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Content

Major S&T indicators over 40 years since reform and opening-up
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The year of 2018 marks the 40th anniversary of reform and opening-up in China. Over the 40 years, China has been working proactively against the challenges, strengthening coordination at home and abroad and doing a good job in all links related to science and technology. This issue deals with four major S&T indicators over the 40 years since reform and opening-up, namely S&T input, S&T output, major players of S&T activities and international comparison.

(Source: MOST)

1. S&T input

1.1 Technical staff (1978-2016)

![Diagram 1.1-1 Number of technical staff in public economy units and growth rate]

![Diagram 1.1-2 Technicians devoted to specific areas in public economy units]
Fig 1.1-3 Number of engineering technicians in public economy units and growth rate

Fig 1.1-4 Number of agricultural technicians in public economy units and growth rate

Fig 1.1-5 Number of researchers in public economy units and growth rate
10,000 people

Number of health technicians in public economy units
Growth rate

Fig1.1-6 Number of health technicians in public economy units and growth rate

Number of teaching staff in public economy units
Growth rate

Fig1.1-7 Number of teaching staff in public economy units and growth rate

1.2 R&D staff (1991-2017)

10,000 people/year
Man-year/10,000 people

R&D staff
R&D staff/10,000 employees

Fig1.2-1 R&D staff and R&D input intensity
1.3 College graduate (1978-2017)

Fig1.2-2 Distribution of different types of R&D activities (1991, 2000, 2010, 2017)

Fig1.3-1 Number of college and junior college graduates and growth rate

Fig1.3-2 Number of post-graduate students and growth rate
1.4 R&D expenditure (1985-2017)

Fig. 1.4-1 National R&D expenditure and its share in GDP

Fig. 1.4-2 Expenditure of various types of R&D activities over the years

Fig. 1.4-3 Distribution of expenditure for various types of R&D activities (1987, 2000, 2010, 2017)
1.5 State-budgeted S&T input (1978-2017)

Fig 1.5-1 State-budgeted S&T input and its share in public financial expenditure

Fig 1.5-2 Central- and local-budgeted S&T input (1990-2017)

Fig 1.5-3 Central- and local-budgeted S&T input (1987, 2000, 2010, 2017)
2. S&T output

2.1 Science papers

Fig2.1-1A Number of SCI of various kinds of institutions

Fig2.1-1B Historical change of SCI of four kinds of institutions
Fig 2.1-2A Number of EI of various kinds of institutions

Fig 2.1-2B Historical change of EI of four kinds of institutions

Fig 2.1-3A Number of CPCI-S of various kinds of institutions
Fig2.1-3B Historical change of CPCI-S of four kinds of institutions

Fig2.1-4A Number of CSTPCD of various kinds of institutions

Fig2.1-4B Number of CSTPCD of four kinds of institutions
2.2 Invention patent (1986-2017)

10,000 pieces

Fig 2.2 Applications and grants of domestic invention patents

2.3 National technology market transaction volume (1985-2017)

100 million yuan

Fig 2.3 National technology market transaction volume and growth rate
2.4 Major economic indicators of hi-tech industries (1995-2017)

![Graphs showing economic indicators for hi-tech industries]

Fig 2.4 Major economic indicators of hi-tech industries

3. Major players of S&T activities

3.1 The country

![Pie charts showing distribution of R&D staff across the country]

Fig 3.1-1 Distribution of enforcement bodies of R&D staff across the country (1987, 2000, 2010, 2017)

![Pie charts showing distribution of R&D expenditure across the country]

3.2 Enterprise

![Graph showing R&D staff in enterprises and growth rate (2000-2017)]

Fig 3.2-1 R&D staff in enterprises and growth rate (2000-2017)

3.3 Research institute

![Graph showing R&D expenditure in enterprises and growth rate (2000-2017)]

Fig 3.2-2 R&D expenditure in enterprises and growth rate (2000-2017)

![Graph showing R&D staff in research institutes and growth rate (1991-2017)]

Fig 3.3-1 R&D staff in research institutes and growth rate (1991-2017)
3.4 Higher learning institution

Fig3 3-2 R&D expenditure of research institutes and growth rate (1995-2017)

Fig3 4-1 R&D staff in higher learning institutions and growth rate (1991-2017)

Fig3 4-2 R&D expenditure of higher learning institutions and growth rate (1995-2017)
4. International Comparison

4.1 Total number of R&D staff and R&D input intensity

Fig 4.1-1: Total number of R&D staff and R&D staff per 10,000 employees in some countries (2016)

Fig 4.1-2: Total number of R&D staff and R&D staff per 10,000 employees in some countries (2000, 2010, 2016)

4.2 Total R&D expenditure and R&D input intensity
4.3 Grants of invention patents and number of third-party patents

Fig 4.2-1 Total R&D expenditure and its share in GDP in some countries (2016)

Fig 4.2-2 Total number of R&D expenditure and its share in GDP in some countries (2000, 2010, 2016)

Fig 4.3-1 Grants of invention patents in some countries (2000, 2010, 2016)
4.4 Hi-tech industry export

Fig 4.3-2 Number of third-party patents in some countries (2000, 2010, 2015)

Fig 4.4-1 Hi-tech industry export volume and its share in manufacturing industry export (2016)

Fig 4.4-2 Hi-tech industry export volume and its share in manufacturing industry export in some countries (2000, 2010, 2016)