Accelerating the Construction of a Globally Competitive Open Innovation Ecosystem and Advancing Higher-Level Open Cooperation in Scientific and Technological Innovation (Postprint)

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Abstract

The Party Central Committee attaches great importance to open cooperation in scientific and technological innovation. Since the 18th Party Congress, China has continuously strengthened intergovernmental scientific and technological cooperation, deepened foreign scientific and technological exchanges, and gradually transformed its role from a "participant" to a "leader" in global innovation governance. As China enters a new stage of development, the rapidly changing international situation and ever-evolving scientific and technological development have placed higher demands on open cooperation in scientific and technological innovation. However, open cooperation in scientific and technological innovation still faces issues such as scattered resources and coordination difficulties, and some open innovation initiatives have yet to be implemented, which is not conducive to accelerating the construction of an open innovation ecosystem with global competitiveness. The reasons include both external environmental issues brought about by changes in the global situation and internal long-standing institutional and systemic problems. Some are deep-seated issues that have existed for a long time and are difficult to break through, while others are superficial problems such as difficulties in implementing initiatives and slow results due to overly macro policies, inadequate implementation, and innovation entities' reluctance to act. To solve these chronic and deep-rooted problems, it is necessary to closely follow the approach of "solid implementation of science and technology policies," coordinate and advance the construction of the national innovation system, implement policies for open cooperation in scientific and technological innovation, uphold the Party Central Committee' s centralized and unified leadership over scientific and technological work, persistently promote the strategic policy of opening up, accelerate the optimization of the institutional system for attracting overseas talent, enhance the capacity for al-

locating global innovation resources, support the global development of various scientific and technological innovation platforms, and leverage enterprises' role as the main force in smoothing the "dual circulation."

Full Text

Preamble

Accelerating the construction of a globally competitive open innovation ecosystem and promoting higher-level open cooperation in science, technology, and innovation (STI) represents an intrinsic requirement for scientific progress and technological innovation, as well as a necessary response to global challenges. China' s S&T self-reliance and strength do not entail working behind closed doors. Since the 18th National Congress of the Communist Party of China (CPC), significant achievements have been made in STI open cooperation, with China gradually transitioning from a participant to a leader in global innovation governance. However, entering this new development stage, changes in the international landscape and the imperative of S&T self-reliance have placed higher demands on open cooperation.

1. Achievements in STI Open Cooperation Since the 18th CPC National Congress

1.1 Progress and Achievements

Significant progress has been made across multiple dimensions. First, the institutional mechanisms for STI open cooperation have been improved and perfected. Second, a new framework for international cooperation has been established that is all-dimensional, deep-level, and broad-ranging. Third, policy systems have been developed to attract high-level foreign talent. Fourth, "green channels" have been created for the cross-border flow of innovation factors. Fifth, China has taken the initiative to participate in the construction of the global innovation governance system. Sixth, the capacity to utilize global innovation resources has been rapidly enhanced. Seventh, regional open cooperation has been strengthened to support the construction of innovation hubs. Eighth, various types of international innovation cooperation resources have been coordinated and allocated.

1.2 Gaps and Shortcomings

Despite these achievements, several persistent challenges remain. (1) The openness of national S&T programs remains limited. (2) Research and development activities funded by foreign sources are insufficient. (3) The internationalization of the scientific and educational workforce is inadequate. (4) The cross-regional and cross-border flow of innovation factors faces obstacles. (5) Enterprises lack sufficient motivation to "go global." (6) China plays a limited role in leading

the formulation of international standards. (7) Foreign-funded enterprises and R&D institutions are not deeply integrated into the domestic innovation system.

2. Deep-Seated Institutional Issues Under New Circumstances

2.1 Emerging Deep Institutional Problems

Three fundamental issues have become apparent. First, the coordination mechanism for STI open cooperation remains inadequate to meet emerging needs. Second, the mechanisms for linking and coordinating the allocation of global innovation resources need improvement. Third, the overall planning and organic integration of various STI open cooperation efforts remain insufficient.

2.2 "Barriers" in Policy Implementation

Implementation faces three major hurdles. First, implementation plans lack operational clarity, with ambiguous responsible entities and inadequate communication of policy spirit. Second, insufficient emphasis is placed on supervision and evaluation, affecting both managers and evaluators. Third, policy promotion and interpretation are inadequate, both domestically and internationally.

3. Promoting Higher-Level STI Open Cooperation

3.1 Uphold the Centralized and Unified Leadership of the CPC Central Committee on S&T Work

The Party' s leadership must coordinate the advancement of STI open cooperation, ensuring consistent implementation of policies.

3.2 Persistently Promote the Organic Integration of Open and Independent Innovation

Building a globally competitive open innovation ecosystem requires (1) improving the institutional framework and (2) ensuring effective policy implementation.

3.3 Accelerate Optimization of Talent Policies to Build International Competitive Advantages

Key measures include (1) leveraging the role of employers as the main actors and (2) optimizing the talent ecosystem.

3.4 Enhance Capacity and Level of Global Innovation Resource Allocation

Focus on (1) innovating cooperation mechanisms and (2) addressing scientific challenges and common human concerns through collaborative research, particularly under frameworks such as the 2030 Agenda.

3.5 Support Global Development of STI Platforms and Optimize International S&T Cooperation Bases

This involves (1) broadening cooperation scope and (2) deepening regional linkages.

3.6 Leverage Enterprises as the Main Force in Facilitating "Dual Circulation" and Promote Orderly Opening of High-Tech Industries

Enterprises must (1) maintain their core position and (2) attract foreign R&D centers.

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Abstract

The Communist Party of China (CPC) Central Committee attaches great importance to open cooperation in science, technology, and innovation (STI). Since the 18th National Congress of the CPC, inter-governmental S&T cooperation has been continuously strengthened, and international S&T cooperation and exchanges have been deepened, leading China to gradually transition from a participant to a leader in global innovation governance. Entering a new stage of development, changes in the international situation and the imperative of S&T self-reliance have placed higher requirements on open cooperation in STI. Nevertheless, challenges such as scattered resources and difficult coordination persist, and some open innovation reform measures have yet to be fully implemented, which hinders the acceleration of building a globally competitive open innovation ecosystem. Evaluation reveals that these problems stem not only from external environmental changes but also from long-standing internal institutional issues. Some problems are chronic and difficult to break through, while others arise from overly principled policies coupled with poor implementation

and risk aversion. All these factors have led to slow progress and limited effectiveness of measures. To address these persistent issues, we should focus on firmly implementing S&T policies, coordinate the construction of the national innovation system, and reform open cooperation policies. Key priorities include upholding the centralized and unified leadership of the CPC Central Committee on S&T work, persevering in promoting open innovation, accelerating the optimization of policies and systems to attract overseas talent, improving the capacity and level of global innovation resource allocation, supporting the global development of various STI platforms, and leveraging enterprises as the main force in facilitating the "dual circulation" strategy to ensure precise and targeted policy implementation.

Keywords: open cooperation, international S&T cooperation, open innovation, S&T innovation

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Note: Figure translations are in progress. See original paper for figures.