

The Effect of Application of Information Technology on the Efficiency of Financial Reporting

Dina Fitri Septarini^A, Heru Ismanto^B

Abstract

The digital era is an era in which the use of technology and information is quite commonplace to be applied in various fields. Information technology provides various conveniences in every activity, including financial reporting. This research was conducted to see how the application of information technology can provide efficiency to financial reporting. This research will be carried out using a descriptive qualitative approach. The data used in this study comes from mixed results of previous studies and studies still relevant to the research content. The results of this study then found that the presence of information technology significantly influences the efficiency of financial reporting. This is because the company of automation using software applications can speed up the reporting process and reduce dependence on manual work. The use of e-reporting can also increase accessibility and fluency in delivering information. Through this e-reporting, the latest information can be accessed directly, so efficiency is much better than without technology.

Keywords: *Information Technology, Efficiency, Financial Statements.*

INTRODUCTION

In today's digital era, the development of information technology has significantly impacted various aspects of life, including in the business and financial spheres. Financial reporting is an essential element in the financial management of an entity. Efficiency in financial reporting is the main goal to ensure accurate, relevant, and reliable financial information for stakeholders (Talha et al., 2022). Developments in information technology, such as accounting software, ERP (Enterprise Resource Planning) systems, e-reporting solutions, and other technologies, have opened up new opportunities for efficient financial reporting. This technology enables faster data processing, process automation, system integration, and better accessibility of financial information (Lavorato & Piedepalumbo, 2023).

Financial reporting efficiency has important implications for the sustainability and growth of an organization. In a fast-paced business environment, the speed and accuracy of financial information are crucial in making strategic decisions. With sound financial reporting efficiency, management can respond to changes more quickly and precisely and increase stakeholders' trust in the financial information submitted

^AUniversitas Musamus, Indonesia, Email: dina@unmus.ac.id

^BUniversitas Musamus, Indonesia

(Mikalef et al., 2020). Before the development of information technology, financial reporting often involved complex manual processes and was prone to human error. Data collection, processing, and reporting are time-consuming, increase the risk of errors, and limit the accessibility of financial information (O'Neill et al., 2022).

The application of information technology in financial reporting can provide solutions to challenges in traditional financial reporting. By using integrated accounting software, ERP systems, and e-reporting solutions, the process of collecting, processing, and reporting financial data can be automated. This helps improve financial reporting efficiency, accuracy, and consistency (Roychowdhury et al., 2019). One of the main effects of the application of information technology in the efficiency of financial reporting is an increase in speed. By using the right information technology, the time needed to collect and process data can be minimized. As a result, financial reports can be prepared more quickly, providing decision-makers with more real-time information (Di Vaio & Varriale, 2020).

The application of information technology also impacts increasing the accuracy and consistency of financial reporting. With process automation, the risk of human error can be significantly reduced. The integrated system also ensures consistency in data processing and report formats, reducing the possibility of errors that can occur in manual reporting (Kokina & Blanchette, 2019). With information technology, financial information can be accessed more easily and quickly. Stakeholders can access financial reports online from anywhere and anytime through an electronic platform. This provides easy access to crucial financial information in business decisions (Pencarelli, 2020).

The trend of applying information technology in financial reporting is growing. Many organizations are adopting integrated accounting software, ERP systems, and e-reporting solutions to improve financial reporting efficiency. It is essential to research the effect of the application of information technology on financial reporting efficiency to dig deeper into the associated impacts, challenges, and benefits (Tiwari et al., 2023). Through this research, we can better understand how information technology can be applied effectively to increase financial reporting efficiency in various types of organizations.

LITERATURE REVIEW

Information Technology

Technology is the overall means of providing goods necessary for the continuity and comfort of human life. The use of technology by humans begins with the conversion of natural resources into simple tools. The prehistoric discovery of the ability to control fire increased the availability of food sources, while the invention of the wheel helped humans travel and control their environment (Lucchi, 2023). Recent technological developments, including the printing press, the telephone, and the internet, have reduced physical barriers to communication and made it possible for humans to interact freely globally. However, not all

technology is used for peaceful purposes. The development of increasingly sophisticated weapons of destruction has occurred throughout history, from clubs to nuclear weapons (Gaines, 2019).

The term 'technology' has changed significantly over the last 200 years. Before the 20th century, this term was uncommon in English and usually referred to the description or study of applied art. The time is often associated with engineering education, such as at the Massachusetts Institute of Technology (founded in 1861) (Bongard & Levin, 2021).

Technology means developing and applying various equipment or systems to solve problems humans face in everyday life. In everyday language, the word technology is close to its meaning with the term ordinance. Technology results from human thought to develop specific procedures or systems and use them to solve problems in their lives (Zhang & Lu, 2021). For example, a child far from his parents can send a message of missing him by sending messages by letter, SMS, telegram, telephone, or email via the internet. So, the child already used technology in information and communication (Bakuri & Amoabeng, 2023).

If the general understanding of technology has been explained above, then the next discussion is about technology development, namely Information and Communication Technology. Suppose technology means developing and applying various equipment or systems to solve problems humans face. In that case, the word information can be interpreted as news with a specific purpose (Mailizar & Far, 2020). Humans have knowledge and experience that they always want to share with others. Experience or knowledge communicated to other people is a message or information. So, messages or information require the presence of other parties. The word communication comes from the Latin communicate, which means sharing or conveying news, messages, information, and feelings to others (Nadler, 2020).

From the meaning above, it can be concluded that information technology is a procedure or system humans use to convey messages or information. Along with the development of computers and modern communication equipment, information and communication technology can be interpreted as using computers and other devices as tools for processing, presenting, and managing data and information based on communication equipment (Lv & Kumar, 2020). The development of human civilization was accompanied by the development of ways of conveying information (from now on known as information technology), starting from meaningless pictures on cave walls, placing historical milestones in the form of inscriptions, to the introduction of the world of information flow known as the internet (van Biljon & Osei-Bryson, 2020).

Efficiency

The word efficient comes from the Latin *efficere*, which means to produce, organize, and make. Efficiency can be formulated according to a precise understanding: maximizing the ratio between the real net results (the balance of the desired effects against those that are not

desired) with the sacrifices made. An action can be called efficient if it achieves maximum results with a given effort (Kanters, 2022). Or when it reaches a certain level of results with the smallest possible effort given. In a general sense, an efficient company is a company that, in its production, produces goods or services quickly, smoothly, and at minimum cost. According to Mulyadi, efficiency is cost control or sacrifice of economic resources measured in units of money that have occurred to achieve the goals that have been set (Siderius & Poldner, 2021).

Concerning industrial organization, efficiency refers to the most productive way to use scarce resources. In this case, there are generally two types of efficiency: technical and economic. Technical efficiency concerns the maximum output produced using certain inputs and technologies (Krizanova et al., 2019). One firm may be technologically more efficient than another if it produces the same output level with one or fewer physical inputs. Due to the different production processes, not all companies are technologically efficient. Economic efficiency arises when inputs are utilized so that one output level is produced at a lower cost than another (Maradin et al., 2021).

An increase in efficiency occurs when the existing output or output level is produced at a lower cost. Unlike engineering or technological efficiency, economic efficiency allows the comparison of different production processes. According to Muchdoro, efficiency is the level of savings in using existing resources to use existing resources to achieve the desired goals (Bevilacqua et al., 2020). According to Yamit, the costs for project acceleration can be divided into 2: Normal Costs and Expedited Costs. Normal costs are costs incurred to complete the project using normal time. Meanwhile, accelerated costs are incurred when the project is completed using the accelerated time (Cooper, 2021).

Miranda stated that efficiency is the spending prediction or the ratio between the quantity of sources used and the output sent. Gie explained that efficiency is an understanding of the optimal relationship between income and expenses, working hard and the results, capital and profits, and costs and enjoyment, which are sometimes also equated with accuracy or can also be formulated as the best comparison between expenses and income, between a work effort and its results (Schroeder et al., 2020). This comparison can be seen from two aspects, namely:

1. In terms of results

A job can be called efficient if it gives maximum results with a certain effort. The intended results are regarding the maximum quality and quantity obtained (Moysiadis et al., 2021).

2. Business Aspects

A job can be considered efficient if a certain result is achieved with minimal effort. The business in question contains three elements: time, cost, and work methods (Mangiaracina et al., 2019).

Finance Report

In general, financial statements consist of a balance sheet, a profit and loss statement, and a report on changes in capital. The balance sheet

describes a company's assets, liabilities, and capital on a certain date. The income statement shows the company's results and the costs incurred during a certain period (Barker et al., 2022). The report on changes in the capital shows the sources and uses that cause changes in the company's capital. In practice, other reports are often included, which help obtain further explanations, for example, reports on changes in working capital, reports on sources and uses of cash or reports on cash flows, and reports on production costs (Lenihan et al., 2019).

Munawir said, "Financial reports are two lists compiled by an accountant at the end of a period for a company. The two lists are a list of balance sheets or a list of financial positions and a list of income or a list of profit and loss. In this position, adding a third list (surplus list) is customary. The third list is a list of surpluses or possible deficits, usually presented in a report on changes in the capital" (Yanuar Ramadhan & Sudarwan, 2022).

In the opinion of the Indonesian Accounting Association: "Financial reports are part of the financial reporting process. Complete financial statements usually include a balance sheet, income statement, and statement of changes in financial position (which can be presented in various ways, such as a statement of cash flows or a statement of flows of funds). In addition, other financial records and reports also include schedules and financial information on industry and geographical segments as well as disclosure of the effect of price changes" (Faccia et al., 2021).

Types of financial reports published by companies include:

1. The balance sheet is a periodic report on a company's assets, debts, and capital on a certain date. The balance sheet's purpose is to show a company's financial position on a certain date, usually at closing time.
2. The profit and Loss Report describes the amount of results, costs, and profit/loss of the company in a certain period
3. Statement of Cash Flows describes the sources and uses of cash in a period.
4. Report on Changes in Capital, explaining changes in the capital position, either share in PT or capital in the company.
5. Retained Earnings Report, explaining the position of retained earnings not distributed to shareholders (Abdulaziovich, 2023).

Financial reports are the result of an accounting process that can be used as a tool for communication between the financial data or activities of a company and parties with an interest in the data or activities of the company (Chen et al., 2021). The function of financial reports for each party can be explained as follows:

1. Investors
They need information to help determine whether to buy, hold or sell the investment. Shareholders are also interested in information that allows them to assess a company's ability to pay dividends (Nicholls, 2020).
2. Employees

Employees and the groups that represent them are interested in information about the stability and profitability of the company. They are also interested in information that allows them to assess the company's ability to provide services, benefits, and employment opportunities (Garg et al., 2021).

3. Lenders

Lenders are interested in financial information to decide whether a loan and interest can be paid when due (Rosavina et al., 2019).

4. Suppliers and other business creditors

Suppliers and other business creditors are interested in information enabling them to decide whether amounts owed will be paid when due. Business creditors are interested in the company for a shorter period than lenders, except when the main customer depends on the company's survival (Gelpern et al., 2022).

5. Customers

Customers are interested in information about the company's going concerns, especially if they are involved in a long-term agreement with or are dependent on the company (Burström et al., 2021).

6. Government

The government and various institutions under its control are interested in corporate activities, establish tax policies and serve as a basis for compiling national income statistics or other statistics (Hoekman & Nelson, 2020).

7. Society

Corporations influence members of society in a variety of ways. For example, companies can significantly contribute to the national economy, including the number of people employed and protection for domestic investors. Financial reports can help society by providing information on trends and recent developments in the prosperity of companies and their range of activities (Scheyvens & Hughes, 2019).

Based on the opinions above, it can be concluded that the financial report is a summary of financial transactions that occurred during the financial year made by management as a means of accountability to company owners and reports to other interested parties (Alhadab et al., 2020).

METHOD

This research will use a descriptive qualitative approach through a literature study. This research method will involve an analysis of relevant and available literature regarding the effect of the application of information technology on the efficiency of financial reporting. A qualitative approach will enable researchers to deeply understand the observed phenomena and explore new insights by interpreting existing data. The research process will begin with identifying relevant literary sources, including scientific journals, books, articles, and other related

publications. The data collected will be in the form of theories, concepts, research findings, and views of experts in the application of information technology and financial reporting efficiency. Data analysis will be carried out by identifying patterns, themes, and relationships between related concepts. This research is expected to produce a more in-depth understanding of the effect of the application of information technology on the efficiency of financial reporting. Literature study as a research method will enable researchers to utilize existing knowledge in the literature to construct strong arguments and provide new insights in the context of this research.

RESULT AND DISCUSSION

Financial Reporting Process Automation

Automating the financial reporting process by implementing integrated accounting software is an effective step in increasing financial reporting efficiency. Economic data collection, processing, and reporting can be done automatically using integrated accounting software. Manual processes that are time-consuming and prone to errors can be significantly reduced. As a result, the financial reporting process can be completed more quickly, efficiently, and accurately. In addition, ERP system integration also plays an important role in accelerating the financial reporting process. ERP systems integrate various business functions, including accounting and finance. With this integration, financial data can be accessed in real-time, thus enabling fast and accurate processing. Integrated financial information in the ERP system also minimizes the risk of errors and excess costs in the financial reporting process.

In implementing integrated accounting software, automating the process of collecting financial data is one of the main advantages. With the automatic collection feature, financial data can be sent directly from related systems, such as sales, payroll, or inventory systems. This reduces reliance on manual processes prone to errors and saves time gathering the data needed for financial reporting. The application of integrated accounting software also provides benefits in processing financial data. The data collected can be automatically processed and compiled in a format that suits financial reporting needs. Integrated accounting software provides efficient data processing features, such as transaction classification, automatic calculations, and systematic preparation of financial reports. Thus, processing financial data can be done more quickly, accurately, and consistently.

Financial reporting generated through integrated accounting software has a higher level of accuracy. In manual processes, human errors often occur in collecting, processing, or preparing financial reports. However, with automation in accounting software, the risk of human error can be minimized. Data that is collected and processed automatically has a higher accuracy level, so the resulting financial reports are more reliable for stakeholders. Another advantage of implementing integrated accounting software is the creation of timely

financial reports. The automation process allows financial reports to be prepared quickly and efficiently. The data collected can be automatically processed and presented as ready-to-use financial reports. This will enable stakeholders to access up-to-date financial information and make more responsive decisions.

In addition to speeding up the financial reporting process, implementing integrated accounting software can reduce operational costs. Manual processes in financial reporting often require considerable effort and human resources. However, automation can reduce work that takes time and consumes human resources. Using integrated accounting software can also reduce the risk of errors that can potentially cause financial losses for the company. ERP system integration also provides more effective financial management and monitoring benefits. The integrated financial data in the ERP system provides a comprehensive picture of the company's financial condition. Real-time and integrated financial information enables managers to make decisions based on accurate and up-to-date data. Thus, financial management can be done better, increasing efficiency in financial reporting.

Implementing integrated accounting software also provides convenience in auditing and compliance. Manual processes in financial reporting often complicate the audit process and require a long time to ensure compliance with applicable regulations and accounting standards. However, with integrated accounting software, financial data automatically collected and recorded can be easily accessed and verified in the audit process. This speeds up the audit process and ensures compliance with applicable regulations. Overall, implementing integrated accounting software and ERP system integration brings various benefits in increasing financial reporting efficiency. Automated reporting processes, fast and accurate data processing, higher levels of accuracy, timely financial reports, reduced operational costs, more effective financial management and monitoring, ease of auditing, and compliance with regulations are some of the main benefits that can be obtained from the application of information technology in financial reporting.

Accessibility and Smooth Submission of Financial Information

Using e-reporting solutions in delivering financial information increases accessibility and fluency. E-reporting solutions enable financial reports to be accessed online by stakeholders. With easy and fast access, decision-makers can respond more responsively to market or business situation changes. Up-to-date and easily accessible financial information helps make more efficient decisions based on relevant financial data. Apart from e-reporting solutions, integration and accessibility of financial data are also important in increasing efficiency in reporting. Information technology can integrate financial data from various systems or related departments. This ensures the integration of financial data required in the reporting process. Easily accessible and integrated data speeds up

the process of financial analysis and reporting, reducing the risk of data processing errors. With data integration, parties needing financial information can easily access it without looking for data from various sources.

Furthermore, applying information technology also allows for wider access to financial information. In today's digital era, financial information can be conveyed through various digital platforms, such as corporate portals, mobile applications, or social media platforms. With broad accessibility, stakeholders, including employees, investors, and other related parties, can easily access the required financial information according to their needs. This provides convenience and flexibility in obtaining relevant and important information for decision-making. The speed and accuracy of delivering information are also important in accessibility and fluency. By using information technology, the delivery of financial information can be done quickly and on time. For example, financial reports can be digitally uploaded and submitted via email or other online platforms. This reduces delays in sending financial reports and ensures stakeholders receive accurate and up-to-date information. The speed and accuracy of information delivery are key to maintaining the company's credibility and stakeholders' trust.

Information technology also plays an important role in maintaining the security and confidentiality of financial information. In the digital delivery of financial information, security measures such as data encryption, user authorization, and protection against cyber-attacks are essential. By adopting secure information technology, companies can protect their financial information from unauthorized access or misuse. Financial information security is a top priority in using information technology in financial reporting. The application of information technology also helps track and record any changes or revisions to financial information. In a manual process, changes or revisions made to financial statements can be difficult to identify and track. However, using an information technology system, every change can be recorded automatically and properly documented. This increases transparency and accountability in the delivery of financial information.

In addition, information technology also provides the ability to store and manage large volumes of financial data. In a complex business, the volume of financial data generated can be enormous and complex. By using information technology, companies can manage and store this data efficiently, making financial analysis and reporting easier. The speed and ease of accessing relevant data allow decision-makers to perform more in-depth analyses and gain valuable insights. Overall, e-reporting solutions, integration and accessibility of financial data, speed and accuracy of information delivery, security of financial information, tracking changes, ability to store and manage data, and transparency are several important aspects that can be obtained through the application of information technology in the accessibility and smooth delivery of financial information. In the digital era that continues to grow,

information technology is a necessity that cannot be ignored in increasing the efficiency and effectiveness of financial reporting.

Increasing the Accuracy and Consistency of Financial Reporting

The application of information technology in financial reporting also significantly contributes to increasing the accuracy and consistency of reporting. One of the main benefits is the automation of calculations and processing of financial data. Using information technology, financial data calculations can be performed automatically, reducing dependence on manual processes prone to human error. In manual operations, errors can occur due to negligence, input, or calculation errors. However, with automation, the calculation process becomes more precise and consistent, increasing the accuracy of financial reporting.

Information technology can create real-time data validation. Financial data can be validated automatically in systems that use information technology during input or processing. This allows early detection of possible data errors or inconsistencies. Real-time data validation ensures that the data used in financial reporting is accurate and consistent. With accurate and fast data validation, the risk of errors in reporting can be minimized, thereby increasing the reliability of financial information submitted to stakeholders.

The use of information technology enables the use of a consistent calculation format and methodology in financial reporting. In manual processes, using different formats and methods can lead to inconsistencies in reporting. However, with information technology, calculation formats and methodologies can be programmed consistently, ensuring uniformity and consistency in financial reporting. Using a consistent format also facilitates stakeholders' understanding and analysis of financial data.

Information technology also facilitates using controls and audit trails in financial reporting. With a computerized system, activities using financial data can be tracked better. Audit trails that are recorded electronically make it easier to trace the history of changes and access financial data, thereby increasing transparency and accountability in reporting. In addition, the controls implemented in information technology systems also help prevent data manipulation and fraud in financial reporting.

The application of information technology allows financial data integration with other data sources. For example, financial data can be integrated into one system with operational or customer data. This allows a more comprehensive analysis of the company's financial performance. Automatic and computerized data integration also minimizes data processing errors and increases financial reporting accuracy.

Overall, automation of calculations and data processing, real-time data validation, use of consistent calculation formats and methodologies, use of controls and audit trails, as well as the integration of financial data with other data sources are some of the factors that enable the application of information technology to increase the accuracy and

consistency of financial reporting. With integrated information technology, companies can optimize operational efficiency and ensure accurate and credible financial information to support good decision-making.

CONCLUSION

The application of information technology significantly affects the efficiency of financial reporting. Automating the financial reporting process through integrated accounting software and ERP system integration speeds up the reporting process, reduces dependence on manual work, and increases efficiency in producing accurate and timely financial reports. Accessibility and smooth delivery of financial information are made easier through e-reporting solutions and financial data integration. E-reporting solutions allow stakeholders to access financial reports online, providing convenience and speed in obtaining the latest financial information. Meanwhile, financial data integration ensures easily accessible and integrated data, speeds up the process of financial analysis and reporting, and reduces the risk of errors in data processing. Thus, the application of information technology in financial reporting provides benefits regarding efficiency, accuracy, consistency, and accessibility of financial information. This supports better decision-making, increases transparency, and strengthens stakeholders' trust in the company's financial reports. Therefore, companies must consider implementing information technology to improve financial reporting efficiency and gain a competitive advantage in an ever-evolving business environment.

REFERENCES

- Abdulazizovich, K. U. B. (2023). Improvement Of Information About Accounts Receivable in Current Assets in the Balance Sheet Based on International Standards. *Journal of Survey in Fisheries Sciences*, 10(2S), 2849-2859.
- Alhadab, M., Abdullatif, M., & Mansour, I. (2020). Related party transactions and earnings management in Jordan: the role of ownership structure. *Journal of Financial Reporting and Accounting*, 18(3), 505-531.
- Bakuri, A. Z., & Amoabeng, D. (2023). Doing kin work among Ghanaians home and abroad: A paradigm shift to ICT. *Family Relations*, 72(2), 585-600.
- Barker, R., Lennard, A., Penman, S., & Teixeira, A. (2022). Accounting for intangible assets: suggested solutions. *Accounting and Business Research*, 52(6), 601-630.
- Bevilacqua, P., Bruno, R., & Arcuri, N. (2020). Comparing the performances of different cooling strategies to increase photovoltaic electric performance in different meteorological conditions. *Energy*, 195, 116950.
- Bongard, J., & Levin, M. (2021). Living things are not (20th century) machines: updating mechanism metaphors in light of the modern

- science of machine behavior. *Frontiers in Ecology and Evolution*, 9, 147.
- Burström, T., Parida, V., Lahti, T., & Wincent, J. (2021). AI-enabled business-model innovation and transformation in industrial ecosystems: A framework, model and outline for further research. *Journal of Business Research*, 127, 85-95.
- Chen, Y., Kumara, E. K., & Sivakumar, V. (2021). Investigation of finance industry on risk awareness model and digital economic growth. *Annals of Operations Research*, 1-22.
- Cooper, R. G. (2021). Accelerating innovation: Some lessons from the pandemic. *Journal of Product Innovation Management*, 38(2), 221-232.
- Di Vaio, A., & Varriale, L. (2020). Blockchain technology in supply chain management for sustainable performance: Evidence from the airport industry. *International Journal of Information Management*, 52, 102014.
- Faccia, A., Manni, F., & Capitanio, F. (2021). Mandatory esg reporting and xbrl taxonomies combination: Esg ratings and income statement, a sustainable value-added disclosure. *Sustainability*, 13(16), 8876.
- Gaines, B. R. (2019). From facilitating interactivity to managing hyperconnectivity: 50 years of human-computer studies. *International Journal of Human-Computer Studies*, 131, 4-22.
- Garg, R., Kiwelekar, A. W., Netak, L. D., & Ghodake, A. (2021). i-Pulse: A NLP based novel approach for employee engagement in logistics organization. *International Journal of Information Management Data Insights*, 1(1), 100011.
- Gelpern, A., Horn, S., Morris, S., Parks, B., & Trebesch, C. (2022). How China lends: A rare look into 100 debt contracts with foreign governments. *Economic Policy*, eiac054.
- Hoekman, B., & Nelson, D. (2020). Rethinking international subsidy rules. *The World Economy*, 43(12), 3104-3132.
- Kanters, C. L. (2022). The Business of Cooperation: Efficiency in a Dutch Alternative Currency Enterprise. *Ethnos*, 1-22.
- Kokina, J., & Blanchette, S. (2019). Early evidence of digital labor in accounting: Innovation with Robotic Process Automation. *International Journal of Accounting Information Systems*, 35, 100431.
- Krizanova, A., Lăzăroiu, G., Gajanova, L., Kliestikova, J., Nadanyiova, M., & Moravcikova, D. (2019). The effectiveness of marketing communication and importance of its evaluation in an online environment. *Sustainability*, 11(24), 7016.
- Lavorato, D., & Piedepalumbo, P. (2023). How Smart Technologies Affect the Decision-Making and Control System of Food and Beverage Companies—A Case Study. *Sustainability*, 15(5), 4292.
- Lenihan, H., McGuirk, H., & Murphy, K. R. (2019). Driving innovation: Public policy and human capital. *Research policy*, 48(9), 103791.

- Lucchi, E. (2023). Regenerative Design of Archaeological Sites: A Pedagogical Approach to Boost Environmental Sustainability and Social Engagement. *Sustainability*, 15(4), 3783.
- Lv, Z., & Kumar, N. (2020). Software defined solutions for sensors in 6G/IoE. *Computer Communications*, 153, 42-47.
- Mailizar, M., & Fan, L. (2020). Indonesian Teachers' Knowledge of ICT and the Use of ICT in Secondary Mathematics Teaching. *Eurasia Journal of Mathematics, Science and Technology Education*, 16(1).
- Mangiaracina, R., Perego, A., Seghezzi, A., & Tumino, A. (2019). Innovative solutions to increase last-mile delivery efficiency in B2C e-commerce: a literature review. *International Journal of Physical Distribution & Logistics Management*.
- Maradin, D., Cerović, L., & Šegota, A. (2021). The efficiency of wind power companies in electricity generation. *Energy Strategy Reviews*, 37, 100708.
- Mikalef, P., Boura, M., Lekakos, G., & Krogstie, J. (2020). The role of information governance in big data analytics driven innovation. *Information & Management*, 57(7), 103361.
- Moysiadis, V., Sarigiannidis, P., Vitsas, V., & Khelifi, A. (2021). Smart farming in Europe. *Computer science review*, 39, 100345.
- Nadler, R. (2020). Understanding “Zoom fatigue”: Theorizing spatial dynamics as third skins in computer-mediated communication. *Computers and Composition*, 58, 102613.
- Nicholls, J. A. (2020). Integrating financial, social and environmental accounting. *Sustainability Accounting, Management and Policy Journal*.
- O'Neill, T., McNeese, N., Barron, A., & Schelble, B. (2022). Human-autonomy teaming: A review and analysis of the empirical literature. *Human factors*, 64(5), 904-938.
- Pencarelli, T. (2020). The digital revolution in the travel and tourism industry. *Information Technology & Tourism*, 22(3), 455-476.
- Rosavina, M., Rahadi, R. A., Kitri, M. L., Nuraeni, S., & Mayangsari, L. (2019). P2P lending adoption by SMEs in Indonesia. *Qualitative Research in Financial Markets*, 11(2), 260-279.
- Roychowdhury, S., Shroff, N., & Verdi, R. S. (2019). The effects of financial reporting and disclosure on corporate investment: A review. *Journal of Accounting and Economics*, 68(2-3), 101246.
- Scheyvens, R., & Hughes, E. (2019). Can tourism help to “end poverty in all its forms everywhere”? The challenge of tourism addressing SDG1. *Journal of Sustainable Tourism*.
- Schroeder, M., Benjamin, N., Atienza, L., Biswas, C., Martin, A., Whalen, J. D., ... & Ismaila, A. S. (2020). Cost-effectiveness analysis of a once-daily single-inhaler triple therapy for patients with chronic obstructive pulmonary disease (COPD) using the FULFIL trial: a Spanish perspective. *International journal of chronic obstructive pulmonary disease*, 1621-1632.

- Siderius, T., & Poldner, K. (2021). Reconsidering the circular economy rebound effect: Propositions from a case study of the Dutch Circular Textile Valley. *Journal of Cleaner Production*, 293, 125996.
- Talha, M., Wang, F., Maia, D., & Marra, G. (2022). Impact of information technology on accounting and finance in the digital health sector. *Journal of Commercial Biotechnology*, 27(2).
- Tiwari, A. K., Marak, Z. R., Paul, J., & Deshpande, A. P. (2023). Determinants of electronic invoicing technology adoption: Toward managing business information system transformation. *Journal of Innovation & Knowledge*, 8(3), 100366.
- van Biljon, J., & Osei-Bryson, K. M. (2020). The communicative power of knowledge visualizations in mobilizing information and communication technology research. *Information Technology for Development*, 26(4), 637-652.
- Yanuar Ramadhan, E., & Sudarwan, G. S. (2022). Prudence In Quality of Financial Statements. *Journal of Positive School Psychology*, 6(3), 9334-9342.
- Zhang, C., & Lu, Y. (2021). Study on artificial intelligence: The state of the art and future prospects. *Journal of Industrial Information Integration*, 23, 100224.