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## The Role of Innovative Technologies in the Promotion of Green Economy

*Khotamkulova Madina Sanjar kizi*

*Student of Samarkand institute of Economics and Service*

*Zaynalov Jakhongir Rasulovich*

*Scientific supervisor, Professor of Samarkand institute of Economics and Service*

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**Abstract:** this article analyzes the importance of innovative technologies in the promotion of sustainable economy across the world. Several studies have been carried to discuss current role of technologies especially, block chain technology in this sector.

**Key words:** financing, transparency, technology, green economy, innovation, block chain.

### Introduction

The developments of infrastructure in recent decades have also been causing severe problems especially, high carbon emission rates. These problems are leading to negative changes in the structure economy. Therefore, specialists and authorities have been concerning on promotion of sustainable economy and innovative technologies are playing an important role in this sector.

### Literature Review

According to scientists [1] green finance promotes the green transformation of the economic structure through capital formation, capital leveraging, and industrial integration; at the same time, under the guidance of green finance policies, financial institutions implement measures, such as stopping loans and restricting loans for the two high enterprises, forcing them to transition to a high-tech, pollution-free industry practices. Levine, R.,[2] also states that Financial institutions accelerate the tilt of financial resources to green industries, thereby accelerating industrial green upgrading and realizing a green transformation. On the other hand, the capital allocation effect of financial institutions appears under the market-oriented operating mechanism, which leads the investment trend of micro-main enterprises to change. In order to ensure investment returns, enterprises or individuals will supervise the entire operation process of the funded projects to ensure that the investment direction and use of the projects meet the green standards. Green finance reduces the time lag effect of traditional government financial resources on environmental protection support through market mechanisms, thereby improving the efficiency of green finance policy implementation and accelerating the flow of funds to the environmental protection industry. It is stated [3] that market players will gradually reduce their investment in low-end industries, such as environmental pollution, and increase their investment in sunrise industries, such as new energy industries. It can not only promote high-quality economic development that is not at the cost of environmental damage, but also ultimately improve the level of regional green development to achieve the goal of green environmental governance.

### Methodology of the Research

The methodology includes historical analyzes, systematic analyzes, and graphic methods. Results have been made by the help of official organizations' studies.

## **Results**

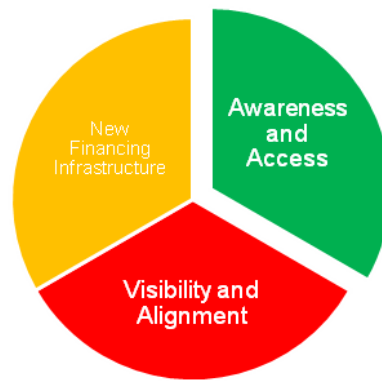
The transition to a low-carbon future requires a visionary reassessment of infrastructure systems and services, from their interaction with consumers all the way through planning, procurement, financing, construction, and operations. Embracing new technologies that enable drastic reductions in greenhouse gas emissions will be a crucial element to a successful transition. Emerging distributed ledger technologies, such as block chain, have the potential to improve current processes and systems by acting as a digital enabler across the infrastructure value chain.

Conducted case study by OECD [4] concluded based on the analysis that innovation in infrastructure services like transportation, energy and water – which account for a significant amount of global emissions – could have a substantial impact on reducing emissions. But this requires game-changing approaches to reimagining how a low-carbon transition could be accomplished, at low-cost, and in an equitable way. The core properties of block chain and other DLT can enable deeper technological integration, standardization, and the possibility of new business models. Their potential for integration with other important digital technologies like the internet of things and artificial intelligence could have profound implications for traditional infrastructure services.

The core competencies of block chain technology -- transparency, data audit ability, privacy, value transfer, and process efficiency and automation -- can be leveraged to drive the systemic changes needed to deliver sustainable infrastructure. The properties of decentralized trust and immutable records enable real transfer of ownership. While it was only possible to copy data via the internet in the past, block chain accelerates the move to an “internet of value”. This enables intangible or tangible assets like currencies, shares, infrastructure securities, data, or obligations like contracts to be exchanged, without the need for intermediaries, via the trusted ledger.

When thinking about block chain, carbon neutrality is not the first thing that comes to mind. Bit coin, block chain’s first application, is widely known as an environmental polluter, consuming massive amounts of energy and emitting vast amounts of CO<sub>2</sub> in order to validate transactions and sustain the network. However, concerns of this nature hold true only for specific applications of the underlying technology. Depending on network architecture and choice of protocols, block chain can be deployed in more energy-efficient ways. For example, private block chains are using algorithms like proof-of authority (PoA), when set up properly; do not consume more energy than traditional database solutions.

Block chain technology could unlock new sources of financing and mobilize existing industry pledges to carbon reduction through establishing new financing platforms. A clear objective is to lower the cost of capital for infrastructure projects, along with improved liquidity, transparency, and expanded access to finance. Secondly, the technology could bring visibility to alignment with sustainability goals by enabling countries and stakeholders to track data and information on infrastructure projects. Block chain enabled platforms are a way to standardize data, assess asset performance, and enhance compliance (such as to sustainability or ESG standards), which may be further augmented when they are integrated with remote sensors (internet of things), or linked to deep analytics like artificial intelligence applications. Thirdly, it can enhance awareness and access by acting as a transaction-enabling infrastructure of new market models. This can incentivize and increase institutions’ and consumers’ willingness and ability to contribute to building long-term sustainability, driving also changes within industries to adapt to the shifting demands of consumers.



**Fig.1. Opportunities of Innovative Technologies**

It can be seen from the above given figure 1 that new financing infrastructure could enable the full spectrum of investors to invest directly in sustainable infrastructure through a block chain-based platform, transforming illiquid assets into tradable digital assets and increasing financing flows for sustainable development. Two financing methods are proposed: projects that issue security tokens where investors receive a return on investment according to project performance; and a utility token through which purchasers receive access to future services provided by the infrastructure project. Tokenization of infrastructure also enables automation of processes and reduced reliance on intermediaries, with reduced cost of administrative functions.

An underlying block chain base protocol layer could allow decentralized applications to be built by any organization to support the governance, alignment and monitoring of various infrastructure standards. Decision makers, including investors, require access to genuine, standardized, and up-to-date information on infrastructure assets. This could include data on financial performance, but also on ESG criteria or climate-related disclosures. Given that existing data is fragmented and may be unaligned with climate objectives, a block chain-enabled platform would provide the digital backbone needed to support data transparency for sustainable infrastructure development, while also enabling automated compliance checks, data standardization, and integration with other digital technologies like deep analytics (artificial intelligence) and remote sensors(internet of things).

### Conclusion

The economy has shifted from a stage of rapid growth to a stage of high quality development, and high-quality development puts forth higher requirements for green development. As new attempts to develop green finance the innovative technology not only makes important contributions to promoting regional green development but also play an important role in implementing new development concepts across the world and providing an extensible experience for reference. Starting from an empirical point of view, this paper examines the impact of green finance reform and innovation technologies on green development by measuring the level of green development.

### References

1. Zhou, C.Y.; Tian, F.; Zhou, T. Green finance and high-quality development: Mechanism and effects. *J. Chongqing Univ.* 2021, 5, 1–13.
2. Levine, R. *Finance and Growth: Theory, Evidence and Mechanisms*; National Bureau of Economic Research: Cambridge, MA, USA, 2003.
3. He, L.Y.; Liu, R.Y.; Zhong, Z.Q.; Wang, D.Q.; Xia, Y.F. Can green financial development promote renewable energy investment efficiency? A consideration of bank credit. *Renew. Energy* 2019, 143, 974–984
4. <https://www.oecd.org/finance/Blockchain-technologies-as-a-digital-enabler-for-sustainable-infrastructure-key-findings.pdf>