding of the relationship between cultivating new economic growth momentum and tapping into the traditional momentum**

Upon entering a new growth phase, the costs of production factors rise, the marginal efficiency of investment declines, and economic growth needs to be driven more by total factor productivity. However, in the phase of growth momentum transition, we cannot ignore the space for improvement and upgrading of conventional growth momentum while cultivating new impetus for economic growth.

### **1. The cultivation of new impetus for economic growth shall not disregard the changes in the growth stage or overlook the historical development stage**

The growth-phase transition is a common phenomenon in the catch-up process. More than 70% of the growth momentums in developed economies are driven by the increase in total factor productivity, which is the result of its high-end economic performance and its low economic growth rate. China's current phase is the one in which capital accumulation and total factor productivity work together to play their roles, and it is also the phase in which economic growth momentums are further converging toward developed economies. China must see that the growth of total factor productivity, especially the growth driven through original innovations, is China's main source of growth after China enters the ranks of high-income economies, and that, subject to the laws and regulations of scientific and technological progress, this form of total factor productivity requires a large investment and displays limited growth rate. At present, China only has sufficient knowledge reserves and financial strength in the local technology and industrial fields. The original innovations need to be promoted in combination with objective conditions.

During the period of high growth, sustained high investment brought about problems such as a decline in marginal efficiency and an increase in resource and environmental constraints. However, we must also see that the gap between China and developed economies in terms of capital stock per capita is still large. In fact, the physical capital also condenses a large number of technological achievements. In a certain sense, the gap in productivity between China and developed countries is mainly reflected in the gap in per capita possession of capital. When the economic growth rate showed a turning point in 2011, China's capital stock per capita was only 23% of that of the United States. However, when the economic growth rates of Japan and South Korea exhibited a turn in 1974 and 1997 respectively, their capital stocks per capita were equivalent to 36% and 47% respectively of that of the United States.<sup>11</sup> Maintaining a faster investment growth rate and continuing to narrow the gap with developed countries in terms of capital stock per capita is a long-term task facing China's development. Therefore, from the supply side, there is still room for the traditional momentum to drive the investment.

From the perspective of demand momentum, especially the transition of the

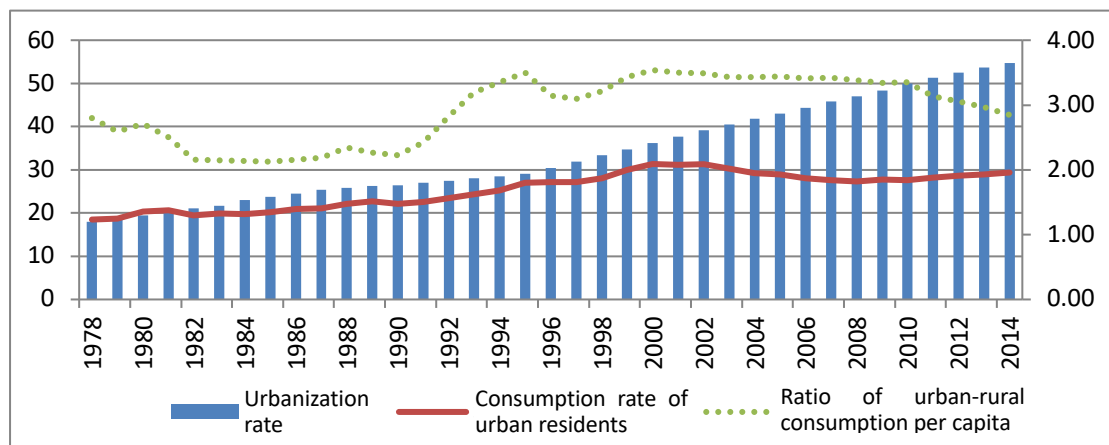
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<sup>11</sup> Calculation based on Penn World Table, Version 9.0

consumption structure, culture, tourism, education and other fields have become new consumption hotspots in recent years. When the per capita income level reaches a certain level, as the level of residents' demand increases, the above-mentioned fields enter a period of rapid development. However, the rapid growth of new consumption momentums does not mean that traditional consumption of food and clothing, housing and transportation has been fully developed. A large number of permanent residents in China have not really integrated into the urban production and consumption system. The basic consumption demand of non-residents in urban areas is much lower than the average level of registered permanent residents. From 1978 to 2000, China's urbanization rate increased by 18.3 percentage points, and the urban residents' consumption rate increased by 12.9 percentage points. However, from 2001 to 2014, China's urbanization rate increased by 17.1 percentage points, but the urban residents' consumption rate decreased by 1.7 percentage points. The consumption rate of urban residents has not increased in proportion to the increase of urban population, and the contribution of consumption upgrading in urban and rural structural optimization has not been reflected (Figure 3). This is because the consumption potential of non-residents has not been released.

In addition, a large number of overseas purchases also reflect a large gap in the quality of Chinese food and other daily necessities in meeting the needs of the people. The urban traffic is tight and the living environment is not so good. The lagging of rural infrastructure development also reflects the room for further development in the traditional demand field.

**Figure 3: Comparison of China's urbanization rate and urban residents' consumption rate**



Source: Wind, author's calculation

**2. The institutional factors of the transitional economy not only overdraw part of the growth space, but also restricts the release of traditional growth engines**

The Chinese market economy has shifted from the planned economic system. The high degree of government involvement in economic operations is both a realistic need for a developmental country and a legacy of the old system. In order to promote economic development, local governments often use low land prices and other

subsidies to attract investment, resulting in low efficiency of industrial land use and the adverse effects of excessive investment expansion. When the industries are in a good condition, this behavior can really push up the growth rates. When the industrial development shifts to a low tide during the growth-phase transition, the industries will result in a serious overcapacity and waste of resources. On the other hand, visible infrastructure investment in airports, highways, and plazas etc. is beyond the actual needs of the public, but infrastructure investment in urban underground corridors and rural areas etc. that are not easily visible is relatively insufficient. After the transition of the growth phase, the conversion of new and old growth engines in China cannot be easily compared with other economies.

### **3. The large economic volume and unbalanced regional economic development indicate that there is still large room for the release of the conventional growth momentum**

It is precisely because of the characteristics of the transitional economy that the regions that promoted reform and opening up early with developed private economy witness the full release of the momentum and the higher level of economic development. In areas where market opening is slow and market economy awareness is underdeveloped, the release of growth momentum is insufficient. The central and western regions of China are only 60% of the eastern region in terms of the GDP per capita level, and there is more room for further release of the growth potential of the central and western regions. The imbalance of regional development is also accompanied by the development imbalance between urban and rural areas. The lifestyle and living standards of migrant workers whose incomes have increased are gradually approaching urban residents, but the development of the rural infrastructure is seriously backward, and the sewage and garbage disposal, cultural and medical facilities are seriously inadequate. If these needs can be met in an effective way, they can also release new growth drivers.

### **(3) Proper understanding and handling the relationship between the government and the market**

During the economic transition period, the release of growth potential depends not only on the spontaneous power of the market, but also the role of the government as an important factor. Adapting to the new requirements of economic transformation requires reforming the relationship between the government and the market. The key to this is to play the role of the government correctly and forcefully.

#### **1. The functions of the government to guide development and release the potential during the transition period have not been weakened**

**The government still plays a fundamental role in market cultivation and development in a number of important areas.** The status and roles of the government in market operations are closely related to the stage of development, technical background and international environment. Faced with the dominant position of developed countries and the fierce homogenous competition from developing countries, the government needs to actively promote the economic development of China while adhering to the laws of the market and actively bringing into full play the favorable market conditions including the huge market size. For example, the new frontiers of human economic activities such as low-altitude open



space, terrestrial space utilization, and deep-sea resources exploitation need to be developed under the guidance of the government. The development and utilization of breakthrough technologies such as genetic engineering, high-resolution remote sensing, quantum communication and computing, and controlled thermonuclear fusion require both the government to invest in research funding and the government to guide its commercial applications. Policy support is also needed in order to expand the service industry and to develop internationally competitive enterprises in such fields as finance, information services, and cultural entertainment.

**International experience shows that the roles of the industrial policies of the catch-up countries after the transition of the growth phase have not been weakened.** After 1973, Japan faced severe energy resource constraints, and its economic growth entered the mid-to-low speed from the high speed. Through the development of energy conservation and new technologies and industrial restructuring, the Japanese government rapidly improved the efficiency of comprehensive energy utilization. In the 1990s, the Japanese government proposed policies such as “the Nation-building of New Technology” and “Nation-building on Creation of Science and Technology” to promote the industrial transition from low value-added to high value-added and labor-intensive growth to technology-intensive growth. After the outbreak of the financial crisis in 1997, under the supervision of the International Monetary Fund, South Korea adjusted the relationship between domestic large-scale enterprises and the government and established a more market-oriented system. However, the roles of the South Korean government in industrial restructuring have not been weakened. In 1997, the South Korean government promulgated the *CyberKorea21* to digitization to a national strategy. After years of development, the Korean information industry has been at the forefront of the world.

**The distorted interests in the reform process require the government to promote adjustments.** While reform and opening up have brought about a general increase in welfare, the distribution of interests among industries, regions, and occupations cannot guarantee complete fairness. This is the inevitable result of the gradual breakthrough of reform from local areas and local sectors. The distortion of interests formed by the reform can only be adjusted in further deepening the commitment to the reform. This adjustment of interests is on the one hand the need to alleviate social conflicts and on the other hand the channel to release growth potential. In the short term and from the local perspective, it may be the burden of financial expenditure, but judging from the macroeconomic and long-term perspective, it creates better conditions for sustained growth.

## **2. Continuing to release growth potential requires the government to adjust priorities in economic management**

After the transition of the growth phase, the government's roles in the economic operation have not been weakened, but the focus of work needs to be adjusted according to changes in the situations, thus promoting the sustained release of growth potential.

**The need to nurture innovative ecology and environment is increasing.** After the transition of the growth phase, it is the core task of economic work to maintain the growth rate at the medium and high speed by increasing the total factor productivity and injecting new impetus into economic development. The focus is also

on promoting industrial transformation and upgrading through more original innovations. This calls for the government to actively foster innovative ecology and environment, advocate a culture of innovation and tolerance of failures, strengthen intellectual property protection, increase government funding for basic research and generic technologies, and improve the policy system for supporting innovation in the financial sector and the social security system.

**The role of the government in intervening in economic development needs to be adjusted, and more emphasis should be placed on setting market rules.** During the period of high growth, the growth of traditional demand for food, clothing, housing and transportation of residents is stable, and the development direction is easy to grasp. Local governments have a higher level of involvement in industrial development. After the transition of the growth phase, the technical routes of industries change rapidly, and demand hotspots undergo frequent changes, and it is difficult for the government to accurately grasp the development trends. At this point, the government should do more information dissemination, and the formulation and implementation of standards and regulations, thus providing a good environment for competition.

**Foreign economic exchanges have become more frequent, and participation in international macroeconomic policy coordination has increased.** China's economic aggregate, foreign trade and outward direct investment have continued to increase their shares in the world market, significantly affecting the global economic and financial structure, and the spillover of economic policies has increased significantly. Actively strengthening international policy coordination is not only an inherent requirement for improving the effectiveness of China's domestic policies, but also an objective need for seeking a win-win situation and forming a benign competitive and cooperative relationship with other economies. On the other hand, China's industrial transformation and upgrading process has intensified competition with developed economies, and trade disputes and investment restrictions have frequently occurred, which also calls for the government to invest more energy to create a favorable international economic and trade environment.

**Social problems are relatively prominent, and raise new requirements on the social management by the government.** Changes in the growth potential, while affecting economic growth and structure, highlight the social problems in the development process and the need to strengthen social management capacity building of the government. For example, in the transition period, with the accelerating industrial restructuring, enterprise mergers and acquisitions, the number of unemployed people may increase and it is necessary to have a more comprehensive social security system to cover these problems. The rapid increase of the aged population has placed higher demands on medical and nursing services for the old-aged. In addition, with the increase in per capita income, the development of emerging media and the enhanced awareness of fairness and power among the people also raise new challenges to social governance.

#### **IV. Financial and monetary policies in the context of crisis response and growth-phase transition**

In 2008, the international financial crisis spread on a global scale, and the Chinese economy was also strongly impacted. Macroeconomic regulation and

monetary policies were the main targets of emergency response to the crisis. In 2010, China's economy reached its highest point after the international financial crisis, and monetary policies were being gradually adjusted. However, the high growth rate that lasted for 30 years has weakened the latecomer advantages of China's economic growth and the economic growth rate has continued to decline. A series of major structural relationships, such as the proportion of working-age population, the proportion of industry and service industry, and investment rate etc., have shown a trend change, and the impact of the transition of the growth phase has become prominent. How to determine and implement monetary policies in the context of the transition phase of growth is the biggest challenge since 2010. At the same time, this challenge may continue for a longer period of time.

#### (I) Financial and monetary policies of China since the international financial crisis

As mentioned above, since the international financial crisis broke out in 2008, China's financial and monetary policies have faced three major tasks: crisis response, transition of the growth phase, and promotion of financial reform. To balance these goals, China has adopted a variety of financial and monetary policies.

##### 1. Hedging the impact of the international financial crisis, increasing credit support, and promoting exchange rate market reform

Since 2008, the external environment of China's economic development has undergone major changes, the international financial market has gone through ups and downs, the international economic growth has been weak, and the growth rate of international trade has slowed significantly. In order to promote the steady growth of the domestic economy, China has on the one hand strengthened its support for the financing needs of the real economy and increased the proportion of direct financing through the development of the bond market and reduced the financing costs of enterprises in addition to the moderate growth of the monetary aggregate M2, and ,on the other hand, promoted the reform of the foreign exchange market, and gradually expanded the one-day floating range of the RMB exchange rate, and the fluctuation range of the RMB-to-US dollar trading price in the foreign exchange market by adjusting the floating range twice to expand from 0.5% to 2% in 2012 and 2014. At the same time, concerning the promotion of international balance of payments, China has introduced supporting policies and measures to encourage imports to promote balance of payments under current account.

##### 2. Monetary policies shift from quantity management to price management

In order to improve and perfect the market-based pricing mechanism for capital prices, China has promoted a series of reform measures, specifically including: First, promoting interest rate marketization reform, and gradually cancelling the lower limit on the loan interest rate and the ceiling on the deposit interest rate, of which the ceiling of the deposit interest rate was lifted in October 2015 cancellation. Second, exploring the interest rate corridor mechanism, and guiding short-term market interest rates through open market interest rate operations and deposits and loans facility. Third, gradually improving the interest rate curve; a risk-free rate curve shall be provided based on national debt, and the risk pricing mechanism for various types of credit bonds shall be improved. Fourth, improving the money supply system. The

flexible monetary delivery mechanism shall be formed through such tools as Standing Lending Facility, Medium Lending Facility, and reverse repo. Fifth, weakening the limit on credit scale and cancelling the loan-to-deposit ratio assessment of commercial banks. Sixth, improving the open market operation mechanism and regulating liquidity through overnight lending and other short-term financing instruments in the interbank market. Seventh, strengthening the support for key areas through refinancing. Eighth, playing the role of window guidance, and improving the effectiveness of monetary policy transmission through expert explanation and market communication.

### 3. Adapting to the transition of the growth phase and actively developing inclusive finance

At the end of 2015, the State Council of China promulgated the *Plan for Advancing the Development of Financial Inclusion (2016–2020)* to improve the transmission effects of monetary policies and improve financial services for small and micro enterprises and vulnerable groups through structural policy measures. Credit support is one of the key objectives. According to the provisions of the *Plan*, the regulatory authorities encourage commercial banks to innovate service models through scientific and technological means, develop specialized products, and participate in credit services by introducing new types of e-commerce and other entities to promote market competition, thereby improving the availability and convenience of credit funds for small and micro enterprises and vulnerable groups, and reduce the credit rates to a reasonable level. The major national policy banks and commercial banks have also established the Inclusive Financial Services Department for Rural, Farmer and Agricultural Affairs to focus on promoting inclusive financial services in rural areas.

In the process of policy implementation, and on the basis of comprehensive coverage of payment and settlement services in rural areas, governments at all levels have reduced the credit risks of inclusive financial services through the establishment of government-backed guarantee funds, rural poverty alleviation programs, and development of farmers' cooperative organizations based on the actual local situations and increased the incentives for commercial banks to issue credit.

### 4. Absorbing the effects of previous economic stimulus policies, and focusing on reducing macro leverage ratio

In the period after the subprime mortgage crisis, the global money supply growth rate was relatively fast. China also noticed that the proportion of debts in some sectors in China had risen rapidly, such as real estate enterprises, local government financing platforms, and state-owned enterprises. This trend means that China's capacity to resist risks is weakened, which also means that systemic financial risks are gradually accumulating. Credit funds are concentrated in these sectors because these sectors perform better according to the bank's risk-return assessment criteria and are more attractive to the funds. Even if regulators consider potential risks and limit the flow of the bank credit funds to real estate companies and local government financing platforms, there is still a considerable amount of funds invested in these sectors through the shadow banking system.

To this end, China has taken a series of measures to resolve potential systemic risks, which mainly include: First, cancelling the local government's guarantee support for financing platforms and state-owned enterprises. Second, unifying regulatory standards, and eliminating regulatory arbitrage and regulatory gaps in accordance with the principles of comprehensive supervision and functional supervision, thereby effectively reducing the size of the shadow banking system, so that financing risks are effectively managed. For example, some large enterprises originally obtained credit through bank channels, and then provided funds to real estate enterprises or local government financing platforms through trust investment channels to obtain spreads. Third, as for bank credit and financing activities such as trusts and bonds, the financing entity should bear the risk at its own expenses, and it is forbidden for local governments to assume debt-servicing obligations for enterprises, mainly state-owned enterprises, to curb the momentum of debt expansion.

#### 5. Furthering reform and focusing on perfecting the regulatory system

To improve the systemic financial risk supervision system, China has established a dual-pillar regulation framework of monetary policies and macro-prudential policies to promote asset prices and financial market stability while stabilizing prices. Since 2011, the differential deposit reserve dynamic adjustment mechanism has been implemented to curb the credit expansion of financial institutions with low capital adequacy ratio and asset quality. In 2016, it was upgraded to the Macro Prudential Assessment System (MPA) and the off-balance sheet financing and interbank deposit receipts were included in the MPA in 2017 and 2018 respectively. Its main purpose is to improve the counter-cyclical adjustment mechanism and prevent the procyclical expansion of financial assets. In order to strengthen supervision and coordination, China established the Financial Stability and Development Committee on the basis of the inter-ministerial joint meeting. Its main responsibilities are to strengthen macro-prudential management and systemic financial risk prevention. In addition, the China Banking Regulatory Commission and the China Insurance Regulatory Commission merged to form China Banking and Insurance Regulatory Commission which shall exercise unified management of banks and insurance institutions. In order to better promote systemic financial risk management, China has improved its supporting fiscal policies and strengthened the management of local government debts. In addition to standardizing the management of liability-incurring behavior, the system of accountability is strictly enforced.

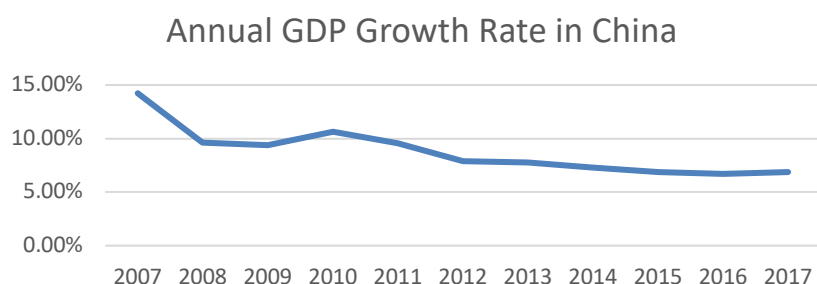
#### (II) Performance achieved by financial and monetary policies

From the perspective of the implementation effects of monetary policies since 2008, the overall goal of achieving stable growth, controlling risks, and promoting development have been achieved. The policies played a positive role in resolving external negative shocks, promoting economic structural transformation, and coordinating economic and financial reforms.

---- The economic growth is generally stable, and employment has increased steadily. The national economy has grown steadily. Since 2010, the economic growth rate declined, but it has stabilized, and the GDP growth rate fluctuates between 6.5%

and 7%. In 2017, it was 6.9%, which was 0.2 percentage points higher than that of 2016.

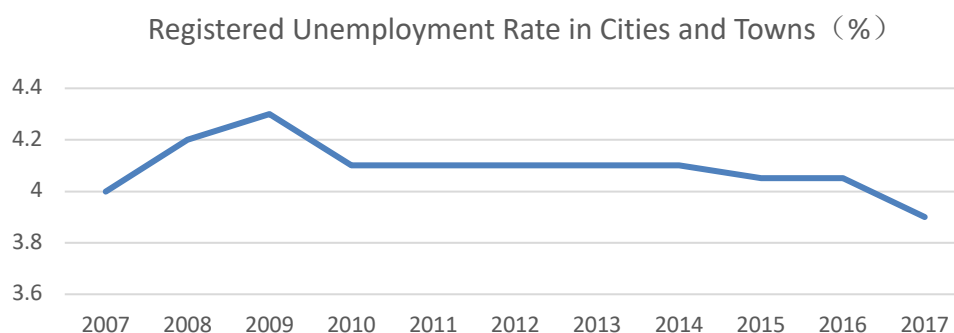
Figure 4: Annual GDP Growth Rate in China



Source: Wind

Employment has increased steadily. The urban registered unemployment rate has steadily declined since 2009 and has fallen to 3.9% in 2017.

Figure 5: Registered unemployment Rate in Cities and Towns (%)



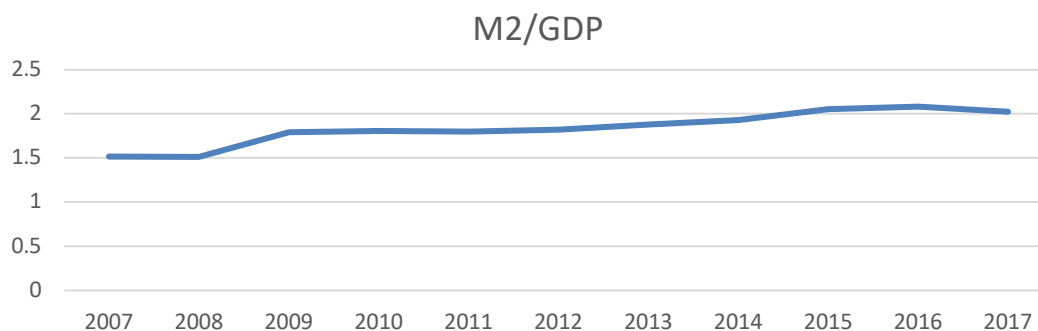
Source: Wind

---- The market-oriented reform of interest rates has been further advanced. First, the short-term capital interest rate pricing system of the inter-bank market has become an important indicator of the liquidity of the money market. Second, the bond market has become an important financing channel. The issuance scale of the inter-bank bond market has increased from 7.98 trillion RMB in 2007 to 37.69 trillion RMB in 2017, and the scale reached 75.8 trillion RMB when the total stock of the exchange market is included. Third, the bank's loan-based floating pricing mechanism based on benchmark interest rates has gradually formed. The next step is to continue improving the risk pricing mechanism based on customer credit. Fourth, the financing costs of small and micro enterprises have dropped significantly. The interest rates for loans of small and micro enterprises have dropped from 12%-15% before and after 2010 to 7%-8% now.

---- Financial risks have been resolved. First, the efficiency of enterprises has rebounded. In 2016, the profits of industrial enterprises above designated size increased by 8.5% compared with the previous year. In 2017, they increased by 21% compared with the previous year. In January to August of 2018, they increased by 16.2% year on year. Second, the leverage ratio of the non-bank system is effectively

controlled. Third, the quality of bank credit assets has risen steadily. The non-performing loan ratio in 2007 was 6.17%, and then decreased year by year. The non-performing loan ratio in 2017 was 1.74%.

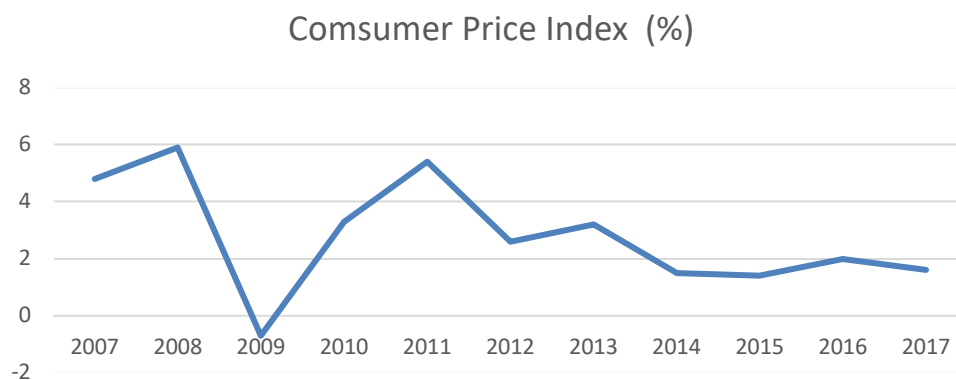
Figure 6: Changes in China's M2/GDP



Source: Wind

---- The prices are generally stable. The overall prices are running smoothly. From 2008 to 2011, CPI experienced significant fluctuations and then began to converge, fluctuating within 2% from 2014 to the present.

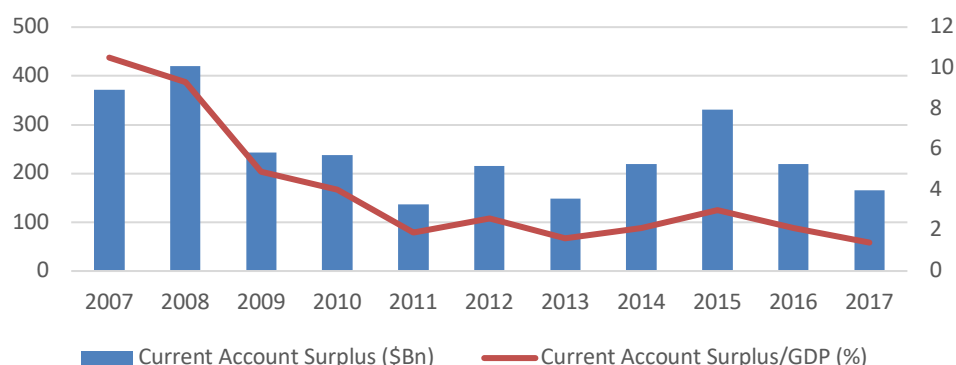
Figure 7: Consumer Price Index since the International Financial Crisis



Source: Wind

---- Balance of payments tends to remain balanced. By continuously encouraging imports, China's current balance of payments surplus has narrowed, and the balance of payments has become more balanced. Since 2011, the ratio of payments surplus of current account to GDP has been less than 3%.

Figure 8: China's international balance of payments since the international financial crisis



#### (IV) Important challenges facing future monetary policies

##### **1. After the transition of the growth phase, the requirements for economic high quality and quality development**

The Chinese economy is transforming from a traditional investment-driven growth model to an innovation-driven growth model, and needs to bring into full play the supporting role of technological innovation for economic growth, so that economic growth benefits more from the added value of product quality improvement and is free from dependence on low-tech and cheap labor by no longer simply relying on the continuous expansion of production scale. This needs to be achieved by investing in human capital and technology research and development, and requires an optimization of the social investment structure. This means that monetary policies that promote economic development need to shift from the macroeconomic policy to the structured policy, so that funds flow to key sectors. In addition to the need to optimize credit policies, it is also necessary to coordinate with fiscal policies.

##### **2. The task requirements of deepening the economic and financial reform**

The market economy is the basic direction of China's reform. To this end, China has formulated a comprehensive reform plan and steadily advanced according to the plan. Deepening reforms will bring new growth drivers, but it will also trigger risks. Financial and monetary policies need to take into consideration of creating a relatively relaxed environment for reform, while paying close attention to risks in the process of deepening reforms. While safeguarding economic reforms, financial reforms will also be carried out in many ways, including the further advancement of interest rate marketization, the further improvement of the exchange rate formation mechanism, the opening up of the financial market, and the strengthening of financial supervision systems. On the one hand, the reform of the financial system will have an impact on the implementation of monetary policies; on the other hand, it will also reshape the transmission mechanism of monetary policies. These need to be considered in the formulation of monetary policies.

##### **3. Challenges brought about by the deterioration of the international economic and trade environment**

As the global recovery trend is further clarified, the monetary policies of major



economies have gradually tightened, and global funds have returned to the United States, which has caused foreign exchange and debt pressure in some developing countries. At the same time, the high yield of US Treasury bonds has also put pressures on the national stock market. China's monetary policies need to pay close attention to these new situations. More noteworthy than the near-term and mid-term issues is that the current international spread of protectionism, isolationism, and unilateralism has had an impact on the multilateral economic and trade system and has had a negative impact on global economic growth and value chains. As the world's largest commodity exporter, China has always contributed to the promotion of global economic growth and inclusive development, while also benefiting from a fair trading environment. However, the risks faced by the multilateral trading system may have an impact on global and China's economic growth, and it has become an important issue for monetary policy considerations.

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