The Logic and Pathway of Green Finance in Advancing the Development of New Quality Productivity

Xiang Wang*

School of Economics and Management, Xinjiang University, China

Abstract: Against the dual backdrop of economic globalization and ecological environmental crisis, green finance has become a key force in driving the development of new quality productive forces. This paper first defines the concept, constituent elements, and characteristics of new quality productive forces, and then explores the promotional role of green finance in their development through theoretical analysis. The research finds that green finance can effectively promote the development of new quality productive forces by mechanisms such as providing financial support, guiding technological innovation, and optimizing industrial structure. The paper specifically outlines the pathways through which green finance can drive the development of new quality productive forces and proposes strategic recommendations on how to enhance the functions of green finance and stimulate the vitality of new quality productive forces. The study emphasizes that constructing an effective green finance system can promote the development of new quality productive forces and achieve sustainable development.

1. Introduction

In the economic development wave of the 21st century, the rise of new quality productivity has become a key force in driving the global economy towards higher quality and more sustainable growth. This new type of productivity, based on technological revolutions in fields such as information technology, biotech, new energy, and new materials, represents a fundamental transformation in production methods and economic structure. Meanwhile, with the intensification of global climate change and the grim reality of environmental degradation, green finance has emerged as a financial service aimed at supporting environmental and sustainable development projects. Its development is rapidly expanding in scale and speed worldwide, becoming an essential tool and mechanism to promote the growth of new quality productivity. The core of green finance lies in mobilizing and guiding more capital flow into the green industry, supporting projects and businesses that reduce environmental pollution, save energy and natural resources, and protect the ecological environment. Through the power of financial markets, green finance facilitates the effective allocation of funds, accelerates technological innovation and industrial upgrading in the field of new quality productivity, and thus promotes a green and low-carbon economic transformation.

2. Literature Review

Ren Yuxin, Wu Yan, and Wu Zhe [1] analyzed the interactive relationship between financial agglomeration, university-industry-research cooperation, and new quality productivity. Their research indicates that financial agglomeration can promote the enhancement of new quality productivity, displaying regional heterogeneity characteristics. Song Jia, Zhang Jinchang, and Pan Yi [2] empirically studied the impact of ESG development on corporate new quality productivity, finding that ESG development significantly boosts the level of corporate new quality productivity. Lu Minfeng [3][4] examined the intrinsic connection between science and technology finance, the development of the real economy, and new quality productivity. The study shows that science and technology finance has facilitated the optimization and upgrading of industrial structures, injecting momentum into the development of the real economy and new quality productivity. Furthermore, he delved into the role of commercial banks in the construction of new quality productivity, suggesting that commercial banks promote the growth of new quality productivity effectively by providing diverse financial products and services, enhancing resource allocation efficiency, and advancing fintech development. Shen Bing and Xiao Hewen [5] discussed the connotation and characteristics of new quality productivity, and theoretically analyzed how finance accelerates the formation of new quality productivity. The study reveals that actively developing strategic emerging industries and future industries can provide a suitable incubator for the development of new quality productivity, which cannot be accelerated without the impetus of finance. He Qiujie, He Xiangling, and Chen Guoqing [6] explored how to accelerate the formation of new quality

* wx2529814802@qq.com

productivity by advancing financial development. By jointly promoting the capital guidance mechanism, demand-pull mechanism, and institutional innovation mechanism at the macro, meso, and micro levels, they aim to build a long-term mechanism fostered by policy guidance, market operation, and concept cultivation. Maximizing the advantages of both government and market, this approach looks to form a collaborative effort between the government, enterprises, and society to drive the development of new quality productivity and proposes relevant policy recommendations.

Through the review of literature, the current research presents the following characteristics: First, there is an abundance of research on the impact of financial development on China's economic growth and financial technology, but discussions on the relationship between financial development and productivity, especially new quality productivity, are relatively lacking and lagging behind the actual performance of financial development in promoting the formation of new quality productivity. Second, the academic community has not yet researched the impact of green finance on new quality productivity. These gaps are also the focus of exploration for this research.

3. Intrinsic Meaning, Constituent Elements, and Characteristics of New Quality Productivity

New quality productivity represents a revolutionary shift in technology, management, and structures, stemming from innovations and advancements in science and technology that enhance the elements and methods of production. Under this paradigm, "new" is manifested in new technologies, new models, new industries, new fields, and new dynamics; "quality" refers to material, quality, essence, and grade; "productivity" is the most dynamic and transformative element driving societal progress[7]. New quality productivity focuses on high-tech innovation to achieve profound internal development, guided by the forefront of global scientific advancement, core competitive areas of the economy, national developmental needs, and the people's aspirations for a better life. It is the most active and innovative force in developmental practice, signifying a major leap and upgrade in productivity levels, enhancing production efficiency, reducing costs, optimizing product quality, and thereby promoting economic structural transformation and improvement [8].

The constituent elements of new quality productivity are primarily reflected in the following three aspects.

First, technological innovation. Technology is the core of new quality productivity. Breakthroughs and applications in cutting-edge fields such as information technology, artificial intelligence, biotechnology, nanotechnology, and new energy technologies have driven revolutionary changes in production methods. Technological innovation not only enhances production efficiency but also spawns new products and services.

Second, information resources and human capital. In the digital economy era, data has become a key resource. The ability to collect, process, analyze, and utilize information determines an organization's competitiveness. The application of technologies such as big data, cloud computing, and the Internet of Things has greatly increased the value of information resources. Knowledgeable talent and innovative capability have become important components of new quality productivity. Education and professional skill training are crucial for improving the quality and innovative ability of the workforce. Creative thinking and problem-solving skills have become more important in the new economy.

Third, green sustainability. Sustainable development and environmentally friendly technologies have become important parts of new quality productivity. This includes not only the development of clean energy and green technology but also reducing the consumption of resources and energy throughout the production process and minimizing environmental impact.

The key driving force of new quality productivity is scientific and technological progress. By empowering modern enterprises with advanced technologies, the transformation of production elements and the innovation and integration of technology are pushed to the forefront. New quality productivity exhibits several distinct characteristics:

Firstly, new dynamics. Unlike past drivers of production capacity, traditional economic growth relied on the input of massive resources, consuming a large amount of resources and energy. In contrast, new quality productivity relies on new types of drivers such as new technologies, new business models, new industries, new fields, and new dynamics.

Secondly, high quality. The formation of new quality productivity is a combination of high-quality labor, superior production materials, and production methods incorporating high technology. Compared to traditional productivity, new quality productivity has made significant leaps in both quantity and quality, especially in terms of quality. This high quality is mainly reflected in high output quality, good economic and social benefits, positive ecological impact, and a healthy state of economic operation.

Thirdly, new fields. Traditional productivity was mainly concentrated in low-end manufacturing and other labor-intensive industries, while new quality productivity has expanded into a broader and higher-end range of fields, including strategic emerging industries and cutting-edge industries.

Fourthly, high efficiency. The support of technological innovation has helped traditional enterprises improve their production methods, increased the efficiency of resource allocation, shortened industrial production time, and reduced capital costs, achieving higher production efficiency. Accelerating the development of new productivity can promote rapid technological progress and improve total factor productivity.

Lastly, future orientation. Strategic emerging industries and cutting-edge industries represent the trends of the next technological revolution and industrial transformation. They are key to cultivating new dynamics and capturing future competitive advantages. The formation of new quality productivity is crucial in nurturing new industries and guiding the future direction of industrial development, with enormous and unpredictable potential for growth.

4. Analysis of the Promotion Mechanism of Green Finance on the Development of New Quality Productivity

The formation of new quality productivity is not accidental; it depends on the integration of technological innovation resources and requires active support and development of strategic emerging industries and future industries. The growth of these industries urgently needs the strong support of the financial industry. Green finance, as a sustainable economic strategy, plays a crucial role in accelerating the formation of new quality productivity. The following is an in-depth analysis of the mechanisms by which green finance supports the development of new quality productivity.

4.1 Financial Support Mechanism

Funding is the basis of any productive activity. Green finance boosts the development of new quality productivity by providing financial support. This support includes not only direct financial inputs, such as loans and investments for clean energy projects, but also indirect funding for sustainable projects through financial products like green bonds and green funds. Such capital flows can accelerate the research and application of new technologies and provide the economic impetus needed for business transformation and upgrading.

4.2 Policy Guidance Mechanism

Policy is an important tool for guiding the direction of economic development. In terms of policy guidance, green finance, combined with government policy-making, provides direction for the development of new quality productivity. Governments can encourage financial institutions and investors to support green industries by enacting preferential policies, such as tax reductions and favorable loan interest rates. This policy orientation not only helps to form favorable market expectations but also attracts more social capital to the field of new quality productivity, promoting the formation and perfection of a green industry chain.

4.3 Risk Management Mechanism

Risk management is key to ensuring sustainable development. The role of green finance in risk management mechanisms cannot be overlooked. By assessing and controlling risks related to the environment and society, green finance provides a safeguard for the robust development of new quality productivity. Introducing green ratings and standards allows financial institutions to effectively identify and manage investment projects that may have negative impacts on the environment and society. Such risk management not only protects the natural environment and social interests but also lays a solid foundation for the sustainable development of new quality productivity.

In summary, green finance promotes the development of new quality productivity through three main mechanisms: financial support, policy guidance, and risk management. This reflects not only the harmonious coexistence between financial strategies and environmental sustainability but also provides strong support for the green transformation of the economy. As the global emphasis on green development models continues to grow, green finance will play an increasingly critical role in future economic development.

5. Pathways for Green Finance to Promote Development of New Quality Productivity

5.1 Pathway of Optimizing Resource Allocation

The role of green finance in optimizing resource allocation lies mainly in guiding capital towards green industries and projects, thus promoting economic development in a low-carbon, environmentally friendly direction. To achieve this goal, financial institutions can increase the proportion of green credit, green bonds, and green investment funds, providing necessary financial support to green industries. At the same time, by assessing and pricing the environmental risks of enterprises, financial institutions encourage companies to reduce environmental pollution and resource waste, optimizing the efficiency of resource use.

Furthermore, governments and regulatory authorities can provide institutional safeguards for the development of green finance by establishing corresponding policies and standards, such as green credit guidelines and carbon emission trading mechanisms. These measures can optimize resource allocation and promote the healthy development of the green economy, achieving a win-win for industrial economic growth and environmental protection.

5.2 Pathway of Green Technology and Industry Development

Financial institutions can set up special green investment funds to finance green technology projects, such as new energy and new materials, to accelerate the commercialization of technological achievements. Through tools like green credit and green bonds, low-cost financial support can be provided to green enterprises, helping them to expand production scale and reduce production costs. In addition, financial institutions can cooperate with research institutions to jointly assess and select high-growth green projects, providing customized financial services to foster the development and perfection of the green industrial chain[10].

5.3 Cross-Sector Collaboration and International Coordination Pathway

Given global environmental issues, the efforts of a single country or region are insufficient; collaboration and international coordination between different countries, regions, financial institutions, research institutions, governments, and non-governmental organizations are required. By jointly establishing global or regional green finance standards and principles, a consistent rule set and guidance for the development of green finance can be provided, reducing the barriers to cross-national green investment and financing.

Moreover, cross-sector collaboration can also promote the innovation of green financial products and services, such as developing transnational green bond markets and establishing international green banks. International cooperation can strengthen the international flow of green investments, providing broader market and financial support for the global development of green industries. This helps not only to promote the globalization of new quality productivity but also to enhance the ability of nations to tackle global environmental challenges.

In summary, through the pathways of optimizing resource allocation, developing green technology and industry, and fostering cross-sector collaboration and international coordination, green finance provides effective means to promote the development of new quality productivity. This is not only beneficial for global sustainable development but also provides practical solutions for environmental issues.

6. Strategies to Promote Green Finance for the Development of New Quality Productivity

6.1 Strengthen Policy Support and Market Incentives

Policy support is a crucial means to drive the development of green finance. Governments should establish a comprehensive policy framework, providing direct economic incentives to individuals and businesses investing in green projects through tax reductions, fiscal subsidies, and other means. For example, companies investing in clean energy and environmental protection technology could see reduced operating costs through lower taxes and research subsidies, increasing their willingness to invest. Meanwhile, preferential green credit policies could encourage banks and other financial institutions to increase loans to green projects by lowering interest rates and providing credit guarantees, attracting more capital to the field of new quality productivity[9].

6.2 Advance Green Financial Market and Infrastructure Construction

Establishing and perfecting the green financial market and its infrastructure is crucial to promoting green finance. First, unified green finance standards and evaluation systems must be developed to ensure the green attributes of financial products and projects, including quantifying the environmental impact and energy efficiency levels to improve market transparency. Second, strengthening the regulatory framework is necessary to ensure the healthy and orderly development of the green finance market. Additionally, establishing a comprehensive green financial market system, including green bond and green stock markets, will provide diversified financing channels and a stable financing environment for the development of green industries.

6.3 Green Technology Innovation

Innovation in green technology is key to driving the development of new quality productivity. Governments and financial institutions should work together to support the research and application of green technologies by providing research funding, establishing technological innovation platforms, and encouraging enterprises and research institutions to innovate in green technology. By using green financial products to fund innovative green technology projects, the commercialization of these technologies can be accelerated, fostering industrial upgrading and transformation, and thus achieving a greener and more sustainable economic structure.

6.4 Promote International Cooperation

International cooperation is significant in addressing global environmental challenges and development issues, and it is essential for promoting green finance and new quality productivity. By establishing multilateral or bilateral cooperation mechanisms, countries can exchange experiences and share resources in areas of green finance policy, technological innovation, and project financing. Moreover, international cooperation can also foster cross-border green investments and expand the international market for green products and technologies, thereby accelerating the development of the global green economy.

References

1. Ren Yuxin, Wu Yan, Wu Zhe. Financial Agglomeration, Industry-University-Research Cooperation and the Formation of New Quality Productive Forces [J/OL]. Finance Theory and Practice, 1-8 [2024-04-05]. http://kns.cnki.net/kcms/detail/43.1057.F.20240318.1357.002.html.

2. Song Jia, Zhang Jinchang, Pan Yi. Research on the Impact of ESG Development on the Formation of New Quality Productive Forces in Enterprises—Empirical Evidence from Chinese A-share Listed Companies [J/OL]. Contemporary Economic Management, 1-13 [2024-04-06]. http://kns.cnki.net/kcms/detail/13.1356.F.20240313.165.002.html.
3. Lu Minfeng. Science and Technology Finance Empowers the Real Economy and the Development of New Quality Productive Forces: Classical Theory, Theoretical Framework, and Countermeasures [J/OL]. Reform and Strategy, 1-13 [2024-04-06]. http://kns.cnki.net/kcms/detail/45.1006.C.20240311.0858.002.html.
4. Lu Minfeng. The Role and Path of Commercial Banks in Shaping New Quality Productive Forces [J]. Jiangnan Forum, 2024, (02): 28-33.
5. Shen Bing, Xiao Hewen. Finance Promotes the Accelerated Formation of New Quality Productive Forces [J]. Contemporary Financial Research, 2023, 6(12): 1-11. DOI: 10.20092/j.cnki.ddjryj.2023.12.001.
6. He QiuJie, He Xiangling, Chen Guoqing. Research on the Long-term Mechanism of Financial Development Promoting the Accelerated Formation of New Quality Productive Forces [J]. Contemporary Financial Research, 2023, 6(11): 1- 14. DOI: 10.20092/j.cnki.ddjryj.2023.11.001.
7. Pu Qingping, Xiang Wang. The Connotation, Intrinsic Logic, and Approaches to Realizing New Quality Productive Forces—New Momentum for Advancing Chinese-style Modernization [J]. Journal of Xinjiang Normal University (Philosophy and Social Sciences), 2024, 45(01): 77-85. DOI: 10.14100/j.cnki.65-1039/g4.20231017.001.
8. Hu Ying, Fang Taikun. Re-discussing the Connotation and Formation Path of New Quality Productive Forces—From the Perspective of Marx's Theory of Productive Forces [J/OL]. Journal of Zhejiang Gongshang University, 1-13 [2024-04-06]. http://kns.cnki.net/kcms/detail/33.1337.C.20240308.1238.002.html.
9. Xu Zheng, Zheng Linhao, Cheng Mengyao. The Intrinsic Logic and Practical Ideas for Empowering High-Quality Development with New Quality Productive Forces [J]. Contemporary Economic Research, 2023, (11): 51-58.
10. Zhai Yun, Pan Yunlong. Development of New Quality Productive Forces from the Perspective of Digital Transformation—A Theoretical Explanation Based on the "Dynamics-Elements-Structure" Framework [J/OL]. E-Government, 1-15 [2024-04-06]. https://doi.org/10.16582/j.cnki.dzzw.2024.04.001.