Chapter 8
Blockchain Technology Adoption, Green Supply Chain Management, and SME Market Sustainability Performance: A Conceptual Review

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ABSTRACT

Small and medium-sized enterprises (SME) companies try to benefit from environmental sustainability and energy conservation in today's competitive and technologically advanced world by integrating the most recent technologies into their supply chains. Due to blockchain adoption and what the future of blockchains holds for the SMEs market, green supply chain management . In order to shed light on the primary existing blockchain applications in SME market performance, as well as the main disruptions and obstacles in the adoption of Blockchain technology, this chapter examines the impact of blockchain

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technology adoption and green supply chain practices on SME market performance. The chapter employed a systematic review and synthesis of extensive literature to achieve the objectives of this study. The analysis of literature sources on blockchain technology adoption, green supply chain management was conducted and presented. The results confirmed a positive impact of blockchain technological adoption and green supply chain practices on SMS market performance.

1. INTRODUCTION

Small and medium-sized enterprises (SMEs) are posited to be the critical determinant of a nation's overall economic quality even though their performances are generally far from expectation (Ionescu et al., 2011; Matthews et al., 2017). They are the foundation of economic growth in all developed and underdeveloped economies to sustain the nation's economy and create a supply chain system (Diabate et al., 2019). Literatures have established that the development of SMEs market is crucial to the development of the global economy and production (Tong et al., 2022). They are also essential for promoting economic development and progress in the modern world. Since SMEs markets are crucial to a nation's growth, there has been much focus on their sustainability and well-being in various parts of the world (Shitaye, 2022; Malaza, 2010; Eniola, 2014). This shows that SMEs market are crucial to expanding, growing, and reducing poverty in the global economy, which corroborates the finding that SMEs market play a crucial role in a nation's economy, particularly in developing nations by its positive effects on improved income distribution, job creation, poverty alleviation, rapid industrialization, regional development, and export growth (Mamo, 2020).

Numerous sectors, including financial, business, industrial, voting, and many other educational and medical applications, represent significant areas for blockchain applications due to the growing interest in blockchain and its implementation in a variety of industries and sectors (Casino, et al., 2019; McGhin, et al., 2019). But because blockchain is a relatively new technology, despite the excitement surrounding its potential advantages, there is also a lot of misinformation and ambiguity surrounding its general utility. According to Jaoude and George Saade (2019), one of the most recently created technologies is blockchain, which emphasises the concepts and advancements of the Internet of Things (IoT) and artificial intelligence revolutions. All industries are anticipated to be impacted by blockchain, which will also present opportunities for improving business operations and fostering data sharing trust and records management in every sector. With the help of a technology called blockchain, users can verify, maintain, and synchronise the information contained in a transaction ledger that is copied among several users. In other terms, blockchain is a decentralised transaction and data management platform that doesn't require participant confidence or data ownership by a third party (Jaoude & George Saade, 2019). The transactions are time-stamped in a ledger as part of an internal system that achieves this property; as a result, the data cannot be changed or amended without the approval and updating of the ledger. With this technology, transactions are secure and trustworthy. (Zhang, et al. (2018); Katuwal et al. (2018).

Blockchain is commonly associated with bitcoin and other cryptocurrencies, but its use cases go beyond financial applications to include various business domains such as agriculture, mining, manufacturing, energy, supply chains and healthcare. However, while blockchain technology utilizes security primitives, such as cryptography, additional efforts must be made to secure its large-scale architecture and mitigate cyber threats.