

Is Blockchain Backed Corporate Governance the Way Forward? – A Review and Future Research Agenda

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ABSTRACT

The goal of this article is threefold: first, to undertake a systematic study on the deployment of blockchain technology to strengthen corporate governance systems; second, to identify and analyse various clusters emerging from the selected articles; third, to propose a conceptual framework regarding the adoption of blockchain technology by organisations. Here, 161 papers are selected using PRISMA technique from the Web of Science database. Various bibliometric analyses are performed and discussed on the selected paper using VOSviewer software. The findings revealed that the number of published research articles on “Interface of Blockchain with Corporate Governance” has seen exponential growth. USA is the most significant contributor with 43 number of publications. Furthermore, “Blockchain and Corporate Governance”, “Digital Ledger Technology as an indispensable part of Blockchain Governance”, “Blockchain Communication”, and “Unlocking Potential of Blockchain” are the major clusters that emerged from the analysis. Also, the results of the study provide interesting implications to academicians, scholars and managers who are interested in exploring the role of blockchain in corporate governance. The authors of this study also offer a holistic framework highlighting various levels of adoption of Blockchain Technology that could assist an organisation in strengthening its corporate governance procedures.

Keywords: Corporate Governance (CG), Blockchain, Systematic Literature Review (SLR), VOS viewer



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1. Introduction

The term "Blockchain" was first used to describe Bitcoin and other Cryptocurrencies' Distributed Ledger Technology (DLT) (Nakamoto, 2008). However, this technology is now widening its scope and applications to various other domains like Finance, FinTech, Healthcare, Education, Law and Government (Swan, 2015). In recent years the application of Blockchain has been widely explored and adopted by these sectors (Sinha et al., 2022; Wörner et al., 2016; UN, 2021). Blockchain technology can help in drastically broadening the boundaries of the digital economy and society by elevating the process of sharing, security, transparency and privacy of information to a whole new level and hence help in strengthening Corporate Governance (CG) mechanisms (UN, 2021). Globally, blockchain-based collaboration across multiple

businesses is thriving, resulting in complex applications & solutions and the current impetus is changing from learning to implementing blockchain business applications (Ezzi et al., 2022; Deloitte, 2018).

Although the present discussion around the phrase "blockchain" is still mostly centred on speculation with digital currencies such as bitcoins, blockchain is actually a cutting-edge technology that can, among other things, provide smart solutions for traditional inefficiencies in corporate governance (Yermack, 2017; Kansil & Singh, 2018). Blockchain technology can facilitate the removal of agents as intermediaries in corporate governance through code, peer-to-peer connectivity, crowds, and collaboration (Kaal, 2021). Blockchain-based guarantees embedded in blockchain code can help ensure that no participant in business transactions and

agency relationships can circumvent the set of governance rules (Kaal, 2021; Singh & Kansil, 2017). Seamless execution of various contracts can be carried out between principal and agent automatically on blockchain if and when both parties have fulfilled all contract criteria and have verified them using a consensus process (Cong & He, 2019; Kaal, 2021). A smart contract, in simple terms, is a self-executing agreement in which the words of the treaty between customer and dealer are promptly encoded into chains of the ordinance (Frankenfield, 2021). As far legal aspects are concerned, existing jurisdictional sites of legal intervention are not well defined for business organisations founded by smart contracts on the blockchain - Decentralised Autonomous Organisations (DAOs) (Vacca et al., 2021). (Meng & Xing, 2021) examined how governments, institutions, and businesses respond to changes in macro and microeconomic models, as well as changes in Corporate Governance techniques.

The majority of research on blockchain that exists in the world of academics are without any analytical discussion related to governance, management, commerce or social implications. While various technical issues related to blockchain are discussed in previous studies there still exists a significant gap as to how blockchain technology can help in strengthening corporate governance mechanism. After reviewing literature on this topic from various streams, the authors' noticed fragmentation among the literature and identified the need for a conceptual framework regarding the adoption of blockchain technology by organizations, which could pave way for future research as well as practice. Furthermore, this research paper attempts to address the following research questions.

RQ1: What is the present publication trend in the field of Blockchain - CG research?

RQ2: Which sources, studies and countries have made a substantial contribution to the literature?

RQ3: Which are the trending topics and emerging research themes in the field of Blockchain - CG research? and

RQ4: What are the directions of future research?

In light of the above discussion our study tries to contribute in the following ways:

- Review of the existing literature using Prisma Protocol followed by bibliometric analysis in order to give us an overview of various antecedents facilitating Blockchain and Corporate Governance. The authors believe that this is the first attempt at doing a systematic review on the subject of Blockchain and Corporate Governance using bibliometric analysis and VOSviewer software. This analysis will help in exploring the most impactful perspectives in the underlining literature by providing publication trend, emerging trends in the research area, top productive journals, paper distribution country wise, bibliometric coupling of countries and documents followed by co-occurrence analysis of Keywords (Kontinen & Ojala, 2010).

- The investigation proposes a framework regarding the adoption of Blockchain Technology by organisations. It is an attempt to give an insight as to how organisations can manage the storage and flow of data and information using blockchain and how it can benefit them.

- Lastly, the findings of this study will aid academicians and researchers in comprehending the major research areas and identifying unexplored areas in the underlying topic, thereby assisting academicians in addressing the study's future research scope.

2. Methodology

To present a precise analysis the authors followed a 3-step methodology. *First*, a dataset of papers was constructed by using the PRISMA protocol which has also been used by (Shamseer et al., 2015). *Second*, bibliometric analysis was performed on a dataset to analyse evolving patterns in the underlying research area using VOSviewer as used by (Perianes-Rodriguez et al., 2016). *Third*, proposing a framework regarding the adoption of blockchain technology founded on the underlying study.

Traditional reviews generally lack rigor and transparency in their literature which can then lead to inconclusive results when compared to a Systematic Review Paper (SLR) paper. Also, the process of collecting and addressing the selected sample of articles is not specified properly (Tranfield et al., 2003). When compared to traditional reviews, the SLR procedure engages an extensive, transparent and unbiased mode for analysing the current articles to enhance the understanding of adoption of Blockchain in Corporate Governance. (Webster & Watson, 2002).

In view of the limitations posed by traditional review method we have used Prisma Protocol followed by VOSviewer 1.6.17 software to inspect the writings along with increasing the continuity of the outcomes as proposed by (Bandara et al., 2015). The entire procedure of Prisma Protocol is defined methodologically in Figure 1.

2.1. Prisma Protocol

As used by (Shamseer et al., 2015), we have conducted a systematic evaluation using a consolidated technique, the PRISMA Protocol, to understand the importance of blockchain research. The PRISMA proclamation is used in a variety of fields to assist the improvement of systematic reviews and meta-analyses (Shamseer et al., 2015). It also includes a flow diagram to support practitioners with the systematic literature review process's identification, screening, eligibility, and inclusion processes. The logical architecture that underpins this study's methodological approach is depicted in Figure-1.

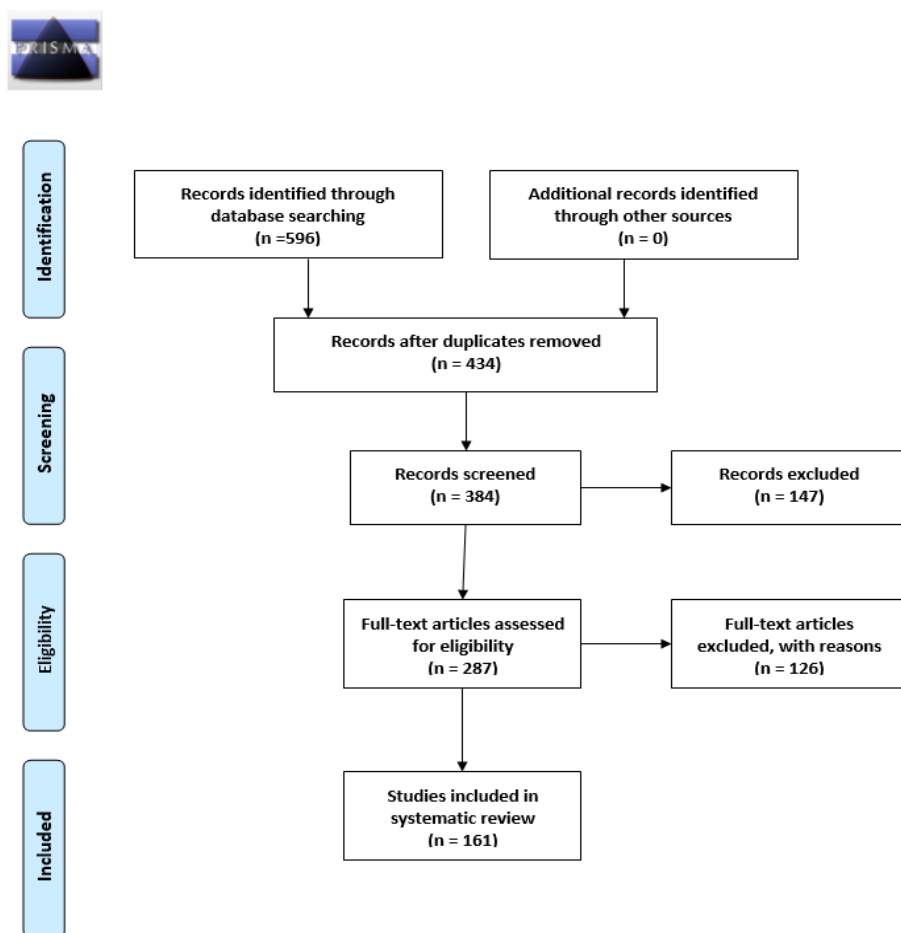


Figure-1: PRISMA PROTOCOL

1. *Identification:* The protocol's first step is to establish how to find and select papers for inclusion in the review. The first pair of terms narrowed the findings to the theme of blockchain technology, while the second step is to limit the outcomes for corporate governance. The Web of Science database search engine was used and 596 articles were identified in the first phase.

2. *Screening:* Selection of papers is the second step of the protocol. 161 records were eliminated due to duplicity of documents and not being published in peer-reviewed and international publications. 434 records were screened, out of which 147 records were excluded by scanning the abstracts or keywords of the studies. Documents that are not connected to blockchain and corporate governance and duplicate materials were excluded.

3. *Eligibility:* Third phase of this process is the formulation of eligibility criteria and the inclusion of publications in the final sample. 287 papers were considered, with full text articles from which 135 publications were eliminated for varying reasons.

4. *Included:* At the verge of the procedure, 161 papers published between 2017 and 2022 were finally selected. Each study that met the eligibility requirements was evaluated for its fit, which was confirmed after studying and examining all full-text publications.

2.2 VOS viewer

VOS viewer is an application that may be used to create and inspect bibliometric networks. Journals, researchers

and individual articles can all be connected in a network that is built on the foundation of citation, bibliographic coupling, co-citation and co-authorship. Important phrases can be extracted from a corpus of scientific literature using the text mining features offered by VOSviewer, and then used to build and visualise co-occurrence networks.

The first phase in this study included a thorough search in the Web of Science Database, which is widely regarded as one of the most well-founded databases for various bibliometric studies. (Aggarwal & Manaswi, 2022; Bandara et al., 2015). To find the literature, a number of keywords were used. The following is the ultimate exploration string: ("blockchains" OR "blockchain" OR "decentralised consensus" OR "block and chain" OR "smart contract" OR "distributed ledger technology"). To ensure that the review was based on high-quality evidence, exclusion and inclusion criteria were devised (Tranfield et al., 2003). The "AND" and "OR" Boolean operators were utilized. The retrieval technique is as follows: title-abs-key ("blockchain") and title-abs-key ("corporate governance") or title-abs-key ("CG") or title-abs-key ("decentralisation") or title-abs-key ("cryptocurrency") or title-abs-key ("supply chain") or title-abs-key ("blockchain governance"), (limit-to (subarea, "busi") or (limit-to (sub-area, "econ") or title-abs-key ("blockchain governance"). Research over the last four years seemed to be producing more conclusive

results, therefore literature from the past four years (2017-2022) was taken into consideration for the study.

The second phase was to conduct bibliometric analysis of the articles and identify clusters using software VOSviewer 1.6.17 (Perianes-Rodriguez et al., 2016). The VOSviewer tool will help in visualizing the finding of a co-occurrences of matrix, which are determined by the presence, frequency, and closeness of similar pairs of cited references in the data (Van Eck & Waltman, 2014). Here, bibliographic coupling is particularly effective when used to inform systematic literature because the number of cited references in research paper does not alter over time, unlike other bibliometric methods (Tandon et al., 2021).

The third phase includes a detailed inspection of the clusters to confirm that the papers grouped together were truly studying subjects that could be aggregated within a specific stream of research from a qualitative perspective (Van Eck & Waltman, 2014; Tandon et al., 2021). Articles were reviewed and analysed qualitatively in accordance with the systematic literature review process.

3. Descriptive Statistics using Bibliographic Analysis

This section sheds light on analysis of on analysis of descriptive data and network relationships for 161 research publications. The software generated the following results after processing enormous amounts of bibliographic and citation data:

3.1 Publications and Citations

Identical to the investigation accomplished by Iden et al. (2017), we examined the papers at several levels of analysis along with the institutions' publishing year. This study throws light on the growing role of blockchain in corporate governance. Based on the literature, Table-1 shows year wise citations of the selected papers. Out of 161 articles, the year 2021 has the highest number of citations (1844) as well as highest number of publications (60). Figure-2 depicts year wise publication of research papers in this domain. Out of total of 161 articles published, the majority of these were published during the year 2021.

Year	No. of Publications	Citations
2017	3	3
2018	11	46
2019	28	309
2020	52	978
2021	60	1844
2022	7	296

Table-1: Trends of publications and citations (2017-2022)

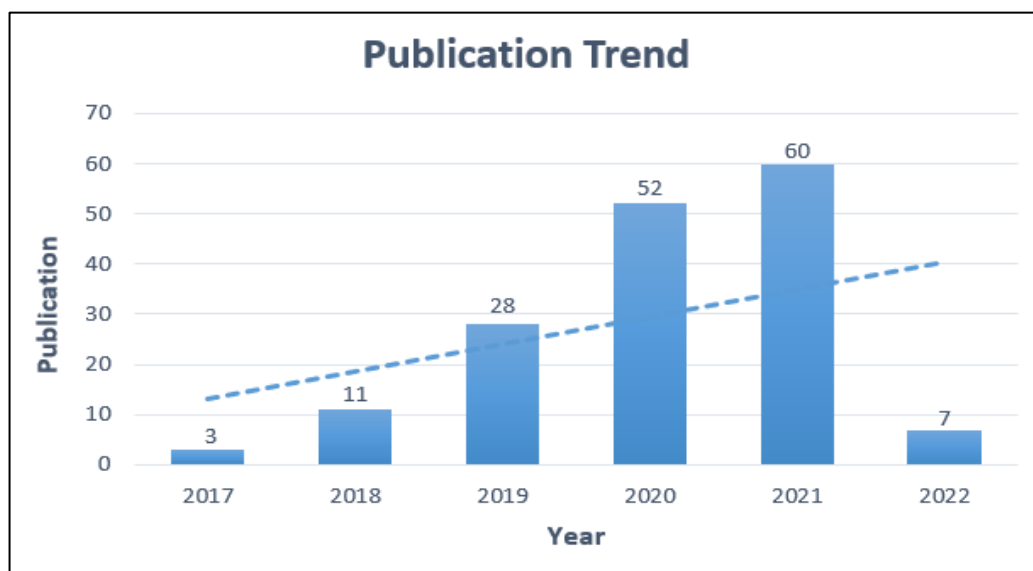


Figure-2: Year wise Publication

3.2 Top Productive Journals

161 manuscripts in the database were printed in 70 journals. Table-2 shows the top 16 journals with the majority publications as well as citations related to publications on Blockchain and Corporate Governance.

In our study Journal Business Horizons has the highest number of published articles with 3 published documents whereas Journal of Electronic Commerce Research and Applications has the highest number of referenced articles with 284 numbers of citations.

Journals	Documents	Citations
ELECTRONIC COMMERCE RESEARCH AND APPLICATIONS	2	284
REVIEW OF FINANCIAL STUDIES	2	210
BUSINESS HORIZONS	3	206
SUPPLY CHAIN MANAGEMENT-AN INTERNATIONAL JOURNAL	1	186
JOURNAL OF MANAGEMENT INFORMATION SYSTEMS	1	180
MIT SLOAN MANAGEMENT REVIEW	1	147
JOURNAL OF BUSINESS VENTURING	1	129
JOURNAL OF PURCHASING AND SUPPLY MANAGEMENT	1	120
M&SOM-MANUFACTURING & SERVICE OPERATIONS MANAGEMENT	1	104
TECHNOLOGICAL FORECASTING AND SOCIAL CHANGE	1	89
MIS QUARTERLY EXECUTIVE	1	81
INTERNATIONAL JOURNAL OF ACCOUNTING INFORMATION SYSTEMS	1	61
ACCOUNTING AND FINANCE	1	59
JOURNAL OF SERVICE MANAGEMENT	1	58
AUSTRALIAN ACCOUNTING REVIEW	1	57
FINANCIAL INNOVATION	1	56

Table-2: Top most productive Journals

3.3 Most Influential Publications

Table-3 presents a listing of the most cited journals. The articles published in the above Journals cover a wide range of topics including the relationship between corporate governance and blockchain, as well as how to improve the current monitoring system and bring value

to businesses. Applications of blockchain for businesses, such as innovation, disclosures, financial statements, blockchain based auditing and e-voting are some of the prominent research issues in these articles. Furthermore, numerous articles concentrate on a sole nation or area, such as USA, China, England or Australia.

Title	Journal	Year	Total Citation
The limits of trust-free systems: A literature review on blockchain technology and trust in the sharing economy	ELECTRONIC COMMERCE RESEARCH AND APPLICATIONS	2018	224
The impact of the blockchain on the supply chain: a theory-based research framework and a call for action	SUPPLY CHAIN MANAGEMENT-AN INTERNATIONAL JOURNAL	2018	186
On the Fintech Revolution: Interpreting the Forces of Innovation, Disruption, and Transformation in Financial Services	JOURNAL OF MANAGEMENT INFORMATION SYSTEMS	2018	180
Blockchain Disruption and Smart Contracts	REVIEW OF FINANCIAL STUDIES	2019	148
How Blockchain Will Change Organizations	MIT SLOAN MANAGEMENT REVIEW	2017	147
Initial coin offerings (ICOs) to finance new ventures	JOURNAL OF BUSINESS VENTURING	2019	129
Blockchain and supply chain relations: A transaction cost theory perspective	JOURNAL OF PURCHASING AND SUPPLY MANAGEMENT	2019	120
Distributed Ledgers and Operations: What Operations Management Researchers Should Know About Blockchain Technology	M&SOM-MANUFACTURING & SERVICE OPERATIONS MANAGEMENT	2020	104

Table 3: Top publishers by Citations

3.4 Most influential countries in Blockchain and Corporate Governance Research

This sub-section sheds light on as to which nations are developing further analyses on Corporate Governance & Blockchain Technology. Figure 3 depicts the distribution of research articles of top 10 countries. Out of a total number of 161 articles, USA, China, England and Australia were the countries with the most contribution in the field of Blockchain Technology and Corporate Governance.

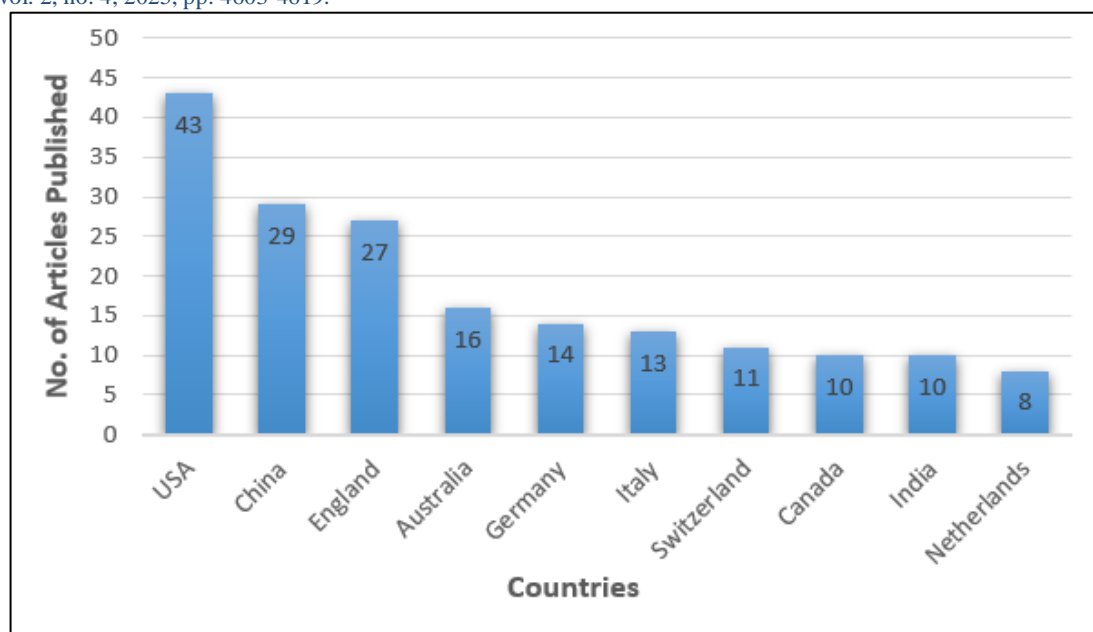


Figure-3: Research Paper Distribution: Country Wise

3.5 Bibliometric Coupling of Countries

Bibliographic coupling is a criterion of resemblance between study references that can be utilized to compare and contrast research findings (Gu et al., 2021). When two documents frequently quote a third study, this is known as bibliographic coupling (Boyack & Klavans, 2010). In terms of countries, bibliometric coupling happens when a manuscript from two nations refers to the third manuscript in their journals (Jarneving, 2007). This demonstrates how numerous regions utilize

identical publications and emphasise a similar subject in their publications (Jarneving, 2007).

In Figure-4, each node exemplifies a country/area, and each colour denotes a cluster, as can be seen from the following figure. In total, there are four clusters in the result. It's easy to observe how countries with the same colour focus on or confront the same issues. For example, in Figure 4, the 'red' cluster formed shows that nations like USA, China, are focusing on similar issues.

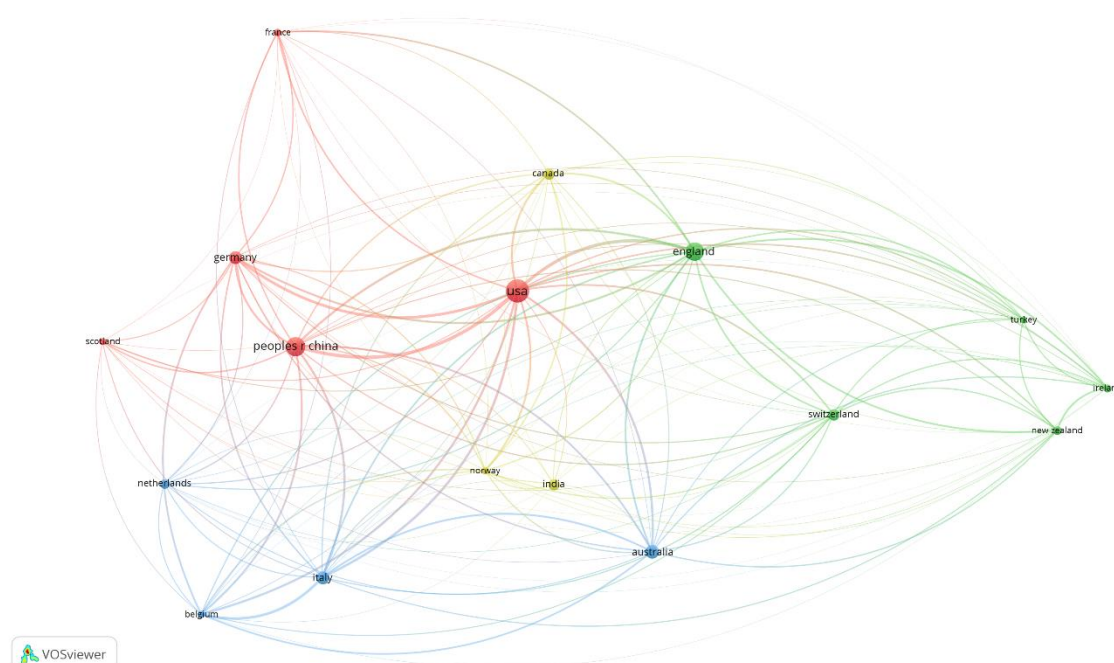


Figure-4: Bibliographic Coupling of Countries

3.6 Co-occurrence analysis of Keywords

The purpose of this analysis is to develop keyword networks and grouping keywords in order to discover the most important study fields in application of blockchain in corporate governance. When working with keywords,

the occurrence attribute tells how many times a keyword appears in a document (Jarneving, 2007). A keyword's minimum number of occurrences that was taken into account was five. Furthermore, all keywords were taken into account. Co-occurrences were utilised to deduce the

4. Cluster Analysis and Thematic Discussion

4.1 Cluster 1 'Red': Interface of Blockchain with Corporate Governance

Ezzi et al., (2022) focused on mediating effect of corporate governance on the relationship between blockchain technology and investment efficiency. Analysis based on the results using feasible generalised least squares (FGLS) shows that using blockchain technology has a large and favourable impact on the investment efficiency of businesses (Ezzi et al., 2022). Therefore, a positive effect of blockchain on investment efficiency is more pronounced for firms with good corporate governance practice. (Ezzi et al., 2022; Biswas

The adoption of blockchain technology by small and medium-sized businesses has the potential to lower their exposure to credit risk. According to (Mutamimah et al., 2022), this concept needs to be tested empirically on SMEs that have loans and use digital in their business transactions. Furthermore, because of involvement of only a few stakeholders, regulating a blockchain network can pose various challenges to the current centralised decision-making structures (Omar et al., 2021). For example, authorities are examining suitable regulations over blockchain-based virtual currencies for criminal activities such as money laundering according

to (Benedetti et al., 2020; Mačiulienė & Skaržauskienė, 2021). Adding to this, blockchain may also have an impact on world energy use and environmentalists might consider it as an indirect stakeholder in blockchain governance (Rehman et al., 2020). This necessitates the collaboration of regulators, policymakers and scholars in order to explore this area as to how this technology can help in strengthening corporate governance mechanisms (Yeoh, 2017). A study by (Rehman et al., 2020) focused on the mediating role of corporate governance in methodical adoption of blockchain technology by organisations which may help in reducing the overall agency costs as well as market frictions in the industry.

4.2 Cluster 2 ‘Green’: Digital Ledger Technology as an indispensable part of Blockchain Governance

In digital ledger, every player involved has access to the documents of transactions or modifications (CB Insights, 2022). The trades in the Blockchain are listed using a hash, which can be used as an unchangeable cryptographic signature. This implies it is an immutable ledger with high information protection. If one block from the series is changed, it becomes fairly clear. It would be quite hard for other parties to have the ability to break into the system without altering every block in the series across all dispersed versions. There is no shortage of use cases for blockchain adoption that promise to protect firms’ business dealings, manage assets differently, prevent theft, simplify and speed up organizational processes, reduce errors, and remove the necessity for third parties (Hughes et al., 2019). Cai, (2018) analyses present cryptocurrency platforms and alternatives and highlight the need for adequate governance. (Jayasuriya & Sims, 2020) provides a case for country-level governance with regard to cryptocurrencies and payment systems related to financial intermediaries.

According to (CB Insights, 2022; , Lafarre & Van der Elst, 2018), blockchain enables distributed trust and solves trust-based coordination problems, which could allow for a new form of non-hierarchical cooperation in order to emerge and replace “the traditional Hammurabi’s open-source approach” to governance. Its influence on corporate governance and the financial framework examined by Liu et al., (2021) is extraordinary. The techniques enabled by this digital transformation have transformed the essential concepts of Corporate Governance. For blockchain governance, (Frankenfield, 2018) cite the concept of “code is law,” where the law dictates the code for human actions, symbolising the ultimate purpose of blockchain governance to preserve human values. In addition, depending on whether the blockchain is permissioned (private) or permissionless (public), each party is given a unique “key,” similar to a password, to enter and verify the block (Akyildirim et al., 2020). This technology has the extra benefit of making transactions within the system more secure, time-consuming, and cost-effective than other options (Zavolokina et al., 2020). Because the technology may be utilised in a variety of applications, it appeals to both permissionless and permissioned blockchain users. Arner et al., (2022) research focuses on four application domains: cryptocurrencies, land

registries, intellectual property rights management, and supply chain management. A study by (Levine, 2019) also emphasised that, technology based on Blockchain can enable efficient data storage and security design through DLT which may further help organisations to meet their financial regulatory objectives, data regulatory objectives, and national security and developmental concerns.

4.3 Cluster 3 ‘Blue’: Blockchain Communication

“When it comes to data safety in the communication business, blockchain technology can set the standard higher”, says Steve Wei, CEO of TOP Network. For example, users will feel further satisfied sharing their timelines on a blockchain-based Facebook, because no centralized institution can manage their information (Appelbaum & Nehmer, 2019). Hackers can’t tamper with data or governments can’t control information because data is decentralised in nodes across the entire network” (Appelbaum & Nehmer, 2019). As a result, blockchain may establish seamless interfaces between applications via a decentralised cloud communication network (Levine, 2019; Felin & Lakhani, 2018). Appelbaum & Nehmer, (2019) suggested that future studies could explore how blockchain can considerably minimise the overall complexity of the communication process between distinct applications.

Blockchain technology is also thought to be an innovative technology that might help improve operational excellence (CB Insights, 2022; Cai, 2018). Blockchain, for example, has been shown to benefit the business process by lowering costs and increasing operational efficiency (Cai, 2018; Autore et al., 2020; Nguyen et al., 2021). Furthermore, one of the outcomes of a study performed by Avdzha, (2017) highlighted that the effectiveness of transparency and traceability in meeting consumer needs for product delivery is linked to the implementation of blockchain technology. The underlining literature also focuses on the desired and undesirable consequences of the human factor involved in decision-making in the firm's operations, as outlined by Sinha et al., (2009), however boosting transparency will have a longer-term advantage than an instant benefit. Firms would have to adjust to the increased transparency standard and also witness enhanced decision-making processes in blockchain as examined by (Andoni et al., 2019). Blockchain Technology can also be implemented by organisations for secure transmission of messages. Various system of payment messaging like SWIFT, Credit Card messaging can adopt this system in order to achieve enhanced security and efficiency (CB Insights, 2022; Levine, 2019)

4.4 Cluster 4 ‘Yellow’: Unlocking the Potential of Blockchain

Many businesses are interested in using blockchain technology's unique capabilities in their security architecture. Much research on digital currencies and blockchain technology have been conducted, indicating that both of these technologies will continue to alter the globe. Autore et al., (2020) said that capitalizing on blockchain technology may help to improve operational

safety. The adoption, enactment, and application of blockchain technology are rapidly increasing in several industries, such as the airline industry (Du et al., 2019). While some businesses and manufacturers, including Toyota, have begun to use blockchain in their internal undertakings (Toyota Motor Corp, 2020). Blockchain technology also has a glorious possibility in further areas like Healthcare, Education, Cyber Security, Digital advertising, Real estate, Supply chain management, etc. (Maleh et al., 2022). Through digital ledger, smart contracts, coding, peer-to-peer networking, and collaboration, blockchain technology can help to eliminate any tampering of information by other parties (Yermack, 2017). Only trust service providers can become transaction validators, according to Guggenberger et al. (2020), and formal political economy as mentioned by Lee & Ra (2020). As Fenwick et al. (2019) discovered how blockchain technology can improve the current corporate governance models, it was also observed that the new processes that emerge from this technology might have the potential to not only solve governance common problems like privacy, data protection, accountability, etc. but also help to increase overall performance and control (Maleh et al., 2022). Furthermore, blockchain technology also has an impact on how businesses operate, not only in terms of their relationships with financial institutions, but also in terms of creative procedures that impact the connection between managers, shareholders, investors, auditors, and other stakeholders (Yermack, 2017). As mentioned by, (Rehman et al., 2020), implementation of Blockchain Technology in various organisations may also help in increasing the overall investment efficiency.

5. Discussion

The present study provides a systematic review of the role of Blockchain Technology in Corporate Governance over the past five years. Recognizing and properly resolving the company's interaction with blockchain could be beneficial to corporate management. On the other hand, failing to manage the blockchain integration can be costly to the firm. Despite the fact that the blockchain revolution promises to eliminate middlemen, the limitations of blockchain oracles will still allow human contact to play a prominent role.

5.1 Conceptual Framework for Blockchain Adoption

This section provides various levels on which Blockchain Technology can be adopted by organizations. This discussion proposes levels on which Blockchain can be adopted by companies in order to strengthen corporate governance mechanism based on the underlining literature.

1. Management of Data: This is one of the most basic layers in which organisations can adopt Blockchain Technology. Here, the organisations can store and manage any confidential data or information by writing that data on the blocks of Blockchain. The data here is broken into small shards and is shared among various participants who are part of the system in a decentralized network. This makes it difficult for any third-party to

interfere or tamper with the data (Yermack, 2017; Benedetti et al., 2020). When compared to any centralized storage system, storage system on blockchain is more secure and potentially cheaper

In this layer, various organisations can use Blockchain Technology to secure data of users like personal information, medical records, payment information, etc. as well as ensure transparency of information among the members of the system which is one the key Governance issues that many organisations need to address (Shi et al., 2020). Also, this may help organisations in inspecting for any potential data modification, leaks or manipulation in future. The level of sensitiveness of the said data may be determined by the company's specific needs; the more explicit the data, the less complications companies will face in spotting any anomalies or irregularities in future (Benedetti et al., 2020).

2. Third Party Integration: This level deals with involvement of third parties like a validator or any co-contractor in order to communicate with the data that is written on the blocks. This process includes two phases, 1. confirmation of transaction, and 2. Validation of input (Benedetti et al., 2020). Organisations can utilize one of the major attributes of Blockchain Technology i.e., Distributed Ledger Technology. In this, blockchain can serve as distributed ledger in order to record and validate transactions between parties in a permanent and secure way (i-SCOOP, 2022). This could potentially introduce a new landscape in the auditing system and may reshape the way businesses are conducted (i-SCOOP, 2022). Here the information stored in Distributed Ledger can be used by auditors for verification of various transactions being reported. For example, when an auditor wants to verify a reported transaction, instead of requesting and waiting for third parties to provide relevant documents or statements they can easily verify these transactions from the ledger which already consists of a full record of transactions (Liu et al., 2019). Each of the organization's transactions record is connected in a cryptographic manner with the preceding records and the prior auditors' certification. As a result, any attempt to tamper with prior data will be exposed as soon as new data is uploaded to the blockchain (Liu et al., 2019).

There are many encryption approaches that allows an organisation to upload the data to the blocks followed by allowing the auditors to decrypt and verify the authenticity of the data simultaneously, thus enabling a system of automation of verification process which may be cost effective when compared to traditional auditing system. In future, it can pave way for various audit firms to conduct continuous assessment of records instead of year end or interim assessments (i-SCOOP, 2022; Liu et al., 2019)

3. Data Augmentation: This level deals with involvement of data from other external sources through integration of non-blockchain applications like various Application Programming Interface, Internet of Things, Public Registries, etc. Here, information is secured, enhanced and communicated through additional layers

of information from multiple sources instead of being stored or transmitted on the blockchain (Benedetti et al., 2020). This can be particularly helpful in case like Maintenance of Data, Freight Transportation or Voting in AGMs (Mutamimah et al., 2022)

In today's time organisations are under continual pressure from shareholders as well as the industries to ameliorate investor participation in order to maintain a robust CG culture (Mutamimah et al., 2022; Dutta et al., 2020). Voting based on blockchain will help organisations in overcoming various challenges like lack of control or visibility of votes, proxy votes, physical barriers, etc. Blockchain based voting can easily help in overcoming these challenges. When compared to traditional voting systems, blockchain based voting are more secure, transparent, cost effective and provide more confidentiality as well as security (Mutamimah et al., 2022). It will also help in accessing as well as easy tracking full voting history. In this process, each shareholder is provided two assets 1. Voting Right, 2. Voting Token. Shareholders will be able to cast their votes through voting token wherever they own voting right.

This level of adoption will help organisations in increasing shareholder participation in AGMs by removing physical barrier and making the overall process very fast, secure and transparent thereby providing a level of continuity to organisations without having the need to postpone meetings. This will help organisations in embracing a new dimension in which businesses are conducted and upholding a strong CG structure among investors as well as the shareholders. (Mutamimah et al., 2022)

4. Unification of Data: Finally, the 4th level combines all of the preceding components, resulting in multilateral data flow and augmentation, as well as value transfer among participants. A fully integrated system may help in exploring more secure payment solutions in order to

transfer value. Payment systems based on Blockchain Technology, such as Central Bank Digital Currencies (CBDC), stable coins, tokens, and even custom-designed private tokens, etc. may be used to transfer value (Benedetti et al., 2020). Moreover, a fully integrated adoption of Blockchain Technology may help in various aspects for like proving efficient compliance process like KYC through an integrated ledger system, fair and fast management of claim in insurance through smart contracts, quick and easy settlement of securities in major stock exchanges due to low operational cost, etc (CB Insights, 2022; EIPOA, 2022)

Organizations are not required to follow the above procedure in same sequence as mentioned above; therefore, these 4 stages are not necessarily in order of priority. Additionally, firms are not required to use the same degree of this technology for all of the procedures that are involved. However, it does help in giving a foundation for thinking about blockchain's use as a standalone software programme (Benedetti et al., 2020) This is a unique and practical solution that can be applied by utilising the existing technology of Blockchain. Nonetheless, this type of platform should not be considered as a replacement for contemporary monitoring and regulatory system at a corporate level. Rather, this platform may be recognized as a significant addition to existing internal and external controls. This framework can further be extended in order to incorporate more aspects of CG covering wide range of industries, shareholders, investors, etc. As a result, blockchain infrastructure may help organisations in improving and strengthening present corporate governance mechanisms by way of improved monitoring and regulatory systems, safe and secure management of relevant data and provide value in detecting, deterring or documentation of potential fraud in future (CB Insights, 2022; Mutamimah et al., 2022; Benedetti et al., 2020; EIPOA, 2022).

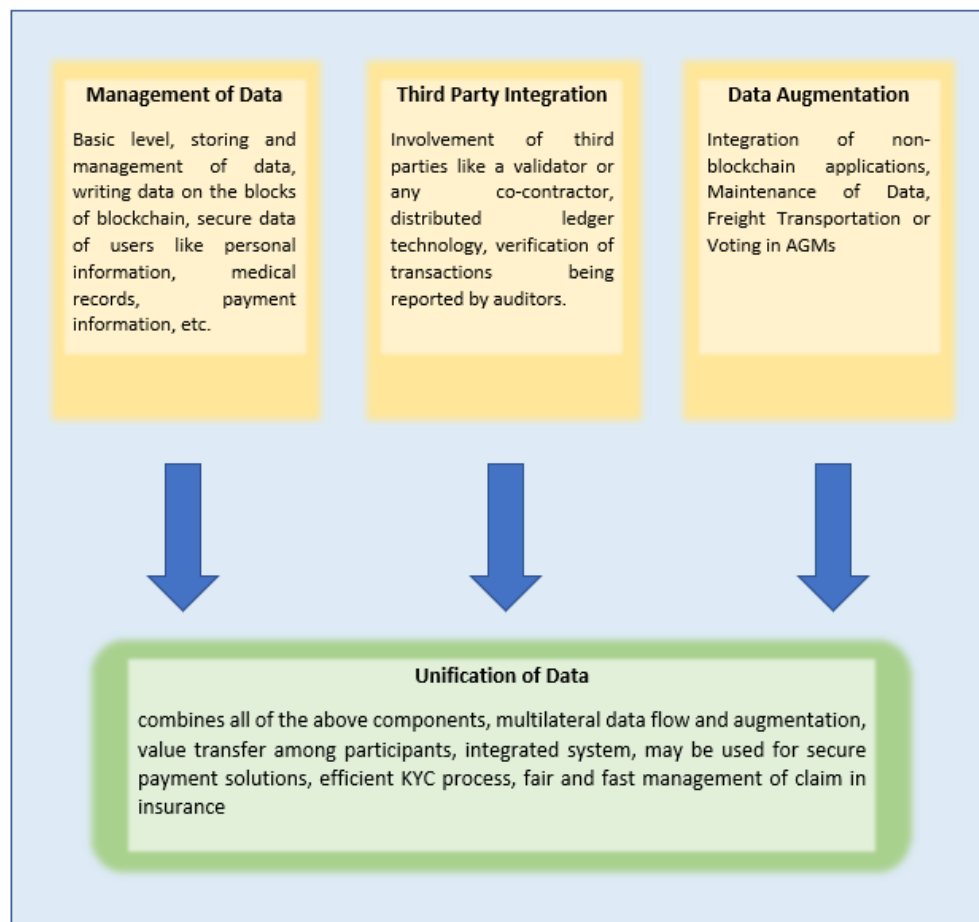


Figure 6: Conceptual Framework

6. Conclusion

Almost every sector of the corporate world can be transformed by blockchain technology. Whether in banking, insurance, general management, or marketing, it is touted as a fundamental symbol of the fourth industrial revolution and a major disruptor of numerous industries (Kaal, 2021; Gupta & Thomas, 2019). Blockchain-based digital governance has the potential to not only revolutionise company culture, but also to improve trust among various stakeholders (Pizzato, 2018). The study's primary purpose was to demonstrate how blockchain technology could be used to corporate governance (Yermack, 2017; Shi et al., 2020; Singh et al., 2019). For the first time in history, blockchain technology provides an environment for actors and institutions to work on neutral territory. Each member's contributions to an institution can be entirely transparently recorded. These ground-breaking technology capabilities enable the addition of blockchain-based agency structures to corporations and other types of commercial organisations. Blockchain technology has the ability to bring effective solutions to a variety of difficulties afflicting present corporate governance systems (Ahluwalia et al., 2020; Aich et al., 2021).

Our work is unique among its contemporaries in that it conducts a systematic evaluation of prior dispersed literature followed by a systematic review of Blockchain and its potential to improve corporate governance procedures. This study incorporates recent publications into its literature review (2017-2022). We provided a comprehensive quantitative and qualitative synthesis of the application of blockchain in corporate governance using data acquired from 161 papers that were selected using the PRISMA protocol. The number of studies published on the use of blockchain technology to better corporate governance procedures has been increasing in recent years. Additionally, among the sampled countries, the United States of America, China, and England are significant contributors in terms of publication volume. Additionally, the authors used Vosviewer software to analyse the selected articles, which assisted them in identifying four major themes/clusters emerging from the underlying literature: (1) Interface of Blockchain with Corporate Governance, (2) Blockchain Governance and Digital Ledger Technology as an indispensable part of Blockchain Governance, (3) Blockchain Communication, and (4) Unlocking Potential of Blockchain. To address corporate governance difficulties, particularly those

relating to the management of information and data, a conceptual framework was also presented to help grasp the features of blockchain technology in corporate governance.

Additionally, the research findings are consistent with the body of knowledge and show that corporate governance may evolve and benefit in novel ways under a blockchain system (Yermack, 2017; Biswas et al., 2016a; Pizzato, 2018; Singh et al., 2019; Tapscott & Tapscott, 2016; Van der Elst & Lafarre, 2017; Haque et al., 2020). Investors and financiers would gain from the ability to purchase shares at a discount and sell it in a more liquid market, but they would have difficulty concealing their trades (Gupta & Jain, 2017; Pizzato, 2018). Due to the increased visibility of their activities on the blockchain, managers who receive substantial incentives through stock-based pay may miss out on profit potential from legal insider trading (Yermack, 2017; Kansil & Singh, 2018). Additionally, the technology would preclude managers from backdating compensation awards or secretly pledging shares for derivative transactions. Shareholder voting would become more affordable and dependable. Businesses would employ blockchain technology to do real-time accounting, eliminating their reliance on and role in auditing services (Yermack, 2017; CB Insights, 2022; Haque et al., 2020). All of these positive improvements have the potential to significantly alter the relative influence of executives, shareholders, financiers, regulators, and third-party corporate governance specialists (EIPOA, 2022; Biswas et al., 2016c)

7. Implications

This paper also sheds light on various implications for academicians, researchers and other corporate participants.

7.1 Practical Implications

Blockchain technology has the ability to fundamentally alter how businesses operate. Given the enormous investments made by industry, academic research is required to study potential consequences and to assist businesses. The authors of this study offer various levels of adoption of Blockchain Technology that could assist an organisation in strengthening its corporate governance procedures. In recent years, the number of financial services available in many developing countries has gone down. This is because banks and other institutions have been trying to reduce risk and lower compliance costs in the wake of the financial crisis. Blockchain technology has the potential to change this trend and make more financial services available because it can lower the costs of regulations and increase transparency. Our research might help academics see the possible benefits of blockchain for their citizens, but they should also be aware of the risks. The governments of emerging markets are paying attention to this technology. Some have even put a lot of money into the technology, hoping to give their people and economies a technological edge by using it. Countries like China and India are working efficiently to include blockchain technology in their plans for economic growth. They are

also pushing regulators and the business world to work on new standards.

7.2 Theoretical Implication

From a theoretical standpoint, our paper may assist academicians and scholars in exploring elements related to various corporate governance theories, such as agency and stewardship theories. The basic objective of firms, according to Agency theory, is to safeguard shareholders and other stakeholders from executive discretion. Blockchain implementation may aid in enhancing transparency and drastically altering managers' incentives and profit potential. Furthermore, Stewards are firm executives and managers who endeavour to safeguard and make profits for the shareholders, according to Stewardship ideology. Adoption of blockchain technology would aid in lowering information asymmetry and changing ways to make money and get an edge for institutional investors, insiders, and traders of all stripes.

8. Future Research Directions

1. Interface of Blockchain with Corporate Governance

- The blockchain, in its capacity as a development platform, offers a groundwork for new groups of software applications that are cryptographically secure and do not rely on a central authority. The removal of third-party intermediaries combined with convergent solutions such as IoT and AI can help corporations in driving down costs, and lowering barriers to entry (Hughes et al., 2019; Yermack, 2017; Swan, 2015; Nakamoto, 2008). Future research in order to verify this statement can be significant.
- (Andreassen et al., 2018; Hughes et al., 2019) wonder how suppliers that build BT-based applications will be differentiated from rivals in the market. In order to extend this argument further within the context of the dynamic capabilities-based vision of the company, the authors believe that additional study is required. There is currently no evidence to support or refute the claim that blockchain model enhances competitive advantage in modern company.
- According to (Schneier, 2018; Murray et al., 2021) blockchain may provide the impetus for new research on the importance of trust in contracting decisions. Future research might examine the influence of smart contracts enabled by blockchain technology on automating various areas of an organization's decision-making environment and the firm's long-term performance.
- Future research focusing on how blockchain technology can improve firm performance specially for small businesses can be insightful. There is a dearth of study regarding how blockchain can drive sustainability in developing economies like India as compared to other developed economies.

2. Digital Ledger Technology as an indispensable part of Blockchain Governance

- Blockchain has the potential to completely change the way accounting and auditing process are conducted (Lombardi et al., 2021; Appelbaum & Nehmer, 2019;

Liu et al., 2019). Since blockchain can act as an immutable ledger, future researchers can verify this statement in order to provide a more comprehensive outlook.

- According to (Hughes et al., 2019), our current healthcare system is plagued with information siloes and inefficient data interchanges between electronic health record vendors, providers, insurance companies, research organizations, and patients. Blockchains have the ability to transform the storage, management, and efficient interchange of health data amongst healthcare companies while preserving their incentives. In future research, an impact analysis can be conducted to investigate this assertion.
- There is lack of development framework for blockchain adoption by corporations. The conceptual framework provided in this paper which was based on framework provided by (Benedetti et al., 2020). This framework was further modified in order to include other factors relevant to a developing corporate environment like India. In future this framework can further be modified in order to broaden the understanding of blockchain for managers and policy makers.
- Blockchain integrated with Internet of Things (IOT) can significantly impact how operations are conducted in supply chain management. Future researchers can explore this dimension of blockchain and can conduct an impact analysis.

3. Blockchain Communication

- According to ((Mazzina, n.d.), omnichannel communication is the goal of many customer service organizations, but stitching together an ongoing conversation across all possible channels is a technical challenge, to say the least. Future research on how decentralized network of blockchain can impact Omnichannel communication can be impactful.
- According to (Mazzina, n.d., Reiff, 2018; Seth, 2018) very few countries, or companies, have solved identification. Social Security Numbers, physical identification cards, and combinations of semi-private information (date of birth, favourite band as a teenager) all have limited security and applicability to digital identity. As a result, many customer communications are hindered since it is difficult to determine whether the recipient is the intended client. Significant further study in this area is possible.

4. Unlocking Potential of Blockchain

- According to Katiyar, (2022) the blockchain offers superior data security and integrity. Encryption and other security measures are useful for preventing data breaches, but they do not guarantee comprehensive protection. Future researchers can investigate this statement in order to assess the impact of blockchain in data management.
- According to Reiff, (2018) Traditionally, the transfer of value has been both expensive and slow, and especially for payments taking place across international borders. Future research on how blockchain can improve cross border payment can be insightful.

- According to Seth, (2018), though blockchain is acknowledged as an efficient and secure data storage system, the process of creating, running, and managing a blockchain is very complex. This system's complexity has discouraged many firms and organisations from implementing it, despite its obvious advantages. Future studies can examine this assertion and analyse the possibility of blockchain as a service.

9. Limitations of Study

This section sheds light on various limitations of our study. First of all, since the authors have conducted a systematic review of the literature, there is likelihood that some subjective biases might be involved. This is mainly because of the different thought processes and mindsets that various scholars or researchers have, which may lead to contrasting outcomes. Secondly, the study contains small sample period of 2017 to 2022. Thirdly, Although the authors have done their best to choose a relevant combination of keywords when picking research papers from the Web of Science database, it is possible that some crucial keywords have been ignored, which could result in the exclusion of certain essential research publications. Fourthly, this study revealed that the major theoretical approaches applied in the papers reviewed were based on frameworks propositions and were conceptual in nature. This paves way for other methods and the necessities to develop various empirical based studies in the future.

References

1. Aggarwal, P., & Manaswi, K. (2022). Role of Circular Economy, Industry 4.0 and Supply Chain Management for Tribal Economy: A Systematic Review. *Journal of the Anthropological Survey of India*, 17(2), 265–280. <https://doi.org/10.1177/2277436x221125914>
2. Ahluwalia, S., Mahto, R. V., & Guerrero, M. (2020). Blockchain technology and startup financing: A transaction cost economics perspective. *Technological Forecasting and Social Change*, 119854. <https://doi.org/10.1016/j.techfore.2019.119854>
3. Aich, S., Tripathy, S., Joo, M.-I., & Kim, H.-C. (2021). Critical Dimensions of Blockchain Technology Implementation in the Healthcare Industry: An Integrated Systems Management Approach. *Sustainability*, 9, 5269. <https://doi.org/10.3390/su13095269>
4. Akyildirim, E., Corbet, S., Sensoy, A., & Yarovaya, L. (2020). The impact of blockchain related name changes on corporate performance. *Journal of Corporate Finance*, 101759. <https://doi.org/10.1016/j.jcorpfin.2020.101759>
5. Alkhudary, R., Brusset, X., & Fenies, P. (2020). Blockchain in general management and economics: a systematic literature review. *European Business Review*, 4, 765–783. <https://doi.org/10.1108/eb-11-2019-0297>
6. Andoni, M., Robu, V., Flynn, D., Abram, S., Geach, D., Jenkins, D., McCallum, P., & Peacock, A. (2019). Blockchain technology in the energy sector: A systematic review of challenges and opportunities.

- Renewable and Sustainable Energy Reviews*, 143–174. <https://doi.org/10.1016/j.rser.2018.10.014>
7. Andreassen, T. W., Lervik-Olsen, L., Snyder, H., Van Riel, A. C. R., Sweeney, J. C., & Van Vaerenbergh, Y. (2018). Business model innovation and value-creation: the triadic way. *Journal of Service Management*, 5, 883–906. <https://doi.org/10.1108/josm-05-2018-0125>
8. Appelbaum, D., & Nehmer, R. A. (2019). Auditing Cloud-Based Blockchain Accounting Systems. *Journal of Information Systems*, 2, 5–21. <https://doi.org/10.2308/isys-52660>
9. Arner, D. W., Castellano, G., & Selga, E. (2022). Financial Data Governance: The Datafication of Finance, the Rise of Open Banking and the End of the Data Centralization Paradigm. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.4040604>
10. Autore, D. M., Clarke, N., & Jiang, D. (2020). Blockchain speculation or value creation? Evidence from corporate investments. *Financial Management*, 3, 727–746. <https://doi.org/10.1111/fima.12336>
11. Avdzha, A. K. (2017). The Coming Age of Blockchain Technology in Corporate Governance. *Unpublished*. <https://doi.org/10.13140/RG.2.2.22468.94083>
12. Bandara, W., Furtmueller, E., Gorbacheva, E., Miskon, S., & Beekhuizen, J. (2015). Achieving Rigor in Literature Reviews: Insights from Qualitative Data Analysis and Tool-Support. *Communications of the Association for Information Systems*. <https://doi.org/10.17705/1cais.03708>
13. Benedetti, H., Nikbakht, E., Sarkar, S., & Spieler, A. C. (2020). Blockchain and corporate fraud. *Journal of Financial Crime*, 3, 702–721. <https://doi.org/10.1108/jfc-09-2020-0187>
14. Biswas, U. A., Garg, S., & Singh, A. (2016a). Government intervention and corporate social responsibility in India. *International Journal of Indian Culture and Business Management*, 4, 450. <https://doi.org/10.1504/ijicbm.2016.079813>
15. Biswas, U. A., Garg, S., & Singh, A. (2016b). The need for regulatory intervention in corporate social responsibility in India: evidence from corporate social disclosures. *International Journal of Indian Culture and Business Management*, 3, 293. <https://doi.org/10.1504/ijicbm.2016.075534>
16. Biswas, U. A., Garg, S., & Singh, A. (2016c). Examining the possibility of achieving inclusive growth in India through corporate social responsibility. *Asian Journal of Business Ethics*, 1–2, 61–80. <https://doi.org/10.1007/s13520-016-0055-5>
17. Boyack, K. W., & Klavans, R. (2010). Co-citation analysis, bibliographic coupling, and direct citation: Which citation approach represents the research front most accurately? *Journal of the American Society for Information Science and Technology*, 12, 2389–2404. <https://doi.org/10.1002/asi.21419>
18. Cai, C. W. (2018). Disruption of financial intermediation by FinTech: a review on crowdfunding and blockchain. *Accounting & Finance*, 4, 965–992. <https://doi.org/10.1111/acfi.12405>
19. Casino, F., Dasaklis, T. K., & Patsakis, C. (2019). A systematic literature review of blockchain-based applications: Current status, classification and open issues. *Telematics and Informatics*, 55–81. <https://doi.org/10.1016/j.tele.2018.11.006>
20. CB Insights. (2022). *65 big industries blockchain could transform* | CB Insights Research. CB Insights Research; CB Insights. <https://www.cbinsights.com/research/industries-disrupted-blockchain/>
21. Cong, L. W., & He, Z. (2019). Blockchain Disruption and Smart Contracts. *The Review of Financial Studies*, 5, 1754–1797. <https://doi.org/10.1093/rfs/hhz007>
22. Du, W. (Derek), Pan, S. L., Leidner, D. E., & Ying, W. (2019). Affordances, experimentation and actualization of FinTech: A blockchain implementation study. *The Journal of Strategic Information Systems*, 1, 50–65. <https://doi.org/10.1016/j.jsis.2018.10.002>
23. Dutta, P., Choi, T.-M., Somani, S., & Butala, R. (2020). Blockchain technology in supply chain operations: Applications, challenges and research opportunities. *Transportation Research Part E: Logistics and Transportation Review*, 102067. <https://doi.org/10.1016/j.tre.2020.102067>
24. EIOPA. (2022). *Discussion paper on blockchain and smart contracts in insurance: EIOPA invites comments* | Eiopa. Eiopa - European Commission. https://www.eiopa.europa.eu/media/news/discussion-paper-blockchain-and-smart-contracts-insurance-eiopa-invites-comments-0_en?source=search
25. Erthal, A., & Marques, L. (2018). National culture and organisational culture in lean organisations: a systematic review. *Production Planning & Control*, 8, 668–687. <https://doi.org/10.1080/09537287.2018.1455233>
26. Ezzi, F., Abida, M., & Jarboui, A. (2022). The Mediating Effect of Corporate Governance on the Relationship Between Blockchain Technology and Investment Efficiency. *Journal of the Knowledge Economy*. <https://doi.org/10.1007/s13132-022-00892-4>
27. Felin, T., & Lakhani, K. (2018). *What Problems Will You Solve With Blockchain?* MIT Sloan Management Review. <https://sloanreview.mit.edu/article/what-problems-will-you-solve-with-blockchain/>
28. Fenwick, M., McCahery, J. A., & Vermeulen, E. P. M. (2019). The End of ‘Corporate’ Governance: Hello ‘Platform’ Governance. *European Business Organization Law Review*, 1, 171–199. <https://doi.org/10.1007/s40804-019-00137-z>
29. Frankenfield, J. (2017, April 18). *Smart Contracts Definition*. Investopedia; Investopedia. <https://www.investopedia.com/terms/s/smart-contracts.asp>
30. Frankenfield, J. (2018, April 10). *Permissioned Blockchain Definition*. Investopedia; Investopedia. <https://www.investopedia.com/terms/p/permissioned-blockchains.asp>
31. *Global Blockchain Survey 2018*. (2018, July 18). Deloitte. <https://www2.deloitte.com/tr/en/pages/financial->

- services/articles/2018-global-blockchain-survey.html
32. Gu, Z., Meng, F., & Farrukh, M. (2021). Mapping the Research on Knowledge Transfer: A Scientometrics Approach. *IEEE Access*, 34647–34659. <https://doi.org/10.1109/access.2021.3061576>
33. Guggenberger, T., Schweizer, A., & Urbach, N. (2020). Improving Interorganizational Information Sharing for Vendor Managed Inventory: Toward a Decentralized Information Hub Using Blockchain Technology. *IEEE Transactions on Engineering Management*, 4, 1074–1085. <https://doi.org/10.1109/tem.2020.2978628>
34. Gupta, V., & Jain, V. (2017). Harnessing information and communication technologies for effective knowledge creation. *Journal of Entrepreneurship and Information Management*, 5, 253–263. <https://doi.org/http://dx.doi.org/10.1108/jeim-10-2016-0173>
35. Gupta, V., & Thomas, A. (2019). Fostering tacit knowledge sharing and innovative work behaviour: an integrated theoretical view. *International Journal of Managerial and Financial Accounting*, 3/4, 320. <https://doi.org/10.1504/ijmfa.2019.104134>
36. Haque, R., Sarwar, H., Kabir, S. R., Forhat, R., Sadeq, M. J., Akhtaruzzaman, Md., & Haque, N. (2020). Blockchain-Based Information Security of Electronic Medical Records (EMR) in a Healthcare Communication System. In *Intelligent Computing and Innovation on Data Science* (pp. 641–650). Springer Singapore. http://dx.doi.org/10.1007/978-981-15-3284-9_69
37. Hughes, A., Park, A., Kietzmann, J., & Archer-Brown, C. (2019). Beyond Bitcoin: What blockchain and distributed ledger technologies mean for firms. *Business Horizons*, 2, 273–281. <https://doi.org/10.1016/j.bushor.2019.01.002>
38. Iden, J., Methlie, L. B., & Christensen, G. E. (2017). The nature of strategic foresight research: A systematic literature review. *Technological Forecasting and Social Change*, 87–97. <https://doi.org/10.1016/j.techfore.2016.11.002>
39. i-SCOOP. (2022). *Blockchain technology and distributed ledger technology (DLT) in business*. I-SCOOP; <https://www.facebook.com/iscoopbiz>. <https://www.i-scoop.eu/blockchain-distributed-ledger-technology/>
40. Jarneving, B. (2007). Bibliographic coupling and its application to research-front and other core documents. *Journal of Informetrics*, 4, 287–307. <https://doi.org/10.1016/j.joi.2007.07.004>
41. Jayasuriya Daluwathumullagamage, D., & Sims, A. (2020). Blockchain-Enabled Corporate Governance and Regulation. *International Journal of Financial Studies*, 2, 36. <https://doi.org/10.3390/ijfs8020036>
42. Kaal, W. A. (2021). *Blockchain-Based Corporate Governance · Stanford Journal of Blockchain Law & Policy*. Stanford Journal of Blockchain Law & Policy; PubPub. <https://stanford-jblp.pubpub.org/pub/blockchain-corporate-governance/release/1#:~:text=Blockchain%2Dbased%20technology%20has%20begun,connectivity%2C%20crowds%2C%20and%20collaboration>
43. Kansil, R., & Singh, A. (2018). Sustainability enhancement of corporate governance regime in India. *World Journal of Science, Technology and Sustainable Development*, 2, 186–199. <https://doi.org/10.1108/wjstd-08-2017-0026>
44. Katiyar, I. (2022, April 28). *Applications of Blockchain in Data Management - GeeksforGeeks*. GeeksforGeeks. <https://www.geeksforgeeks.org/applications-of-blockchain-in-data-management/#:~:text=Blockchain%20technology%20has%20enormous%20potential,orders%2C%20payments%2C%20and%20more>
45. Kontinen, T., & Ojala, A. (2010). The internationalization of family businesses: A review of extant research. *Journal of Family Business Strategy*, 2, 97–107. <https://doi.org/10.1016/j.jfbs.2010.04.001>
46. Lafarre, A., & Van der Elst, C. (2018). Blockchain Technology for Corporate Governance and Shareholder Activism. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3135209>
47. Lee, K. M., & Ra, I. (2020). Data privacy-preserving distributed knowledge discovery based on the blockchain. *Information Technology and Management*, 4, 191–204. <https://doi.org/10.1007/s10799-020-00317-1>
48. Levine, E. (2019, March 6). *Four Ways Blockchain Technology Will Disrupt Telecommunications / HackerNoon*. HackerNoon - Read, Write and Learn about Any Technology. <https://hackernoon.com/four-ways-blockchain-technology-will-disrupt-telecommunications-48357404928c>
49. Liu, M., Wu, K., & Xu, J. J. (2019). How Will Blockchain Technology Impact Auditing and Accounting: Permissionless versus Permissioned Blockchain. *Current Issues in Auditing*, 2, A19–A29. <https://doi.org/10.2308/ciia-52540>
50. Liu, Y., & Lu, Q. (2021). *A Systematic Literature Review on Blockchain Governance*. ArXiv.Org. <https://arxiv.org/abs/2105.05460>
51. Lombardi, R., de Villiers, C., Moscariello, N., & Pizzo, M. (2021). The disruption of blockchain in auditing – a systematic literature review and an agenda for future research. *Accounting, Auditing & Accountability Journal*, 7, 1534–1565. <https://doi.org/10.1108/aaaj-10-2020-4992>
52. Mačiulienė, M., & Skaržauskienė, A. (2021). Conceptualizing blockchain-based value co-creation: A service science perspective. *Systems Research and Behavioral Science*, 3, 330–341. <https://doi.org/10.1002/sres.2786>
53. Maleh, Y., Lakkineni, S., Tawalbeh, L., & AbdEl-Latif, A. A. (2022). Blockchain for Cyber-Physical Systems: Challenges and Applications. In *Internet of Things* (pp. 11–59). Springer International Publishing. http://dx.doi.org/10.1007/978-3-030-93646-4_2
54. Mazzina, A. (12 C.E.). *Blockchain and Customer Communication*. Business Phone, VoIP, Communication APIs, Contact Center | Vonage; Vonage.

- <https://www.vonage.com/resources/articles/blockchain-customer-communication/>
55. Meng, L., & Xing, S. (2021). Research on the Application of Blockchain Technology in the Field of Corporate Governance. *E3S Web of Conferences*, 01064. <https://doi.org/10.1051/e3sconf/202127501064>
56. Murray, A., Kuban, S., Josefy, M., & Anderson, J. (2021). Contracting in the Smart Era: The Implications of Blockchain and Decentralized Autonomous Organizations for Contracting and Corporate Governance. *Academy of Management Perspectives*, 4, 622–641. <https://doi.org/10.5465/amp.2018.0066>
57. Mutamimah, M., Alifah, S., & Adnjani, M. D. (2022). Blockchain Technology as Corporate Governance Innovation Model for SMEs. In *Advances in Intelligent Networking and Collaborative Systems* (pp. 253–263). Springer International Publishing. <https://www.globalcustodian.com/blog/agm-voting-goes-electronic-blockchain/>
58. Nakamoto, S. (2008). *Bitcoin: A Peer-to-Peer Electronic Cash System / Bitcoin Paper*. Bitcoin.Org. <https://www.bitcoinpaper.info/bitcoinpaper-html/>
59. Nguyen, L. T. Q., Hoang, T. G., Do, L. H., Ngo, X. T., Nguyen, P. H. T., Nguyen, G. D. L., & Nguyen, G. N. T. (2021). The role of blockchain technology-based social crowdfunding in advancing social value creation. *Technological Forecasting and Social Change*, 120898. <https://doi.org/10.1016/j.techfore.2021.120898>
60. Omar, I. A., Hasan, H. R., Jayaraman, R., Salah, K., & Omar, M. (2021). Implementing decentralized auctions using blockchain smart contracts. *Technological Forecasting and Social Change*, 120786. <https://doi.org/10.1016/j.techfore.2021.120786>
61. Perianes-Rodriguez, A., Waltman, L., & van Eck, N. J. (2016). Constructing bibliometric networks: A comparison between full and fractional counting. *Journal of Informetrics*, 4, 1178–1195. <https://doi.org/10.1016/j.joi.2016.10.006>
62. Pizzato, L. (2018, June 21). *Cygnatise wins Most Efficient Blockchain-based Application Software 2018*. Cygnatise; Cygnatise. <https://www.cygnatise.com/blog/6-2018-cygnatise-wins-most-efficient-blockchain-based-application-software-2018>
63. Rehman Khan, S. A., Yu, Z., Sarwat, S., Godil, D. I., Amin, S., & Shujaat, S. (2021). The role of blockchain technology in circular economy practices to improve organisational performance. *International Journal of Logistics Research and Applications*, 4–5, 605–622. <https://doi.org/10.1080/13675567.2021.1872512>
64. Rehman, M. H. ur, Salah, K., Damiani, E., & Svetinovic, D. (2020). Trust in Blockchain Cryptocurrency Ecosystem. *IEEE Transactions on Engineering Management*, 4, 1196–1212. <https://doi.org/10.1109/tem.2019.2948861>
65. Reiff, N. (2018, May 27). *Forget Bitcoin: Blockchain is the Future*. Investopedia; Investopedia. <https://www.investopedia.com/tech/forget-bitcoin-blockchain-future/#:~:text=Blockchain%20could%20be%20used%20to,ownership%2C%20titles%2C%20and%20more.>
66. Schneier, B. (2019, February 6). *There's No Good Reason to Trust Blockchain Technology | WIRED*. WIRED; WIRED. <https://www.wired.com/story/theres-no-good-reason-to-trust-blockchain-technology/>
67. Seth, S. (2018, April 23). *All About Amazon's New Blockchain Service*. Investopedia; Investopedia. <https://www.investopedia.com/news/all-about-amazons-new-blockchain-service/>
68. Shamseer, L., Moher, D., Clarke, M., Ghersi, D., Liberati, A., Petticrew, M., Shekelle, P., & Stewart, L. A. (2015). Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015: elaboration and explanation. *BMJ*, jan02 1, g7647–g7647. <https://doi.org/10.1136/bmj.g7647>
69. Shi, S., He, D., Li, L., Kumar, N., Khan, M. K., & Choo, K.-K. R. (2020). Applications of blockchain in ensuring the security and privacy of electronic health record systems: A survey. *Computers & Security*, 101966. <https://doi.org/10.1016/j.cose.2020.101966>
70. Singh, A., & Kansil, R. (2017). Impact of foreign shareholdings on corporate governance score: evidence from Bombay Stock Exchange, India. *International Journal of Business and Globalisation*, 1, 93. <https://doi.org/10.1504/ijbg.2017.085116>
71. Singh, H., Jain, G., Munjal, A., & Rakesh, S. (2019). Blockchain technology in corporate governance: disrupting chain reaction or not? *Corporate Governance: The International Journal of Business in Society*, 1, 67–86. <https://doi.org/10.1108/cg-07-2018-0261>
72. Sinha, N., Kakkar, N. K., & Gupta, V. (2009). Unleash the power of creativity and innovation. *International Journal of Sustainable Strategic Management*, 4, 417. <https://doi.org/10.1504/ijssm.2009.030515>
73. Sinha, N., Kakkar, N. K., & Gupta, V. (2011). Uncovering the secrets of the twenty-first-century organization. *Global Business and Organizational Excellence*, 2, 49–56. <https://doi.org/10.1002/joe.21414>
74. Swan, M. (2015). *Blockchain: Blueprint for a New Economy* (p. 12). O'Reilly Media.
75. Tandon, A., Kaur, P., Mäntymäki, M., & Dhir, A. (2021). Blockchain applications in management: A bibliometric analysis and literature review. *Technological Forecasting and Social Change*, 120649. <https://doi.org/10.1016/j.techfore.2021.120649>
76. Tapscott, D., & Tapscott, A. (2016, May 10). *The Impact of the Blockchain Goes Beyond Financial Services*. Harvard Business Review. <https://hbr.org/2016/05/the-impact-of-the-blockchain-goes-beyond-financial-services>
77. Toyota Motor Corp. (2020). *Toyota Blockchain Lab, Accelerating Blockchain Technology Initiatives and*

- External Collaboration / Corporate / Global Newsroom / Toyota Motor Corporation Official Global Website*. Toyota Motor Corporation Official Global Website. <https://global.toyota/en/newsroom/corporate/31827481.html>
78. Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a Methodology for Developing Evidence-Informed Management Knowledge by Means of Systematic Review. *British Journal of Management*, 3, 207–222. <https://doi.org/10.1111/1467-8551.00375>
 79. UN. (2021). *Harnessing blockchain for sustainable development* (pp. 33–45). UN Report. <http://dx.doi.org/10.18356/9789214030430c007>
 80. Vacca, A., Di Sorbo, A., Visaggio, C. A., & Canfora, G. (2021). A systematic literature review of blockchain and smart contract development: Techniques, tools, and open challenges. *Journal of Systems and Software*, 110891. <https://doi.org/10.1016/j.jss.2020.110891>
 81. Van der Elst, C., & Lafarre, A. (2017). Bringing the AGM to the 21st Century: Blockchain and Smart Contracting Tech for Shareholder Involvement. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.2992804>
 82. van Eck, N. J., & Waltman, L. (2014). Visualizing Bibliometric Networks. In *Measuring Scholarly Impact* (pp. 285–320). Springer International Publishing. http://dx.doi.org/10.1007/978-3-319-10377-8_13
 83. Webster, J., & Watson, R. T. (2002). *Analyzing the Past to Prepare for the Future: Writing a Literature Review*. JSTOR. <https://www.jstor.org/stable/4132319>
 84. Wörner, D., Bombard, T. V., Schreier, Y.-P., & Bilgeri, D. (2016). “*THE BITCOIN ECOSYSTEM: DISRUPTION BEYOND FINANCIAL SERVICES?*” by Dominic Wörner, Thomas Von Bomhard et al. AIS Electronic Library (AISeL). https://aisel.aisnet.org/ecis2016_rp/33/
 85. Yeoh, P. (2017). Regulatory issues in blockchain technology. *Journal of Financial Regulation and Compliance*, 2, 196–208. <https://doi.org/10.1108/jfrc-08-2016-0068>
 86. Yermack, D. (2017). Corporate Governance and Blockchains. *Review of Finance*, rfw074. <https://doi.org/10.1093/rof/rfw074>
 87. Zavolokina, L., Schlegel, M., & Schwabe, G. (2020). How can we reduce information asymmetries and enhance trust in ‘The Market for Lemons’? *Information Systems and E-Business Management*, 3, 883–908. <https://doi.org/10.1007/s10257-020-00466-4>