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Content

2018 Report on Regional STI Evaluation in China

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2018 Report on Regional STI Evaluation in China conducts analysis and comparison of STI level nationwide and in 31 provinces, municipalities and autonomous regions by setting up an indicator system of five first-tier indicators in STI environment, input of S&T activities, output of S&T activities, high and new technology industrialization, and S&T facilitation of economic and social development, as well as 12 second-tier and 39 third-tier indicators. The results are as below:

- China's regional STI level increased steadily
- Shanghai and Beijing performed outstandingly in establishing STI centers
- The developed eastern part of China enjoyed cutting edges, while central and western regions progressed rapidly
- Regional STI pattern with distinct characteristics was put in place

1. China's regional STI level increased steadily

The indicator of China's overall STI level has risen by 2.06 percentage points compared with the same period last year. Anhui, Jilin, Zhejiang, Hebei, Henan and Guangdong witnessed bigger rise, while Xinjiang, Beijing, Shanxi, Tibet and Heilongjiang saw decline.

In contrast with last year, Beijing, Shanghai, Tianjin, Guangdong, Jiangsu and Zhejiang in the east have been leading the nation; Hubei province in central China performed best in terms of innovation capacity, ranking 7th nationwide; Anhui province progressed remarkably, as it moved up by four places to the 11th; Hebei province went up by two places in terms of overall STI level and two first-tier indicators of STI environment, input of S&T activities. Marked results were made in narrowing the STI gap by the Beijing-Tianjin-Hebei coordinated development; Shanxi province saw relatively rapid decline of 3 places mainly due to slip in S&T hardware ranking. Heilongjiang province and Ningxia autonomous region dropped by two places.

2. Shanghai and Beijing performed outstandingly in establishing STI centers

The role and functions of Shanghai and Beijing municipalities as STI centers became more prominent. Based on Zhongguancun Science City, Huairou Science Park, Future Science Park, Beijing Economic-Technological Development Area, Shanghai Zhang-jiang National Science Center and prompted by coordinated development of surrounding areas, Shanghai and Beijing did much better in the pooling of innovative talents, scale and intensity of input in innovation and entrepreneurship, width and depth of knowledge generation, dissemination of technology outcomes and domestic and international impact.

According to the report, Shanghai and Beijing secured top two in terms of overall STI level, followed by Tianjin, Guangdong, Jiangsu and Zhejiang.

3. The developed eastern part of China enjoyed cutting edges, while central and western regions progressed rapidly

Eastern regions were the top three in the first-tier indicators of STI environment, input of S&T activities, and S&T facilitation of economic and social development. Chongqing municipality in western China topped the nation in industrialization of high and new technologies.

As for STI environment, Tianjin, Beijing, Jiangsu, Shanghai, Zhejiang, Shandong and Guangdong surpassed national average to dominate the top seven

places. Jilin secured the 15th place from 23rd last year, marking the fastest progress due to outstanding improvement in science and technology hardware. Heilongjiang jumped from 17th to 12th. Henan saw three-place rise in the ranking. Shanxi declined from 20th to 25th because of the drop in science and technology hardware ranking. Jiangxi went down by four places, while Inner Mongolia, Anhui and Hunan witnessed three-place decrease.

In relation to output of S&T activities, Guangdong, Shanghai, Zhejiang, Jiangsu, Tianjin, Beijing, Anhui and Shandong occupied top eight places with higher level than average. The ranking saw no marked changes. The only exception was Anhui province, which outperformed Shandong and rose to the 7th.

When it comes to output of science and technology activities, Beijing, Shanghai and Tianjin maintained the leading three places and surpassed the national average. Jilin province and Guangxi autonomous region climbed up by four and three places respectively. Heilongjiang province dropped by four places, while Gansu and Ningxia saw decline of three places.

In terms of high and new technology industriali -zation, Chongqing, Tianjin, Shanghai, Beijing, Jiangsu, Sichuan, Guangdong, Hubei, Guangxi, Anhui, Henan, Zhejiang and Shaanxi surpassed the average to rank top 13. Anhui province has ascended from 15th to 10th with the most rapid progress resulting from remarkable increase in profits of high and new technology industrialization. Hainan and Shaanxi provinces saw four-place rise, while Shanxi, Yunnan and Chongqing climbed up by three places. Guizhou province decreased from 11th to 19th due to decline in profits of high and new technology industrialization. Heilongjiang province declined by four places, while Shandong province and Tibet autonomous region saw slip of three places.

With regard to science and technology facilitation of economic and social development, Guangdong, Shanghai, Beijing, Zhejiang, Jiangsu and Chongqing constituted top six nationwide, surpassing national average. In the ranking, Shandong rose by five places due to improvement of environment evaluation, Shaanxi up by four places, Jilin and Hunan both up by three places, Heilongjiang down by eight places as a result of declining environment, Hainan down by six places caused by drop in IT application in social life, and Ningxia and Xinjiang down by three places.

4. Regional STI pattern with distinct characteristics was put in place

After decades of rapid development, innovation input and transformation of S&T outcomes have shifted from superiority of the eastern regions to coordinated development among eastern, central and western regions. Shanghai and Beijing played a more prominent role in leading development. Coastal eastern regions boasted pronounced advantages in industrial innovation. Central and western regions witnessed faster development, the rapid development of Anhui, Hubei, Shaanxi, Sichuan and other provinces has become a highlight for regional innovation. Regional innovation layout with characteristics at different levels has emerged in China.

Eastern regions boasted remarkable advantages in innovation-led development. Shanghai and Beijing municipalities played a more prominent role in leading development. Coastal eastern regions enjoyed marked advantages in industrial innovation. The added value, turnover and profit of high-tech industry of Jiangsu, Guangdong, Zhejiang, Shandong and Tianjin accounted for nearly 60 percent of the national total, while exports of high-tech products occupied over 60 percent. Jiangsu and Guangdong possessed superior advantages in STI environment, input and output of science and technology activities, high and new technology industrialization, and science and technology facilitation of economic and social development and became the most important STI centers and clusters of high-tech industries respectively in eastern and southern regions. Zhejiang province rose by two places in STI environment and output of science and technology activities. Enterprises from Fujian province spent 22.11 billion yuan gaining access to and transforming technologies, an increase of 62.6 percent from last year. And the international revenue out of technologies rose by 25.7 percent.

Central regions witnessed booming STI development. With the most rapid growth in fiscal expenditures in science and technology, Anhui province increased by four places and ranked 11th nationwide in overall STI level. Hubei province was listed 7th, with ranking in STI environment and science and technology facilitation of economic and social development rising by two places. Its technology export volume ranked 2nd nationwide following Beijing municipality. Hunan province saw one and two places up in STI and output of science and technology activities. The newly added fixed assets in scientific research and technology service secured the 4th place. Jiangxi province increased by one place in overall STI level, two places in science and technology facilitation of economic and social development, nine places in the share of newly added fixed assets in scientific research and technology service of all newly added fixed assets. Jilin and Heilongjiang provinces saw marked improvement in innovation environment, with rise of eight and five places respectively.

Western China is an important part of the “Belt and Road” Initiative. Chongqing and Sichuan in the southwest and Shaanxi province in the northwest have become STI centers of west China. Connected with each other geographically, they play a leading and exemplary role in regional technological and economic development. Chongqing municipality topped in high and new technology industrialization, up by three places, ranked 6th in science and technology facilitation of economic and social development, and moved up by one place in output of science and technology activities. Sichuan province saw rise of one and two places in output of science and technology activities and science and technology facilitation of economic and social development respectively. Shaanxi province climbed up by four places in science and technology facilitation of economic and social development and high and new technology industrialization. Engaged actively in the “Belt and Road” Initiative, Guangxi, Guizhou, Qinghai, Yunnan and Xinjiang strove to improve innovation environment, expand technology input for greater output, and optimize industrial structure and boost regional competitiveness through corporate innovation.