ORIGINAL ARTICLE

INTERNATIONAL JOURNAL OF ARTIFICIAL INTELLIGENCE

ISSN: 2692-5206, Impact Factor: 12,23
American Academic publishers, volume 05, issue 09,2025

Journal: https://www.academicpublishers.org/journals/index.php/ijai

THE ROLE OF ORGANIZATIONAL, INSTITUTIONAL, AND ECONOMIC MECHANISMS IN MANAGING THE NATIONAL INNOVATION SYSTEM

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Abstract: This article examines the essential role of organizational, institutional, and economic mechanisms in the management and development of the national innovation system. It argues that effective coordination of innovation actors, the establishment of institutional frameworks, and the creation of financial and economic incentives are crucial for fostering technological progress and ensuring sustainable economic growth. The analysis draws upon both theoretical foundations and international experience to highlight the importance of public-private partnerships, state support for research and development, and modern financing methods such as venture capital and crowdfunding. The findings suggest that a balanced interaction between the state, private sector, and academic institutions not only accelerates innovation but also enhances national competitiveness and integration into the global knowledge economy.

Keywords: National Innovation System, innovation policy, public-private partnership, R&D, institutional frameworks, economic growth, technology transfer, venture capital.

Innovation is widely recognized as a decisive factor in the long-term development of national economies, shaping their competitiveness and ability to adapt to global technological change. The successful functioning of a national innovation system requires a comprehensive approach that unites the goals of national and regional development, while ensuring coordination among public institutions, private enterprises, and academic organizations. This interaction is not limited to the financing of projects but also encompasses legal, institutional, and organizational aspects that create the necessary conditions for innovation to thrive. In this regard, the state plays multiple roles: as a key partner with significant resources, as a regulator that establishes institutional and legal frameworks, and as an organizer of national innovation entrepreneurship. At the same time, the private sector contributes by taking risks, investing in new markets, and accelerating the commercialization of innovative products.

Organizational and institutional mechanisms of innovation policy include public-private partnerships, state corporations, and free economic zones that stimulate technological entrepreneurship and strengthen innovation infrastructure. Legal and regulatory frameworks provide protection for innovation activities, ensure intellectual property rights, and encourage competition in the innovation sphere. These measures are complemented by economic tools such as direct budget financing, targeted loans, tax incentives, subsidies, investment guarantees, and state insurance mechanisms. International experience demonstrates that concession agreements and production-sharing contracts make it possible to attract significant private investment into large-scale projects without compromising sovereign state control, thus ensuring both efficiency and security.

At the core of the innovation process lies research and development. Universities, research institutes, and industrial laboratories are responsible for generating new knowledge, producing prototypes, and transferring technologies into practical application. R&D not only

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fosters technological progress but also ensures the training of highly qualified specialists capable of addressing current and future challenges of innovative activity. Government support for R&D is essential due to the presence of positive externalities, such as knowledge spillovers and diffusion of technology. For this reason, many countries employ policies that include grants, subsidies, preferential taxation, and intellectual property protection, which together create a favorable environment for businesses to expand their innovation capacity. However, the state must also avoid excessive intervention that could distort competition and undermine private initiative, instead focusing on complementing and stimulating the efforts of private enterprises.

The international dimension of innovation policy plays an equally important role. Joint ventures with foreign partners, the establishment of cross-border research projects, the organization of exhibitions and fairs, and the integration into international information networks contribute to the transfer of knowledge and technologies. Such cooperation allows national firms to gain access to advanced scientific results, while at the same time enabling local industries to improve their competitiveness in global markets. Trade and industry chambers, as well as small business networks, act as bridges between academic institutions and enterprises, helping to disseminate knowledge and providing consulting support. Through networking and cooperation, even small firms with limited resources are able to maximize the impact of their innovative activities.

In recent years, modern financing methods have gained particular importance. Alongside traditional sources such as budget allocations, loans, and subsidies, new mechanisms including venture capital, business angels, crowdfunding, and specialized innovation funds have become essential for supporting high-risk projects. These instruments help to mobilize private resources for innovation, accelerate the commercialization of promising technologies, and reduce the risks associated with the development of cutting-edge products. By diversifying the sources of financing, national innovation systems can achieve greater resilience and flexibility in responding to changing global economic and technological conditions.

The effectiveness of a national innovation system depends on its ability to balance the roles of the state and the private sector, while ensuring that institutional frameworks and economic incentives are properly aligned. A well-functioning innovation system is not only a driver of technological progress but also a foundation for broader socio-economic transformation. By fostering cooperation between government, academia, and industry, and by introducing modern financing mechanisms, countries can strengthen their competitive positions in the global economy and secure long-term sustainable growth. The experience of many developed and developing nations confirms that the creation of an integrated innovation system is a prerequisite for building a knowledge-based society and ensuring that the opportunities of technological change are fully realized.

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