



Reforming China's TVET & Developing Technical and Skilled Talents in the New Era in China

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Central Institute for Vocational & Technical Education (CIVTE), MOE, P. R China

- Joint project to establish CIVTE between Germany and China in 1990;
- National research institute for vocational & technical education;
- Main functions:
 - Provide advisory services for VET policy making
 - Provide professional services for VET practice
 - Provide services to improve the development of VET international cooperation and exchanges.
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Outline

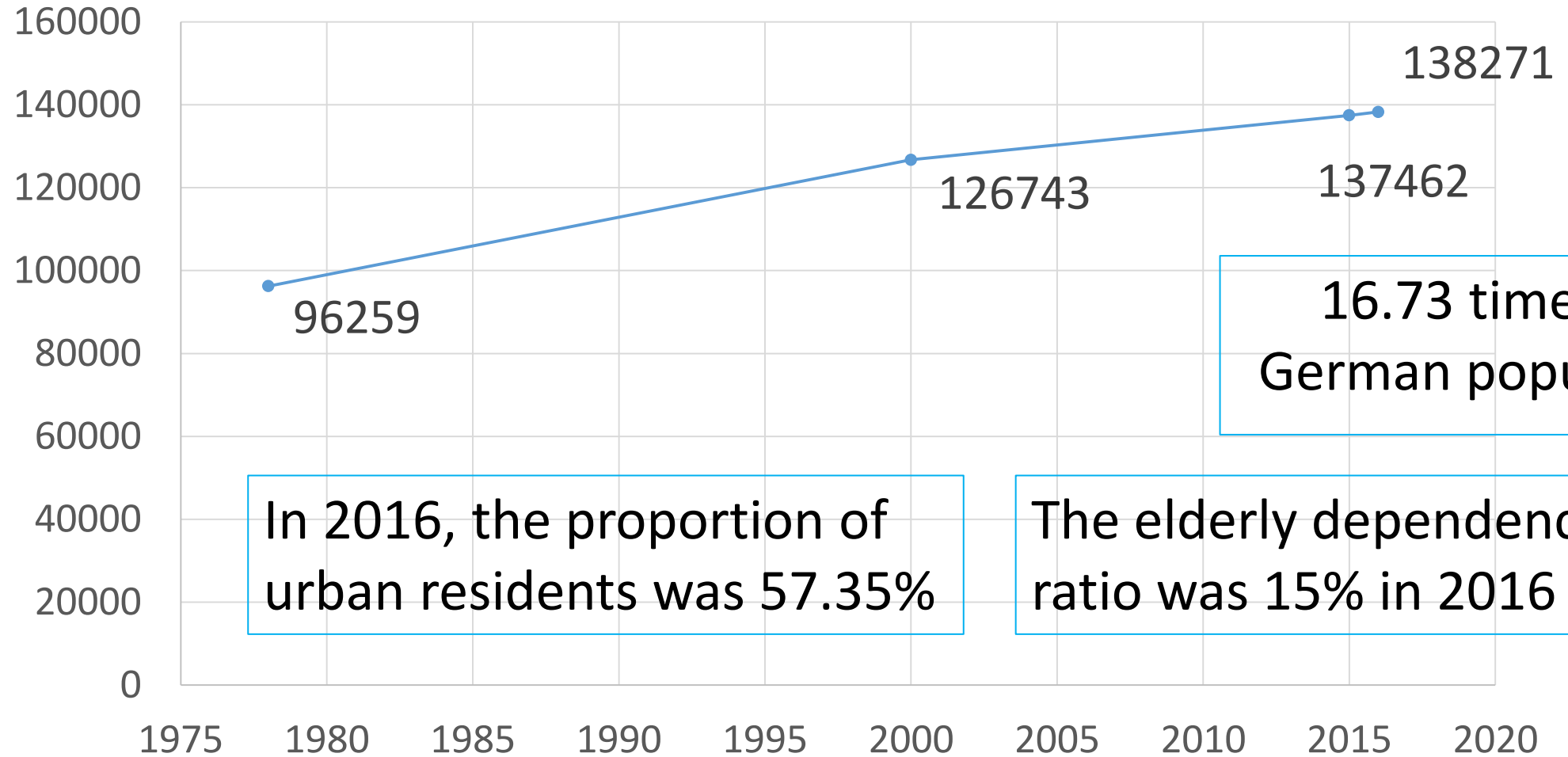
New changes of China's economy

New requirements for technical and skilled talents

New policy measures and experience of China's TVET reform

TVET Service one belt one road initiatives

Population in China (Unit: 10,000)

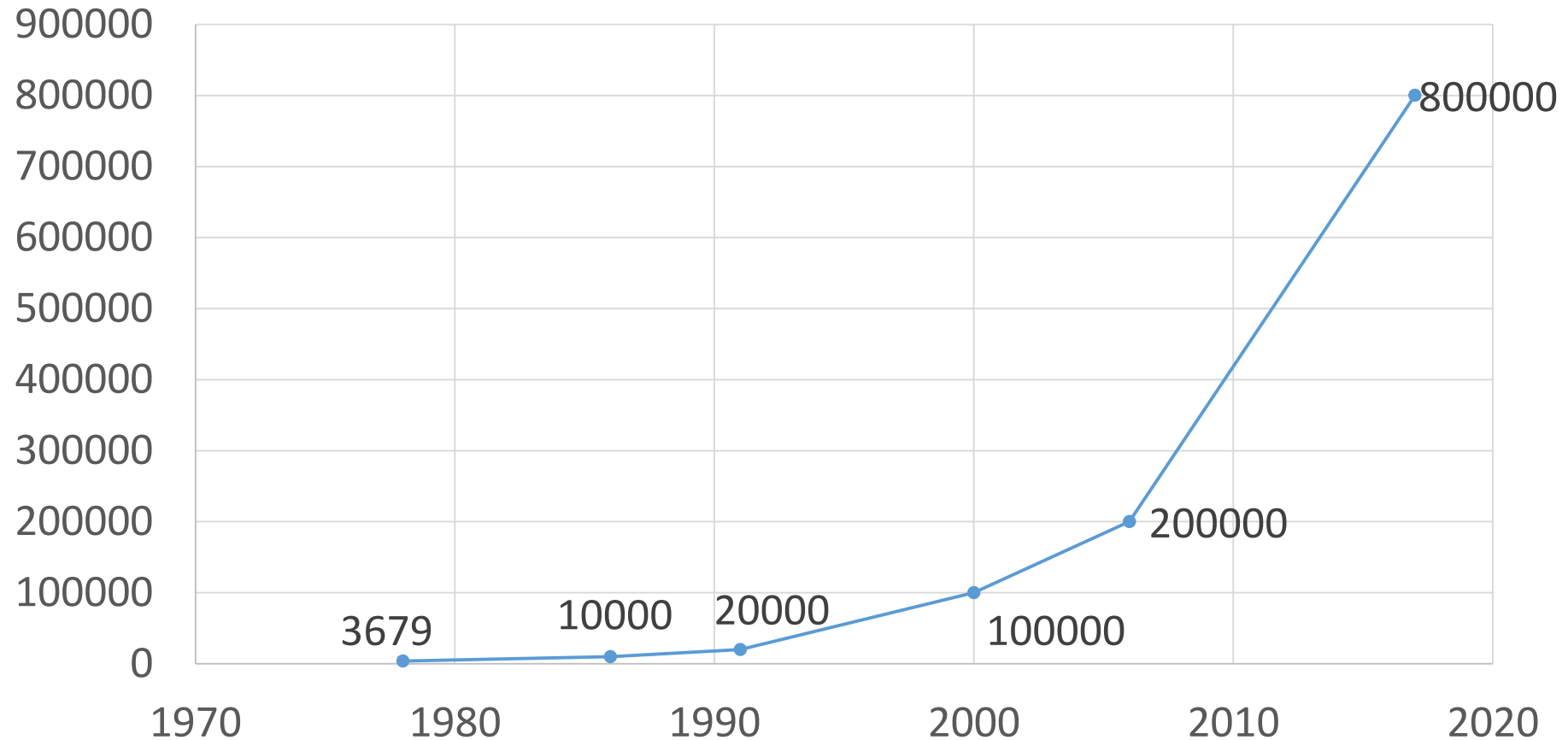


16.73 times of German population

In 2016, the proportion of urban residents was 57.35%

The elderly dependency ratio was 15% in 2016

GDP (unit: 100 million RMB Yuan)

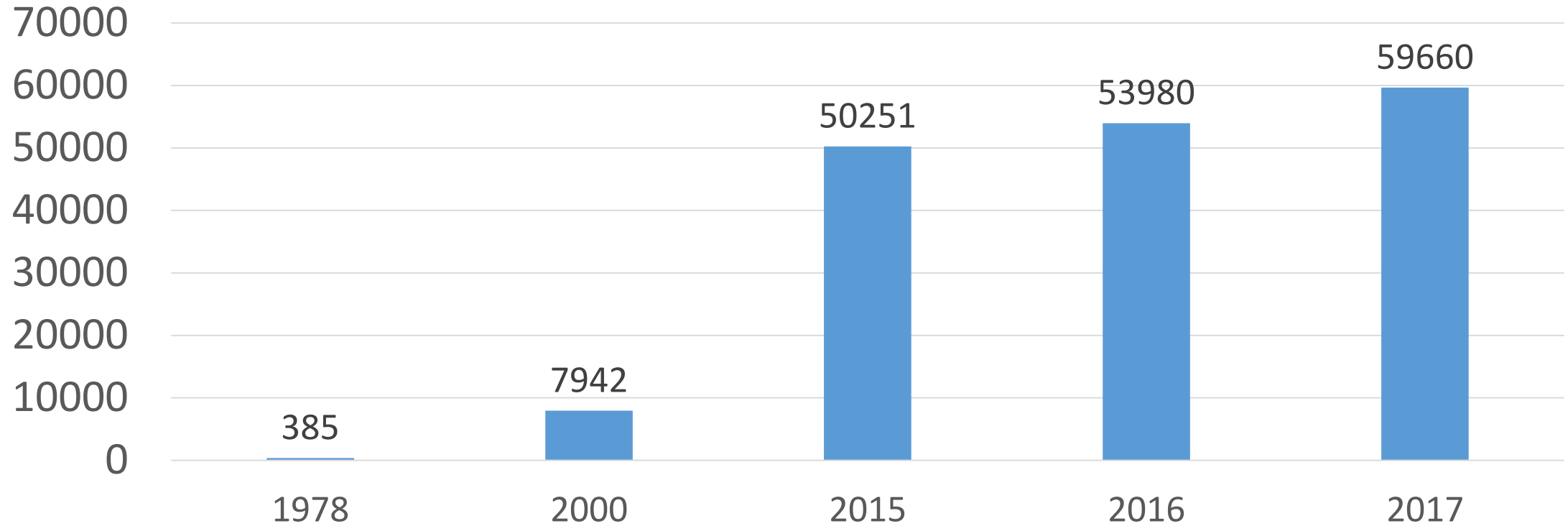


In 2017, China's GDP grew by 33.5 times compared with 1978 at constant prices, an average annual growth rate of 9.5%. The world economy grew by about 2.9% annually in the same period.

Economic scale

- The second in the world.
- In 1978, 11th of the world.
- In 2000, 6th of the world.
- In 2007, 3rd of the world.
- In 2010, 2nd of the world.
- In 2017, China's gross domestic product (GDP) was equivalent to US\$12.3 trillion, accounting for about 15% of the world economy, an increase of 13 percentage points over.
- In recent years, China has contributed more than 30% to world economic growth.

GDP Per capita (Unit: RMB Yuan)

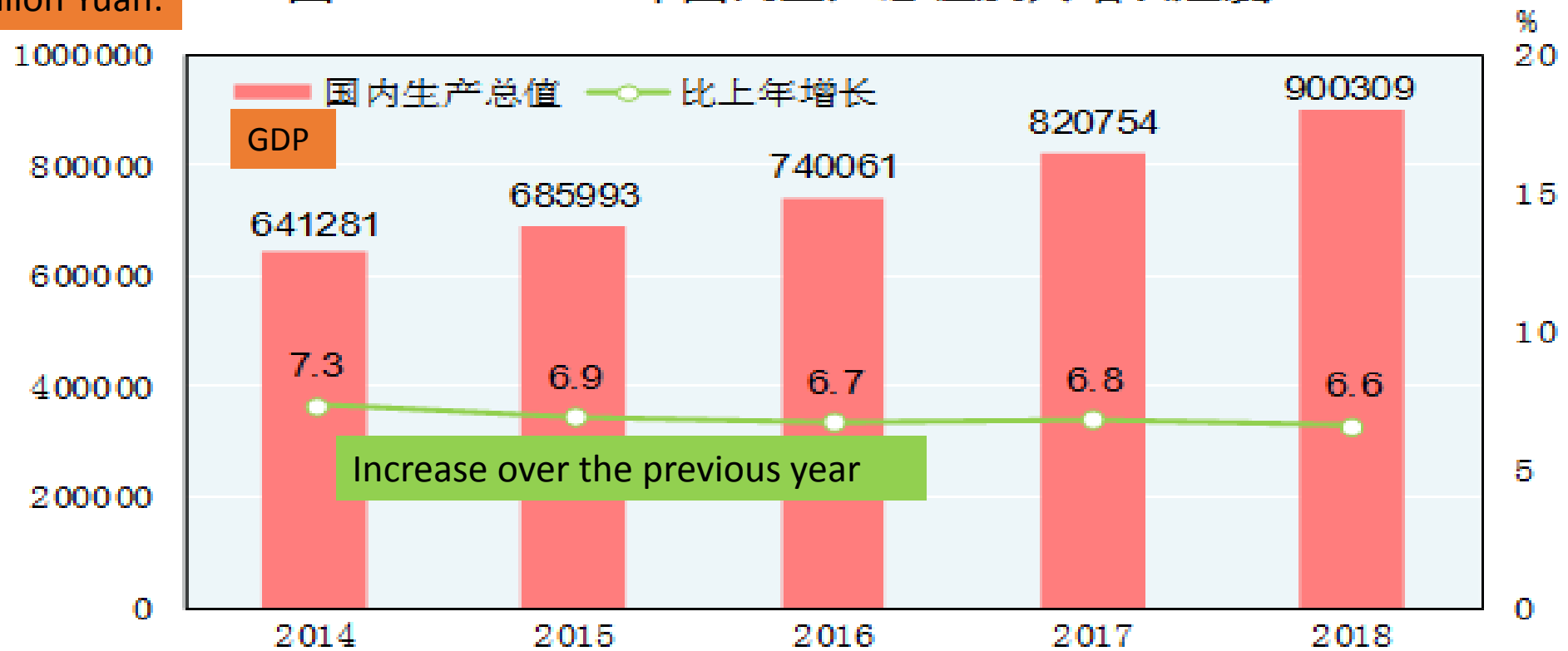


Excluding price factors, China's per capita GDP in 2017 was 22.8 times higher than that in 1978, with an average annual real growth of 8.5%. China's per capita gross national income (GNI) rose from \$200 in 1978 to \$8,250 in 2016, exceeding the average level of middle and upper income countries.

China's GDP and its Growth Rate (2014—2018)

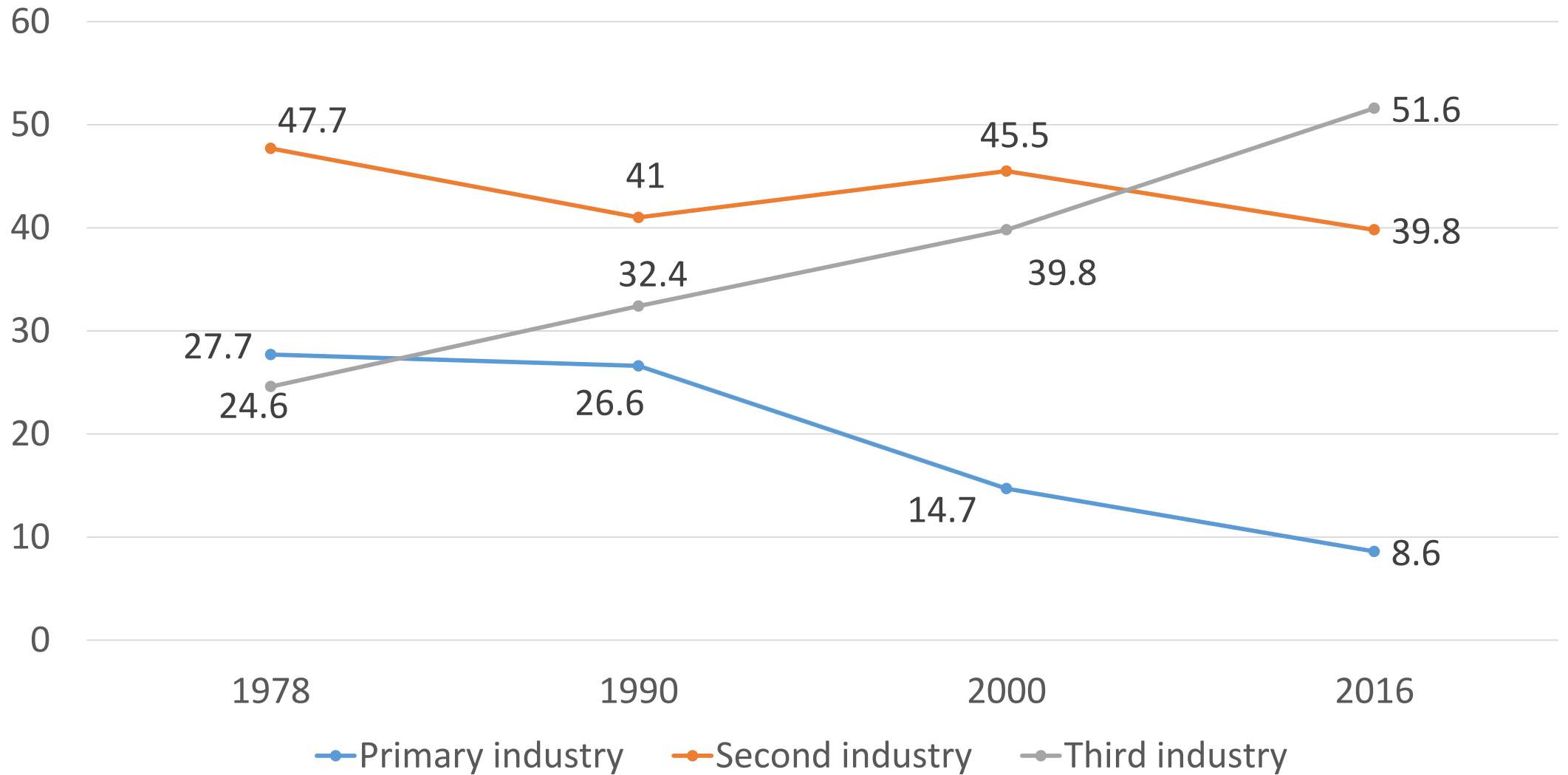
100 million Yuan:

图1 2014-2018年国内生产总值及其增长速度

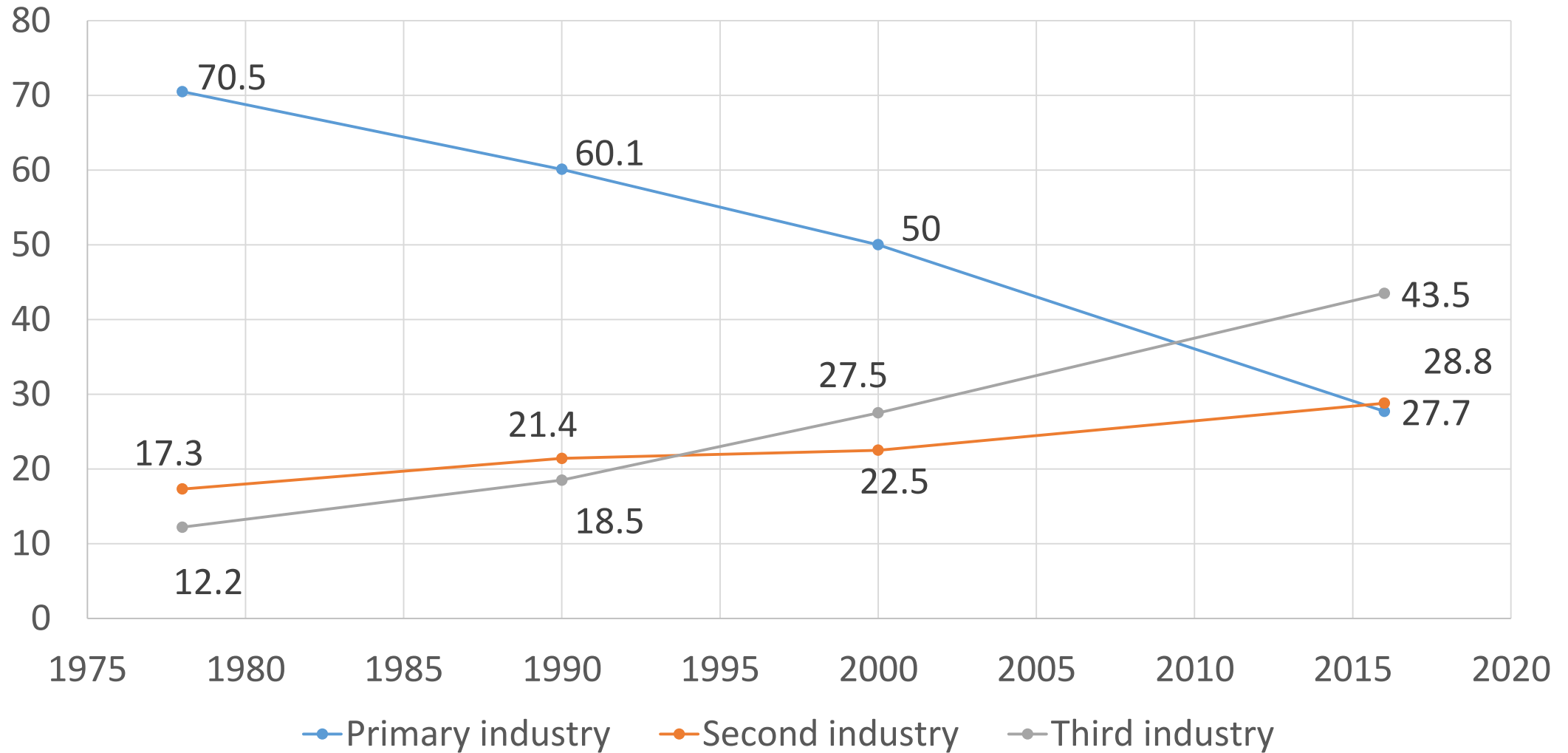


Resource: Statistical Bulletin on National Economic and Social Development 2018

GDP ratio of the three industries



Proportion of employment in three industries



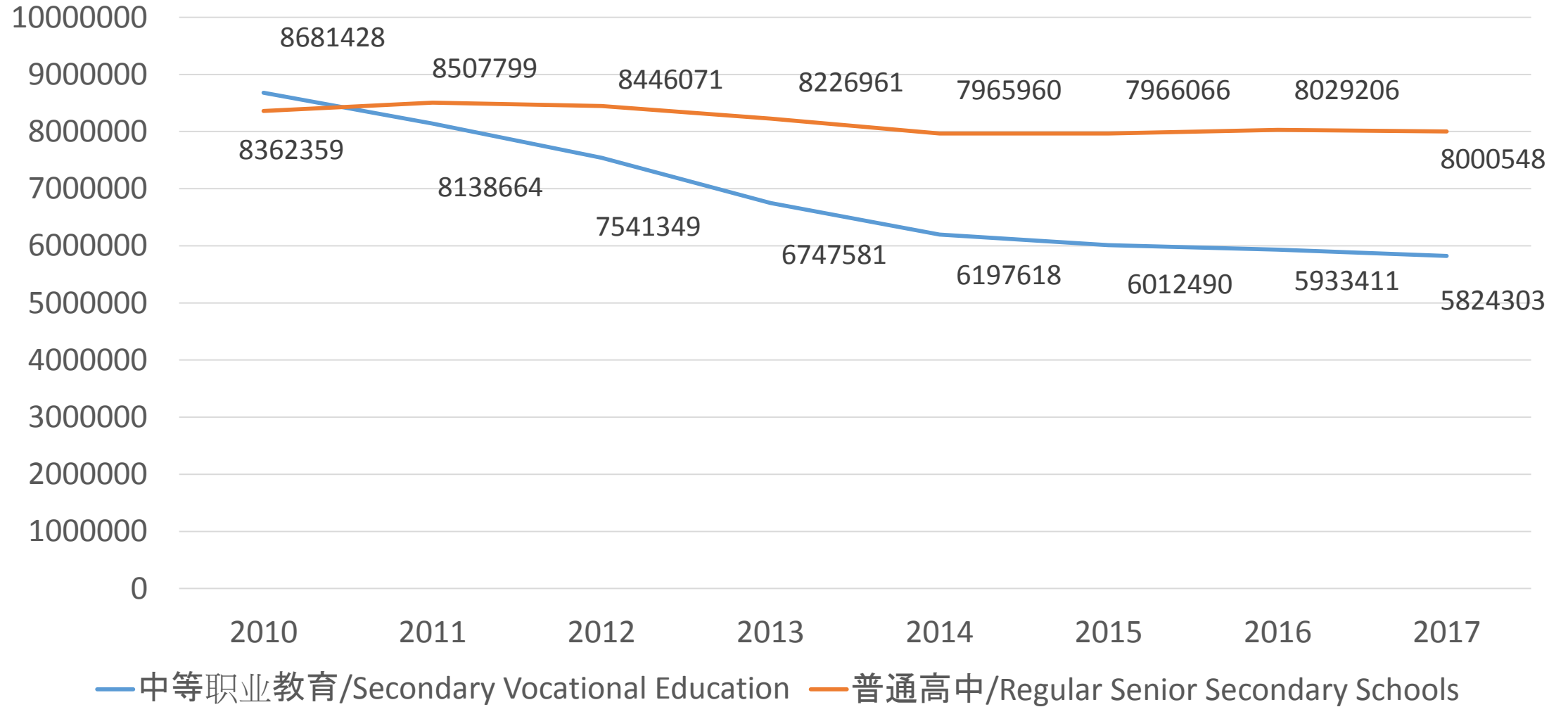
Population and employment (2018)

- Total population of the mainland China:
 - 1.39538 billion
 - Urbanization rate: 59.58%
 - Natural growth rate of the whole population: 3.81‰
- Employed people:
 - 775.86 million people were employed nationwide, among which 434.19 million were employed in urban areas.
 - The newly-increased population employed in urban areas was 13.61 million.
 - National unemployment rate of urban areas was 4.9%
 - The total number of migrant workers: 288.36 million.

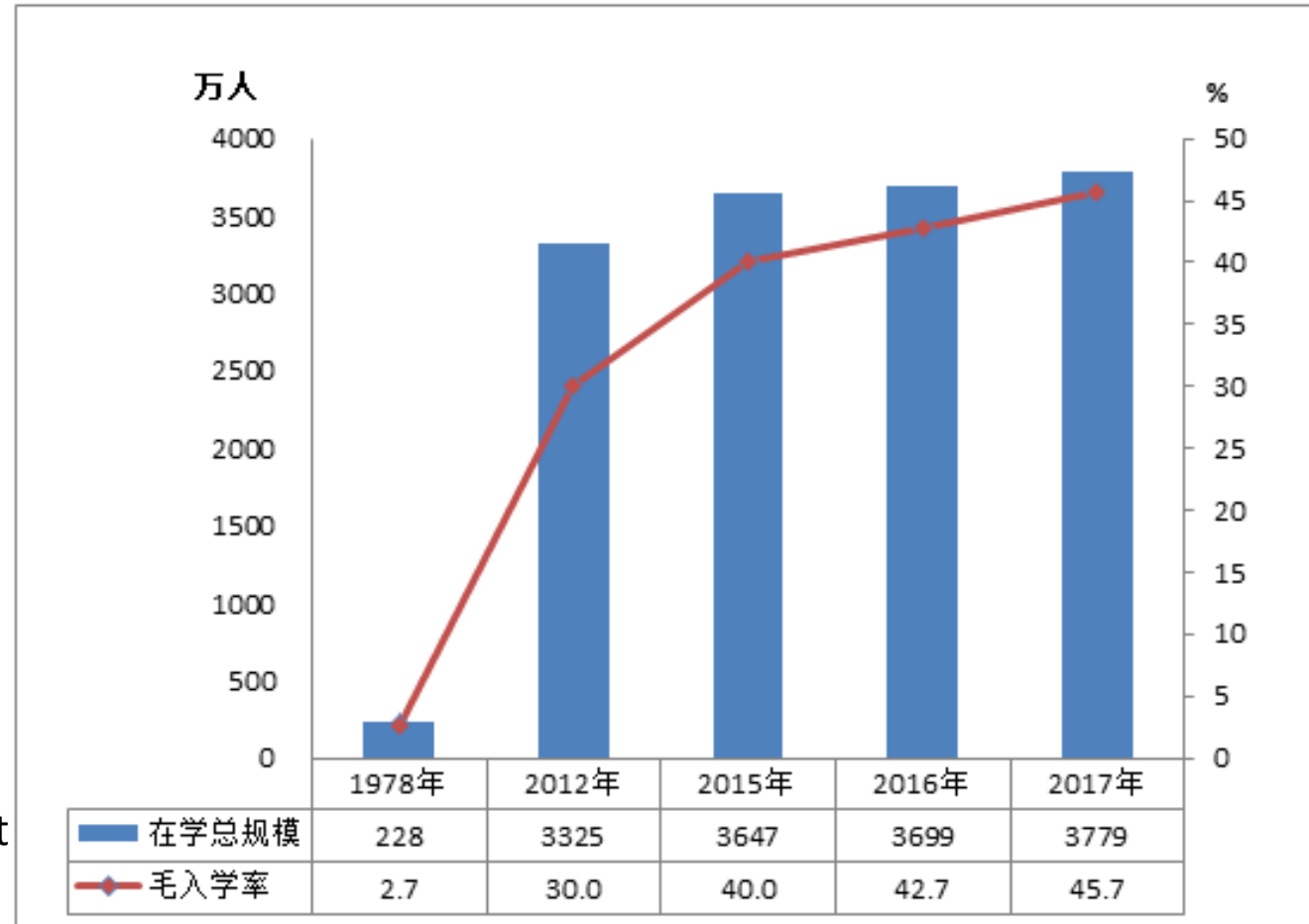
Industries change (2018)

- Among industries above scale in 2018:
 - The added value of strategic emerging industries increased by 8.9% over the previous year.
 - The added value of high-tech manufacturing industry increased by 11.7%, accounting for 13.9% of the total added value of industries above scale.
 - The added value of equipment manufacturing industry increased by 8.1%, accounting for 32.9% of the total added value of industries above scale.
 - Among the third industry above scale, operating receipts of strategic emerging services increased by 14.6% year on year.
 - The year-round investment in high-tech industries increased by 14.9% year on year and the investment in industrial technological transformation increased by 12.8%.
 - The annual output of new energy vehicles was 1.15 million, an increase of 66.2% year on year and
 - The output of smart TV was 113.76 million, an increase of 17.7%.

Entrants of secondary VESs and RSSSs



Number of enrollments in Higher Edu and Gross enrollment rate in 1978,2012, and 2015-2017



Number of enrollment
Gross enrollment rate

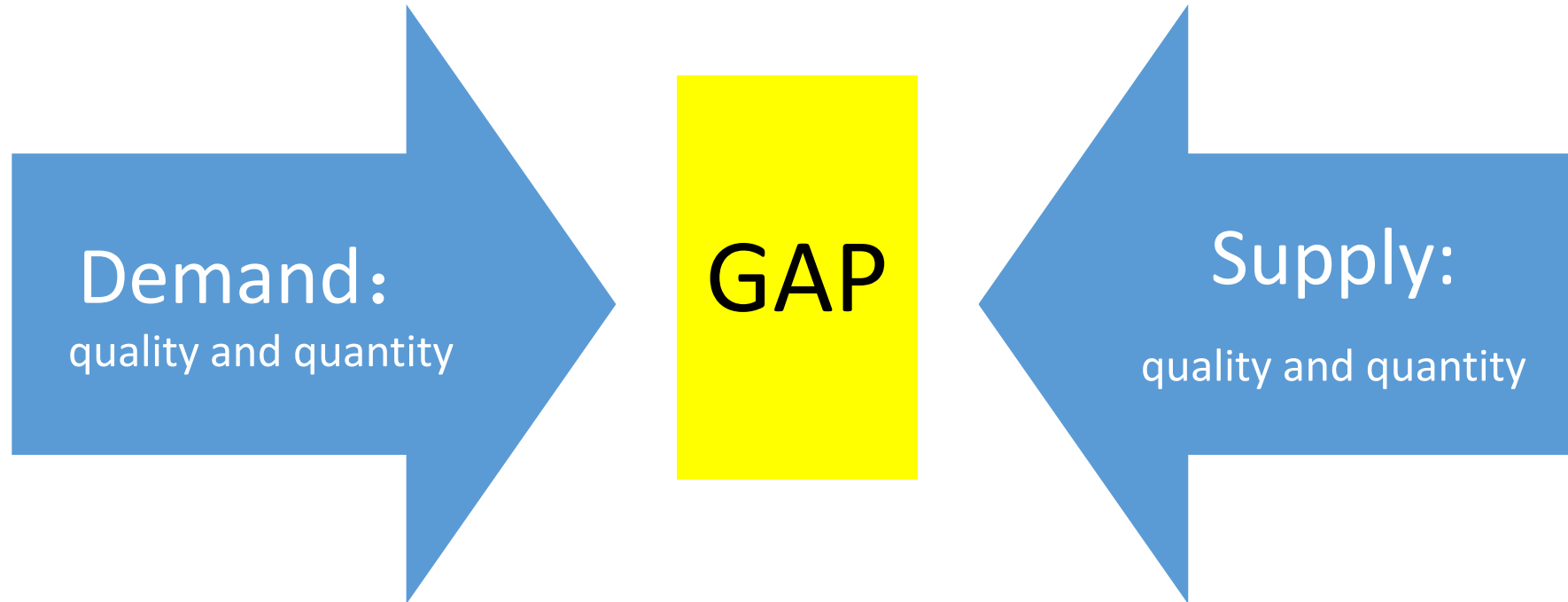
Basic data of Higher Vocational Education in China (2017)

- Vocational Colleges (independent colleges): 1388
- New entrants per year: 3.504 M
- Total enrollments: 11.0495 M
- Graduates: 3.5164 M
- Higher vocational education in China has accounted for over 40% of the total scale of higher education.

Lack of skilled workers in China

- **165 million skilled workers** in China, 21.3% of employed population.
- **47.91 million highly-skilled workers**, 29% of total number of skilled workers.
- The **low proportion** of skilled workers with unreasonable talents structure and the serious shortage of highly-skilled personnel have become bottleneck restricting China's industrial development and competitiveness of enterprises.
- In recent years, the rate of seeking talents for skilled workers remained above 1.5 and the rate of seeking talents for senior technicians has even reached more than 2.

Gap between demand and supply of skilled workers



Opinions of the General Office of the State Council on Deepening the Integration of Industry and TVET (2017)

• **Promoting coordinated development of TVET and industry**

- Simultaneous planning for industry-TVET integration and socio-economic development;
- Coordinating TVET and regional development;
- Improving the demand-oriented adjustment mechanism for talent training structure

• **Enhancing the main role of enterprises**

- Increasing participating routes for enterprises into TVET
- Deepening the reform of “introducing enterprises into TVET”
- Developing productive internship and training

• **Promoting the reform for talents training under industry-TVET integration**

- Promoting the cooperative talents training by industries and TVET schools
- Enhancing faculty building for industry-TVET integration
- Accelerating the reform of TVET school’s governance structure

• **Promoting supply-demand docking between industries and TVET**

- Strengthening industries’ guidance and coordination
- Building information service platform

• **Increasing policy supports**

- Strengthening financial support:

China’s government-enterprise cooperative investment funds and loans from international financial organizations and foreign governments are used to actively support eligible industry-TVET integration projects. Following the relevant procedures, rules and regulations, the Asian Infrastructure Investment Bank (AIIB) and the Silk Road Fund (SRF) will further promote the “One Belt and One Road” TVET projects.

• **Enhancing international exchanges and cooperation**

- Vocational education and higher education should be encouraged to participate in the “One Belt and One Road” initiative and international capacity cooperation.

Implementing Plan for National TVET Reform (2019)

- **Setting national standards for TVET**

- According to the requirements of connecting major settings and industrial demands, curriculum contents and vocational standards, teaching and production, the Chinese government will improve standards of setting secondary and higher vocational schools and standardize the setting of vocational colleges.

- **Promoting talents training by industry-TVET integration**

- Establishing certification system under industry-TVET integration
- Giving combined incentives of "finance + land + credit" to enterprises
- Implementing tax policies according to regulations. If the investment of a pilot enterprise meets the requirements, additional education fees and local education surcharges may be offset in a certain proportion.
- Drawing experience from the "dual system" and other modes to summarize the pilot experience of the modern apprenticeship system and the new apprenticeship system in enterprises.
 - Schools and enterprises should jointly study and formulate talents training programs to timely incorporate new technologies, new techniques and new standards into teaching standards and contents and strengthen students' practical training.
 - Improving the regular evaluation mechanism for major settings and strengthening the local responsibility of guiding vocational to optimize major settings.
 - Major catalogue of vocational colleges should be revised once every five years and TVET schools could set majors flexibly and independently according to the catalogue and adjust majors once a year.

Apprenticeship Pilots

- **In 2014**, MOE issued:
 - *Opinions on Setting Pilots of Modern Apprenticeship.*
 - **On January 5th, 2015**, the Department of Vocational Education and Adult Education of the MOE issued:
 - *Notice on the Pilot Work of Modern Apprenticeship*
 - *Implementation Plan for the Pilot Work of Modern Apprenticeship.*
 - **Pilot lists** have been published three times: August 2015, August 2017 and August 2018
 - **Total of 562 pilots.**
 - The pilot work of modern apprenticeship has been carried out extensively throughout the country.
- **On July 24th, 2015**, MOHRSS and MOF:
 - Issued the *Program for Pilot Work of New Apprenticeship in Enterprises*; and
 - Launched the *pilot work of New Apprenticeship* in enterprises in 12 provinces, cities and autonomous regions such as Beijing and Tianjin.
 - **On October 12th, 2018**, MOHRSS and MOF issued:
 - *Opinions on the Comprehensive Implementation of the New Apprenticeship in Enterprises.* Goals:
 - Training more than 500,000 new apprentices for enterprises" from 2018 to the end of 2020
 - Training about 500,000 apprentices annually" from 2021.

Establishing industrial advisory committees for vocational education and training

- **In 2011**, MOE issued:
 - *Opinions on Fully Exerting the Guiding Role of Industry to Promote the Reform and Development of Vocational Education.*
 - Industrial advisory committee is a TVET experts organization led by executive departments and industry organizations.
 - It gives full play to industries in instructing the supply and demand of talents, the TVET development, major settings, curriculum system, evaluation criteria, teaching materials, practical training, faculty building, industrial participation, and group school-running, etc.
- **Since 2010**, after three major adjustments and re-elections:
 - More than **3,000 members** of 56 industrial advisory committees, covering nearly all categories of national economic industry classification and **95% of the majors of secondary and higher vocational education.**
 - At present, educational administrative departments, industry authorities, industrial organizations, enterprises and institutions and vocational schools and colleges have **jointly promoted the reform and development of vocational education.**
- **In 2017**, five new education (teaching) advisory committees set up directly by the MOE were established, including foreign language, education, art design, cultural quality education and information-based teaching.

Vocational education groups

- Number of national vocational education groups:
 - In 2014: 1,048
 - **In 2016: 1,406** (↑34%), covering all provinces (autonomous regions and municipalities governed by the Central Government) except Tibet Autonomous Region
 - 1095 industrial VET groups
 - 98 primary industry
 - 530 secondary industry
 - 467 tertiary industry.
 - 35,945 members
 - 73 % industrial enterprises
 - 1,236 higher vocational colleges have participated in these groups (91% of the total)
 - 53 have been registered as corporate entity groups (↑ 21 over 2014)
- Annual Report of Group School Running of Vocational Education in China (2017)



Thank you !