Analysis of Current Situation of Green Finance and Sustainable Development in China

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Abstract. Amidst escalating global environmental challenges, green finance, serving as a pivotal instrument for advancing sustainable growth, is garnering heightened interest from the international arena. This financial mechanism seeks to channel societal capital into eco-friendly sectors including environmental stewardship, energy efficiency, decarbonization, and renewable energy, all the while adeptly mitigating ecological hazards and fostering harmonious development dynamics. The primary objective of this piece is to delve into the conceptual framework, historical evolution, predominant operational paradigms, hurdles, and prospective growth trajectories of green finance. Moreover, it seeks to dissect the interplay between green finance and pertinent governmental strategies, alongside its influence on various facets of the economy. Through this approach, the endeavor seeks to furnish both theoretical benchmarks and practical insights that can propel the development and refinement of the global green finance framework. Moreover, it intends to catalyze more profound investigation and hands-on experimentation within this domain, thereby accelerating the evolution and enhancement of green finance mechanisms to more effectively support the overarching objective of global sustainability.

Keywords: Green finance; environmental protection; sustainable development.

1. Introduction

Amidst escalating global environmental challenges and climate deterioration, the international community has coalesced around the shared objective of sustainable development. Serving as a financial mechanism that underpins eco-friendly ventures, green finance facilitates environmental stewardship and resource preservation, thereby nurturing the growth of a greener, low-emission economy. The connection between green finance and sustainable development is intimate. Green finance serves as a vital and robust pillar for sustainable development's attainment. Conversely, the principles and objective of sustainable development spur the ongoing evolution and expansion of green finance. These two entities coexist and collaborate synergistically, driving advancements in both economic and societal realms.

Circular economy first emerged in the 1970s, and gradually fell into a pattern. Additionally, it established the foundation for building a green financial market. The circular economy follows the principles of recycling and reduction and can reduce environmental pollutants from the source, to realize the recycling development of social and economic resources [1]. Previously, the investigation synthesized the landscape of green finance, pinpointing its central challenge for sustainable growth. This study highlighted significant advancements in both green finance and the exploration of sustainable development. The paper delved into the various facets of green finance, the determinants impacting it, the operational mechanism driving its dynamics, and the methodologies employed to articulate these elements. Through this comprehensive analysis, the study aimed to elucidate the pivotal issues and strides made in this field. Let us delve into the various forms of green finance, the factors that influence them, the operational mechanisms involved, and the methodologies for their description. Building upon this exploration, the paper will outline the trajectory and potential avenues for advancing sustainable development research.

2. Theoretical and Practical Analysis

Adopting a sustainable development model ensures present-day requirements are fulfilled without compromising the future generations' capacity to satisfy theirs. This approach requires balancing economic expansion and societal advancement with environmental preservation, ensuring the natural habitat isn't depleted or damaged. Consequently, subsequent generations should experience at least equivalent, if not superior, living standards.

Amidst escalating global ecological challenges, the international maritime sector has championed the notion of sustainable growth via the design and operation of eco-centric harbors, along with the embodiment of the green port doctrine. The objective of this endeavor is to operationalize the tenet of green progress, harnessing environmentally benign technologies for administration, and steering the port industry onto a trajectory of resource-efficient and eco-conscious advancement [2].

2.1. The Connotation of Green Finance

Green finance encompasses economic endeavors aimed at environmental enhancement, adaptation to climate change, and resource optimization. It offers financial solutions including investment and funding for projects, operational management, and risk mitigation in sectors such as environmental conservation, energy efficiency, renewable energy, sustainable transport, and eco-friendly construction.

In 2016, a set of "Guiding Opinions" on the establishment of a Green Finance System was jointly released by seven governmental entities, encompassing the People's Bank of China, the Ministry of Finance, the National Development and Reform Commission, the Ministry of Environmental Protection, and the China Securities Regulatory Commission. This landmark document was instrumental in delineating the foundational structure for China's Green Finance System, and it officially defined the concept for the first time.

Green financing is essentially based upon the profit generated from the environmentally friendly activities. This is the complete suite of financial services, including loans, securities, risk mitigation policies, green insurance, and carbon financing projects. The distinctive feature of this mode is that in the order of priorities, human civilization comes first, followed by the protection of the environment and efficient management of resources. It gives standards for resource efficiency and environmental conservation as major indicators of the outcome of economic activities. Through monetary stream regulation, it encourages the rational allocation of social and economic resources and prompts the rational economic actor to keep the ecosystem healthy in order to drive long-term social and economic development. This, therefore, in most cases requires advocacy by the government in green policies that would foster green financing. The governments need to prioritize the development of green finance.

It is one of the basic mechanisms of the market, which reflects mountains of gold and silver, turning naturally rich areas into riches. It reshapes industries in a high-handed way, affecting the environment, the economy, and the efficiency of government. It is pro-long-term development by concentrating monetary sources onto spaces exemplified by innovative ideas and technological milestones. The slow but inevitable change of China's attitude towards green financing in the past few years has made an enormous difference to the strategic decisions of the country. A green loan and green bond economy characterized by diversity and inclusiveness has become possible now because of a more complex basic infrastructure in this domain. It's a solid ecology that has been working as the main force in pushing through the green economic trajectory. China hopes to increase green funding standards, environmental data disclosure, and global cooperation in the future. The result will be a broader financial structure, strongly behind low-emission development and sustainable growth.

2.2. The Supporting Role of Green Finance

The establishment of China’s National Sustainable Development Agenda Innovation Demonstration Zone serves as a distinctive initiative aimed at operationalizing the United Nations’ 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs). Currently, the State Council has endorsed the establishment of eleven urban centers, encompassing Taiyuan, Guilin, and Shenzhen. These cities are designated to serve as exemplars for implementing the National Sustainable Development Agenda Innovation Demonstration Zone initiative. For a long time, the construction progress of demonstration areas has been mainly qualitative description, but from the actual need to strengthen the construction and management of demonstration areas, it needs to establish a set of scientific quantitative evaluation method systems for the construction progress of demonstration areas [3]. Based on this, the study gains some ideas from the domestic and foreign about SDGs progress evaluation theory and method, combined with the demonstration area construction orientation, study and put forward including demonstration area activity and sustainable development index two dimensions demonstration zone construction progress quantitative evaluation method system, based on the data provided around, the demonstration area construction progress of the exploratory assessment. The results of the activity assessment show that the activity difference of the demonstration area in 2022 is obvious, and the scores of Chengde, Hainan Tibetan enthusiasm and initiative of the demonstration area construction are strong [4].

Green finance plays a pivotal role in facilitating sustainable growth by offering essential financial backing and direction. It accomplishes this through various financial tools like green loans, green bonds, and green investment funds, channeling resources into environmentally beneficial and sustainable endeavors. These include initiatives such as renewable energy expansion, pollution mitigation, ecological conservation, and other sectors aiming to foster environmental stewardship and economic prosperity in tandem [5]. It will foster the growth of pertinent sectors, expedite the economic shift towards eco-friendly and carbon-efficient practices, and support the attainment of sustainable development objectives. Moreover, various nations, including Indonesia, have implemented strategies to advance sustainability [6].

The swift expansion of China's real economy has concurrently triggered specific environmental damage and pollution issues. Notably in China's eastern region, efforts are being made to accelerate the growth of the green economy and mitigate environmental issues arising from industrial expansion by advocating for enhanced green finance initiatives and steering the real economy towards eco-friendly and sustainable practices. The notion of ecological civilization underscores the commitment to safeguarding and fostering the sustainable evolution of natural environments. It takes environmental friendliness and sustainability as its core values. It is committed to integrating economic development with environmental protection, promoting harmonious coexistence between humans and nature, advocating respect for natural laws and ecological principles, and pursuing balance and coordination between humans and nature. In this way, a virtuous interaction between social economy and natural ecology can be achieved [7].

3. Green Finance and Sustainable Development

Embrace a structured methodology and facilitate the progression of sustainable finance (Figure 1 and Figure 2). As early as 2007, the Industrial and Commercial Bank of China (ICBC) designated green finance as the overarching strategic direction for the institution, steering its "Belt and Road" development strategy [8]. Throughout the years, the efforts have consistently enhanced the regulatory framework for green finance. The government will persistently advocate for the greening and decarbonization of investments and financing activities, proactively foster the growth of green and low-carbon sectors, adeptly facilitate the eco-friendly transition and high-caliber development of the real economy, and ensure that the fruits of sustainable economic progress are widely accessible to all societal members [9].

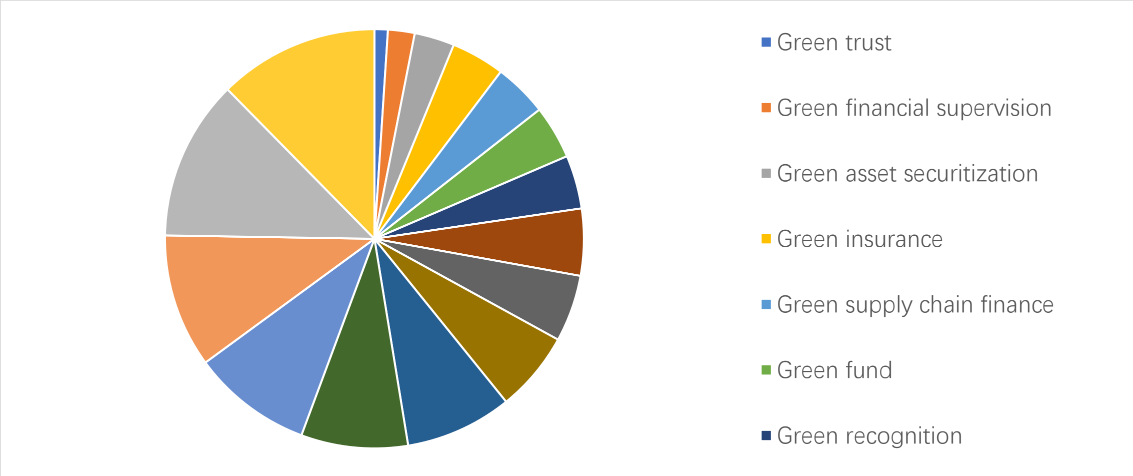

Fig. 1 Application scenarios of China's fintech in green finance (Picture credit: Original)

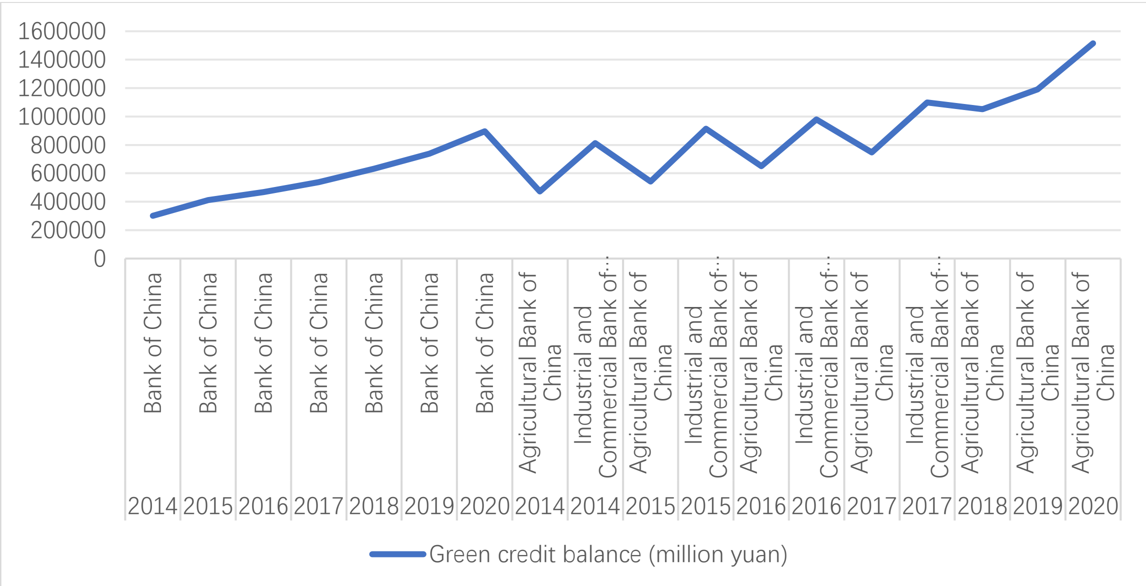

Fig. 2 Green credit balance (million yuan) (Picture credit: Original)

Green finance prioritizes environmental protection and resource conservation as its core objectives, aiming to evaluate environmental impacts and benefits across business decisions holistically. It leverages market mechanisms for resource allocation, thereby stimulating innovations in green technologies and the widespread adoption of sustainable consumption patterns within society. It effectively mitigates the financing constraints faced by small and medium-sized enterprises, thereby reducing their financing costs and enhancing their financing efficiency. The effect will inspire companies to boost their expenditures on research and development, as well as the innovation of green technologies. This stimulation will drive advancements in green technology and the modernization of production processes, leading to a more environmentally friendly and lower carbon footprint for local industry sectors. Consequently, this could significantly contribute to the national reduction of carbon emissions. However, excessive financial instruments and supply scale may have negative impacts. It may trigger financial risks and reduce the quality of economic growth; Additionally, it may stimulate large-scale investment in green infrastructure projects, leading to an increase in energy consumption. Consequently, assessing the existence of an ideal level of green finance within the operational context becomes indispensable when endeavoring to facilitate small and medium-sized enterprises' adoption of green technological innovations aimed at curtailing carbon emissions. This evaluation is crucial as it enables market-driven reallocation of resources, thereby mitigating environmental degradation via the implementation of green finance initiatives [10].

The integration of green finance into sustainable development unfolds across multiple dimensions. Primarily, within the environmental domain, this financial strategy underpins initiatives aimed at clean energy and pollution mitigation. This helps to greatly reduce greenhouse gas emissions and improve environmental quality, therefore supporting efforts at ecological preservation. Economically, it also greatly strengthens the green industry by creating fresh employment opportunities and driving economic development [11]. Moreover, it guarantees financial support for the implementation of clean energy, therefore accelerating the change from traditional to renewable energy sources and reducing dependence on more polluting fossil fuels. Finally, in search of society sustainability, it helps to build environmentally friendly infrastructure including green buildings and public transportation, so greatly improving the quality of living for the residents.

4. Conclusion

Green money essentially plays center stage in contemporary culture. In terms of sustainable development, its significance lies in channeling funds into businesses that offer benefits to the environment and society, hence finally greening the economic structure. It is essential to promote a financial shift from the traditional high-pollution, energy-intensive sectors into projects designed around clean energy and renewable resource development. This would provide an impetus not only to industrial innovation and modernization but also help hasten the transformation to a greener economy. Green financial products comprise green loans, green bonds, green funds, and green insurance. These systems not only open more sources of money for environmentally friendly projects but also encourage more investment in sectors of sustainable development. Still, the development of green finance runs into several challenges. To show, the evaluation criteria for environmentally friendly projects lack coherence and completeness as well as difficulties with data transparency. To foster the advancement of green finance and align with sustainable objectives, enhancing regulatory backing and setting up a robust framework for green finance standards becomes imperative. To sum up, the potential of green finance in driving sustainable development and fostering harmonious economic, social, and environmental progress is immense.

Authors Contribution

All the authors contributed equally and their names were listed in alphabetical order.

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