DIGITAL ACCOUNTING: THE ROLE OF ARTIFICIAL INTELLIGENCE AND XBRL INCREASING TRANSPARENCY OF ACCOUNTING INFORMATION. THE OVERVIEW BASED ON FINANCIAL DATA TRANSPARENCY ACT (FDTA)

HENY TRIASTUTI KURNIA NINGSIH [1], LAYLAN SYAFINA [2], ISKANDAR MUDA [3]
[123] Universitas Sumatera Utara, Medan, Indonesia
henytriastuti@fe.uisu.ac.id [1], laylansyafina@uinsu.ac.id [2], iskandar1@usu.ac.id [3]

Abstract
This research is a study that explains the role of digital accounting in Artificial Intelligence and *Extensible Business Reporting Language* (XBRL), role the very important to transparency information accountancy. The aim of this research is to see how the digitalization of accounting plays a role in the development of accounting information openness. The research method used in this research is a descriptive method, namely the researcher only studies literature and then develops it into writing. The results of this research explain that using, accurate and efficient. with technological developments and a continuously developing business environment, and increasing the transparency of accounting information.
Keywords: Digital Accounting, XBRL, Openness Information Accountancy

1. Introduction

Since the 1970s, western countries began to disclose environmental information in financial accounting reports (Wang et al. 2014). In research on environmental information disclosure, research focuses more on empirical analysis of factors that influence environmental information, for example the influence of asset size and company performance. On December 23, 2022, USA President Biden signed into law H.R. 7776, the James M. Inhofe National Defense Authorization Act for Fiscal Year 2023 which includes TITLE LVIII, the Financial Data Transparency Act (FDTA). The FDTA calls for the use of data standards by member agencies of the U.S. Financial Stability Oversight Council, including the U.S. Department of the Treasury, the Securities and Exchange Commission (SEC), the Federal Deposit Insurance Corporation (FDIC), and the Office of the Comptroller of the Currency. (OCC), Consumer Financial Protection Bureau (CFPB), Federal Reserve System, National Credit Union Administration (NCUA), and Federal Housing Finance Agency (FHFA). The FDTA also includes requirements for standardized data regarding municipal securities to be implemented by the SEC. The data standards to be established under the final rule must include common identifiers, be open and non-proprietary, and make data searchable and machine-readable (https://xbrl.us/home/government/legislation/).

Technological developments and the world of modern digitalization have penetrated all areas of life, the most important of which is economics and accounting is the main part (Khalaf Gatea, Adnan Alnawas, and Hamza Gali 2021). The widespread use of technology and rapid changes in the delivery of information, especially the internet as an information tool for providing financial information (Ahmi and Mohd Nasir 2019). Information technology systems are considered one of the factors that most influence commercial and economic activities to obtain data related to decision making quickly (Khalaf Gatea et al. 2021).

The authenticity, timeliness and accuracy of financial reports are important prerequisites for the efficient implementation of government supervision and management, corporate financing and lending, investor analysis and decision making (Pan and Ji 2023). The use of some technologies is widespread, other technologies may be less widely used, especially for business purposes (Galloway and Mochrie 2005). Therefore, just as existing differences (e.g. industrial sectors) can cause variations in the use of information and communication technology, so too can variations in the use

of information and communication technology itself. Digitalization has changed the way businesses operate and survive amidst changing times due to technological advances (Kaur and Singh 2022).

The abundance of data combined with the availability of processing and storage on digital devices has created renewed interest in artificial intelligence (AI) in various fields over the last few years , artificial intelligence (AI) is a broad technology that promises several advantages for organizations in terms of added business value, organizations are increasingly turning to artificial intelligence (AI) to gain business value following the abundance of data and huge increases in computing capacity. (Enholm et al. 2022, Jaichandran et al., 2022, Rajagopal et al., 2022, Habbe et al., 2023). Intense competition between organizations around the world is also accelerating the need to apply Artificial Intelligence (AI) to gain an advantage compared to competitors (Subramanian, Mitra, and Ransbotham 2021). Organizations and managers must assess whether business competencies will serve to capitalize on opportunities associated with artificial intelligence (AI), because artificial intelligence (AI) is not considered by most executives to be something organizations must develop to remain competitive in the long term (Paschen, Pitt, and Kietzmann 2020, Krishna et al., 2022).

Technologies that enable artificial intelligence (AI), such as development platforms and processing power and large data storage, are developing rapidly and becoming increasingly affordable (Fountaine, Mccarthy, and Saleh 2019, Palleti et al., 2022). Artificial intelligence (AI) has received increasing attention from the information systems (IS) research community, but there is growing concern that artificial intelligence (AI) investments require careful utilization and development to align with organizational operations (Collins et al . 2021, Roy et al., 2022). In other words, it is important for artificial intelligence (AI) to be considered as a technology introduced as a means to imitate human performance with the potential to draw its own conclusions through learning that can aid human cognition or even replace humans in such tasks., (Borges et al. 2021).

Technology intelligence artificial intelligence (AI) as one source power required, however no enough for develop ability intelligence artificial (AI). This is basically it means that Intelligence technique artificial (AI) only No will give profit competitive because of this technique easy obtained . (Mikalef and Gupta 2021), up to moment This understanding about How organization must plan development intelligence artificial (AI) still limited become strategic assets that can utilized For get excellence competitive . (Anuj Kumar et al. 2022, Gatia et al., 2022).

Adopting Extensible Business Reporting Language (XBRL) has been appear as strength transformation in landscape reporting continued finances develop. XBRL empowers holder interest For access financial data in digital format, fitting the new era in transparency , analysis and retrieval decision for investors, analysts, regulators and ssociety (Hwang, No, and Kim 2021) ; (Liu, Luo, and Wang 2017). Extensible Business Reporting Language (XBRL) is included For make analysis more easy and fast with increase exchange information financial, benefits from standard this global reporting will obtained from reporting more finances appropriate timely, accurate and transparent (Hwang et al. 2021).

In the middle accessibility information facilitated by the internet, challenges still there is, though disclosure finance Already available online , integration information This into the tool analysis Still become obstacles, so hinder user regards extracting data from report finance in a way efficient (Mwiya et al. 2022). The transferability of online disclosures exhibits asymmetry, thereby potentially disrupting cost dynamics in capital markets. Another important challenge is the absence of consistent data standards for financial information, which is very important for decision making by both individuals and institutions (Tohang, Limijaya, and Chitrahadi 2020) , Extensible Business Reporting Language (XBRL) can overcome problem with coding information systems (Khalaf Gatea et al. 2021). Currently (Kumar, Kumar, and Dilip 2019) XBRL is used throughout the world and has become an internationally recognized financial and business reporting standard. The XBRL wave has swept across the world and the number of adopters has increased rapidly over the past few years. Given the benefits XBRL provides, many regulators around the world have required XBRL reporting and only a few regulators have initiated XBRL programs voluntarily. The effect of XBRL adoption (Yoon, Zo, and Ciganek 2011) in reducing information asymmetry is stronger in large-sized companies than in

medium-sized and small companies. Furthermore, they recommend that government authorities promote the adoption of XBRL for business reporting.

Digital finance is closely related to the keyword "Fintech", (Wang and Wang 2022) namely innovative financial services or products delivered through digital technology. Both digital finance and Fintech highlight How innovation technology empowering finance. In other words (Chen 2016) Fintech success must started with technology , however ended with trust and use in life real. (Abhishek N et al. 2022) state that FinTech does not only covers individual sectors but all over spectrum services and products finance.

Evaluate changes that occur in field technology, operations , and more wide place and implications to corporate strategy and structure company, costs organization combine changes and their implications to mechanism management costs, outsourcing and computing clouds, as well (Bhimani and Willcocks 2014) step organization going to possible business digitally which has implications for expansion role function finance natural company and in particular management provision accounting information . Steps reported accounting in report digital finance can accessed and processed in a way automatic. This shows (Shan and Troshani 2021) that the digitalization of company financial reports should increase the value relevance of accounting measures.

The technologies that have been developed in recent decades as a result of the digital revolution are fundamentally changing finance and financial markets. The scale of qualitative and quantitative changes in financial markets is increasing thanks to blockchain technology and cryptocurrencies, (Lavrinenko et al. 2023) which are outside the control of the state, weakening the monopoly of central banks over the control of money flows.

2. Literature review

2.1 Accountancy

Accounting is generally assumed to only exist in large companies because the existence of accounting itself is represented in financial reports. On the other hand (Wiyarni 2017) in traditional markets, it can be said that there are no financial reports made by traditional market traders. (Jacobs and Kemp 2002) explored the presence and absence of accounting in the daily lives of three small-scale Bangladeshi traders. They want to investigate why traders do/don't do accounting. They found that the presence of accounting in the three small traders was influenced by important social and state institutions and also by literacy.

The usefulness of accounting information depends on the accounting basis on which it is reported because that accounting basis appears to influence decision making (Bergmann 2012) although recent trends indicate a general move to accrual accounting. No one knows for sure, (Nicholls 2020) but financial accounting allows businesses to make reasonable estimates, good enough, with certainty, to inform investors' decisions to buy or sell shares in different companies.

2.2 Intelligence Artificial (AI)

Intelligence artificial intelligence (AI) is series technology growing disruption fast in a way radical change various aspect related people, business, society and the environment. With many device digital computing and the emergence of big data, intelligence artificial intelligence (AI) increasingly offer opportunity big for society and organizations business (Dwivedi et al. 2023). Intelligence artificial intelligence (AI) is a sub- field with long history in the field knowledge computer. Although in a way historical intelligence artificial (AI) only limited to fields theoretical , progress latest in data generation and computing has possible intelligence artificial (AI) for move from theory to practice . (Haenlein and Kaplan 2019). Technology about idea intelligence artificial intelligence (AI) has explained in various method especially For solve a complex and consuming problem time as system imitation from intelligence man . (Enholm et al. 2022) in other words as agent computing in action smart. Scholar (Paschen, Kietzmann, and Kietzmann 2019). Important pillar from technology intelligence artificial (AI) is that technology the designed and developed For Act based on requirements that have been determined before based on existing data and information (Paschen et

al. 2020).Technology intelligence artificial (AI) built based on learning Still can modify the processing based on new information obtained The latest (Gómez-Pérez et al. 2009).

However so, though technology intelligence artificial intelligence (AI) has develop in a way significant during a number of year Lastly, a lot struggling organization For utilise technology the so that produce mark for technology the (Collins et al. 2021) . The more Lots research that focuses on challenges This highlighting that utilization technology intelligence artificial (AI) manner effective originate from context organizational (Cavazos-Arroyo and Puente-Diaz 2019). Besides that a number of successful organization _ utilise intelligence artificial intelligence (AI) in operational and discover how to technology the can become source mark business (Makarius et al. 2020). Therefore That intelligence artificial (AI) is not only just technology used For ability technical However used For take advantage of it in a way effective which is combined creative from technology, knowledge organizations and institutions the as One harmonious unity (Prahalad 1993).

A number of literature leading about user intelligence artificial (AI), highlighting that ability they For obtain benefit from technology the originate from ability they For in a way creative combine intelligence artificial (AI) to in the new process or updated (Fountaine et al. 2019).

2.1. Information Transparency Accountancy

Enhancement transparency in the process of displaying financial data company, in environment business (Ahmi and Mohd Nasir 2019). Report finance is results finances prepared by accountants to holder interests , with consider information and data it contains about activities achieved in the period before, that would be used For know report finance moment This (Khalaf Gatea et al. 2021). There is (Abdolmohammadi et al. 2017) two main reasons why an internal audit function might be involved in an XBRL implementation. First, as a user of financial information and a participant in the corporate governance process, the internal audit function has an interest in the reliability of XBRL financial information and, thus, the quality of XBRL implementation. Second, organizational members responsible for corporate governance may assign the internal audit function responsibility for managing risks associated with financial disclosures.

2.2. XBRL

Extensible Business Reporting Language (XBRL) is an open standards-based reporting system built to accommodate the electronic preparation and exchange of business reports worldwide. Extensible Business Reporting Language (XBRL) about electronic data tagging displaying financial reports, designed to make it easier to add new features in the future (Khalaf Gatea et al. 2021). Extensible Business Reporting Language (XBRL) is a technological tool that can disseminate data by producing information that is more relevant and tailored according to user requests (Debreceny and Gray 2001). XBRL (Hao, Zhang, and Fang 2014) defines that XBRL is every individual element contained in a company's financial statements so that the data can be marked and can be read by a computer. Each element is assigned a unique barcode that contains information regarding the item definition and various attributes. XBRL (Abdelrahim Qushtom 2021) designed to reduce differences in methods of presenting financial data. The use of the XBRL framework will improve users' planning and decision-making tools, which will be reflected in the interests of companies, especially companies with good performance via XBRL (Estébanez, Grande, and Colomina 2010 Companies can publish information in a machine-readable way to meet the demands of various stakeholders.

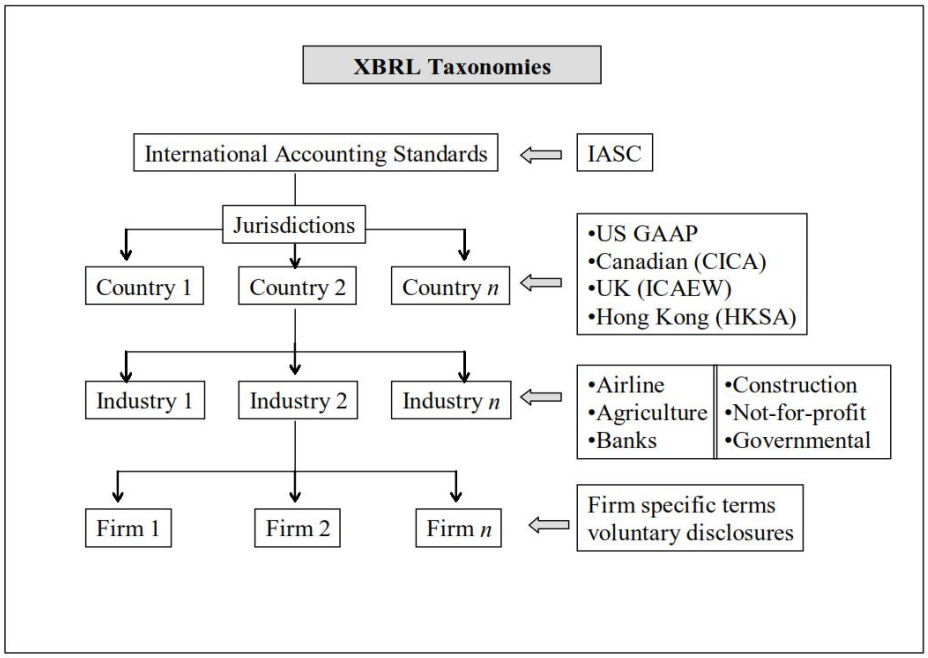

Figure 1. XBRL Taxonomies

XBRL is technology generational digital reporting second because it does not like technology generation first characterized by static PDF and HTML formats, XBRL (Dunne et al. 2013) allows more analysis and interrogation automatic to information fundamentals across multiple platforms and channels communicaton new for interested parties._use (de Villiers, Rinaldi, and Unerman 2014) form reporting electronic possible user report integrated for browse more reports _ details and other information regarding reported elements _ in report their most integrated interested. XBRL capable fulfil challenge this and support application reporting integrated with way more fulfil need information user through taking more information effective, dynamic, and customizable.

3. Method

Data analysis method used is with do analysis descriptive with analyze various literature, okay from various related sources, books, journals, and so on with transparency information accounting and XBRL. Method used in study This is method analysis descriptive or study descriptive. Through method analysis descriptive , researcher try explain in a way plain based on results research that has been done (Linarwati, Fathoni, and Minarsih 2016).

The data obtained (in the form of words, images, behavior) is not poured in form number or number statistics, however Still in form qualitative meaning rich compared to just number or frequency. Researcher quick do data analysis with give description the situation under study in form description narrative. Essence exposure That like knit, every part studied One one by one, with answer question what, why, and how something phenomenon happen in context the environment (Jayusman and Shavab 2020). Based on understanding the that descriptive done with method look for information related with Existing symptoms are explained with clear, the goal will be achieved, planned how gather various type note as material for make report .

4. Results and Discussion

4.1. Results

Research result This explain exists very big influence connection with openness accounting information and XBRL. With so, results study This capable answer existing problems in study This includes, among other things following:

Digitalization of accounting in artificial intelligence (AI)

Technological developments that are increasingly improving make everyday problems easier, practically artificial intelligence is developing very rapidly (Fitriyani, Putri, and Adawiyah 2021). Artificial intelligence (AI) does not mean that humans are eliminated by artificial intelligence (AI) but is useful for development in better use of technology. (Selin 2022). The digitalization of accounting has brought about many changes in the accounting climate, rapid development, positive responses from users, although it is not uncommon for some people to reject these changes. (Zhang, Ye, and Jia 2022). Digitalization provides convenience, effectiveness and efficiency which are currently being felt and the development of accounting science has begun to be made easier. (Cattaneo, Antonietti, and Rauseo 2022).

Digitalization of accounting in Extensible Business Reporting Language (XBRL) in accounting information disclosure

Increasing information transparency through data quality, reducing errors in financial reports and increasing data integrity (Efendi et al. 2020). This empirical evidence supports the statement (Efendi et al. 2020) that for financial companies in Jordan, the impact of XBRL on information disclosure is very important considering the context that XBRL can improve data quality and openness, as well as contribute to academics' understanding of the impact of XBRL. Improper XBRL implementation planning can affect the timeliness of financial reporting, especially when financial reports include errors and misstatements in financial reports, resulting in reporting delays (Ettredge, Richardson, and Scholz 2002).

4.2. Discussion

XBRL is method technical for serve report finance in form electronic interactive. This is (Khalaf Gatea, Adnan Alnawas, and Hamza Gali 2021b) can influence efficiency, transparency, reliability, and accuracy information on reports and reports finance company. Which will produce quality data high and more easy For handled, compared and influenced taking decision. With XBRL can be used disseminate data with produce more information relevant and tailored in accordance with request user (Debreceny and Gray 2001).

Whereas intelligence artificial intelligence (AI) is series technology growing disruption fast in a way radical change various aspect related people, business, society and the environment. With important pillars from technology intelligence artificial (AI) is that technology the designed and developed For Act based on requirements that have been determined before based on existing data and information. (Paschen et al. 2020). Therefore That intelligence artificial (AI) is not only just technology used for ability technical However used For take advantage of it in a way effective which is combined creative from technology, knowledge organizations and institutions the as One harmonious unity (Prahalad 1993).

5. Conclusion

In other words XBRL capable fulfil challenge this and support application reporting integrated with way more fulfil need information user through taking more information effective, dynamic, and customizable. Using the XBRL framework can improve users' planning and decision-making tools, which will be reflected in the interests of the company, especially companies with good performance. So when XBRL is associated with artificial intelligence (AI), which is not just a technology used for technical capabilities but is used to utilize it effectively, which is a creative combination of technology, organizational knowledge and institutions as one harmonious whole, there is a relationship between the two.

Reference

1. Abdelrahim Qushtom, Thaer Faisal. 2021. “The Expected Effect of Using EXtensible Business Reporting Language (XBRL) on the Extent of Using Ordinary Financial Statements by External Users in Jordan.” *Academic Journal of Interdisciplinary Studies* 10(5):249–59. doi: 10.36941/ajis-

2021-0137.

2. Abdolmohammadi, Mohammad J., Steven M. DeSimone, Tien Shih Hsieh, and Zhihong Wang. 2017. "Factors Associated with Internal Audit Function Involvement with XBRL Implementation in Public Companies: An International Study." *International Journal of Accounting Information Systems* 25(December 2016):45–56. doi: 10.1016/j.accinf.2017.03.002.
3. Abhishek N, Dr, M. Ashoka, Dr. Parameshwara, and Divyashree MS 2022. "An Empirical Analysis of Impact of XBRL on Quality of Financial Reporting in India." *SSRN Electronic Journal* 7631(48514):1–9. doi: 10.2139/ssrn.4183844.
4. Ahmi, Aidi, and Mohd Herry Mohd Nasir. 2019. "Examining the Trend of the Research on Extensible Business Reporting Language (Xbrl): A Bibliometric Review." *International Journal of Innovation, Creativity and Change* 5(2).
5. Anuj Kumar, Arya Kumar, Purvi Pujari, and Kuldeep Bhalerao. 2022. "A Study of Barriers and Benefits of Artificial Intelligence Adoption in Small and Medium Enterprises." *Academy of Marketing Studies Journal* 26(1).
6. Bergmann, Andreas. 2012. "The Influence of the Nature of Government Accounting and Reporting in Decision-Making: Evidence from Switzerland." *Public Money & Management* 32(1):15–20. doi: 10.1080/09540962.2012.643050.
7. Bhimani, Alnoor, and Leslie Willcocks. 2014. "Digitisation, Big Data and the Transformation of Accounting Information." *Accounting and Business Research* 44(4):469–90. doi: 10.1080/00014788.2014.910051.
8. Borges, Aline FS, Fernando JB Laurindo, Mauro M. Spínola, Rodrigo F. Gonçalves, and Claudia A. Mattos. 2021. "The Strategic Use of Artificial Intelligence in the Digital Era: Systematic Literature Review and Future Research Directions." *International Journal of Information Management* 57(December 2019):102225. doi: 10.1016/j.ijinfomgt.2020.102225.
9. Cattaneo, Alberto AP, Chiara Antonietti, and Martina Rauseo. 2022. "How Digitalized Are Vocational Teachers? Assessing Digital Competence in Vocational Education and Looking at Its Underlying Factors." *Computers and Education* 176(October 2021):104358. doi: 10.1016/j.compedu.2021.104358.
10. Cavazos-Arroyo, Judith, and Rogelio Puente-Diaz. 2019. "The Influence of Marketing Capability in Mexican Social Enterprises." *Sustainability (Switzerland)* 11(17):1–15. doi: 10.3390/su11174668.
11. Chen, Long. 2016. "From Fintech to Finlife: The Case of Fintech Development in China." *China Economic Journal* 9(3):225–39. doi: 10.1080/17538963.2016.1215057.
12. Collins, Christopher, Denis Dennehy, Kieran Conboy, and Patrick Mikalef. 2021. "Artificial Intelligence in Information Systems Research: A Systematic Literature Review and Research Agenda." *International Journal of Information Management* 60(June):102383. doi: 10.1016/j.ijinfomgt.2021.102383.
13. Debreceny, Roger, and Glen L. Gray. 2001. "The Production and Use of Semantically Rich Accounting Reports on the Internet: XML and XBRL." *International Journal of Accounting Information Systems* 2(1):47–74. doi: 10.1016/S1467-0895(00)00012-9.
14. Dunne, Theresa, Christine Helliar, Andy Lymer, and Rania Mousa. 2013. "Stakeholder Engagement in Internet Financial Reporting: The Diffusion of XBRL in the UK." *British Accounting Review* 45(3):167–82. doi: 10.1016/j.bar.2013.06.012.
15. Dwivedi, Yogesh K., Anuj Sharma, Nripendra P. Rana, Mihalis Giannakis, Pooja Goel, and Vincent Dutot. 2023. "Evolution of Artificial Intelligence Research in Technological Forecasting and Social Change: Research Topics, Trends, and Future Directions." *Technological Forecasting and Social Change* 192(December 2022):122579. doi: 10.1016/j.techfore.2023.122579.
16. Efendi, Riyanto, Muhamad Nanang Rifa'i, Bahrun Khairul, Hilyati Milla, and Suharmi Suharmi. 2020. "The Mediation of Work Motivation on the Effects of Work Discipline and Compensation on Performance Batik MSMEs Employees in Yogyakarta City, Indonesia." *International Journal of Multicultural and Multireligious Understanding* 7(1):689–703. doi: 10.18415/ijmmu.v7i1.1375.
17. Enholm, Ida Merete, Emmanouil Papagiannidis, Patrick Mikalef, and John Krogstie. 2022.

"Artificial Intelligence and Business Value: A Literature Review." *Information Systems Frontiers* 24(5):1709–34. doi: 10.1007/s10796-021-10186-w.

18. Estebanez, Raquel Perez, Elena Urquía Grande, and Lara Muñoz Colomina. 2010. "Information Technology Implementation: Evidence in Spanish SMEs." *International Journal of Accounting & Information Management* 18(1):39–57.
19. Ettredge, Michael, Vernon J. Richardson, and Susan Scholz. 2002. "Dissemination of Information for Investors at Corporate Web Sites." *Journal of Accounting and Public Policy* 21(4–5):357–69. doi: 10.1016/S0278-4254(02)00066-2.
20. Fitriyani, Raihani Alvinna, Lintang Tirta Putri, and Robiatul Adawiyah. 2021. "Trends in Artificial Intelligence Technology to Replace Advertising Models in the Future." *Journal of Socio-Politics* 2(2):118–29. doi: 10.54144/jsp.v2i2.39.
21. Fountaine, Tim, Brian Mccarthy, and Tamim Saleh. 2019. "Building the AI-Powered Organization." *Harvard Business Review* (August):1–13.
22. Galloway, Laura, and Robbie Mochrie. 2005. "The Use of ICT in Rural Firms: A Policy-Oriented Literature Review." *Information* 7(3):33–46. doi: 10.1108/14636690510596784.
23. Gatla, R., Bansal, A., Bansod, S. N., Chowdhary, H., & Aarif, M. (2022, December). Artificial Intelligence Based E-Commerce Information Management Model. In *2022 5th International Conference on Contemporary Computing and Informatics (IC3I)* (pp. 2013-2018). IEEE.
24. Gómez-Pérez, Gabriel, José D. Martín-Guerrero, Emilio Soria-Olivas, Emili Balaguer-Ballester, Alberto Palomares, and Nicolás Casariego. 2009. "Assigning Discounts in a Marketing Campaign by Using Reinforcement Learning and Neural Networks." *Expert Systems with Applications* 36(4):8022–31. doi: 10.1016/j.eswa.2008.10.064.
25. Haenlein, Michael, and Andreas Kaplan. 2019. "A Brief History of Artificial Intelligence: On the Past, Present, and Future of Artificial Intelligence." *California Management Review* 61(4):5–14. doi: 10.1177/0008125619864925.
26. Hao, Lizhong, Joseph H. Zhang, and Jing (Bob) Fang. 2014. "Does Voluntary Adoption of XBRL Reduce Cost of Equity Capital?" *International Journal of Accounting and Information Management* 22(2):86–102. doi: 10.1108/IJAIM-11-2012-0071.
27. Habbe, A. H., Prawira, I. F. A., Hasibuan, R. M., & Dhumale, N. R. (2023, February). Machine Learning Pose Detection Kit Implementation in Taspen Android Application. In *2023 Third International Conference on Artificial Intelligence and Smart Energy (ICAIS)* (pp. 554-558). IEEE.
28. Hwang, Seokyoun, Won Gyun No, and Jongkyum Kim. 2021. "XBRL Mandate and Timeliness of Financial Reporting: The Effect of Internal Control Problems." *Journal of Accounting, Auditing and Finance* 36(3):667–92. doi: 10.1177/0148558X20929854.
29. Jacobs, Kerry, and Jeff Kemp. 2002. "Exploring Accounting Presence and Absence: Case Studies from Bangladesh." *Accounting, Auditing & Accountability Journal* 15(2):143–61. doi: 10.1108/09513570210425592.
30. Jaichandran, R., Rayavarapu, S., Salve, A. R., Rajagopal, M., Prasad, G. N. R., & Muda, I. (2022, December). Artificial Intelligence and Machine Learning-Based Systems for Controlling Medical Robot Beds for Preventing Bedsores. In 2022 5th International Conference on Contemporary Computing and Informatics (IC3I) (pp. 2105-2109). IEEE. https://ieeexplore.ieee.org/abstract/document/10073403
31. Jayusman, Iyus, and Oka Agus Kurniawan Shavab. 2020. "Student Learning Activities Using Edmodo-Based Learning Management System (LMS) Learning Media in History Learning." *Artifact Journal* 7(1):13. doi: 10.25157/ja.v7i1.3180.
32. Kaur, Deepinder, and Dr. Bikramjit Singh. 2022. "EXtensible Business Reporting Language: A Study of Trends and Implementations." *YMER Digital* 21(07):38–47. doi: 10.37896/ymer21.07/02.
33. Khalaf Gatea, Ali, Anwar Adnan Alnawas, and Zina Hamza Gali. 2021. "The Effect of XBRL Financial Reporting on Enhancing the Transparency of Information in the Financial Statements." *Turkish Journal of Computer and Mathematics Education* 12(11):4945–53.
34. Krishna, S. H., Pattnaik, M., Patil, A., Rao, K. T. V., & Saravanan, S. (2022, December). Artificial Intelligence Influence on Accounting Methods. In *2022 5th International Conference on*

Contemporary Computing and Informatics (IC3I) (pp. 2120-2125). IEEE.
35. Kumar, Purnendu, S. Sujeesh Kumar, and Archana Dilip. 2019. “Effectiveness of the Adoption of the XBRL Standard in the Indian Banking Sector.” *Journal of Central Banking Theory and Practice* 8(1):39–52. doi: 10.2478/jcbtp-2019-0002.
36. Lavrinenko, Olga, Edmunds Čižo, Svetlana Ignatjeva, Alina Danileviča, and Krzysztof Krukowski. 2023. “Financial Technology (FinTech) as a Financial Development Factor in the EU Countries.” *Economies* 11(2). doi: 10.3390/economies11020045.
37. Linarwati, Mega, Azis Fathoni, and Maria M. Minarsih. 2016. "Descriptive Study of Training and Development of Human Resources and the Use of Behavioral Event Interview Methods in Recruiting New Employees at Bank Mega Kudus Branch." *Journal of Management* 2(2):1–8.
38. Liu, Chunhui, Xin (Robert) Luo, and Fu Lee Wang. 2017. "An Empirical Investigation on the Impact of XBRL Adoption on Information Asymmetry: Evidence from Europe." *Decision Support Systems* 93(2016):42–50. doi: 10.1016/j.dss.2016.09.004.
39. Makarius, Erin E., Debmalya Mukherjee, Joseph D. Fox, and Alexa K. Fox. 2020. “Rising with the Machines: A Sociotechnical Framework for Bringing Artificial Intelligence into the Organization.” *Journal of Business Research* 120(July):262–73. doi: 10.1016/j.jbusres.2020.07.045.
40. Mikalef, Patrick, and Manjul Gupta. 2021. "Artificial Intelligence Capability: Conceptualization, Measurement Calibration, and Empirical Study on Its Impact on Organizational Creativity and Firm Performance." *Information and Management* 58(3):103434. doi: 10.1016/j.im.2021.103434.
41. Mwiya, Bruce, Mathew Katai, Justice Bwalya, Maidah Kayekesi, Sekela Kaonga, Edwin Kasanda, Christopher Munyonzwe, Bernadette Kaulungombe, Eledy Sakala, Alexinah Muyenga, and Donald Mwenya. 2022. "Examining the Effects of Electronic Service Quality on Online Banking Customer Satisfaction: Evidence from Zambia." *Cogent Business and Management* 9(1). doi: 10.1080/23311975.2022.2143017.
42. Nicholls, Jeremy Andrew. 2020. "Integrating Financial, Social and Environmental Accounting." *Sustainability Accounting, Management and Policy Journal* 11(4):745–69. doi: 10.1108/SAMPJ-01-2019-0030.
43. Pan, Ding, and Yali Ji. 2023. “Extensible Business Reporting Language Technology Adoption and Diffusion—A Tripartite Evolutionary Game Perspective.” *Systems* 11(4). doi: 10.3390/systems11040197.
44. Paschen, Jeannette, Jan Kietzmann, and Tim Christian Kietzmann. 2019. “Artificial Intelligence (AI) and Its Implications for Market Knowledge in B2B Marketing.” *Journal of Business and Industrial Marketing* 34(7):1410–19. doi: 10.1108/JBIM-10-2018-0295.
45. Paschen, Ulrich, Christine Pitt, and Jan Kietzmann. 2020. “Artificial Intelligence: Building Blocks and an Innovation Typology.” *Business Horizons* 63(2):147–55. doi: 10.1016/j.bushor.2019.10.004.
46. Pelleti, S., Bains, S., Bansal, A., Chowdhary, H., & Mahajan, Y. (2022, December). Management Information System based on Artificial Intelligence Technology. In *2022 5th International Conference on Contemporary Computing and Informatics (IC3I)* (pp. 2007-2012). IEEE.
47. Prahalad, C.K. 1993. “The Role of Core Competencies in the Corporation.” *Research-Technology Management* 36(6):40–47. doi: 10.1080/08956308.1993.11670940.
48. Rajagopal, M., Hinge, P., Srinivas, K., Palav, M. R., Balaji, P., (2022, December). Artificial Intelligence & Data Warehouse Regional Human Resource Management Decision Support System. In 2022 5th International Conference on Contemporary Computing and Informatics (IC3I) (pp. 2110-2113). IEEE. https://ieeexplore.ieee.org/abstract/document/10073122
49. Roy, S., Salve, A. R., Shah, J. A., Kadam, S., & Dash, M. (2022, December). Artificial Intelligence Based Rural E-Commerce Boosting Using Big Data. In *2022 5th International Conference on Contemporary Computing and Informatics (IC3I)* (pp. 2087-2093). IEEE.
50. Selin, Alia Qonita Julia. 2022. "The Role of Artificial Intelligence Technology in the Era of Industrial Revolution 4.0." *Bina Darma University* .
51. Shan, Yuan George, and Indrit Troshani. 2021. “Digital Corporate Reporting and Value Relevance: Evidence from the US and Japan.” *International Journal of Managerial Finance* 17(2):256–81. doi:

10.1108/IJMF-01-2020-0018.

52. Subramanian, Hemang, Sabyasachi Mitra, and Sam Ransbotham. 2021. “Capturing Value in Platform Business Models That Rely on User-Generated Content.” *Organization Sci* 32(3):804–23. doi: 10.1287/orsc.2020.1408.
53. Tohang, Valentina, Amelia Limijaya, and Marcus Chitrahadi. 2020. "An Analysis of the Impact of XBRL Filings towards Information Asymmetry in Indonesia." *Proceedings of 2020 International Conference on Information Management and Technology, ICIMTech 2020* (August):330–35. doi: 10.1109/ICIMTech50083.2020.9211114.
54. de Villiers, Charl, Leonardo Rinaldi, and Jeffrey Unerman. 2014. “Integrated Reporting: Insights, Gaps and an Agenda for Future Research.” *Accounting, Auditing and Accountability Journal* 27(7):1042–67. doi: 10.1108/AAAJ-06-2014-1736.
55. Wang, Pu Cha, Fei Che, Shan Shan Fan, and Chen Gu. 2014. "Ownership Governance, Institutional Pressures and Circular Economy Accounting Information Disclosure: An Institutional Theory and Corporate Governance Theory Perspective." *Chinese Management Studies* 8(3):487–501. doi: 10.1108/CMS-10-2013-0192.
56. Wang, Xun, and Xue Wang. 2022. "Digital Financial Inclusion and Household Risk Sharing: Evidence from China's Digital Finance Revolution." *China Economic Quarterly International* 2(4):334–48. doi: 10.1016/j.ceqi.2022.11.006.
57. Wiyarni. 2017. "Traditional Market Accounting: Management or Financial Accounting?" *Asian Journal of Accounting Research* 2(1):7–10. doi: 10.1108/AJAR-2017-02-01-B002.
58. Yoon, Hyungwook, Hangjung Zo, and Andrew P. Ciganek. 2011. “Does XBRL Adoption Reduce Information Asymmetry?” *Journal of Business Research* 64(2):157–63. doi: 10.1016/j.jbusres.2010.01.008.
59. Zhang, Min, Tingting Ye, and Li Jia. 2022. “Implications of the 'Momentum' Theory of Digitalization in Accounting: Evidence from Ash Cloud.” *China Journal of Accounting Research* 15(4):100274. doi: 10.1016/j.cjar.2022.100274.