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A Meta-Analysis of Big Data Security: Using Blockchain for One Data Governance, Case Study of Local Tax Big Data in Indonesia

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ABSTRACT
The Presidential Decree on One Data Indonesia is intended to regulate data generated by central agencies and regional institutions to support development planning, implementation, evaluation, and control, including regional taxes. Blockchain has the potential to become the primary tech that governs the way our cities function in the future. Big data in supporting the implementation of One Data raises problems about the operation and data management mechanisms, related to how the form of privacy protects data. This study analyzes the background of the Blockchain concept, current, and emerging trends in its development, followed by a survey of potential urban applications with particular attention to the governance domain, secondly analyzing Blockchain as a technology to improve data interoperability and security, and honesty. Third, this paper presents the challenges that must be overcome to enable the widespread adoption and dissemination of technology. This research data is from an international article (Scopus) with the keyword Blockchain. The data analysis stage was carried out with VOSviewer software. The findings of this study using the Blockchain framework, Local Taxes Big Data can be improved significantly on data security, interoperability, and honesty. Blockchain is built based on security with protection of confidentiality, integrity.

Keywords: *Big data Security, Blockchain, Local Tax, One Data Governance, Indonesia.*

1. INTRODUCTION

Blockchain has become popular with the advent of Bitcoin. However, this technology is not limited to the financial sector. Blockchain originally meant blocks of cryptocurrencies linked by chains. This new concept received significant attention in FinTech (Financial Technology) [1]. It combines several computer technologies, including distributed data storage, the point-to-point transmission of consensus mechanisms, and encryption algorithms. Blockchain has been identified as an innovation in data security whose network-based system was developed to create a secure, intelligent, and transparent distributed ledger and build digital trust [2],[3]. As blockchain is a breakthrough in data storage and information transmission, it fundamentally changes the existing financial and economic operating models, leading to a new round of technological innovation and industrial transformation in the FinTech industry [4].

Recently, international institutions, including the United Nations, the International Monetary Fund, as well as developed countries such as the US, UK, and

Japan, have been paying attention to blockchain developments and exploring its applications in various fields [4]. Furthermore, China, Russia, India, South Africa, and other countries also successively started research on blockchain technology. In February 2016, during a discussion on issues related to digital currencies, the Governor of the People's Bank of China (PBOC), Zhou Xiaochuan, mentioned that blockchain technology is a possible option. As such, the PBOC has spent a lot of resources researching the application of blockchain technology. On October 18, 2016, the Ministry of Industry and Information Technology published the “China Blockchain Technology and Application Development White Paper [4], which analyzes the current status of blockchain technology and proposes recommendations for future development.

Each block, bound by cryptography, contains a cryptographic hash of the previous block, a timestamp, and transaction data. The first blockchain was conceptualized by Satoshi Nakamoto in 2008, who used methods such as Hash cash to add blocks to the chain without a trusted third party[1], [5]. Blockchain, a rapidly evolving financial technology, is revolutionizing the way people deal with business [5]. Blockchain is attracting attention as the underlying technology for Bitcoin and other cryptocurrencies [6] because it is seen as a new foundation for transactions in the world [6]. Blockchain is a continuous database of accounts, which is complete, distributed, and immutable [7]. The best part of blockchain is that it is a decentralized system with a very long chain of security. An important feature is the distributed trust offered by Blockchain (1): removing trusted third parties to facilitate transactions and (2) reducing trading costs and (3) reducing time. Thus, Blockchain is expected to spark an industrial and commercial revolution and promote economic reform around the world [1], showing a view on how Blockchain supports transactions between the two parties. First, Blockchain uses encryption to generate digital security codes. Then the user can validate the transaction without any personal information. Since records in Blockchain are immutable, transactions will be completed automatically and distributed. Taspott [8] points out five main principles of Blockchain: (1) Computational Logic, (2) Peer-to-Peer Transmission, (3) Irreversibility of Records, (4) Distributed Databases, and (5) Transparency under pseudonyms. Another approach is to use a conceptual framework to integrate the important components. For example, Pazaitis [9], uses the concept of Back-feed to illustrate how to integrate production, recording, and value actualization together that can rival industrial and information economies.

Code Blockchain presents some interesting features and new over a centralized ledger. However, apart from recording the timing and details of transactions, they can also play a more active and potentially autonomous role in the management and execution of transactions. By embedding code in the blockchain, transactions can be executed automatically in response to certain conditions being met, providing an 'execution guarantee'. Self-executing smart contracts based on this functionality are growing rapidly. Questions arise however when code and law become one [10]. There are areas of law that are vulnerable to exploitation where contracts are not considered part of traditional legal jurisdictions. Examples include taxation (eg on income, sales, inheritance, and capital gains), exploitation (eg on rents and employment contracts), and corporate crimes (eg price-fixing and insider trading). It may be necessary to find new ways to assert the superiority of national laws if the automation involved in smart contracts makes them difficult to enforce.

New government responsibilities can arise in the process of applying traditional judicial processes to smart contracts, such as arbitration when bugs are found in the contract code. When programmers start translating agreements into executable code, they are effectively making decisions about how they will be implemented. Smart contract practices can become inflexible and unable to adapt to changing circumstances or parties' preferences. Not all possible questions can be answered in advance, and there will always be unforeseen circumstances that require interpretation of how contractual clauses should be applied. The code is too rigid to allow all contracts to be determined algorithmically. Adjudication of contract disputes and enforcement of contract clauses can present challenges as the field evolves. Traditional contract law, particularly record-keeping requirements and rules of evidence, needs to be modified to take into account the automatic and deterministic nature of smart contracts, as well as issues related to their validity and enforceability. The legislation is expected to face challenging questions regarding the need to establish physical relationships, carry out necessary validation procedures and ensure compliance of blockchain applications with applicable laws. Should technical codes approached through the lens of Lessig be the most significant form of law? Criteria are needed to ensure the legal

validity and enforceability of smart contracts under the law.

A few years ago, blockchain was used in cryptocurrencies. Currently, various fields are seeing the benefits of implementing blockchain. One-way transactions without reverse mode make blockchain a desirable platform for maintaining data, its authenticity, transparency, and authority make it ideal for data systems [11]. The digital age has not only changed the relationship between taxpayers and tax authorities, but the way we pay, send and store information. Blockchain can be a breakthrough for tax administration to make the tax system more accurate, transparent, and reliable, as it is a distributed ledger. Communication in the network is connected by using cryptography to identify data senders and data recipients. There are two types of blockchain ledgers, namely permission-less (public) ledgers, and permissioned (private) ledgers. Digital currencies (cryptocurrency) such as Bitcoin and Ethereum are permission-less ledgers. In a permissioned ledger, only parties with access authorization can participate. Permissioned ledger is an appropriate concept for public sector applications as it guarantees credibility. The application of technology blockchain in the private sector covers various fields such as entertainment, social engagement, retail, car rental, supply chain and logistics, insurance, healthcare, real estate, charity, and financial services[12]. On the other hand, many countries are experimenting with or implementing blockchain in the areas of identity, personal records, financial services, property, supply chain, asset tracking, contract and vendor management, energy utilities, voting, and fraud and mitigation.

Several countries have been experimenting with and implementing blockchain in the field of taxation. Estonia, for example, has implemented a Keyless Signature Infrastructure -based system (KSI) blockchain for tax administration purposes. The Dutch Tax and Customs Office researched Smarter Tax Revenues to distribute tax money after it is deducted from employee salaries. Another research is the Tourist Tax Collection for income taxes based on cryptocurrency from platforms like Airbnb, which will be transferred to a tourist tax fund. Meanwhile, the Danish Tax Office is building a blockchain project called Vehicle Wallet to track the transfer of car ownership to payment of taxes on motor vehicles[13]. The Shenzhen Bureau of Taxation in China implements blockchain-based tax invoice issuance to reduce the cost and time of invoicing and mitigate the risk of fraud. More than 7,600 companies in Shenzhen have access to a blockchain-based tax invoice system. According to a World Economic Forum survey of executives of technology companies in the world, most respondents expect governments to implement blockchain-based tax collection and administration system for the first time before 2025 [14]

Looking at the experiences of these various countries, blockchain opens up opportunities for application in the Indonesian tax system. Blockchain has potential areas for taxation systems in terms of databases taxpayer, employee income tax, value-added tax, and transfer pricing. Associated with the database taxpayer, the KSI system in Estonia allows taxpayers to access accounts, update data and pay taxes online. For employee income tax, it can help overcome the distribution of taxes to various stakeholders automatically. For transfer pricing, blockchain can comprehensively track the flow of transactions and the identities of all parties. All transactions will be timestamped, cryptographically sealed, and only visible to parties with access to the network, thereby minimizing the risk of fraud.

Seen this way, blockchain can revolutionize the technology underlying payment clearing and credit information systems in banks, thereby improving and changing them. Blockchain applications also promote the establishment of a “multi-center, weak intermediary” scenario, which will increase efficiency. However, despite the unlicensed and self-regulating nature of blockchains, the actual regulation and implementation of decentralized systems is a problem that must be solved [4]. With this blockchain can prove itself in eliminating distrust and providing data security [15] [16]. Based on a structured, systematic review, and analysis of thematic content from the literature found, we present a comprehensive classification using blockchain application analysis in securing big data in the sector Regional Taxin Indonesia. Remember The Presidential Regulation on One Indonesian Data is intended to regulate the data produced by central and regional agencies to support development planning, implementation, evaluation, and control, including local taxes.

2. 2. METHOD

To provide a transparent, reproducible, and scientific literature review on blockchain-based applications, the author adopted the process suggested by Briner and Denyer, as well as some of the features of the states [17]. The overall methodological approach included the following steps:

1. Identifying the need for review, preparing proposals for review, and developing a review protocol.
2. Identify research, select studies, assess quality, record and extract data, synthesize data.
3. Report the results of the review.

2.1. Locating studies

To answer our main research question, a systematic literature search was conducted from 2018-2021. Scopus was used as the main scientific database where the term “blockchain” was searched across all article titles. Additional searches using reference works from relevant articles were also performed (snowball effect). Relevant “grey literature”, including unpublished research commissioned by the government or private/public institutions was also found through electronic search. To identify published gray literature, we evaluated the first 50 hits from Google. Alternative terms for "blockchain" and "application" were used during the search. Hand-searched reference lists in some reports yielded additional gray literature, notably research and committee reports or policy summaries from private and public sector institutions/organizations. The flow chart of the implemented strategy is presented in Figure 1 below. In addition, several Scopus enhancement features were widely used (some result improvements following the context of a particular article, search for related documents, etc.). When a particular study abstract was not available, the full article was retrieved and assessed for relevance. All potentially relevant articles were taken in full text.

2.2. Study selection and evaluation

The feasibility of the retrieved literature was evaluated independently by the authors based on a set of exclusion and inclusion criteria that were determined (see Table 1). Several exclusion criteria were used before introducing literature in the bibliography manager (language, subject area, and document type restrictions). Initially, abstracts of all research papers and introductory sections of gray literature were assessed. Articles that met one of the exclusion criteria were excluded and sorted by reason for exclusion. After that, a full-text review was also conducted and several additional articles were excluded from the study, with full documentation of the reasons for exclusion. Any differences concerning the relevance of the articles under review were resolved through discussion until consensus was reached. Overall, a few studies were excluded because they focused primarily on the technical aspects of blockchain technology and/or blockchain architecture. Articles that did not meet the inclusion criteria were excluded and consequently used in the introduction to this article.

3.3. Analysis and synthesis

All articles and reports that met the inclusion criteria were entered into the qualitative analysis software using the Vosviewer application. Data were analyzed by their emerging themes. Below, we can see the process in the data processing:

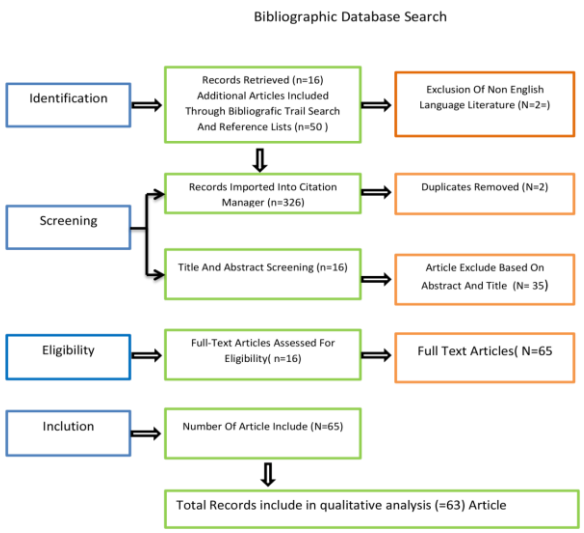

Figure 1: Data Processing Stage

Table 1. Inclusion and Exclusion Criteria.

Selection criteria	Scientific database	
Inclusion	Peer-reviewed research articles (including articles in press), conference proceedings papers, book chapters, review papers, short surveys, serials.	English reports
	Without time-frame restrictions	Without time-frame restrictions
Exclusion	Prior to importation to bibliographic management	Non English articles, articles with missing abstracts, notes, editorials
	During title screening	Generic articles related to the blockchain technology and/or blockchain architecture.
	During abstract screening	Software-oriented articles related to the blockchain technology
	During full-text screening	Articles addressing technical aspects of blockchain technology

3. BASIC THEORY

3.1 Big Data

Big Data is a data memory with very large storage- so large in size and complexity that no traditional data management tool can store or process them efficiently. Big data is also understood as data in general, but with very large volumes and is part of the development of relational databases. The development is through an open-source framework created specifically for storing and analyzing big data sets. Development of source frameworks, such as Hadoop, and more recently, Spark, can make big data easier to use and cheaper to store. Over time, the Internet of Things (IoT) emerged, where more and more objects and devices are connected to the internet, so that collecting product usage data is easier and faster.

Because of Big Data, the present day is becoming more and more important. Several organizations from various sectors are increasingly reliant on the knowledge extracted from huge volumes of data [18] [19]. To understand more about big data, we can analyze or examine big data according to experts and scientists, by looking at the main characteristics of big data [20]: First, Volume organizations collect data from various sources, including business transactions, smart devices (IoT)), industrial equipment, videos, social media and more [21]. In the past, storing it would have been a problem - but cheaper storage on platforms like data lakes and Hadoop has eased the burden[22] [23]. Second Velocity: With the growth of the Internet of Things, data is flowing into businesses at an unprecedented speed and must be handled promptly. RFID tags, sensors, and smart meters drive the need to handle these torrents of data at almost the same time. Third, Variety data comes in all kinds of formats - from structured, numerical data in traditional databases to text documents, emails, videos, audio, stock ticker data, and unstructured financial transactions.

3.2 Blockchain

Blockchain is a technology designed for digital data storage systems. This technology is connected through cryptography and its use, by itself, cannot be separated from Bitcoin and cryptocurrency [24][9]. Although considered a modern technology, the initial idea of blockchain itself was sparked by Scott in his Journal of Cryptography: How to Time-Stamp a Digital Document, dating back to 1991 [22]. Cryptocurrencies, such as Bitcoin and Ethereum are permission-less ledgers. In the permissioned ledger, only parties who have access authorization can participate. Permissioned ledger is an appropriate concept for public sector applications as it guarantees credibility.

Blockchain itself was first conceptualized by Satoshi Nakamoto in 2008, using methods such as Hash cash to add blocks to a chain without a trusted third party[1], [25]. Blockchain, a rapidly developing financial technology, is revolutionizing the way people deal with business [5]. Blockchain attracts interest as the underlying technology for bitcoin and other cryptocurrencies [6], because it is seen as a new foundation for transactions in the world [6]. Blockchain is a continuous database of accounts, which is complete, distributed, and immutable[7]. The best part of blockchain is that it is a decentralized system with a very long security chain. One important feature is the distributed trust offered by Blockchain, (1) removing trusted third parties to facilitate transactions and (2) reducing trading costs and (3) reducing time consumed.

The inherent characteristics of blockchain's design provide properties such as transparency, robustness, suitability, and security. So, blockchain can be thought of as a distributed database organized as an ordered list of blocks, where committed blocks are immutable. One can see that this is ideal in the banking sector as banks can work together under the same blockchain and drive transactions of their customers beyond transparency [26].

4. FINDINGS AND DISCUSSION

4.1. One data governance

One Data Indonesia (Satu Data Indonesia / SDI) is a government data governance policy aimed to create quality data, which can be accessed easily and can be shared between Central and Regional Agencies. This policy is contained in Presidential Regulation no. 39 of 2019 concerning One Indonesian Data. Through SDI, all government data and other relevant agency data can lead to the One Data Indonesia Portal (data.go.id). The Satu Data Indonesia Portal is the official open data portal for Indonesia, managed by the Central Level Secretariat of One Data Indonesia, Ministry of National Development Planning / Bappenas. Through the One Data Indonesia Portal, the government is making full efforts to improve data governance for the realization

of government transparency and accountability, as well as supporting national development.

All data collections available in the Satu Data Indonesia Portal can be accessed openly and categorized as public data so that they do not contain information containing state secrets, personal secrets, or other similar matters as regulated in Law number 14 of 2008 concerning Openness of Public Information.

4.2. Data security

The concept of big data consists of several keywords: volume (volume), variation (variety), and velocity (velocity) (Figure 2).

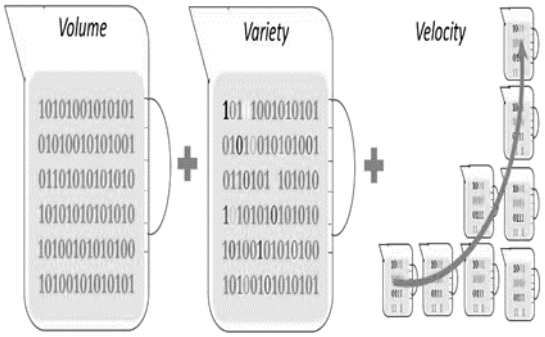

Figure 2. Illustration of the concept of big data

In the picture above, we can see some of the keywords used in data security. First, volume organization collects data from a variety of sources, including business transactions, smart devices (IoT), industrial equipment, video, social media, and more [21]. In the past, storing it would have been a problem - but cheaper storage on platforms like data lakes and Hadoop has eased the burden [22] [23] Second, velocity. With the growth of the Internet of Things, data flows to businesses at an unprecedented rate and must be handled in a timely manner. RFID tags, sensors, and smart meters drive the need to handle these torrents of data at almost the same time. Third, Varieties of data. Data comes in all kinds of formats - from structured, numerical data in traditional databases to text documents, emails, video, audio, stock ticker data, and unstructured financial transactions

4.3.Blockchains in big data security

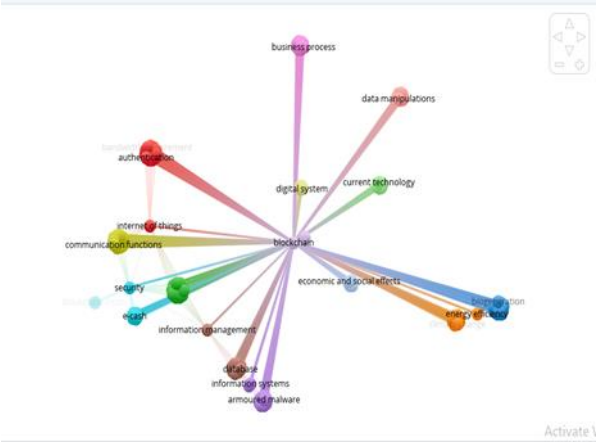

Figure 3: Mapping Blockchain

In blockchain mapping under big data security, each node represents a keyword, and each link represents the co-occurrence of a pair of words. The weight of the link connecting each pair represents the number of times these words appear together in multiple articles. Therefore, the co-occurrence network effectively represents the cumulative knowledge of a domain, in terms of its components and crucial knowledge insights, as determined by the patterns and strength of relationships between keywords that appear in the literature [27][28]. Figure 3 depicts a network of events with keywords for blockchain in data security related to the study of networks, information management, databases, security, e-cash, information systems, digital systems, communication functions. Here we can see how blockchain works. Blockchain

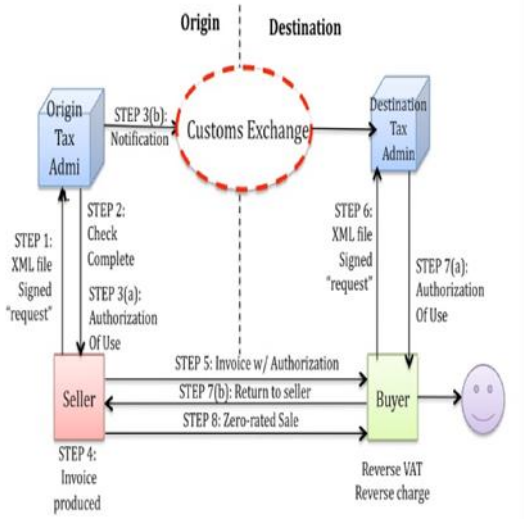

Figure 3. Framework.

In the picture above, we can see how blockchain works in the income tax system, allowing no intermediary role. Workers only need to enter gross income in the system and the blockchain functions to calculate the amount of taxes that need to be paid and maintain the security and privacy of individual income systems. The net salary calculation data is sent to the workers' accounts and the income tax calculation data is sent to the government. The government does not need to duplicate workers' income data from various institutions, institutions do not need to deduct the gross income of their workers for tax payments and individuals do not need to calculate the taxes that must be paid on gross income. The process of paying income taxes through the system blockchain is faster, more cost-effective, and more efficient.

The application of blockchain to value-added tax (VAT) has almost the same benefits as its application to income tax. The various benefits of this application include reducing the company's administrative burden and accounting service burden, all transactions are carried out in real-time and executed by an automation system called smart contracts, reducing the risk of errors and fraud, and transferring payments between companies and the government. at high speed. Smart contracts divide invoices into VAT and non-VAT expenses. This technology automatically calculates VAT and is paid directly to the tax authorities without going through an intermediary. Blockchain in the tax system can be useful for anticipating acts of tax manipulation, corruption, and data falsification. The distribution ledger provides tax information for the tax authorities to audit. Blockchain has the potential to detect tax evasion and tax evasion through transparency that allows tax authorities to directly access taxpayers' financial records.

Through this explanation, the tax system has the potential to be more advanced and developed with the application of blockchain technology with its various benefits. This technology can be relied on to overcome the problems faced in the world of taxes and increase efficiency in tax digitization. The Directorate General of Taxes must do careful planning to implement blockchain in the tax system in Indonesia considering that many developed countries are currently developing the technology.

5. CONCLUSION

Based on the analysis and findings above, we can conclude that blockchain mapping in data security shows that blockchain networks are related to information management, database, security, e-cash, information systems, digital systems, and communication functions. Therefore, blockchain in the local tax system allows for the absence of an intermediary role. Workers only need to enter gross income in the system and blockchain functions to calculate the amount of taxes that need to be paid and maintain the security and privacy of individual income systems. Blockchain in the taxation system can be useful for anticipating acts of tax manipulation, corruption, and data falsification. The distribution ledger provides tax information for the tax authorities to audit. Blockchain has the potential to detect tax evasion and tax evasion through transparency that allows tax authorities to directly access taxpayers' financial records.

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REFERENCES

[1] V. Chang, P. Baudier, H. Zhang, Q. Xu, J. Zhang, and M. Arami, "How Blockchain can impact financial services – The overview, challenges and recommendations from expert interviewees Victor," no. January, 2020.

[2] A. I. Ozdemir, I. M. Ar, and I. Erol, "Assessment of blockchain applications in travel and tourism industry," Qual. Quant., vol. 54, no. 5–6, pp. 1549–1563, 2020, doi: 10.1007/s11135-019-00901-w.

[3] H. Abubakar and S. Hassan, "A framework for enhancing digital trust of quranic text using blockchain technology," J. Telecommun. Electron. Comput. Eng., vol. 10, no. 2–4, pp. 7–17, 2018.

[4] Y. Guo and C. Liang, "Blockchain application and outlook in the banking industry," Financial Innovation, vol. 2, no. 1. SpringerOpen, Dec. 01, 2016, doi: 10.1186/s40854-016-0034-9.

[5] A. DiNizo, "From Alice to Bob: The Patent Eligibility of Blockchain in a Post-CLS Bank World," J. Law, Technol. Internet, vol. 9, no. 1, Jan. 2018, Accessed: Jun. 26, 2021. [Online]. Available: https://scholarlycommons.law.case.edu/jolti/vol9/iss1/2.

[6] Q. K. Nguyen, "Blockchain-A Financial Technology for Future Sustainable Development," Proc. - 3rd Int. Conf. Green Technol. Sustain. Dev. GTSD 2016, pp. 51–54, 2016, doi: 10.1109/GTSD.2016.22.

[7] S. Yoo, "Blockchain based financial case analysis and its implications," Asia Pacific J. Innov. Entrep., vol. 11, no. 3, pp. 312–321, 2017, doi: 10.1108/apjie-12-2017-036.

[8] I. Klaus, "Don Tapscott and Alex Tapscott: Blockchain Revolution," New Glob. Stud., vol. 11, no. 1, p. 19104, 2017, doi: 10.1515/ngs-2017-0002.

[9] R. Alkhudary, X. Brusset, and P. Fenies, "Blockchain in general management and economics: a systematic literature review," Eur. Bus. Rev., vol. 32, no. 4, pp. 765–783, 2020, doi: 10.1108/EBR-11-2019-0297.

[10] P. Boucher, S. Nascimento, and M. Kritikos, "How Blockchain Technology Could Change Our Lives," Eur. Parliam., pp. 4–25, 2017, [Online]. Available: http://www.ep.europa.eu/stoa/%0Ahttp://www.europarl.europa.eu/RegData/etudes/IDAN/2017/581948/EPRS_IDA(2017)581948_EN.pdf.

[11] K. Misztal, T. Służalec, and A. Kubica-Misztal, "Securing Data of Biotechnological Laboratories Using Blockchain Technology," in Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), Oct. 2020, vol. 12133 LNCS, pp. 88–96, doi: 10.1007/978-3-030-47679-3_8.

[12] O. Boutkhoum, M. Hanine, T. Agouti, and A. Tikniouine, "Selection problem of Cloud solution for big data accessing: Fuzzy AHP-PROMETHEE as a proposed methodology," J. Digit. Inf. Manag., 2016, [Online]. Available: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85010966355&partnerID=40&md5=4f3167a86b6e54545dc4826982f49ca6.

[13] M. Rochlitz, E. Mitrokhina, and I. Nizovkina, "Bureaucratic discrimination in electoral authoritarian regimes: Experimental evidence from Russia," Eur. J. Polit. Econ., 2020, doi: 10.1016/j.ejpoleco.2020.101957.

[14] F. O. Ayodele, L. Yao, H. B. Haron, and E. L. Dabor, "Knowledge Management and Institutional Accounting Functional Effectiveness: Evidence from Malaysia," J. Inf. Knowl. Manag., 2019, [Online]. Available: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85068342131&doi=10.1142%2FS0219649219500175&partnerID=40&md5=8538946f724f623e50a9541124722254.

[15] Y. Gani and M. M. Askaroglu, "A Voting Application Which Provides Data Security via Blockchain Technology," in UBMK 2019 - Proceedings, 4th International Conference on Computer Science and Engineering, Sep. 2019, pp. 773–777, doi: 10.1109/UBMK.2019.8907111.

[16] F. Casino, T. K. Dasaklis, and C. Patsakis, "A systematic literature review of blockchain-based applications: Current status, classification and

open issues," Telemat. Informatics, vol. 36, no. November 2018, pp. 55–81, 2019, doi: 10.1016/j.tele.2018.11.006.

[17] R. B. Briner and D. Denyer, "Systematic Review and Evidence Synthesis as a Practice and Scholarship Tool," Oxford Handb. Evidence-Based Manag., pp. 112–129, 2012, doi: 10.1093/oxfordhb/9780199763986.013.0007.

[18] N. Corbu, A. Bârgăoanu, R. Buturoiu, and O. Ştefăniţă, "Does fake news lead to more engaging effects on social media? Evidence from Romania," Communications, 2020, doi: 10.1515/commun-2019-0152.

[19] A. Oussous, F. Z. Benjelloun, A. Ait Lahcen, and S. Belfkih, "Big Data technologies: A survey," J. King Saud Univ. - Comput. Inf. Sci., vol. 30, no. 4, pp. 431–448, 2018, doi: 10.1016/j.jksuci.2017.06.001.

[20] H. J. Fang, Z. Zhang, C. J. Wang, M. Daneshmand, C. Wang, and H. Wang, "A survey of big data research," 2015.

[21] Munifah, S. Huda, U. D. Hamida, Subandi, M. Syazali, and R. Umam, "The use of management strategies to attract the public's interest in pesantren: A new model for pesantren dynamics study," Int. J. Innov. Creat. Chang., 2019, [Online]. Available: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076528878&partnerID=40&md5=1f53ae3261dd501aa9fe26e728c6256e.

[22] Y. Y. Al-Ashmori, I. Othman, and Y. Rahmawati, "Bibliographic analysis of BIM Success Factors and Other BIM Literatures using Vosviewer: A Theoretical Mapping and Discussion," J. Phys. Conf. Ser., vol. 1529, no. 4, 2020, doi: 10.1088/1742-6596/1529/4/042105.

[23] I. Yaqoob et al., "Big data: From beginning to future," Int. J. Inf. Manage., vol. 36, no. 6, pp. 1231–1247, 2016, doi: 10.1016/j.ijinfomgt.2016.07.009.

[24] H. Benbya and B. McKelvey, "Bitcoin and Cryptocurrency Technologies," J. Inf. Technol., vol. 21, no. 4, pp. 284–298, 2006, [Online]. Available: http://doi.wiley.com/10.1046/j.1365-2575.1999.00061.x%5Cnhttp://dx.doi.org/10.1016/j.im.2014.10.003%5Cnhttp://onlinelibrary.wiley.com/doi/10.1046/j.1365-2575.2000.00082.x/full%5Cnpapers3://publication/doi/10.1046/j.1365-2575.2000.00082.x%5Cnhttp://www.inf.

[25] F. Casino, T. K. Dasaklis, and C. Patsakis, "A systematic literature review of blockchain-based applications: Current status, classification and open issues," Telematics and Informatics, vol. 36. Elsevier Ltd, pp. 55–81, Mar. 01, 2019, doi: 10.1016/j.tele.2018.11.006.

[26] L. Ante, "Smart contracts on the blockchain – A bibliometric analysis and review," Telemat. Informatics, vol. 57, no. 10, pp. 1–48, 2021, doi: 10.1016/j.tele.2020.101519.

[27] T. Lazarides and E. Drimpetas, "Corporate governance regulatory convergence: a remedy for the wrong problem," Int. J. Law Manag., 2010, [Online]. Available: https://www.scopus.com/inward/record.uri?eid=2-s2.0-84986097680&doi=10.1108%2F17542431011044634&partnerID=40&md5=b5118125fac6be7d45baf7c8020ac584.

[28] B. Wang, "Public Value in Moral Market: A Case Study of Human Organ Transplantation System," Int. J. Public Adm., 2016, [Online]. Available: https://www.scopus.com/inward/record.uri?eid=2-s2.0-84955190217&doi=10.1080%2F01900692.2014.1003304&partnerID=40&md5=4c511e9c0c8550b17173f549c82aa106.