

# Exploring the Application of Blockchain Technology in Supply Chain Management and its Challenges

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**Abstract:** *Blockchain technology has gained significant attention in recent years due to its potential to revolutionize various industries, including supply chain management. This research paper aims to explore the application of blockchain technology in supply chain management and highlight the challenges associated with its implementation. The paper begins by providing an overview of blockchain technology and its key features that make it suitable for enhancing supply chain operations. It then examines the specific areas within supply chain management where blockchain can be applied, such as traceability, transparency, and efficiency. Furthermore, the paper discusses the potential benefits of adopting blockchain technology in supply chains, including reduced costs, improved trust, and enhanced security. However, several challenges must be addressed for successful implementation, such as scalability, interoperability, governance, and data privacy. The research paper concludes by presenting recommendations and future research directions to overcome these challenges and unlock the full potential of blockchain technology in supply chain management*

**Keywords:** Blockchain technology, Supply chain, Blockchain technology features, Blockchain technology challenges

## REFERENCES

- [1]. Naka moto s. A peer-to-peer electronic cash system[J]. Journal for General Philosophy of Science,2008.39(1).
- [2]. Yuan Yong, Wang Feiyue. Development status and prospect of block chain technology [J]. Journal of automation,2016,42(04):481-494.
- [3]. Ronald H. Ballou. Enterprise logistics management [M]. Mechanical industry press.
- [4]. Yan Ying, Zhao Jun H, Wen fu, Chen Xingying. Block chain in energy system: concept, application and prospect [J]. Power construction, 2013, 38 (02):12-20.
- [5]. Wang Wei J. Application of block chain technology and logistics express business [J]. Logistics technology, 2013, 36(03):31-34.
- [6]. Li Jing W, Jia Chun Fu, Liu Z Li, Li J, li min. A review of search encryption technology [J]. Journal of software, 2015, 26(01):109-128.
- [7]. Wang Chuanlei, Wan Yidi, Qin Qin. Logistics Information Ecosphere Model of Supply Chain Based on Block Chain [J]. Intelligence theory and practice, 2014,40(07):115-121.
- [8]. Zhou Ping. White paper on China block chain technology and industry development [M]. Beijing: ministry of industry and information technology, 2016