Blockchain Technology as a Means of Facilitating Exports

Daiane Rodrigues dos Santos
Ladue Horton Watkins High School, Ladue, Missouri, United States

Daniele Damasceno
Ladue Horton Watkins High School, Ladue, Missouri, United States

Abstract

This article investigated the integration of blockchain technology into international trade, with an emphasis on recent advances, patent volume, and public policy initiatives. The analysis of more than 4,700 patent applications between 2015 and 2024 evidenced a global acceleration of innovation, led by the United States, Europe, and WIPO. Major technology companies and industrial consortia registered patents to improve traceability, data security, and the reliability of cross-border operations. The study also examined public policies in the United States, the European Union, and China, highlighting strategies such as regulatory sandboxes, pilot projects, and infrastructure investments to support the adoption of blockchain in exports and logistics. The results indicated that blockchain technology enabled greater transparency and efficiency throughout the supply chain, while regulatory and institutional adaptation remained a condition for large-scale implementation. It is concluded that incorporating international best practices may contribute to strengthening Brazil's digital infrastructure, promoting systems interoperability, and increasing the levels of security and competitiveness in the country's export sector.

Keywords

Blockchain Technology, International Trade, Supply Chain Traceability.