

Pathways for Promoting High-Quality Economic Development through New-Quality Productive Forces

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Abstract: *Against the backdrop of new-quality productive forces, social economy is experiencing high-quality development. This is an inevitable path for advancing to a new stage of socio-economic development and an important strategy to accelerate social construction and development. With the rapid advancement of technology in China, frontier technologies such as big data, artificial intelligence, and cloud computing have been widely applied across various fields. New-quality productive forces are not only transforming traditional industry production methods and operational models but are also fostering a series of emerging industries and new business formats, creating new opportunities for high-quality economic development. However, due to factors such as resource constraints and intense competition, it is essential to fully leverage the potential value of new-quality productive forces to drive high-quality economic growth. This paper explores the connotation, characteristics, and importance of new-quality productive forces for high-quality economic development, analyzes the existing dilemmas and challenges, and proposes targeted strategies and suggestions. The aim is to provide a supportive force for economic development, in line with the intrinsic logic of continuous modernization of productive forces, and to offer valuable reference for promoting China's sustained and healthy economic development.*

Keywords: *New-quality productive forces, high-quality economic development, industrial innovation*

1. Brief Overview of New-Quality Productive Forces

1.1 Connotation of New-Quality Productive Forces

Based on Marxist theory of productive forces, productive forces can be divided into three main elements: laborers, means of labor, and objects of labor. New-quality productive forces, as a key optimization indicator, deeply reflect the development and transformation of productive forces. Their core lies in enhancing total factor productivity, aligning work objectives with economic development concepts, and promoting scientific advancements in productive forces. New laborers and new means of labor are the core driving forces of new-quality productive forces. Their effective development promotes the improvement of traditional laborers, pushing them to move towards a better direction and achieving improvements in quality^[1-3]. These laborers are characterized by stronger and more advanced innovative awareness and the mastery of scientific and technological application methods. For new laborers, this requires high demands in terms of both quantity and structure. New labor means fully demonstrate advanced technologies such as automation, intelligentization, and technologicalization, endowing traditional means of labor with scientific characteristics^[4-5]. These new production tools, based on traditional tools, improve infrastructure construction standards and are a major manifestation of new labor means. Therefore, correctly positioning the transformation and upgrading of traditional laborers to new labor objects, with the assistance of science and technology, new materials and new energy, provides more support for new-quality productive forces.

1.2 Characteristics of New-Quality Productive Forces

New-quality productive forces, supported by big data and network information technologies, have become the foundation of productive elements in the new era, driving changes in production modes and structures, and leading to profound transformations in production methods. New-quality productive forces have multiple characteristics, as shown in Table 1. Technological Frontline: New-quality

productive forces rely on many new technologies, which are at the critical stage of scientific and technological innovation and development. They enhance competitiveness in the market, and in the process, they boost innovation capabilities. Comprehensive Application: New-quality productive forces encompass many types of industries, with significant applications in manufacturing, services, and other fields. This is of greater importance for industrial development and upgrading and for promoting the continuous growth of social economy. Improved Production Efficiency: New-quality productive forces can enhance production efficiency by optimizing resource allocation, making production factors more rational, enhancing competitiveness within industries, and improving social and economic benefits. New-quality productive forces, with their technological frontier, comprehensive application, and production efficiency improvement characteristics, are gradually reshaping the global economic landscape and becoming the core force driving social progress and industrial upgrading^[6-7], as shown in Table 1.

Table 1: Characteristics of New-Quality Productive Forces

Name	Description
Technology cutting edge	Based on many new technologies as support conditions, new quality productivity is in the key stage of scientific and technological innovation and development, which can enhance competitiveness in the competitive market and improve innovation ability in the process
Application comprehensiveness	New quality productivity includes many industry types, which can be fully applied in manufacturing industry, service industry and other fields, and is of great significance to industrial development and upgrading, and the continuous growth of social economy
Increase productivity	The new quality productivity can further strengthen production efficiency, scientifically optimize resource allocation, make various production factors more reasonable, strengthen the competitiveness of enterprises in the industry, and promote the improvement of social and economic benefits

2. Significance of New-Quality Productive Forces in Promoting High-Quality Economic Development

2.1 Promoting Industrial Innovation and Development

To drive economic growth, new opportunities for traditional industries can be created through technological innovation and industrial upgrading. New-quality productive forces can push traditional industries toward intelligent and green directions, gradually increasing product added value, optimizing industrial structures, and forming new growth points. By leading technological innovation, traditional industries can break through technological bottlenecks, undergo intelligent upgrades, make production processes more efficient and precise, and gradually reduce production costs while gaining more economic and social benefits. The concept of green development should be integrated throughout the industrial chain, emphasizing the research, development, and application of environmentally-friendly technologies to lay the foundation for sustainable development^[8-9].

2.2 Improving Resource Utilization Efficiency

New-quality productive forces advocate for optimizing resource allocation and integrating various resources to maximize their use while focusing on resource efficiency. In production activities, new-quality productive forces emphasize adopting advanced production technologies and equipment to improve efficiency and reduce resource wastage. At the same time, attention should be paid to the recycling and reuse of waste materials, achieving resource reuse and maximizing value through circular economy models. This concept of resource conservation and efficient utilization reduces production costs, improves economic benefits, and aligns with green and sustainable development, providing strong support for high-quality economic development.

2.3 Enhancing Economic Resilience

With the deepening of global economic integration, new-quality productive forces enhance industries' competitiveness and risk resilience through technological innovation and industrial upgrading, enabling industries to address various risks. Technological innovation brings smarter production methods, increases product added value, and strengthens competitiveness in global markets. Industrial upgrading can also extend the industrial chain, diversify the economic structure, and enhance the resilience of the economic system. By leveraging the potential value of new-quality productive forces, industries can better respond to external shocks, safeguard economic security, and provide strong protection for economic stability.

3. Dilemmas in Driving High-Quality Economic Development through New-Quality Productive Forces

3.1 Lack of Innovation in Key Technologies

In the context of intense global technological competition, whether key technologies can achieve overall, innovative breakthroughs directly determines the effectiveness and quality of modernization construction and significantly impacts the security and stability of China's industrial development. Leveraging the advantages of a super-large market, China's digital technology has developed rapidly and is deeply applied in various industries, but there is still a gap compared to international advanced levels in key technologies. Artificial intelligence, as a strategic technology leading the new technological revolution and industrial transformation, is not sufficiently applied in key fields, which prevents technological innovation from playing its role as a new growth engine for new-quality productive forces^[10-11]. Furthermore, some key technologies require long development cycles and large investments, while some enterprises, due to financial shortages, tend to pursue short-term returns, thus restricting the development of key technologies in China.

3.2 Slow Transformation of Traditional Industries

Amid the accelerated transformation of the global economy, industries, as the foundation of development, are crucial to the development of productive forces. However, at present, China's traditional industries are slow to digitalize, which hinders the development of new-quality productive forces. Additionally, intense competition and the overcapacity of traditional industries exacerbate the challenge. The professional equipment, skills, and human resources required by traditional industries are often mismatched, and the transfer and reconfiguration of related resources require time and cost, making it impossible to quickly adapt to new-quality productive forces. Moreover, the integration of digital technology into traditional industries is still low, preventing the full release of its potential to improve efficiency and optimize production processes. As market competition intensifies and consumer expectations rise, traditional industries with weak digital foundations find it difficult to adapt to market changes, gradually losing competitive advantages and market shares.

3.3 Weak Awareness of Green Development

Green and sustainable development is a critical, overarching concept for China, key to overcoming resource and environmental bottlenecks, transforming development models, and promoting high-quality economic development. Weak awareness hinders green technology innovation, green finance development, and environmental protection system improvement, obstructing the achievement of sustainable development goals. On the one hand, emerging technologies tend to develop faster than the update cycle of traditional industries, leading to a lag in adopting and applying new technologies. The high cost of updating technology and equipment increases the pressure on enterprises to invest and operate in green, low-carbon industries. On the other hand, financial institutions struggle to grasp the green innovation information of enterprises, making it difficult to efficiently anchor demand and match resources. Without perfect information disclosure standards, there is insufficient market supervision and investor decision-making support, making the risks and returns of green investments mismatched. In future development, stronger policy guidance and market mechanism construction are needed to promote the deep integration of green technologies and finance to achieve sustainable development goals.

4. Strategies for Promoting High-Quality Economic Development through New-Quality Productive Forces

4.1 Update the Concept of Talent Development

As China transitions to a new development stage, the "talent dividend," which emphasizes quality over quantity, becomes a pivotal driver of high-quality economic growth. This talent-driven economic model not only accelerates the development of new-quality productive forces but also necessitates the creation of diverse and well-structured industrial chains. While attracting top-tier talent is crucial, there is an equally urgent need to focus on middle- and lower-level talent, especially those skilled in utilizing new technologies and production techniques. Higher education institutions, vocational schools, and other educational bodies should pivot from prioritizing "high-end" talent to cultivating applied talents who are proficient in integrating and deploying cutting-edge tools and technologies in real-world settings. These talents will play a critical role in ensuring that emerging industries and innovations thrive. To fully harness the potential of this workforce, enterprises need to establish a talent management system that fosters trust and provides ample opportunities for growth and advancement^[12]. By improving compensation structures, providing ample professional development opportunities, and promoting a culture of innovation, enterprises can stimulate individual creativity and create a thriving talent ecosystem. Moreover, governments should support this process by providing incentives for educational institutions to align curricula with the needs of emerging industries, ensuring a continuous supply of relevant and skilled talent, as shown in Figure 1.

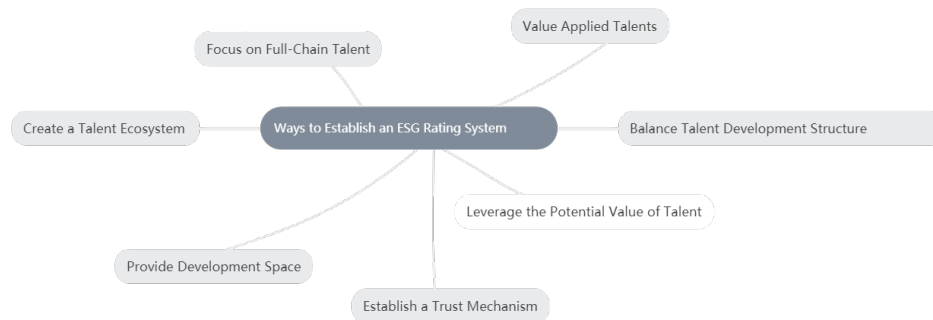


Figure 1: The Way to Update the Concept of Education

4.2 Strengthen Independent Innovation

Independent innovation is recognized as the cornerstone of national development. In the face of global technological competition, mastering cutting-edge technologies and strengthening scientific and technological capabilities are crucial for driving forward the development of new-quality productive forces. For China to remain competitive, it must prioritize investment in R&D, particularly in areas where technological gaps still exist. The government should allocate more resources to critical sectors like artificial intelligence, quantum computing, and biotechnology, where technological advancements can provide a significant boost to industrial capabilities. At the same time, enterprises should be encouraged to increase their R&D spending, promote corporate innovation, and form strategic collaborations with universities, research institutions, and global partners. These collaborations can facilitate the commercialization of research outcomes, transforming academic achievements into market-ready products and technologies. Encouraging entrepreneurship and innovation among smaller firms, and providing them with support through incubators, venture capital, and access to markets, will further elevate the innovation ecosystem. It is also important to create an environment that fosters risk-taking and accepts failure as part of the innovation process. This will enable the nation to strengthen its technological foundations, improve industrial competitiveness, and ultimately elevate the quality of productive forces, ensuring sustainable and high-quality economic development.

4.3 Accelerate the Green Transformation of Enterprises

In today's global context, the transition to green and low-carbon development has become a key driver of industrial transformation. To meet the challenges of environmental sustainability and climate change, enterprises must not only adopt green production practices but also reimagine their entire

business models, focusing on reducing carbon footprints and resource consumption. The green transformation involves shifting from traditional, resource-intensive industries to sustainable and eco-friendly practices, including the use of renewable energy, waste recycling, and the development of green products. Enterprises should incorporate green development strategies into their long-term planning and roadmap, setting clear goals for energy efficiency, carbon neutrality, and sustainable sourcing. This requires a strong commitment from both the public and private sectors. Policymakers should introduce and expand financial incentives, such as green bonds, tax breaks, and subsidies for green technologies, which can ease the financial burden on companies seeking to transition to low-carbon operations. Additionally, developing a robust green finance system, which channels investments toward sustainable projects and innovations, will further accelerate this shift. The government should also enforce stricter environmental regulations and support the establishment of green certifications, encouraging businesses to align with international standards for sustainability. By fostering the integration of green technologies, supporting innovation in clean energy, and ensuring the financial viability of green projects, China can lead the way in building a low-carbon economy that is both competitive and sustainable in the long term, as shown in Figure 2.

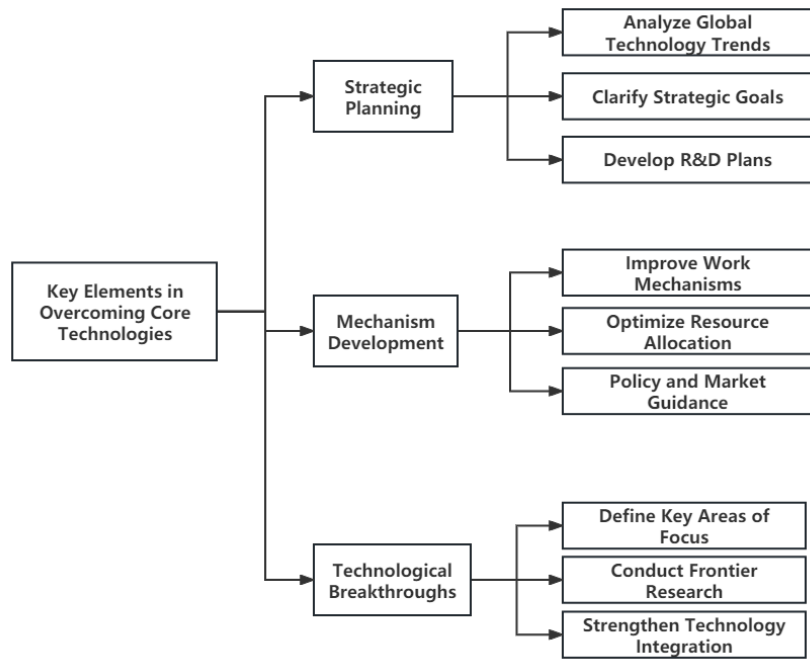


Figure 2: Key Elements in Overcoming Core Technologies

5. Conclusion

New-quality productive forces are a key factor in achieving high-quality economic development. To address the challenges and obstacles faced by new-quality productive forces, we must increase the promotion of scientific and technological innovation, optimize resource allocation, and implement green development strategies to pave the way for sustainable economic growth. The government, enterprises, and the entire society should join forces to promote the efficient use of new-quality productive forces, achieving economic growth, industrial upgrading, and a better standard of living for all.

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