

# China

## A. Medium-term economic outlook (forecast, 2019-23 average)

GDP growth (percentage change):	5.9
Current account balance (% of GDP):	0.2
Fiscal balance (% of GDP) (central government):	-3.9

## B. Medium-term plan

Period: 2016-20

Theme: Actively manage the "new normal" of economic development, facilitate innovation and sustainable growth, maintain openness in the economy, ensure inclusiveness and establish a moderately prosperous society

## C. Basic data (in 2017)

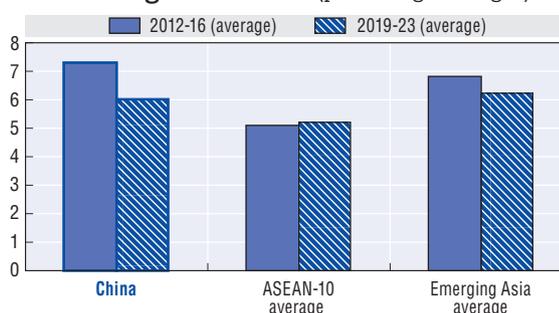
Total population:	1 390.1 million*
Population of Beijing:	21.7 million*
Nominal GDP (US dollar):	12 014.6 billion**
GDP per capita at PPP:	16 695.6 (current International Dollar)**
Exchange rate in the first half of 2018 (period average):	6.4 (CNY/USD)

Note: \* Population data are year-end government estimates.

\*\* IMF estimate.

Sources: OECD Development Centre, national sources, CEIC and IMF.

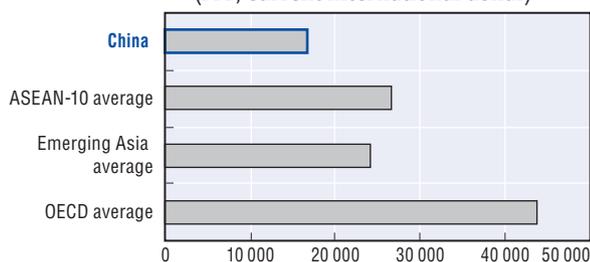
## GDP growth rates (percentage changes)



Source: OECD Development Centre, MPF-2019.

## GDP per capita, 2017

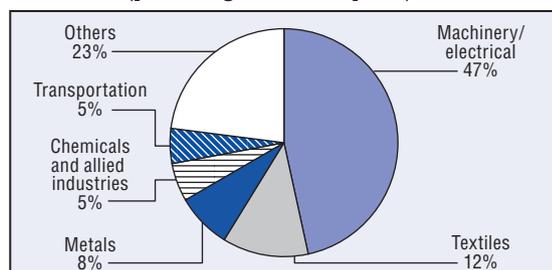
(PPP, current international dollar)



Source: IMF.

## Composition of exports, 2017

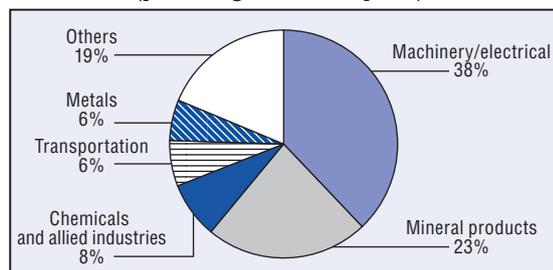
(percentage of total exports)



Source: Trademap.

## Composition of imports, 2017

(percentage of total imports)



Source: Trademap.

## Structural policy challenges discussed in previous editions of the Outlook

2014	Fiscal policy	Improving fiscal efficiency through institutional reform
2015	Environment	Increasing clean-energy consumption in response to the serious environmental degradation that persists despite the country's efforts to reduce pollution
	Rural development	Expanding rural and agricultural development to help improve equality between urban and rural areas
	Education and skills	Continuing with reforms and improving education in order to exploit the service sector's potential to drive future growth
2016	Environment	Strengthening environmental regulations to improve the quality of growth
	Education and skills	Upgrading human capital to help expand the value-added economy
	Rural development	Boosting rural development to ensure robust growth in incomes
2017	Capacity utilisation	Working off excess capacity
	Environment	Upgrading the quality of the environment
2018	Connectivity and integration	Unlocking synergies with the Belt and Road Initiative

## Recent developments in policy areas covered by previous editions of the Outlook

### Fiscal policy: performance budgeting to enhance efficiency, and cutting taxes to stimulate the economy

- The Central Committee of China's ruling communist party, along with the country's State Council, recommended implementing a comprehensive system of performance budgeting to cover all budgetary accounts. It will take between three and five years to fully implement this system.
- After completing a raft of legislation in mid-2017 establishing legislation on common reporting standards, China started sharing tax information with other jurisdictions as of September 2018 within the framework of the OECD's Global Forum on Transparency and Exchange of Information for Tax Purposes. The exchange of information will give tax officials a better view of the overseas financial investments and earnings of Chinese residents.
- In order to boost disposable incomes and consumption, the government recently raised the tax-free income threshold and increased deductibles. Starting from October 2018, the minimum threshold for personal income tax has been raised from CNY 3 500 (Chinese yuan) per month to CNY 5 000 per month. In addition, the tax rates on lower brackets have also been reduced.
- In August 2018, the Chinese government announced that the rate of export-tax rebates for some products will be increased, and that banks can now lend more money to small firms without having to pay VAT and income taxes on their SME-related lending. In addition, foreign investors will not have to pay corporate income taxes or value added taxes for three years on interest income that they earn in China's domestic bond market.

### A new ministry to enhance environmental protection

- In March 2018, China's government established a new ministry of ecology and the environment, replacing the existing ministry of environmental protection. The new government department took over a range of major environmental protection responsibilities that had been scattered across various other government agencies and ministries.
- Aside from creating this new ministry, China will, as of the latter part of 2018, also begin to reduce the average intensity of the particulate matter known as PM2.5 – a major air pollutant – by around 3% year a year in Beijing, Tianjin, Hebei and the areas that surround these cities.
- In June 2018, the State Council released a three-year action plan for tackling air pollution, which sets up targets for improving the country's air quality by 2020.

### Providing extra resources for the development of rural infrastructure

- China's ministry for housing and urban and rural development announced in September 2018 that the government will allocate more resources to rural infrastructure projects through the so-called pledged supplementary lending programme. Rural infrastructure projects eligible for funds from this programme span water, electricity, roads, the construction of gas networks, and sewage and garbage treatment.
- Meanwhile, a "silver-age" project under the aegis of the education and finance ministries will recruit 10 000 retired headmasters and teachers to teach in primary and junior middle schools in rural areas between 2018 and 2020.

## POLICY FOCUS

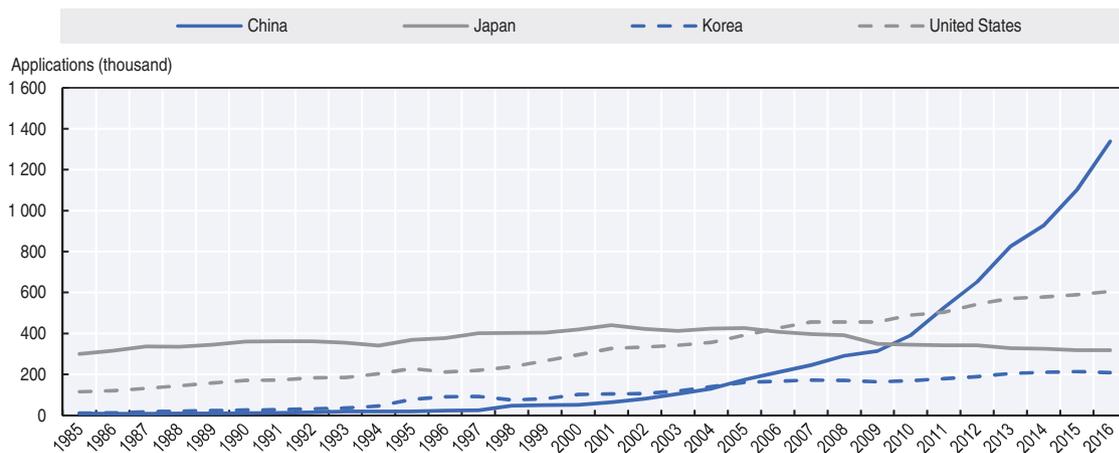
Making innovation a new driver of growth

China's growth has been impressive in the past couple of decades, but it is set to slow as the population ages rapidly. It is a long time since China reaped a demographic dividend, and the working-age population has been shrinking for a number of years now – both in absolute terms and as a share of the total population. As a result, the contribution of labour to economic growth will be limited, notwithstanding the necessary raise of the retirement age sooner or later. This measure is necessary, yet it is unlikely to come into force within the coming couple of years. The expansion of productive capacity through high growth in investment has expanded the economy's potential for growth, but as excess capacity looms large in a number of industries, capital's contribution will also decline somewhat in the years to come. Indeed, recent data confirm that investment is set to play a weaker role in driving growth. Thus, the only remaining factor that can be a key driver is productivity growth, which can be attained by continuous innovation. Chinese policy makers have recognised this, and innovation features among the five keywords of the country's five-year plan, the 13th in the history of the People's Republic.

Judging from the various output indicators used to measure the economy's capacity to innovate, achievements in this field have been quite remarkable. In 2016, for instance, 1.3 million of the roughly 3 million patents filed worldwide were filed in China (Figure 3.11.1). As well as becoming the number one patenter in terms of domestic filings, China is also excelling in international patent applications. In 2017, the country attained second position after the United States as a source of patent applications filed via the World Intellectual Property Organization (WIPO).

Figure 3.11.1. Chinese patent applications have soared

Number of patent applications in the top five offices



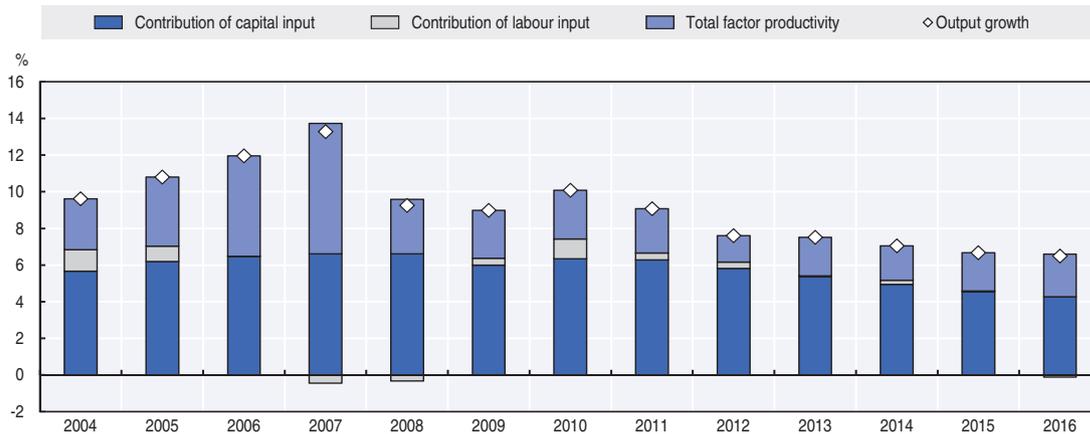
Source: WIPO Statistics database.

StatLink  <https://doi.org/10.1787/888933887405>

International trademark applications reveal that China enjoys a similarly prominent position. In 2017, the country ranked third in this regard, following the United States and Germany. More importantly, China has registered double-digit growth in international applications of both patents and trademarks in the latest year for which data are available. Such an impressive performance on various output indicators would suggest that China

can produce new goods and apply new technologies and processes, thereby improving productivity and overall growth. However, available data indicate that the contribution of overall productivity to growth has diminished over the past decade or so (Figure 3.11.2).

Figure 3.11.2. Productivity's role in driving growth has fallen



Source: Asia Productivity Organisation database.

StatLink  <https://doi.org/10.1787/888933887424>

The fact that innovation has soared even as productivity's contribution has slowed may be due to a weak link between the two. In fact, there is evidence to suggest that innovation often may not be driven by the potential business returns. Indeed, the performance-evaluation system of academics and researchers suggests that their focus is more on the quantity than on the quality of the patents they hold (OECD, 2015). Furthermore, patent subsidies have led to soaring filings in recent years, resulting in a decreasing impact of new patent applications in terms of productivity (Boeing, Mueller and Sandner, 2016).

The decreasing impact of soaring patenting activity on productivity is largely related to issues of quality and relevance. The quality of patents is often measured by citations or scope of claim, but such information is not readily available for Chinese firms. As an imperfect alternative, the share of invention patents may provide an indicator as to their overall quality. The majority of Chinese patents fall into the categories of utility patents – which represent marginal improvements relative to the original product or process – and design patents. Only a small share of the patents are genuine inventions. The utilisation rate of patents can also provide a measure of their relevance, and this rate tends to be particularly low in the case of patents registered by universities and research institutes, standing at around 5% (OECD, 2015). Furthermore, both the number of registered patents and their rates of utilisation vary widely across China's provinces. Moreover, a high utilisation of patents is not necessarily related to the number of patents that are registered in the province. Furthermore, neither a high number of registered patents nor a high degree of utilisation ensures productivity spillovers. Notwithstanding the large number and high utilisation of patents in Guangdong, there is no concentration of high-productivity firms there, unlike in the delta of the Yangtze river (OECD, 2014). The highly concentrated holding of patents by a small number of firms without much spillover to the surrounding firms in Guangdong, and also the fact that these firms operate in networks that are often more international than domestic, may help to explain this.

While in other countries most inventions are the result of collaborative projects, collaboration in research is relatively limited in China. Among manufacturing industries, moreover, producers of electronics and small firms are less likely to collaborate than others (Figure 3.11.3). This may have something to do with the type of inventions, and

with the ease of imitation that is characteristic of various firms and industries (Molnar, Xu and Khor, 2019). Indeed, the limited collaboration across firms in China may be hampering innovation and the diffusion of its benefits (Zhao, 2015). In the Chinese ecosystem of innovation, vertical linkages or interactions with suppliers and customers are well established, but horizontal linkages are more limited (Zhao, 2015). Most research and development (R&D) projects are carried out by the firms alone. Collaborative projects with research institutions are rare, and are even scarcer between different firms.

Notwithstanding the large number of registered patents and applications, not all innovations are patented in China. Companies often do not bother registering patents: two-thirds of them think that patent rights cannot effectively prevent others from copying their inventions. According to a country-wide representative survey of patent holders by the State Intellectual Property Office, 17% of patent owners have experienced a violation of their rights, yet a third of them took no action in response (SIPO, 2015). The problem is especially acute for micro-enterprises. Domestic firms are more likely not to take any action in this regard than firms with foreign investors. Almost half of the firms think that better protection of patent rights would effectively stimulate innovation at company level, and 87% would like to see a strengthening of intellectual property rights. In addition to sometimes seeking protection for intellectual property, most firms try to reap the first-mover advantage by quickly marketing their invention. They also sign confidentiality agreements with staff or change their products quickly so that competitors cannot catch up. Better protection for intellectual property rights would encourage more firms to patent their valuable inventions.

Figure 3.11.3. Research collaboration is less common in electronics and among smaller firms



Note: Size categories are defined using the definition of up to 19 employees for micro firms, 20-49 for small, 50-245 for medium, 250-999 for large and at least 1 000 employees for very large firms.

Source: OECD Development Centre's calculation based on the 2016 SIPO Patent Survey.

StatLink  <https://doi.org/10.1787/888933887443>

### Key government ministries in China

President	Xi Jinping
Premier	Li Keqiang
Agriculture and Rural Affairs	Han Changfu
Civil Affairs	Huang Shuxian
Commerce	Zhong Shan
Culture and Tourism	Luo Shugang
Ecology and Environment	Li Ganjie
Education	Chen Baosheng
Emergency Management	Wang Yupu
Finance	Liu Kun
Foreign Affairs	Wang Yi
Housing and Urban-Rural Development	Wang Menghui
Human Resources and Social Security	Zhang Jinan
Industry and Information Technology	Miao Wei
Justice	Fu Zhenghua
National Audit Office	Hu Zejun
National Defence	Wei Fenghe
National Development and Reform Commission	He Lifeng
National Health Commission	Ma Xiaowei
Natural Resources	Lu Hao
Public Security	Zhao Kezhi
Science and Technology	Wang Zhigang
State Ethnic Affairs Commission	Bater
State Security	Chen Wenqing
Transport	Li Xiaopeng
Veterans Affairs	Sun Shaocheng
Water Resources	E Jingping
People's Bank of China	Yi Gang

Note: Valid as of 16 October 2018.

### References

- Boeing, P., E. Mueller and P. Sandner (2016), "China's R&D explosion – Analysing productivity effects across ownership types and over time", *Research Policy*, Vol. 45, Elsevier, Amsterdam.
- Molnar, M., H. Xu and N. Khor (2019), "Who patents, how much is real invention and how relevant? – A snapshot of firms and their inventions based on the 2016 SIPO China Patent Survey", *OECD Economics Department Working Papers* (forthcoming).
- OECD (2015), *OECD Economic Surveys: China*, OECD Publishing, Paris, <https://doi.org/10.1787/eco-surveys-chn-2015-en>.
- OECD (2014), *Perspectives on Global Development*, OECD Publishing, Paris, [https://doi.org/10.1787/persp\\_glob\\_dev-2014-en](https://doi.org/10.1787/persp_glob_dev-2014-en).
- SIPO (2015), *2014 China patent survey report*, State Intellectual Property Office, Beijing.
- Zhao, W. (2015), "Is R&D upgrading China from imitation to innovation? An institutional analysis of absorptive capacity", *Transition Studies Review*, Vol. 22, No. 2, Springer, Berlin & Heidelberg.