

Scientific understanding of the fundamentals of China's economic development

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Abstract

Purpose – The purpose of this paper is based on China's economic fundamentals. Factor input, structural optimization and institutional reform, which determine the fundamentals of China's economic development, will actively prop up long-term, sustained and stable growth of the Chinese economy and keep China's potential economic growth rate stabilized within a reasonable growth range in the long term.

Design/methodology/approach – The fundamentals of economic development of a country are the basic situation of economic operation determined by the country's main factors and the long-term trend thereof, and they have such characteristics as stability, internality and persistence.

Findings – Stability refers to economic operation that remains relatively stable within a reasonable growth range at a certain stage of development, and this does not rule out exceptional economic fluctuations in certain years due to the impact of unexpected short-term factors. For instance, the fundamentals of the Chinese economy during the period after the reform and opening-up are characterized by a sustained high growth rate.

Originality/value – Internality refers to the intrinsic quantity and quality of all factors supporting the economic development of a country, especially the quantity and quality of the factors that play a decisive role in the economic development of a country at a specific stage. For instance, demographic dividend and capital formation have bolstered the high-speed growth of the Chinese economy since the reform and opening-up.

Keywords China's economic development, Economic fundamentals, Long-term growing power

Paper type Research paper

Although the corona virus disease 2019 (COVID-19) pandemic has impacted China's economic development, it will not change the fact that China's economic fundamentals remain favourable for long-term growth. Factor input, structural optimization and institutional reform, which determine the fundamentals of China's economic development, will actively prop up long-term, sustained and stable growth of the Chinese economy and keep China's potential economic growth rate stabilized within a reasonable growth range in the long term.

Determinants of the fundamentals of China's economic development

The fundamentals of economic development of a country are the basic situation of economic operation determined by the country's main factors and the long-term trend thereof, and they have such characteristics as stability, internality and persistence. Stability refers to economic operation that remains relatively stable within a reasonable growth range at a certain stage of development, and this does not rule out exceptional economic fluctuations in certain years due to the impact of unexpected short-term factors. For instance, the fundamentals of the Chinese economy during the period after the reform and opening-up are characterized by a

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sustained high growth rate. Internality refers to the intrinsic quantity and quality of all factors supporting the economic development of a country, especially the quantity and quality of the factors that play a decisive role in the economic development of a country at a specific stage. For instance, demographic dividend and capital formation have bolstered the high-speed growth of the Chinese economy since the reform and opening-up. Persistence indicates that core factors determining the economic development of a country will not change fundamentally in the near term. For instance, China has been always upholding and improving the basic economic systems with distinct advantages since the reform and opening-up. The fundamentals of China's economic development are mainly reflected in sustained stable economic development, growing comprehensive national strength and constantly improving people's standard of living.

The main factors determining the fundamentals of economic development are the fundamental driving forces spurring economic growth, generally including demand pull and supply push. Demand pull refers to the driving force of consumption, investment and export on economic growth. Supply push refers to the impetus given by factor input, structural optimization and institutional reform to economic growth. The demand side and supply side play different roles in economic development during different stages of economic development. As the largest developing country in the world, China is still in the primary stage of socialism and will remain so for a long time to come. As for the principal contradiction in China's society, whether it be the previous one between the ever-growing material and cultural needs of the people and the backward productivity or the current one between the people's ever-growing needs for a better future in the new era and unbalanced and inadequate development, the principal aspect of such contradiction always lies in the supply side. This results in the fact that factor input, structural optimization and institutional reform on the supply side are the main influencing factors of the fundamentals of China's economic development. In terms of comprehensive quantitative indexes, the fundamentals of China's economic development can be represented by the potential economic growth rate. The potential economic growth rate of a country refers to the maximum level of output a nation's economy could realize if its existing production factors can be fully utilized. Normally, the production function method is adopted, where the future change of potential economic growth rate is calculated by estimating the changes in the input of all production factors. The trend of changes in the potential economic growth rate reflects the basic situation of a country's future economic development and becomes a part of the fundamentals of economic development. The actual economic growth rate may deviate from the potential economic growth rate when impacted by unexpected short-term emergencies, and the direction and extent of such deviation become an essential basis for a country to lay down macropolicies for economic intervention.

Unexpected short-term emergencies can impact on economic development to some degree, but they cannot change the fundamentals of economic development. That is because unexpected emergencies are a short-term factor that does not fundamentally change the conditions of the main factors determining the fundamentals. For instance, the input quantity and quality of a country's main production factors like population, capital, land, management, knowledge and technology are unlikely to be fundamentally changed because of unexpected emergencies, and basic drivers of economic growth will not be fundamentally disrupted. However, unexpected emergencies must be contained within a certain time or certain region so that long-term trends of economic development will not be affected. In addition, unexpected emergencies as an exogenous factor cannot cause systematic damage to the internal formation mechanism of the fundamentals. Unexpected emergencies may result in the suspension of production and operation for enterprises. However, as long as the industry chain product brands still exist, once the unexpected short-term emergencies abate, enterprises can timely resume their operations and production.

The COVID-19 pandemic, an unexpected emergency that broke out this year, has been effectively controlled in China and can be confirmed as a short-term factor that does not change the fundamentals of China's economic development. Domestically, under the strong leadership of the Central Committee of CPC, China has taken decisive measures and quickly contained the epidemic situation and it has now entered into a new stage of coordinated epidemic prevention and control and economic and social development. While China is making remarkable achievements in the resumption of overall production, its economic growth begins to bottom out. With strong support from the proactive fiscal policy, the large-scale "new infrastructure construction" has been launched to bring into play the key role of investment, especially government investment and SOE (state-owned enterprises) investment, in counter-cyclic adjustment; local governments at various levels have taken multiple measures to support automobile, housing, catering and tourist consumption and encourage consumption recovery at the earliest time possible. Therefore, as long as China manages to avoid possible epidemic rebound from imported cases, it will have sufficient time and space to make economic growth return to the reasonable range in the remaining three-quarters. Admittedly, outside China, the spread of the COVID-19 pandemic in other countries and regions inevitably pose a severe threat to Chinese export-oriented enterprises and enterprises involved in the division of labour in the global supply chain; however, considering that the contribution of net export to China's economic growth was only 11% in 2019 and even negative in 2018, that the World Exposure to China Index rose from 0.4 in 2000 to 1.2 in 2017, while China Exposure to the World Index fell from a peak of 0.7 in 2007 to 0.6 in 2017, the strong expansion of domestic demand can offset the negative impact to external demand to a certain extent in the short term. Additionally, Chinese export-oriented enterprises have actively adjusted their production efforts by supplying foreign countries with urgently needed epidemic prevention supplies and became an important force in stabilizing foreign trade growth.

Fundamentals of China's economic development are favourable in the long term

There is ample room for development by factor input

First, the synchronous development of new industrialization, informatization, urbanization and agricultural modernization in China generates an enormous capital formation dividend. According to a 2017 report by the Institute of Industrial Economics of CASS, the national industrialization composite index of China is 84, while the figures for Northeast China and western China are 76 and 58, respectively, and it can be as low as 50 among all Chinese provinces. It is expected that overall industrialization will not be realized until 2035. Based on the development experience of Japan, South Korea and other economies, at the accelerated industrialization stage, due to the enormous investment space, capital formation plays a key role in economic growth. China's abundant capital supply provides effective support for achieving moderately high-speed growth. Second, rapid urbanization generates a huge population flow dividend. China's urbanization rate of the resident population was 60.60% in 2019 and it will be 10 years or so before China achieves urbanization (i.e. urbanization rate reaches 70%). If the calculation is based on the urbanization rate of the registered population, which is now 44.38%, it will take China longer to achieve urbanization. Additionally, according to the basic laws of urbanization development, China's urban population will cluster from small and medium-sized towns to large cities or supercities. For example, the total population of city clusters in China's three economic circles represents approximately 23.65% of the national population, while the proportion of the population of the top three economic circles in the US and Japan is over 33% and over 50%, respectively. The flow of rural population to towns urban and the clustering of the population of small and medium-sized towns towards medium and large-sized cities continually releases urbanization

dividend for realizing the moderately high-speed growth. Third, the rapid rise of the new economy generates an enormous talent dividend. The optimization of China's population structure will reduce the impact of dwindling demographic dividend on long-term, stable economic growth. China has some 9m college students, postgraduate students and returned overseas students each year, which provides adequate high-calibre talents for the development of emerging strategic industries and hi-tech industries and guarantees efficient and rapid implementation of innovation-driven development. Fourth, accelerated independent innovation generates an enormous technology dividend. According to China's strategic plan on innovation development, China is expected to become an innovative country by 2020, a leading innovative country by 2030, and a leading country in scientific and technological innovation by 2050. Accordingly, the contribution rate of scientific and technological progress to China's economic growth is expected to be boosted to 60%, 70% and 80%, with the actual figure for 2018 being 58.5%. The enormous room for growth will provide strong support for the long-term, stable growth of the Chinese economy. To accelerate the release of technology dividend, China has launched an extensive range of institutional innovations to encourage technology innovation, such as the nationwide systems aimed at mastering key and core technologies and a series of reforms aimed at stimulating the sources of innovation, including the science and technology system, education system, scientific and technical personnel assessment system and system for income distribution of innovation achievements. All these efforts offer institutional and mechanism guarantee for China's goal of building the country into a powerhouse of scientific and technological innovation by 2050. Fifth, the rapid creation of new production factors including knowledge and data generates an enormous factor dividend. With the rise of a new round of technical revolution marked by digital technology, artificial intelligence (AI) and quantum computing, China has grasped historic opportunities and established global leadership in some of those fields, which is a strong impetus for long-term, stable economic development.

Economic structure is being increasingly optimized

First, the industrial structure is being increasingly advanced. Thanks to the innovation-driven development strategy, the new economy incorporating new industries, new business forms and new models maintains a high-speed growth, providing strong momentum for long-term, sustained stable growth of the Chinese economy. In 2019, the value added of industrial strategic emerging industries grew 8.4% YOY, value added of high-tech manufacturing industry grew 8.8%, which represented 14.4% of industrial value added of industrial enterprises above designated size, and the operating revenue of enterprises in strategic emerging service industry grew 12.7% YOY. Additionally, in 2019, investment in the high-tech industry grew 17.3% YOY and investment in industrial technical transformation grew 9.8%. These figures show a sustained rapid growth trend of the new economy, the rapid growth of which is resulting in the new economy's increasing contribution to the national economic growth. According to an estimate by the National Development and Reform Commission (NDRC), the proportion of the new economy in China's gross domestic product (GDP) jumped from 8% in 2015 to about 15% in 2020 and the contribution of the new economy to economic growth increased from 1.4 percentage points to 2.8 percentage points. This is of great significance for the subsequent sustained, stable growth of the Chinese economy. With the development and application of the Internet, AI and quantum computer, the digital economy represented 34.8% of China's GDP in 2018, signalling its role as a new engine of economic growth. Second, the urban and rural structure is increasingly integrated. Driven by the urban-rural integration development strategy, rural revitalization, agricultural modernization and increasing farmers' income have laid a solid agricultural foundation for

long-term, sustained, stable growth of the Chinese economy. Increased efforts in rural infrastructure construction and environmental governance greatly promote the equalization of urban and rural public services, allowing effective implementation of the rural revitalization strategy; the accelerated construction of the urban-rural integrated supply chain that runs from production and processing to transportation and sale of agricultural products promotes the coordinated development of the primary, secondary and tertiary industries in rural areas and continually boosts the level of agricultural modernization; joint efforts by urban and rural areas to develop core and key agricultural technologies promote the scale production of high-quality, safe and efficient agricultural products, making agriculture a high-income industry; continued deepening of rural system reforms, including rural land requisitions, market trading of rural collective construction land for development purposes and rural residential land reform, promotes the formation of the integrated urban-rural construction land market, thus granting farmers access to more land revenue and living guarantee; continued deepening of household registration system reform promotes the citizenisation process of farmers, enabling farmers to share the dividend of urbanization development. Third, the regional structure is increasingly coordinated. Under the guidance of the strategy of coordinated development of regional economy, China has developed a regional economic layout at the national level with remarkable mainstay function, complementary advantages and high-quality development powered by the “multiple pillars” comprising the three economic circles (i.e. Pearl River Delta, Yangtze River Delta and Beijing-Tianjin-Hebei circle), Yangtze River Economic Belt and the “Belt and Road” Economic Belt. The three economic circles including the Pearl River Delta, Yangtze River Delta and Beijing-Tianjin-Hebei play an important role in leading and driving regional development, with their aggregate GDP accounting for 40% of China’s total GDP. Compared with the top three economic circles in the US and Japan, which represent 68 and 70% of their national economic aggregate respectively, China’s top three economic circles can expect enormous development space and will become important growth poles driving long-term, stable growth of the Chinese economy. The Yangtze River Economic Belt and the “Belt and Road” Economic Belt have become new regional economic growth poles and the regional GDP of Yangtze River Economic Belt grew 6.9% in 2019, providing strong support for stabilising growth. Fourth, economic development and environmental governance are increasingly inclusive. Under the guidance of the green development concept, China is increasingly green in terms of production mode, lifestyle, way of thinking and leadership style and has established an inclusive development pattern where economic development and environmental governance runs in the same direction without hampering each other. Since the 18th National Congress of the Communist Party of China, to win the tough battle of pollution prevention and control, China has vigorously conducted Beautiful China construction with unprecedented determination and investment—polluting enterprises were closed, more severe punishments were meted out on environmental pollution, and carbon emission per unit of GDP dropped sharply; ecological construction investment was ramped up considerably, and fixed asset investment in ecological protection and environmental governance-related industry grew 37.2% in 2019; clean energy production grew rapidly, and the proportion of clean energy consumption in total energy consumption rose from 18% in 2015 to 23.4% in 2019. All these efforts provide a strong resource and environmental guarantee for long-term, stable economic growth.

Distinct advantages of the economic system are released at a higher pace

First, the comprehensive deepening of the reform is being continually accelerated. Since the 18th National Congress of the Communist Party of China, China has launched a series of major reforms more frequently than ever. The Decision of the Central Committee of the

Communist Party of China on Some Major Issues Concerning Comprehensively Deepening the Reform was launched in 2013, and the Decision of the Central Committee of the Communist Party of China on Deepening the Reform of Party and State Institutions was launched in 2018, followed by the Decision of the Central Committee of the Communist Party of China on Some Major Issues Concerning Upholding and Improving the System of Socialism with Chinese Characteristics and Advancing the Modernization of China's System and Capacity for Governance launched in 2019. Thanks to these measures, the "multiple pillars" institutional framework has now basically taken shape and the release of institutional dividend is being accelerated. In 2019, China advanced to the 31st place in the World Bank's ease of doing business ranking, up 15 spots from the previous year. Second, China's basic economic system has the distinct advantage of emancipating and developing productive forces. China's existing basic economic system, which was established based on arduous explorations, emancipates and develops productive force to the utmost extent, and the rationale can be explained as follows: this system allows full play to the controlling force, influence and anti-risk capability of public ownership as the mainstay to secure the fundamentals of economic development, fully unleash all sources of wealth creation by relying on economic vitality and competitiveness of non-public ownership and form a sound ecology where the public ownership economy and non-public ownership economy co-exist and thrive by bringing into play the advantage of combination in a mixed ownership economy; this system can maintain the proportion of wage income and proportion of labour income at reasonable levels and hold the line of equitable distribution by following the principle of distribution according to contribution, adopt various modes of distribution to provide effective incentive and increase the input of new production factors including technology, knowledge and data to develop the new economy, and improve the factor distribution mechanism to develop an effective market system inductive to the development of new industries, new business forms and new models; this system gives full play to the decisive role of market in resource allocation and stick to the basic direction of quality transformation, efficiency transformation and impetus transformation in economic development, better facilitates the government's role in prevention of systematic economic risk caused by market failure and gives full play to the effective combination of market and government to develop an economic system with effective market mechanism, energetic micro entities and moderate macrocontrol. Third, the modernization of the national system and capacity for governance is being accelerated. According to the medium-to-long-term development goals set for China's advancement of modernization of the national system and capacity for governance, China will basically realize the modernization of the national system and capacity for governance by 2035 and comprehensively realize the modernization of the national system and capacity for governance by 2050. If the medium-to-long-term development goals set for China's advancement of the modernization of the national system and capacity for governance are achieved on schedule, this will fully display the distinct advantage and superiority of socialism with Chinese characteristics and continually provide a strong impetus for driving the long-term, sustained, stable economic development.

Based on the foregoing understanding and China's actual economic development, we estimated future changes in China's potential economic growth rate in 2020–2050 and obtained concrete, quantitative indexes, which indicate that the fundamentals of China's economic development will remain favourable in the medium-to-long term. Estimation results show that China will grow at an annual average rate of 5% in 2020–2035 and 4% in 2036–2050. If such an economic growth rate is maintained, China will by 2025 attain the high-income country threshold established by the World Bank, i.e. per capita GDP of USD12,000 or higher. If the growth rate of at least 5% is maintained at such a development stage, this will create a new miracle in the world's economic development history; China is estimated to overtake the US in its national GDP around 2035. If the growth rate of about 4% is maintained

at that time, this will be a development miracle for a large economy. Therefore, we are confident that China will achieve its goal of becoming a strong country on schedule.

Respond to short-term impact and maintain the fundamentals of economic development

The impact of the COVID-19 pandemic on the Chinese economy is comprehensive and involves all supply chains. However, such impact varies depending on the sector and industry. In terms of the three-sector model, the service sector is hit the most. As the largest industry driving China's economic growth, the service industry contributed 59.4% of the national economic growth, which is 22.6 percentage points higher than that of the secondary industry. Meanwhile, the service industry is where more job opportunities can be created. Additionally, 80% of micro-, small- and medium-sized enterprises newly established in China in recent years are concentrated in the service industry, and 80% of new investment also goes to the service industry. Unsurprisingly, the impact of the pandemic on the service industry has seriously threatened the survival of micro-, small- and medium-sized enterprises in the industry. In terms of the model of three-driving-elements (i.e. investment, consumption and export) of economic growth, consumption is hit the hardest by the pandemic. In 2019, final consumption expenditure contributed 57.8% of China's economic growth, which is 26.6 percentage points above 31.2%, the contribution rate of gross capital formation to economic growth. Obviously, consumption is the largest driver of China's economic growth. Judging from the relationship between consumption and the service industry, the impact of the pandemic brings about a combined effect. With the constant upgrade of residents' consumption structure, the proportion of residents' service consumption continues to increase. In 2019, service consumption expenditure represented 45.9% of residents' consumption expenditure per capita. The impacts of the pandemic on the consumption and service industry will combine into a negative spiral.

Responding to the short-term impact of COVID-19 pandemic on China's economic development, we should neither implement the short-term stimulus policies at the cost of medium-to-long-term economic development pattern nor neglect the potential escalation of short-term impact into long term trend because of the medium-to-long-term favourable economic fundamentals. In order to better maintain the fundamentals of China's economic development, we need to coordinate short-term, medium-term and long-term macroeconomic policies to form policy synergy.

In the short term, we should take unconventional policies to quickly restore the economy to a normal development level

The economic downturn triggered by the COVID-19 pandemic is a substantial deviation from China's potential economic growth rate and is considered an abnormal economic downturn. Therefore, China should give better play to the government's role by taking effective macropolicies to achieve stable growth. When the market price of a commodity deviates significantly from the value of the commodity, the practice of adjusting the supply-demand relationship quickly to bring the commodity price fluctuation back to around the value is seen as an act of following the law of value. Likewise, within a period of abnormal economic downturn, the government may take unconventional policy measures to intervene in economic operation and bring the economy quickly back to the level of potential economic growth rate, which should also be considered a practice of respecting and following the law of economic development.

To rectify the situation where the short-term economic growth is well below the potential economic growth rate and prevent the economic operation from slumping out of the

reasonable range, proactive fiscal policy intervention should be more proactive and aggressive, prudent monetary policy intervention should be more flexible and moderate, and macropolicy intervention should be applied in the correct direction and be precisely targeted. Since China is undergoing a period of transition from old to new growth drivers, attention should be paid to the combined effect of both new and old growth drivers while stabilizing growth. Fostering new growth drivers is the basic direction of China economic development, and we must maintain a mentality that seeks to turn crises into opportunities while implementing the macropolicy of short-term growth stabilization by taking the following measures: vigorously foster, support and guide rapid development of the new economy including new industries, new business forms and new models, treat economies of different ownership system equally, ramp up the proportion of the new economy to form a strong support for growth stabilization; vigorously foster, support and guide the application of modern information technology and AI technology to transform and upgrade traditional industries and advance the modernization of traditional industries; follow the “economic Darwinism”, take the opportunity to accelerate the elimination of backward production practice and “zombie enterprises” and facilitate the free flow of market factors to more rewarding, more efficient sectors and enterprises. Meanwhile, since new growth drivers are not strong enough to ensure short-term, stable growth, we must also bring into play the driving role of old growth drivers; however, we must adhere to a mentality that aims at fixing weak links, closing the loopholes and strengthening weak points: the impact of COVID-19 pandemic reveals that public service infrastructure is the weakest link. The fastest-growing part of the people’s various needs for a better life is the consumption of such services as education, culture, health, sports and old-age care. This calls for greater effort in the construction of public service infrastructure, which entails strong support for investment in projects that do not fall into the “new infrastructure” category. Additionally, although the real estate industry in China generally has no risk of bubbles, its structure remains unreasonable. Therefore, guided by the general principle of “housing is for living in, not for speculation”, we should take measures such as urban village renovation, reconstruction in old dilapidated residential areas and public rental housing construction to address the housing needs of middle-income and low-income groups and effectively promote their consumption growth.

In the medium term, we should strengthen innovation-driven efforts and hold core technologies and key technologies in our own hands

Historical experience and cold facts tell us that we must tackle and master core technologies and key technologies to realize the historic leap from being rich to being strong, for core technologies and key technologies bolster leapfrog development, act as pillars of a country’s strength, and are the foundational requirements of national security. In October 2019, the Chinese Academy of Engineering released a security assessment report on 26 manufacturing supply chains, noting that China has 2 industries with high external dependency and 8 industries with extremely high dependency, posing the biggest pitfall for China where the Chinese economy is at the mercy of other economies and China’s process of growing into a strong country can be strangled by developed countries at any time due to this situation. Key technologies and core technologies are the “stability anchor” of developed countries, and we can neither purchase nor learn such technologies from them. To accelerate China’s pace towards the goal of becoming a powerhouse of science and technology, we have no choice but to rely on independent innovation. To tackle and master core technologies and key technologies, China must make medium-to-long-term strategic deployment for the tackling of core technology and key technology depends on breakthroughs in major basic theories and major projects. According to our national development plan for the construction of China into a powerhouse of science and technology, by 2030, China will become one of the world’s

leading innovative countries, and generally establish its global leadership in AI and become one of the world's leading AI innovation centres. This requires us to benchmark China against the world's leading innovative countries while implementing unconventional macropolicies, so that our macropolicies can maintain steady growth in the short term and fulfil the goal of becoming a powerhouse of science and technology in the medium-to-long term. In this regard, intensifying "new infrastructure" investment will undoubtedly pay off in a "killing two birds with one stone" manner.

In the long term, we should advance efficiency transformation and continually boost the contribution of total factor productivity to economic growth

The improvement of total factor productivity plays a critical role in the long-term, stable growth of the Chinese economy. One of the root causes of increased economic downturn pressure in China is a decline in the contribution of total factor productivity to economic growth. Since the 18th National Congress of the Communist Party of China, China has launched the innovation-driven development strategy and the strategy of rejuvenating the country through science and education, recognized innovation as the first driving force for development and talent as the first resource and accelerated the implementation of the supply-side structural reform. As a result, the growth of total factor productivity has been showing signs of rally, with its average growth rate in recent five years, four years, three years and two years being 2.03%, 1.99%, 1.92% and 1.98%, respectively. If the current rallying trend continues, based on our estimation, the contribution of total factor productivity to economic growth will reach or surpass 40 and 50% by 2035 and 2050, respectively, and become the most important driver of economic growth.

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