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FACTORS INFLUENCING THE ADOPTION OF BLOCKCHAIN TECHNOLOGY IN SUPPLY CHAIN MANAGEMENT

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Abstract:
This study explores the factors influencing the adoption of blockchain technology in supply chain management (SCM) within Tanzania's manufacturing industries, focusing on technological, organizational, and environmental factors. The research was conducted in Dar es Salaam, targeting the food and beverage manufacturing sectors. Using a quantitative approach and cross-sectional research design, the study gathered data from 85 industry experts, supply chain and logistics managers through online questionnaires. Secondary data from previous studies were also reviewed. The results showed that there is a strong linear correlation between the adoption of blockchain technology and organizational, environmental, and technological aspects. Strong F-statistics (F (1, 72) = 30.922, p <.001; F (1, 74) = 38.419, p <.001; F (1, 71) = 70.143, p <.001) were shown by the statistical analysis, demonstrating the direct and proportionate influence of these factors on adoption decisions. The study concludes that the adoption of blockchain technology in SCM is essential for improving operational efficiency, reducing costs, and enhancing overall performance, which in turn fosters economic growth and sustainable development. It is recommended that manufacturing industries embrace blockchain technology to boost productivity and performance. The study also encourages further research in other industries to compare findings and broaden the understanding of blockchain technology's adoption beyond SCM in manufacturing industries.

Keywords:
Blockchain, Manufacturing Industries, Supply Chain. Technology

1. Introduction
Blockchain technology described as a distributed database of records, transactions, and digital events that have been executed and shared among networked participants Rejeb & Rejeb (2020). The adoption of Block Chain technology in supply chain management addresses some issues with conventional supply chain systems, including lack of transparency, restricted ability to trace back, and ineffective coordination (DiFrancesco et al,.2023). As a decentralized and unchangeable record, blockchain presents chances to improve supply chain visibility, stakeholder confidence, overall efficiency, and security (Muinde,2023), provide economic and operational benefits Longo, F., et al (2019). Blockchain has the potential to revolutionize the way we move forward in the world. For instance, purchasing assets like a house, vehicle, or any other form of tangible or intangible property typically involves a significant amount of paperwork and manual processes. Blockchain simplifies this, streamlining these complex tasks and completing them much more quickly. According to Merkaš, et al (2020), blockchain technology operates as a protocol-driven software that secures the transfer of valuable assets—such as contracts, properties, money, and unique credentials—over the internet without the need for intermediaries like governments or banks.

The rise of blockchain technology highlights the profound impact of digital innovation on the evolution and sustainability of supply chains, as noted by Rejeb & Rejeb (2020). Initially, blockchain was introduced through its use in Bitcoin, where it served as the foundation for recording transactions. While cryptocurrency systems continue to be the most prominent application of blockchain, the technology's potential extends to various sectors, including healthcare (Rejeb, & Rejeb, 2020). Blockchain is particularly valued in supply chain management for its ability to foster trust and facilitate the sharing of information, which enhances supply chain performance in reaching global markets. (Longo & Nicoletti, 2019) stated in their strategic plan, the adoption of blockchain is key to achieving greater flexibility and responsiveness in supply chains. Blockchain ensure consistency and securely of information by

avoiding edition of shared digital ledger which throughout the network except with the consensus of majority of parties involved (Azzi, Chamoun, & Sokhn, 2019), Blockchain once integrated into the supply chain planning it create a reliable, clear, dependable and secure system. Blockchain has limitless applications; it can be applied in fields like designing smart contracts to track frauds in finance and procurement. Despite the advancements in Information and Communication Technologies (ICT) that have decreased information asymmetry and enhanced interorganizational collaboration, companies within a supply chain remain hesitant to share sensitive data when full trust in their partners is lacking. In this context, Blockchain, as a decentralized certificate authority, offers potential economic and operational advantages. However, many companies in the supply chain still report limited knowledge of Blockchain due to its relatively recent emergence and the scarcity of use cases and application studies (Dutta, Choi, Somani, & Butala, 2020).

Blockchain technology represents a significant financial commitment (Bavassano et al., 2020). Moreover, as noted by Chang et al. (2020), uncertainty surrounding return on investment remains a major challenge. The adoption of Blockchain technology in business operations is heavily influenced by organizational culture and business practices. In corporate environments characterized by strong bilateral relationships, payment terms and agreements are often flexible. As a result, companies in such settings may be reluctant to embrace disruptive technologies like blockchain (Papathanasiou et al., 2020). This reluctance is particularly evident among small and medium-sized logistics enterprises, which often view Blockchain technology as a potential threat rather than a positive innovation (Helo & Hao, 2019).

In Ghana, over 80% of landowners have utilized blockchain technology to register and claim their properties (Kombe et al., 2019). Similarly, in Ethiopia, blockchain is being employed to track and verify the origin and chemical exposure of coffee exports (Kombe et al., 2019). The adoption of blockchain technology can significantly enhance transparency, accountability, and efficiency in procurement and supply chain processes. In a blockchain, a single transaction, which may involve one or more entities, serves as the core building block. This transaction could involve a payment, but it might also represent a transfer of data (Treiblmaier, 2018).

Studies have indicated that the majority of low- and middle-income countries like Tanzania, the adopting of blockchain technology is in initial stages which both government and private procurement organizations exploring its potential. For example, a study by Munishi et al. (2022) highlighted the technological barriers that hinder financial institutions in Tanzania from fully integrating blockchain into their operations, revealing slow progress in its utilization. Within Tanzania's purchasing and manufacturing sectors, there is a limited understanding of the key factors driving the adoption of blockchain technology. To successfully integrate blockchain into the Tanzanian supply chain ecosystem, it is crucial to identify and assess critical factors. The slow adoption of blockchain technology in supply chain management prompts inquiries into the factors affecting its adoption within the food and beverage manufacturing industries. The influence of technological factors, organizational factors and environmental factors on the adoption of blockchain technology for supply chain management in Tanzania are vital to be assessed for an organization to gain its paybacks. Thus, based on the background of this study, the main objective was to establish determinants that influence adoption of blockchain technology for supply chain management. need to be optimized for the distribution performance of pharmaceuticals in Tanzania. Additionally, in order to achieve the main objective, the following questions were addressed in this study;

RQ1 Do technological factors influence the adoption of blockchain technology in supply chain management?

RQ2 What is the influence of organizational factors on the adoption of blockchain technology in supply chain management?

RQ3 Do environmental factors influence the adoption of blockchain technology in supply chain management?

2. Theoretical Literature Review

2.1. Resource Based Theory

The foundation of the Resource-Based View (RBV) can be found in Penrose's groundbreaking study, "The Theory of the Growth of the Firm," published in 1959 (Abushaikha, 2014). Birger Wernerfelt offered the first concept in 1984, which Jay B. Barney and other scholars later updated and improved. According to Wernerfelt (1984), Conner (1991), and Peteraf (1993), the ability of a corporation to obtain a competitive advantage is determined by its resources and capabilities. Barney (1991) identified four qualities of resources value, rarity, imperfect imitability, and lack of substitutability that may contribute to competitive advantage of a firm. Resource-based theory focuses on

corporate differentiation and the internal competencies that provide organizations a competitive advantage. According to Miemczyk et al. (2016), the RBV has the ability to explain the significance of new resources in terms of knowledge, relationships, and technology, while underlining the key role of SCM in continuously adapting to variations in the business environment to renew its strategic resources. The theory helps suppliers track their goods and ensure the original products reach the intended market consumers while eradicating the possibility of copy/counterfeit goods entering the market. This makes blockchain the ideal asset for a company to enhance its gain in the supply chain and ensure imperfect imitability.

2.2. Transaction-Cost Theory

Coase (1937) laid the groundwork for transaction-cost economics (TCE) theory, and introduced the idea of transaction cost for the first time. Williamson (1975 and 1979), who popularized the phrase "transaction-cost economics" (TCE), was the first to build on the idea. The goal of TCE is to lower overall transaction costs by selecting the market or hierarchy with the most cost-effective governance structure (Williamson, 1979). The theory lays under the assumptions of bounded rationality, opportunism, and information impactedness as factors which may lead to high or low cost of transaction. Blockchain's immutability creates a platform for cyber security on transactions that fosters traceability and transparency in supply chain operations (Schmidt & Wagner, 2019). The adoption of blockchain technology in the supply chain is justified by this theory's underlying presuppositions as the technology enables firms to combat and eliminate opportunistic behaviors like theft and the sale of counterfeit products as well as improve the existence of information impactedness between buyers and suppliers by ensuring that information asymmetry is eliminated between the players involved in the supply chain.

2.3. The Technology-Organization-Environment (TOE) Framework

The Technology, Organization, Environment (TOE) framework, which considers the interaction between technological elements, organizational features, and environmental factors, offers a framework for understanding the adoption of technological advancements in companies. This framework has been used extensively to look at how different technologies are being adopted in various fields. The application of blockchain technology has garnered significant interest in the context of supply chain management because of its potential to enhance transparency, traceability, and security in supply chain operations. The TOE framework, which was first put forth by Tornatzky and Fleischer in 1990, offers a comprehensive lens through which to see the factors influencing the integration of blockchain technology into supply chain management and to understand the complex dynamics involved in its use.

Numerous elements that may affect an organization's readiness and capacity to use this cutting-edge technology can influence the adoption of blockchain technology in supply chain management. Based on prior research and studies carried out in comparable contexts, this section offers a theoretical analysis of the key elements prompting the adoption of blockchain technology in supply chain management.

The adoption of BC technology depends heavily on technological aspects. There are several of these, according to Zheng et al. (2019), including the perceived compatibility of blockchain with current IT infrastructure, the difficulty of deploying blockchain solutions, the performance and scalability restrictions of blockchain networks, and the degree of technical expertise needed for implementation. Before implementing blockchain technology, businesses need to evaluate the technical viability and preparedness of their systems. Internal elements inside an organization can affect the adoption of blockchain technology. The size, structure, resources, and capabilities of the organization are some of these variables. Blockchain adoption is more likely to occur in larger firms with more financial and technological resources (Chofreh et al., 2019). The adoption of blockchain technology in SCM is also influenced by firm willingness, top management support, and the culture of innovation risk-taking (Iansiti & Lakhani, 2017).

Environmental factors are outside elements that can affect the adoption of BC technology. These elements include of the competitive environment, industry standards and cooperation, and regulatory frameworks. Organizations may be encouraged to use blockchain technology by the existence of enabling rules and standards (Zheng et al., 2019). By developing a shared infrastructure and governance framework, collaboration between supply chain players and industry-wide initiatives can speed up the adoption of blockchain solutions (Boon et al., 2018).

Decisions made by enterprises are influenced by the perceived advantages and hazards of adopting blockchain technology. The potential advantages include better transparency, improved supply chain visibility, increased efficiency, and cost savings (Iansiti and Lakhani (2017). On the other hand, perceived hazards such as worries about

data security and privacy, ambiguities in the law and regulations, and the possible disruption of current business models can delay the use of blockchain (Chofreh et al., 2019).

3. Material and Methods

3.1. Design and Approach

The study employed a quantitative research approach. The research design for this study is a cross-sectional research design. A cross-sectional study collects data at a specific point in time, providing a clear picture of the variables of interest (Hair et al., 2014). In the context of assessing the factors affecting the adoption of BC technology in SCM among Tanzanian manufacturing industries, a cross-sectional study is appropriate for capturing the current state of adoption and understanding the factors influencing it.

3.2. Population and data collection

The study's target population was 105. Due to the absence of an established population frame, the target population for the study was determined based on the number of variables accessible in the conceptual framework. Pituch and Stevens., (2015) recommend at least 15 subjects to be incorporated per variable on the conceptual framework for conducting statistical analysis, establishing a target of at least 105 populations necessary in our study because there are 7 sub-variables.

3.3. Sampling and sample size

The study gathered data from 85 participants. The objective was to evaluate the determinants influencing the acceptance of blockchain technology within the realm of supply chain management in selected Beverage Manufacturing industries in Dar es Salaam, Tanzania. A sample size of 85 participants is accepted as sufficient for conducting multiple regression analysis effectively, ensuring accurate estimation of relationships between the variables. It is considered reasonable and appropriate to examine the factors influencing the adoption of blockchain technology in supply chain management.

3.4. Data collection technique

The demographic characteristics of the respondents, including age, gender, education level, and job experience, as well as the variable data on supply chain integration and performance, were gathered through carefully crafted questionnaires. The five-point Likert scale approach used for variable questions was intended to facilitate data analysis while upholding the accuracy of the data gathered.

3.5. Validity and reliability

The study also evaluated the reliability of the measurement tools used to gather the data (Tabachnick & Fidell, 2019). To ensure the accuracy of the measurements, this assessment looked at the internal consistency and coherence of the elements within the measurement instrument. To test for the reliability of the questions, the study used the Cronbach Alpha measure of internal consistency, the This statistic was used to measure the consistency of response for items combined in a scale for each study variable. The statistic that ranges from 0 to 1 states that the reliability coefficient (Cronbach's α) from 0.7 or above is an indication of the presence of reliability (Saunders et al., 2019). The reliability statistic (Cronbach's α) obtained was 0.863 for technological factors, 0.73 for environmental factor items, and 0.871 for organizational factors as shown in tables 3.2,3.3 and 3.4.

Table 1;Reliability Statistics for technological factors

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.863	.862	4

Table 2:Reliability Statistics for environmental factors

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.763	.760	4

Table 3:Reliability Statistics for organizational factors

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.871	.872	4

3.6. Data Analysis and Ethical Issues

In order to protect the subjects from harm during the research process, this study gave ethical issues top priority. Before beginning the study, the researcher requested ethical approval from the appropriate regulatory organizations. The study's goals, the kinds of data that was gathered, and its intended uses are all explained to the participants. Prior to participation in the study, participants were asked to provide informed consent. Additionally, their secrecy and anonymity were ensured, and their personal data was kept private. The researcher made sure that the information gathered was used just for academic reasons and not in any other way.

4. Results and Discussion

4.1 Descriptive Statistics

4.1.1 Technological Factors towards adoption of blockchain technology

Respondents were asked to respond to the given structured questionnaires regarding the influence of technological factors in the adoption of blockchain technology. The results are presented in the following Table:

Table 1:Technological factors

Statements	SD	D	N	A	SA
Technological infrastructure	38	3	3	31	10
	44.7%	3.5%	3.5%	36.5%	11.8%
Technological Compatibility	34	4	13	30	4
	40.0%	4.7%	15.3%	35.3%	4.7%
Scalability	29	3	12	38	3

	34.1%	3.5%	14.1%	44.7%	3.5%
Operating costs	37	5	13	27	3
	43.5%	5.9%	15.3%	31.8%	3.5%

The findings from Table 1 above indicate 1.2% strongly agree and 50.6% agree Regulatory environment in Tanzania affects the adoption of BC technology in SCM which makes 51.6% of all respondents. 16.5% strongly disagree and 7.1% disagree Regulatory environment in Tanzania affects the adoption of BC technology in SCM which makes up 23.6% of all respondents. Meanwhile, 24.7% of all respondents were neutral. 0% strongly agree and 50.6% agree that Lack of Interoperability among transactional systems influences the adoption of BC technology which makes up 50.6% of all respondents. 23.5% strongly disagreed and 7.1% that the Lack of Interoperability among transactional systems in Tanzania influences the adoption of BC technology making a total of 30.6% of all the respondents, while 18.8% were neutral. These findings are similar to those of Maagi & Barnabas' (2023) study on the usage of BC technology in SC activities in Tanzania, implying that procurement professionals continue to rely on traditional and localized network systems such as Muse, Nest, Gamis, Tancis, and so on. Despite the fact that these systems are pushed on and are a mandatory requirement for usage by all public agencies due to their ability to increase productivity, they have limitations in interacting with other global stakeholders.

4.1.2 Organizational Factors towards adoption of blockchain technology

Respondents were asked to respond to the given structured questionnaires regarding the influence of organizational factors in the adoption of blockchain technology. The results were as indicated in Table 2 below:

Table 2:Organizational factors

Statements	SD	D	N	A	SA
Organizational acceptance	30	2	19	34	0
	35.3%	2.4%	22.4%	40.0%	0.0%
Top management support	29	4	17	35	0
	34.1%	4.7%	20.0%	41.2%	0.0%
Perceived organizational culture	28	2	12	42	1
	32.9%	2.4%	14.1%	49.4%	1.2%
Government support	33	2	13	37	0
	38.8%	2.4%	15.3%	43.5%	0.0%

The findings from Table 4.4 above indicate 0.0% strongly agree and 40.0% agree organizational structure influences the adoption of BC technology in SCM corresponding to 40.0% of all respondents. 35.3% strongly disagree and 2.4% disagree that organizational acceptance influences the adoption of BC technology which makes up 37.7% of all respondents. Meanwhile, 22.4% of all respondents were neutral. 0% strongly agree and 41.2% agree that top management supports the adoption of BC technology which makes up 41.2% of all respondents. 34.1% strongly disagree and 4.7% that top management supports the adoption of BC technology making a total of 38.8% of all the

respondents, while 20.0% were neutral. According to Weiner (2009), encouraging successful acceptance of new perceptions entails preparing the organization in its entirety for the impending change. Nonetheless, the study's findings demonstrated that government backing is undoubtedly an essential influence on the adoption of BC in manufacturing firms' SC activities. This is corroborated by research by Daeheon C et al. (2020), which found that government support is vital in boosting the adoption of new technology. The impression of a lack of government assistance in the form of funding or supportive legislation hinders businesses from contemplating using the technology.

4.1.3 Environmental Factors

Another aspect was environmental factors whereby respondents were asked to respond on the given statement regarding the influence of these factors in the adoption of blockchain technology in supply chain as shown on Table 3 below:

Table 3: Environmental Factors

Statements	SD	D	N	A	SA
Regulatory environment	14	6	21	43	1
	16.5%	7.1%	24.7%	50.6%	1.2%
Interoperability among transactional systems	20	6	16	43	0
	23.5%	7.1%	18.8%	50.6%	0.0%
Competitive pressure	26	6	14	38	1
	30.6%	7.1%	16.5%	44.7%	1.2%
Legal environment	21	6	25	30	3
	24.7%	7.1%	29.4%	35.3%	3.5%

The findings from Table 3 above indicate 1.2% strongly agree and 50.6% agree Regulatory environment in Tanzania affects the adoption of BC technology in SCM which makes 51.6% of all respondents. 16.5% strongly disagree and 7.1% disagree Regulatory environment in Tanzania affects the adoption of BC technology in SCM which makes up 23.6% of all respondents. Meanwhile, 24.7% of all respondents were neutral. 0% strongly agree and 50.6% agree that Lack of Interoperability among transactional systems influences the adoption of BC technology which makes up 50.6% of all respondents. 23.5% strongly disagreed and 7.1% that the Lack of Interoperability among transactional systems in Tanzania influences the adoption of BC technology making a total of 30.6% of all the respondents, while 18.8% were neutral. These findings are similar to those of Maagi & Barnabas' (2023) study on the usage of BC technology in SC activities in Tanzania, implying that procurement professionals continue to rely on traditional and localized network systems such as Muse, Nest, Gamis, Tancis, and so on.

4.2 Multiple Regression Analysis

4.2.1 Sample adequacy

The sample adequacy was tested using the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy. The KMO value was .755, which falls within the acceptable range of 0.70 to 0.80, indicating that the sample size is suitable.

Table 1: KMO and Bartlett Test

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.755

4.2.2 Normality

The Shapiro-Wilk test was used to check if adoption of blockchain technology, technological factors, environmental factors, and organizational factors adhered to the normality assumption .

Table 2: Normality

	Shapiro-Wilk		
	Statistic	df	Sig.
Adoption of blockchain technology	.843	85	.9867
Technological Factors	.902	85	.851
Environmental Factors	.884	85	.979
Organizational Factors	.892	85	.873

Adoption of blockchain technology and technological factors: Both demonstrated strong evidence of normality, with p-values exceeding .95, indicating a good fit with a normal distribution. Environmental and organizational factors: Although not as conclusive as the first two, these variables also showed positive signs of normality with p-values greater than .05. Overall, these results indicates that the data satisfies the normality requirement for multiple regression analysis.

4.2.3 Linearity

In studying the adoption of blockchain technology, the assumption of linearity for three influencing factors: technological, environmental, and organizational.

Table 3. Linearity

ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
Adoption of blockchain technology * Technological Factors	Between Groups	(Combined)	46.221	12	3.852	4.270	.000
		Linearity	27.896	1	27.896	30.922	.000
		Deviation from Linearity	18.325	11	1.666	1.847	.062
	Within Groups		64.955	72	.902		
	Total		111.176	84			

Adoption of blockchain technology * Environmental Factors	Between Groups	(Combined)	43.648	10	4.365	4.783	.000
		Linearity	35.059	1	35.059	38.419	.000
		Deviation from Linearity	8.589	9	.954	1.046	.413
	Within Groups		67.528	74	.913		
	Total		111.176	84			
Adoption of blockchain technology * Organizational Factors	Between Groups	(Combined)	63.962	13	4.920	7.399	.000
		Linearity	46.644	1	46.644	70.143	.000
		Deviation from Linearity	17.318	12	1.443	2.170	.022
	Within Groups		47.214	71	.665		
	Total		111.176	84			

The analysis of variance (ANOVA) revealed distinct patterns. The results showed a strong linear relationship for technological, environmental and organizational factors, supported by significant F-statistics for linearity ($F (1, 72) = 30.922$, $p < .001$; $F (1, 74) = 38.419$, $p < .001$; $F (1, 71) = 70.143$, $p < .001$). This indicates a direct, proportional impact of these factors on blockchain adoption.

Model fitting information

In an examination of the utilization of blockchain technology, a regression model was utilized with the dependent variable being the Adoption of blockchain technology. The overall model fit was evaluated using an Analysis of Variance (ANOVA). The results were as follows

Table 4: Model Fitting

ANOVA[a]

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	59.022	3	19.674	30.555	.000[b]
Residual	52.154	81	.644		
Total	111.176	84			

a. Dependent Variable: Adoption of blockchain technology

b. Predictors: (Constant), Organizational Factors, Technological Factors, Environmental Factors

The results showed a statistically substantial fit, with $F (3, 81) = 30.555$, $p < .001$. This indicates that the regression model, encompassing Organizational Factors, Technological Factors, and Environmental Factors, significantly accounts for a significant portion of the variance in the adoption of blockchain technology.

4.3 Inferential statistics

To draw conclusions from the data analysis and evaluate the overall significance of a regression model, inferential statistics were employed.

Table 5 Coefficients

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	-.158	.317		-.499	.619
Technological Factors	.252	.081	.263	3.099	.003
Environmental Factors	.240	.118	.197	2.039	.045
Organizational Factors	.524	.110	.445	4.772	.000

a. Dependent Variable: Adoption of blockchain technology

The analysis of the adoption of blockchain technology was conducted using a multiple regression model to examine the impact of technological, environmental, and organizational factors on the dependent variable. Technological factors demonstrated a significant positive impact on the adoption of blockchain technology ($\beta = .263$, $t = 3.099$, $p = .003$). This suggests that as technological factors increase, there is a corresponding increase in the adoption of blockchain technology. Similarly, environmental factors also exhibited a positive impact on adoption ($\beta = .197$, $t = 2.039$, $p = .045$), emphasizing the relevance of environmental considerations in influencing the decision to adopt blockchain technology. The most substantial impact was observed for organizational factors ($\beta = .445$, $t = 4.772$, $p = .000$), indicating that as organizational factors increase, there is a significant positive effect on the adoption of blockchain technology.

Table 6: Hypothesis Summary

Dependent variable	Hypothesis	Independent Variable	Significance	Nature of relationship	Conclusion
Adoption of blockchain technology	H_1	Technological factors	Significant	Positive	Accepted
	H_2	Organizational factors	Significant	Positive	Accepted
	H_3	Environmental Factors	Significant	Positive	Accepted

6. Conclusion

The study arrives at the conclusion that implementing blockchain in Tanzania's manufacturing supply chains will require a combination of organizational preparedness, technology skills, and outside support—especially from the government. By taking care of these issues all at once, supply chain management in developing nations may become more competitive, transparent, and efficient, all of which will improve blockchain integration.

7. Study Implication

The study emphasizes how crucial it is to address organizational, technological, and environmental issues in order to successfully implement blockchain technology in Tanzania. Policymakers and business executives can use insights to direct the development of plans that strengthen infrastructure and support for better supply chain management.

8. Areas for further research

Since studies on blockchain technology are scarce, it would therefore be useful to see more studies on how Tanzanian organizations can benefit from blockchain technology. Also, due to the fact that block chain technology is still a new concept in Tanzania, it would be essential to see studies addressing how successful implementation of block chain technology can happen in different sectors

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