Innovation-driven Development and Comprehensive Innovation & Reform

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Outline

I. New Landscape of Innovation Development

II. Framework of Innovation Development Policy

III. Progress in Comprehensive Innovation & Reform

IV. Future Policy Orientations
I. New Landscape of Innovation Development

Chinese government issued the Outline of Mid-long Term Plan for National S&T Development and the supportive policies as well as 78 detailed policy documents to implement the outline Feb. in 2006.
I. New Landscape of Innovation Development

Import/export (1000 US $)

WTO in 2001

Urban Popul($10^4$)  Rurual Popul($10^4$)
I. New Landscape of Innovation Development

Enterprises account for more than 76% of the total GERD since 2012.
I. New Landscape of Innovation Development

[Graph showing the trend ofSCI Paper Number and Ratio to the World from 2006 to 2016]
I. New Landscape of Innovation Development

International cooperation papers by Chinese scholars as the first author

Cooperation with scientists from 155 countries or economies.

In 2016, 225 papers with over 1000 co-authors and 150 cooperative institutions. 496 articles with over 100 co-authors, and more than 50 cooperative institutions.

Big Science Cooperation
<table>
<thead>
<tr>
<th>Ranking</th>
<th>2015</th>
<th>2006</th>
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Innovation is a complex process of value creation, including:

- **scientific value** ---------- scientific discovery
- **technological value**------- technology invention
- **economic value**---------- entrepreneurship & commercialization
- **social value**------------- social diffusion and service
- **culture value**----------- cultural service and experiences
II. Framework of Innovation Development Policy

◆ The orientation of innovation development policy is to seek the efficiency and benefit of value creation under the certain development concept.

◆ The innovation development policy emphasizes the guidance of the development concept, and emphasizes the decisive influence of the development concept on the innovation resource allocation and the value judgment of innovation output.
SDGs to some extent determine the goals of innovation development policy and the time schedule to implement.
III. Progress in Comprehensive Innovation & Reform

Decision on Reforming S&T System in 1985
--to introduce the competitive mechanism in the allocation of public S&T funds
--Program on the Cooperation between Industry-University-Research Institute
--Program on technology development centre authorised by Central Government

Decision on Deepening S&T System Reform in 1995
--Technology Innovation Program in 1996
--CAS Pilot Project of Knowledge Innovation Program in 1998
--Transformation of Public Research Institutes in 1999

--Enterprise-centred National Innovation System
III. Progress in Comprehensive Innovation & Reform

National High-Tech Industrial Development Zone (146)
National Innovation Demonstration Zone (17)
National Innovation City (61)
National Engineering Labs
National Enterprises’ TDC

Engines for Innovation-Driven Development

National Innovation-driven Strategy in 2012

Chongqing, Hefei-Wuhu-Bengbu
Fuzhou-Xiamen-Quanzhou
III. Comprehensive Innovation & Reform in China

The CPC Central Committee and the State Council issued the opinions on deepening the reform of the institutional mechanism so as to accelerating the implementation of the strategy of innovation-driven development in March 13, 2015, and pointed out that it is necessary to push forward the comprehensive innovation and reform experiment;

Chinese government issued the Overall Plan for Systematically Promoting Comprehensive Innovation and Reform Experiments in some Regions in September 7, 2015.
III. Progress in Comprehensive Innovation & Reform

Pilot Areas of Comprehensive Innovation & Reform

• Beijing-Tianjin-Hebei
• Shanghai
• Guangdong
• Anhui
• Sichuan
• Wuhan
• Shenyang
• Xian

• About 172 items of pilot policies have been authorized by central government to those areas.
III. Progress in Comprehensive Innovation & Reform

◆ Reform for promoting Market Fair Competition
   13 reform measures: decentralization, charging list system, optimization of government services, reform of administrative examination and approval in key areas, promotion of market access and innovation policy review and evaluation.

◆ Reform for IP Policy
   26 reform measures: intellectual property rights transaction system, strict protection of intellectual property rights, implementation of technical standards strategy, strengthening the use of intellectual property rights, and promoting public services of intellectual property rights.

◆ Reform for National Innovation System
   16 reform measures: innovation subject, innovation base, innovation growth pole, innovation network, innovation governance structure, innovation ecology and so on.
III. Progress in Comprehensive Innovation & Reform

◆ Reform for Talent Development

14 reform measures: talent training, talent introduction, talent use, talent flow and talent employment and entrepreneurship service

◆ Reform for Finance Innovation

31 reform measures: bank credit, bond financing, capital market, equity investment and insurance.

◆ Reform on S&T System (Fiscal policy)

13 reform measures: science and technology programs, financial subsidies, guidance funds, government procurement and tax incentives
CASE 1. FAST Track for Examination, Acquisition and Enforcement of Patent (Guangdong)

➢ Problems: The cost for enforcement of intellectual property rights is high, the time is long, the effectiveness is poor.
➢ Measures: Guangdong, relying on Fast IPR Enforcement Center, provides the one-stop services including quick examination of the patent applications, a quick acquisition of the patents and quick enforcement of the patents. To choose a number of enterprises to enter the fast track of examination. To establish the circuit court jointly with local court so as quickly resolve patent infringement disputes.
➢ Effectiveness: The time of the design patent application was shortened from the several months to 7-10 working days; the time of the patent infringement cases was shortened to 1 months, which effectively reduced the cost of safeguarding the rights of enterprises.
Case 2. To support outstanding foreign students to start employment in China, eligible foreign students can apply for work permission and residence permission directly (Beijing, Tianjin, Hebei)

➢ Policy Issues: Current regulations on entry & exit administration of foreigners do not support excellent foreign students with study certificates to start their own businesses in China.
➢ Measures: Foreign students in Beijing universities can apply for private residence permission if they have the university graduation certificate and the business plan for "entrepreneurship", and the work permission from the Ministry of Human Resources & Social Security and the Bureau of Foreign Experts, and the resident permission from the public security bureau if they have the registration certificate of the enterprise.
➢ Effectiveness: Foreign students, who are ready to start a business, have got work permissions from local government.
Case 2. To support outstanding foreign students to start their own business in China, eligible foreign students can apply for work permission and residence permission directly (Shanghai).

- **Policy Issues**: According to the existing regulations, foreign students cannot directly obtain employment after graduation, and need more than 2 years work experience abroad after graduation so as to apply for work visa. These regulations are not good for hiring overseas talents.

- **Measurements**: Foreign students with Master or PhD degree from universities in Shanghai and work at the free trade zone and the National Innovation Demonstration Zone can directly apply for work permission for foreigners and working residence permission.

- **Effectiveness**: 81 foreigner students have got the permissions.
CASE 3. To hire high-level foreign talents by simplifying the application procedures for work permission in China, and establish a transit channel from work permission to permanent residence permission (Guangdong)

- **Policy Issues:** to simplify the management procedures of foreign talents in China, and improve the classification management system for foreigners working in China.
- **Measurements:** to integrate the work permission and entry permission for foreigners.
- **Effectiveness:** 7574 foreigners in Guangdong, 1012 foreigner experts in Tianjin and Since November 1, 2016, the work permit system for foreigners in China has been fully implemented in the pilot areas. Up to now, there are 7574 working permits for foreigners in Guangdong, 1012 in Tianjin and 1348 in Hebei have got the permissions since 1 November 2016.
CASE 3. To hire high-level foreign talents by simplifying the application procedures for work permission in China, and establish a transit channel from work permission to permanent residence permission (Shanghai)

- **Policy Issues:** The current management regulations strictly limit the employment type, duty grade and residence time of foreign talents. This high threshold limits high-level foreign talents to apply for permanent residence.
- **Measurements:** to abolish the employment units’ classification and job level restrictions, and increase the market-oriented application channels which are linked with wages and taxation as well as work time in Shanghai. Foreign experts (more than 60 years old) can also apply for the permissions and permanent residence in China if they have been authorized by government.
- **Effectiveness:** 206 from 331 high level foreign talents have got the permissions by the end of 2016, over 50% of them are legal representatives or CEO of enterprises, 65% are oversea Chinese.
CASE 4. State Tax and Local Tax jointly establish a Tax Service Hall so as to improve the efficiency and effectiveness.

➢ **Policy Issues:** Taxpayers have to go to the State Tax and Local Tax authorities and provide tax information respectively, while the administrative examination and approval are of low efficiency and high time cost.

➢ **Measurement:** Taking Sichuan Province as an example, state and local tax authorities set up a joint tax window, based on digitalization and administration reform, and realize that taxpayers enter to one door, call one number, go to one window, to pay national taxes and local taxes at the same window.

➢ **Effectiveness:** an average of 50% reduction in submitting tax information, saving 40% of the time for paying taxes since the joint tax service hall has been jointly established by state and local tax authorities in the Sichuan Tianfu New Area.
IV. Future Policy Orientations


- Innovation Development
- Coordinated Development
- Green Development
- Open Development
- Sharing Development
IV. Future Policy Orientations

Chinese government issued The Outline of National Innovation-driven Development Strategy in May 2016 and raised a “Three Step Strategic goals”, namely:

• An innovative country by 2020
• A leading innovation-driven country by 2030
• A world leading country in S&T by 2050.

The 19th National Congress of the Communist Party of China laid out three strategic goals for achieving socialist modernization in China.
IV. Future Policy Orientations

Beijing Comprehensive Science Center

Beijing Global STI Center

Shanghai Comprehensive Science Center

Shanghai Global STI Center

Hefei Comprehensive Science Center

Shenzhen International STI & I Center

Guangdong, Hong Kong and Macao Bay Area International STI Center

Metropolis Urban Agglomeration
IV. Future Policy Orientations

• National Labs
• National Research Center
• National Key Labs
• National Engineering Research Center
• National Technology Innovation Center
• National Manufacturing Innovation Center
• National Industrial Innovation Center
IV. Future Policy Orientations

1. to encourage local governments to promote comprehensive innovation and reform.
2. to promote system reform in the context of laws & regulations supports.
3. to establish mechanism for pre-reviewing & evaluating innovation development policy.
4. to monitor/evaluate the comprehensive innovation & reform.
5. to promote international cooperation on innovation development.