

Digital Transformation in the MSME Accounting Information System and its Contribution to Economic Growth in Indonesia: Systematic Literature Review (SLR)

Hazri Wahyuni Ht. Suhut^{*1}, Hardea Putriani Fadhila², Iskandar Muda³

^{1,2,3} Department of Accounting, Post Graduate, Faculty of Economics and Business, Universitas Sumatera Utara, Medan, North Sumatera, Indonesia

Email : ¹hazriwahyuni@students.usu.ac.id , ²hardeaputriani@students.usu.ac.id ,

³iskandar1@usu.ac.id

Abstract

This study analyzes the influence of digital transformation on the performance and economic growth of MSMEs in Indonesia through the method *Systematic Literature Review* (SLR) of 21 journals published in 2018–2025. The study results show that digitalization, including the implementation of Accounting Information Systems (AIS), plays a significant role in improving operational efficiency, financial reporting accuracy, market expansion, and revenue growth for MSMEs. However, the level of technology adoption remains low due to limited digital and accounting literacy, lack of capital and infrastructure, and digital security risks. To optimize its implementation, MSMEs need support through structured training, the use of simple and affordable accounting applications, and multi-stakeholder collaboration. Overall, MSME digitalization has been proven to contribute significantly to strengthening the competitiveness and sustainability of the Indonesian economy.

Keyword: Digital Transformation, Accounting Information Systems, MSMEs, and Economic Growth

INTRODUCTION

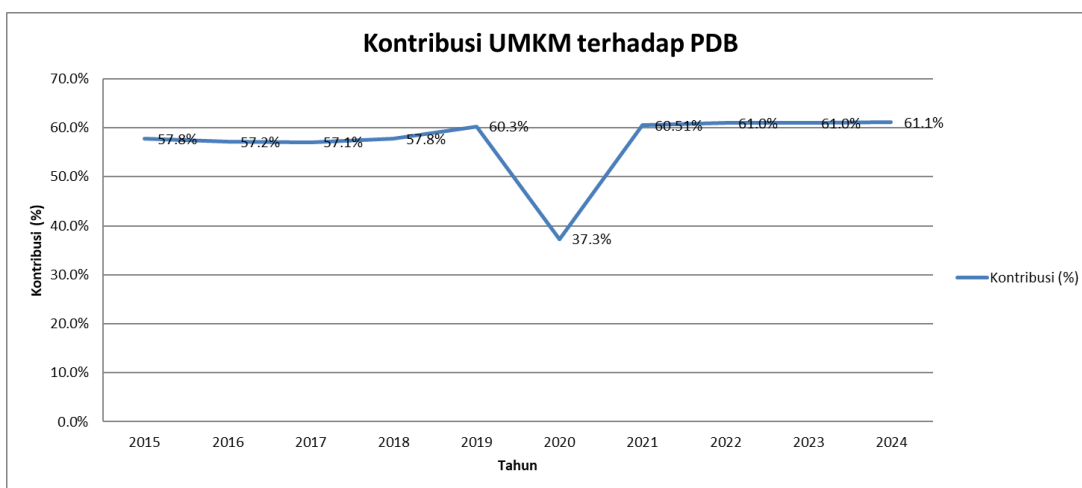
In today's modern era, various technological innovations have emerged and often attract significant attention from various parties. With the development of information technology, various human activities have begun to adapt and form new habits that rely on increased knowledge in various fields. Technology is now not only limited to hardware and software, but also utilized through various platforms such as marketplaces, YouTube, Instagram, WhatsApp, Blogger, and websites that are increasingly popular among the public. Increasingly progressive human activities have made various sectors of life dependent on technological modernization. This advancement in information technology has improved the quality of life, accelerated various activities, and driven developments in the political, economic, legal, and socio-cultural fields.

MSMEs are a major driver of the Indonesian economy, contributing 60.5% to GDP (BKPM, 2021) and absorbing approximately 97% of the national workforce (Ministry of Cooperatives and SMEs, 2023). Despite their significant role, MSMEs still face various

challenges, particularly in financial management, including the preparation of financial reports that serve as the basis for business decision-making. Technological developments have enabled this process to be implemented through Accounting Information Systems (AIS), as part of digital transformation. The implementation of technology-based AIS enables automated, rapid financial recording, processing, and reporting, integrated with other business activities, thereby increasing the efficiency and accuracy of financial information. Several studies, such as those by Ramli et al. (2023), have also demonstrated that mobile-based AIS can help MSMEs streamline administration and prepare better financial reports.

A digitized Accounting Information System (AIS) serves not only as a tool for financial recording and reporting but also as a source of insight and strategic advantage for businesses. Through more sophisticated data analytics, an AIS can identify patterns and trends not visible in traditional financial reports, providing a stronger basis for strategic decision-making (Tan et al., 2024). The implementation of a digital AIS is also considered capable of increasing efficiency, effectiveness, and accuracy in the financial recording and reporting process (Sinarwati et al., 2019). However, the adoption rate of AIS remains low due to limitations in human resources, infrastructure, and technological understanding among MSMEs (Dewi et al., 2022).

Figure 1. Contribution of MSMEs to Gross Domestic Product (GDP)



Source: Ministry of SMEs, Ministry of Finance (Data processed by researchers, 2025)

The graph shows the development of MSMEs' contribution to Indonesia's Gross Domestic Product (GDP) from 2015 to 2024. In general, MSMEs play a stable and significant role in the national economy. From 2015 to 2018, their contribution hovered around 57%, with very little fluctuation. Entering 2019, their contribution increased sharply to 60.3%, indicating the stronger performance of MSMEs before the pandemic. However, in 2020, there was a drastic decline to 37.3%. This decline was in line with the significant impact of the COVID-19 pandemic, which caused many MSMEs to experience declining sales, operational disruptions, and even business closures. Subsequently, MSME contributions recovered rapidly. In 2021, the figure jumped to 60.51%, then stabilized at 61% in 2022 and 2023. In 2024, the MSME contribution increased slightly to 61.1%, reflecting the recovery and strengthening of the MSME sector after the pandemic. Overall, this graph illustrates that MSMEs remain a vital

pillar of the Indonesian economy, able to recover from significant pressures, and have continued to contribute above 60% to GDP in recent years.

MSMEs play a crucial role in the Indonesian economy, serving as a strategic sector employing approximately 117 million workers, or 97% of the total workforce, and contributing more than 61% of national GDP, valued at IDR 9,580 trillion in 2023 (Aprieni et al., 2024 & Yulya Ammi Hapsari et al., 2024). However, despite the demands of adapting to digital technology developments, the level of technology adoption among MSMEs remains low. The 2022 National MSME Survey showed that only 17% of MSMEs utilize digital platforms for marketing, and only 10% use digital-based accounting information systems (BPS, 2022). This low adoption is influenced by limited internet access, low digital literacy, and minimal government support (Hardi & Arifin, 2023). The digital infrastructure gap is also a significant obstacle, with national internet penetration of 77.03% in 2022 still showing a gap between urban ($\pm 90\%$) and rural ($\pm 60\%$) areas (BRTI, 2022).

The lack of ability of MSMEs to build digital business networks and manage online marketing platforms also exacerbates the challenges of digitalization (Herwanda & Aji, 2023). Furthermore, the low level of digital literacy among Indonesians, with a score of 3.49 out of 5 according to the 2021 National Digital Literacy Survey, makes it difficult for many MSMEs to understand and utilize technology effectively (Katadata Insight Center & Kominfo, 2020 & Wardhana, 2020). Amidst the demands of the digital economy, MSMEs, which should be the main drivers, still lack awareness of the importance of good financial management and record-keeping (Surjono et al., 2021). Accurate bookkeeping is crucial for monitoring cash flow and ensuring business continuity. Therefore, MSMEs require a flexible and easy-to-use accounting information system to improve the efficiency, accuracy, and effectiveness of their financial management (Harjoseputro & Sidhi, 2021). The role of MSMEs is also evident in their significant contribution to national production, the number of business units, and the number of actors involved. Providing convenience and facilities to meet financing requirements helps encourage the development of MSMEs in the digital age. Furthermore, the use of accounting software simplifies the preparation of financial reports for MSMEs. Data input is more convenient, as it is less complex than conventional accounting. This software allows for quick presentation of financial reports, making it easier to monitor the business's financial condition. This software also supports the presentation of financial performance reports and simplifies asset and inventory management.

This study aims to analyze the impact of digital transformation on the economic growth of MSMEs in Indonesia through a literature review. By integrating previous research findings, this study provides a comprehensive overview of how digitalization, including the implementation of Accounting Information Systems (AIS), affects the performance, business processes, and development of MSMEs. Although digital technology has the potential to improve the efficiency and accuracy of financial management, many MSMEs still face obstacles such as low technology adoption, limited capital, and a lack of knowledge and skills in utilizing AIS, which impact their financial condition (Urohmah et al., 2022). The findings of this study are expected to serve as a basis for the government and stakeholders in formulating more effective policies to encourage the use of digital technology to increase the competitiveness and growth of MSMEs in the modern economic era.

LITERATURE REVIEW

Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) Developed by Davis (1989), the Technology Acceptance Model (TAM) is a model frequently used in information technology research. The Technology Acceptance Model (TAM) explains that the success of digital transformation depends heavily on the extent to which users accept and are willing to use new technology. Two key factors influencing this acceptance are perceived usefulness, the belief that digital technology can provide tangible benefits such as improving work efficiency and quality, and perceived ease of use, the extent to which the technology is perceived as easy to learn and use. In the digital transformation process, technology will be adopted more quickly if users perceive the digital features to simplify their activities and not add complexity. By ensuring that the implemented technology is useful and easy to operate, organizations can increase adoption rates, accelerate digital change, and achieve more optimal transformation results. The development of web-based business applications in MSMEs is a crucial factor in strengthening competitiveness. Interview results show that the implementation of E-Commerce can increase net revenue from sales by 20% to 30% (Lyonita et al., 2024).

Economic growth

Economic growth essentially describes increased economic activity, characterized by increased production of goods and services, thus driving increased social prosperity (Sukirno, 2016). In this context, an economy is said to be experiencing growth if there is an increase in output or real national income as a result of the increase in real gross national product (Resalawati, 2011). Economic growth is also an important indicator in analyzing the quality of a country's economic development because it shows the extent to which economic activity is able to generate additional income for the community within a given period (Juniddin, 2009).

Furthermore, economic growth can be understood as a process of increasing production capacity, reflected in a country's rising national income (Tunggaluh, 2012). For this growth to provide more equitable benefits, maximum efforts are needed to address income distribution issues, as controlling economic growth is expected to produce an equalizing effect so that national income can be felt more fairly by all levels of society (Sugiarto, 2002).

Digital Transformation

Digital transformation is a process of change within an organization to generate new value through the use of digital technology and internet services, thereby changing the way businesses operate and manage (Urbach et al., 2019). Digital transformation offers numerous benefits and is a crucial factor in increasing the resilience and sustainability of MSMEs (Chen et al., 2021 & Sulastri et al., 2023). Purnomo S. et al. (2024) state that digital transformation can expand markets, increase efficiency, and boost MSME profitability. Therefore, digital transformation in MSMEs in Indonesia must be understood as a gradual process that requires simultaneous support from various aspects. Digitalization is an adaptive strategy that allows MSMEs to continue operating, market products online, and maintain business continuity despite physical restrictions and changes in consumer behavior (Johan & Wati, 2023).

The implementation of digital technology in business processes also increases efficiency, expands market reach, and strengthens the competitiveness of MSMEs (Husna & Susyanti, 2024). Thus, digital technology has great potential to support business development and help MSMEs achieve long-term success. Most MSMEs have begun adopting digital technology through social media, e-commerce, and simple financial applications. This finding aligns with research showing that platforms like Instagram and WhatsApp are the primary choice for MSME digital marketing due to their ease of use and low cost (Septiadi B & Agus I, 2024).

Accounting Information Systems and their impact on MSMEs

Accounting Information Systems (AIS) function to collect, process, and present financial information as a basis for decision-making. In the Society 5.0 era, digital AIS has evolved from a traditional recording tool into a strategic, data-driven instrument that supports reporting efficiency and accuracy. Advances in information technology have also brought significant changes to accounting structures and practices, including increased automation in financial reporting and auditing, and the emergence of new professions such as information systems auditors and digital accounting consultants (Fauzi et al., 2022).

In the context of MSMEs, AIS plays a crucial role in increasing business capacity and competitiveness by providing accurate, timely, and structured financial information. Efficient recording and minimal reporting errors help MSME owners manage operations more optimally and make more informed decisions (Fitriani et al., 2023 & Hakiki et al., 2020). AIS digitization also strengthens data security, accelerates reporting processes, and supports MSMEs in competing in a competitive market. (Huynh, 2021 & Dewi G. A. et al., 2024) Research shows that the use of AIS has a positive impact on business success, which then contributes to increased productivity, income, employment, and economic activity of MSMEs, thus impacting broader economic growth (Nurwani & Safitri, 2019).

Micro, Small and Medium Enterprises and their role

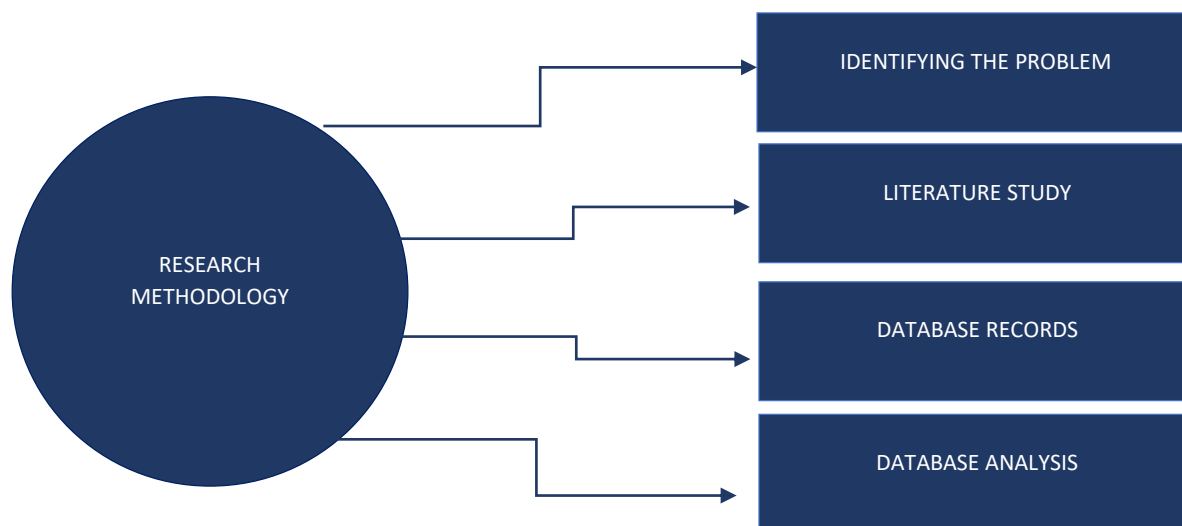
According to Law No. 20 of 2008, MSMEs are productive businesses owned by individuals or individual business entities with certain criteria (Arkhan et al., 2024), MSMEs are divided into three categories:

1. Micro Enterprises are productive businesses owned by individuals and/or individual business entities that meet the criteria for Micro Enterprises as regulated in this Law.
2. Small Business is a stand-alone productive economic enterprise, carried out by an individual or business entity that is not a subsidiary or branch of a company owned, controlled, or part of either directly or indirectly a Medium Business or Large Business that meets the criteria for a Small Business as referred to in this Law.
3. Medium Enterprises are independent productive economic enterprises, carried out by individuals or business entities that are not subsidiaries or branches of companies owned, controlled, or are part of either directly or indirectly with Small Enterprises or Large Enterprises with the amount of net assets or annual sales results as regulated in this Law.

MSMEs play a significant role in the Indonesian economy, creating jobs and thus helping reduce unemployment (Ramadaey Bangsa et al., 2024). MSMEs can also drive economic growth through their contribution to national and regional revenues (Putra, 2023). According to Amalia et al. (2023), MSMEs generally arise from individual initiatives, require relatively little initial capital, and are capable of absorbing a large workforce. This flexibility allows MSMEs to adapt easily to market changes and be more resilient to various external conditions (Kumorajati et al., 2021). Despite facing various challenges, MSMEs in Medan City continue to contribute significantly to the regional economy. Data shows that the MSME sector contributes approximately 28.86% to North Sumatra's total GRDP. Of the more than 60 million MSMEs in Indonesia, including those in Medan, approximately 97% play a role in providing employment. This confirms that MSMEs not only function as providers of goods and services, but also as a major source of job creation, which plays an important role in reducing unemployment rates in the region (Yosi Annisa & Achmad Fauzi, 2022).

METHODS

Figure 2. Research Method Flowchart



Source: Processed by Researchers, 2025

This research employs the Systematic Literature Review (SLR) method, a literature study approach conducted by reviewing and analyzing various sources of information related to the research topic. Literature review itself is a type of research that integrates various findings from previous studies into a comprehensive set of data and information. The sources used can include journals, articles, notes, magazines, or books relevant to previous research, thereby strengthening problem-solving and the suitability of the theoretical foundation used.

This literature study focuses on the elaboration of digital-based MSME business processes and evaluates findings related to the implementation of accounting information systems within the context of digital transformation in Indonesia. The research stages refer to a literature review model, starting with problem identification to explain the urgency of MSME digitalization and its contribution to economic growth. The research data sources were obtained from credible scientific databases, namely Google Scholar, ScienceDirect, DOAJ, and Garuda. They also reviewed open-access journals published between 2018 and 2025, resulting in 21 relevant journals. The next stage was database analysis, which examined the literature findings

to identify key points regarding MSME digitalization strategies, including new concepts and ideas that could strengthen the quality of the study.

The literature selection was based on the keywords Digital Transformation, Accounting Information Systems, MSMEs, Economic Growth, and Systematic Literature Review, so that the research results can provide a comprehensive picture of how digitalization and the implementation of AIS affect business processes and the development of MSMEs. By reviewing related literature, this research is expected to provide a deeper understanding of the following important aspects:

RQ1: How does the implementation of Digital Transformation through MSMEs contribute to the sustainability of the economy in Indonesia?

RQ2: What challenges do MSMEs face in adopting Accounting Information Systems with the implementation of digital transformation?

RQ3: In optimizing the implementation of Accounting Information Systems, what strategies can be used by MSMEs?

RESULT AND DISCUSSION

Result

This section presents a series of literature reviewed using the Systematic Literature Review (SLR) method. Through the SLR procedure, which encompasses identification, selection, quality evaluation, and synthesis of findings, the researchers successfully compiled a number of studies relevant to the research focus. From this entire process, 21 journals met the inclusion criteria and were deemed most supportive of the analysis.

These twenty-one papers provide an important foundation for understanding how this research issue has been addressed in previous studies. Furthermore, the analysis of this literature provides a more comprehensive understanding of research trends, methodological approaches used by previous researchers, and research gaps that can be further developed. Thus, this literature review not only summarizes previous research but also strengthens the research concept and scientific argumentation of the current study.

Figure 3. Analyzed Paper

No	Research Title	Author and Year	Research result
1	Indonesia's Digital Economy's Development	Amitkumar Dudhat dan Vertika Agarwal (2023)	The digital economy in Indonesia is growing very rapidly, contributing to increasing GDP and strengthening productivity in several sectors.

2	Digital Transformation of MSMEs in Indonesia: A Systematic Literature Review	Purnomo et al (2024)	Digital transformation contributes to increased market reach, operational efficiency, and profitability for MSMEs. However, its success is still limited by limited resources and technical competency.
3	Analisis Systematic Literature Review Tentang Strategi Pengembangan Bisnis UMKM Melalui Digitalisasi Proses Bisnis	Husna & Susyanti (2024)	The implementation of digitalization in MSME business processes contributes to increased efficiency, expanded market reach, and strengthened competitiveness. However, its implementation still faces challenges related to digital literacy and limited infrastructure.
4	Studi Ekonomi Digital di Indonesia	Teguh Permana dan Andriani Puspitaningsih (2021)	Indonesia's digital economy is showing rapid growth and is predicted to increase eightfold, reaching a value of Rp 1,796 trillion in 2020.
5	The role of digital business transformation in frugal innovation and SMEs' resilience in emerging markets..	Al Omoush et al. (2023)	Digital business transformation contributes to increased innovation efficiency and strengthened MSME resilience. Furthermore, organizational learning significantly impacts digital transformation, low-cost innovation, and operational resilience.
6	Digital transformation and SME internationalisation: unravelling the moderated mediation role of digital capabilities, digital resilience and digital	Aghazadeh et al (2023)	Digital platform capability and resilience act as full mediators in the growth process of MSMEs. The maturity of the digital business model has a positive moderating effect on this indirect relationship. Furthermore, the influence of digital leadership on international growth is mediated by digital platform capability (DPC) and digital resilience (DR).

	maturity.		
7	Spatial Patterns and Drivers of SME Digitalisation.	Holl & Rama (2023)	Location factors influence the rate of digital technology adoption among MSMEs. MSMEs in rural areas tend to be less likely to utilize digital technology, while a supportive business environment can encourage such adoption.
8	Impact of the digital economy on high-quality urban economic development: Evidence from Chinese cities	Guo B et al (2023)	The digital economy has made a significant contribution to driving high-quality urban economic development. Its influence is stronger in large cities and eastern China than in smaller cities, central and western regions.
9	Transformasi Digital : Dampak, Tantangan, Dan Peluang Untuk Pertumbuhan Ekonomi Digital	Sudiantini D et al (2023)	The digital economy presents a variety of opportunities, from increased productivity and market expansion, to the creation of new jobs and the encouragement of innovation in various sectors.
10	Klaster Ekonomi Digital Dan Analisis Dampak Ekonomi Digital Terhadap Pemulihan Ekonomi Di Pulau Sumatra	Rizky Zulkarnain dan Eviphantias H. Sinaga (2022)	The digital economy in Sumatra is showing rapid development and is predicted to continue to grow, making a significant contribution to economic growth in the region.
11	Digital Transformation pada Sistem Informasi Akuntansi di Desa	Sampetoding., et al (2024)	The research results show that the implementation of an Accounting Information System (AIS) in villages has a positive impact, increasing the accuracy of financial information, transparency, and accountability in village fund management, and supporting more effective decision-making. However, the effectiveness of the AIS is still affected by several key obstacles, such as limited human resource competency, a lack of understanding of accounting standards and reporting, inadequate technological infrastructure, and an organizational culture that

			does not fully support the use of digital technology.
12	Impact of the digital economy on high-quality urban economic development: Evidence from Chinese cities	Guo B., et al (2023)	The digital economy has significantly improved the quality of urban economic development. Its impact is more pronounced in large cities and eastern China than in smaller cities, central and western regions.
13	Defining and Measuring the Digital Economy	Kevin B., et al (2018)	Based on the t-test results, e-commerce implementation has a significant influence on MSME promotional activities in Binjai City, with a significance value of 0.001, which is below the threshold of $\alpha = 0.05$. Furthermore, the e-commerce implementation variable contributes 18.2%, as indicated by the R-squared value.
14	Peluang dan Tantangan Usaha Mikro Kecil dan Menengah (UMKM): Systematic Literature Review	Simangunson g B (2022)	Utilizing e-commerce allows MSMEs to expand their businesses online, open wider market access, and enhance business legitimacy. Furthermore, the convenience offered by marketplaces and shifts in consumer behavior also create market opportunities for MSMEs.
15	Pengaruh Penerapan Sistem Informasi Akuntansi (SIA) terhadap Kinerja Perusahaan (Studi Empiris pada UMKM di Kota Banda Aceh)	T. Irzal Rizki Mauliansyah & Mulia Saputra (2019)	The study found that the utilization, quality, security, and supporting facilities of Accounting Information Systems (AIS) significantly influence the performance of MSMEs in Banda Aceh, both simultaneously and partially. Every aspect of the AIS, from ease of use, reporting reliability, data security, to the availability of supporting tools, has been proven to increase the effectiveness of planning, monitoring, coordination, and presentation of company reports. Therefore, the implementation of a good AIS can increase the efficiency of the reporting process and have a direct impact on improving MSME performance.
16	Optimalisasi Pengembangan Melalui Bisnis	Rosdiyati., et al (2024)	This study indicates that the implementation of an Accounting Information System (AIS) in MSMEs significantly improves the quality of

	Penerapan Sistem Informasi Akuntansi Digital Pada UMKM (Studi Kasus Fashion Baju Thrift)		financial information, thus supporting the effectiveness of business planning and decision-making processes. The implementation of an AIS also improves the process of recording transactions more systematically, accurately, and in accordance with accounting standards, which positively impacts business performance. However, challenges that arise include limited accounting and technology competencies among MSME human resources and a lack of supporting infrastructure. Therefore, training, mentoring, and the provision of easily accessible technology are crucial elements in driving the success of AIS implementation in MSMEs.
17	Pemanfaatan Informasi Sistem Akuntansi Berbasis Digital Mobile Pada Kelompok Usaha Batu Bata Di Kelurahan Limbung, Kecamatan Bajeng, Kabuapten Gowa	Ramli., et al (2023)	The findings of this article indicate that the implementation of a mobile application-based Accounting Information System (AIS) has significantly contributed to MSMEs, particularly brick-making businesses in Limbung Village, Bajeng District, Gowa Regency. The training provided has improved the MSMEs' ability to manage their finances more systematically and efficiently. The application's ease of access and simplicity allow for the preparation of standardized financial reports and flexible business monitoring. However, some MSMEs face challenges operating smartphones or Android devices, emphasizing the importance of advanced technological assistance. The success of this activity provides positive prospects for improving MSME discipline in preparing financial reports and the ability to produce monthly reports on an ongoing basis.
18	Peran Sistem Informasi Akuntansi dalam Bentuk Digital bagi Peningkatan Kinerja pada Toko Busana Wanita “Damai Indah”	Berliana S & Ratnawati D (2021)	The research results show that a digital Accounting Information System (AIS) plays a crucial role in improving Toko Damai Indah's performance through more accurate transaction recording, more efficient customer service, and more reliable financial reporting. The information generated by the system also facilitates the owner's monitoring of employee activity and serves as a basis for operational decision-making, thus making the overall business process more effective and controlled.

19	Peran Akuntansi pada Era Society 5.0 sebagai Antecedent terhadap Pertumbuhan Kinerja UMKM dan Pengaruh Penggunaan Informasi Akuntansi	Hanifah R., et al (2023)	The results of the study indicate that the role of accounting in the Society 5.0 era has a positive and significant impact on the performance of MSMEs, and MSME performance also has a positive impact on the use of accounting information. The more widespread the use of technology-based accounting, the better the performance of MSMEs in managing their business activities. This encourages business actors to use accounting information more optimally as a basis for decision-making, performance assessment, and sales growth.
20	Peran Sistem Informasi Akuntansi Berbasis Mobile Bagi Peningkatan Kinerja UMKM	Sinarwati., et al (2019)	The research results show that the use of a mobile-based Accounting Information System significantly improves MSME performance by improving administration and the quality of financial reports, while also expanding access to funding sources. However, successful implementation still depends on training support and human resource competency development.
21	Pengaruh Sistem Informasi Akuntansi (SIA) Terhadap Efektifitas Pelaporan Akuntansi UMKM di Desa Banyuwanyar	Srihastuti E., et al (2020)	The results of the study indicate that the implementation of an Accounting Information System (AIS) has an influence on the effectiveness of MSME financial reporting, but the effect is not significant. This is proven through a regression test with a significance value of 0.656 (>0.05), which means that the AIS does not have a strong enough impact on the effectiveness of MSME financial reporting in Banyuwanyar Village. This insignificance is caused by several factors, primarily the lack of understanding among MSME actors regarding the importance of AIS and financial reporting, as well as the assumption that preparing financial reports only adds to the workload and does not provide direct benefits to their businesses.

Conclusion

After the entire literature analysis process was completed, a summary of answers to each previously formulated research question was obtained. These answers were compiled based on a synthesis of findings from the various studies reviewed in the previous stage. The analysis not only identified core information from each previous study but also identified

patterns, similarities, and differences in the findings that emerged across the literature. Thus, the resulting answers reflect a comprehensive understanding of the issue under study and demonstrate how this research contributes to filling existing knowledge gaps.

Furthermore, this summary of answers serves as an important foundation for the discussion and drawing final conclusions. Each presented finding has been verified using credible literature, providing a strong argumentative basis for the entire study. Therefore, this section not only presents answers but also illustrates the relationship between the research concept, empirical findings, and objectives in a clearer and more focused manner.

RQ1: How does the implementation of Digital Transformation through MSMEs contribute to the sustainability of the economy in Indonesia?

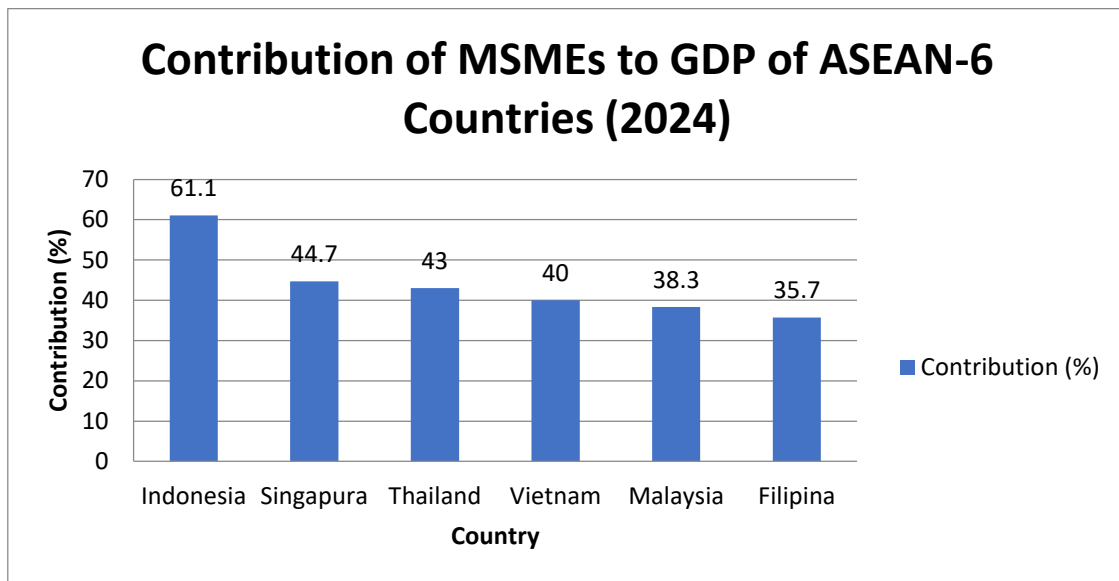
The contribution of MSMEs to the sustainability of the economy in Indonesia

The results of the literature analysis indicate that digital transformation has a very significant positive impact on the economic growth of MSMEs. First, digital transformation has been proven to increase MSME revenues, along with the increasing use of digital technology in Indonesia. When MSMEs are able to meet the prerequisites for utilizing digital technology, the opportunity to increase revenue becomes even greater. Second, digital transformation expands marketing reach because digital technology allows businesses to reach consumers more widely, without the constraints of space and time. High digital accessibility makes MSME products and services accessible to anyone, from anywhere.

Third, digital transformation provides operational cost savings because business processes are no longer dependent on physical stores. Services, marketing, and transactions can be conducted online, increasing cost efficiency. Fourth, digital transformation offers convenience and flexibility in transaction processes. This aligns with rapid technological developments and is supported by various research findings. Research by Dudhat & Agarwal (2023) shows that the digital economy has made a significant contribution to Indonesia's GDP. Similar findings were described by Permana & Puspitaningsih (2021), who stated that the digital economy drove an eightfold increase in GDP, reaching IDR 1,796 trillion in 2020. In the Sumatra region, the digital economy is also growing rapidly and is predicted to continue growing, contributing significantly to regional economic growth (Rizky Zulkarnain & Eviphanias H. Sinaga, 2022).

A similar phenomenon is occurring in China, where the adoption of the digital economy has driven many startups to success, particularly in large cities, and is projected to expand into smaller cities (Guo et al., 2023). In the United States, the digital economy is showing very rapid growth. During the 2006–2016 period, it grew at an average of 5.6% per year, surpassing the national economic growth of only 1.5%. In 2016, the digital economy contributed 6.5% to GDP, or \$1,209.2 billion (Barefoot et al., 2018). Overall, the literature shows that digital transformation provides various strategic benefits, such as driving economic growth, creating jobs, expanding market share, and generating new innovations for businesses (Sudiantini et al., 2023). Thus, MSMEs that are able to optimally adopt digital transformation have a greater opportunity to achieve sustainable business success.

Figure 4. Contribution of MSMEs to GDP of ASEAN-6 Countries (2024)



Source: [Data processed by the Ministry of Finance](#)

The graph of MSME Contribution to GDP of ASEAN-6 Countries in 2024 shows the important role of MSMEs in the economies of ASEAN countries. Indonesia ranks highest with an MSME contribution of 61.1%, indicating that the MSME sector is the main backbone of the national economy. In the next position, Singapore recorded a contribution of 44.7%, followed by Thailand with 43%, indicating that both countries also have quite strong MSME sectors. Vietnam is at 40%, while Malaysia has an MSME contribution of 38.3%. The Philippines recorded the lowest contribution among the six countries, at 35.7%. Overall, this graph illustrates that despite varying levels of contribution, MSMEs remain a vital pillar of the economies of all ASEAN-6 countries. Indonesia appears to have the highest dominance, indicating the significant role of MSMEs in the formation of national Gross Domestic Product (GDP) compared to other countries.

The contribution to the implementation of Digital Transformation through MSMEs

Figure 5. Digitalization Already Used by MSMEs in Indonesia (2024)



Source: [Mastercard Center for Inclusive Growth, Mercy Corps Indonesia, dan 60 Decibels.](#)

Based on a literature review, MSME development strategies that utilize digital technology have proven to play a crucial role in strengthening business resilience and sustainability in the modern era. The use of various technologies such as e-commerce, social media, and digital financial applications has a significant impact on improving operational efficiency, expanding market access, and strengthening competitiveness. MSMEs can utilize digital technology in various aspects, from digital marketing and the use of e-commerce platforms to business management, product and service development, to enhancing collaboration and communication. Facing the disruptive digital era, MSMEs are required to quickly adapt to technological developments to improve operational efficiency and competitiveness. One form of this adaptation is the use of e-commerce in business activities. The use of e-commerce helps MSMEs expand their markets, improve communication with customers, and simplify digital transactions. However, its utilization remains uneven due to various obstacles, such as limited digital infrastructure, low digital literacy, and inadequate human resources (Simangunsong, 2022).

Therefore, several measures are needed to improve the situation described above. These include adopting new technologies, digital literacy training, and implementing digital security, which also play a crucial role in supporting business activities. By integrating digital technology into business processes, MSMEs can increase productivity, efficiency, and expansion capabilities. Ultimately, this will positively impact MSME growth and sustainability in the long term.

RQ2: What challenges do MSMEs face in adopting Accounting Information Systems with the implementation of digital transformation?

Various case studies and literature studies have shown that the implementation of digital accounting information systems (AIS) has a significant positive impact on the management of MSMEs. Through the use of an AIS, transaction recording can be automated, financial reporting is faster and in real time, and financial data is easier to access to support decision-making. Research by Rosdiyati., et al (2024) on MSMEs Paidi Thrift and Pecel Lele Thrift demonstrated that the use of AIS applications, such as Zahir Accounting, can facilitate

the preparation of financial reports more systematically and efficiently. Furthermore, its implementation also increases internal transparency and strengthens trust with business partners. Similar findings were also presented by Safira & Ratnawati (2021) on Toko Damai Indah. In this study, AIS was shown to help business owners clearly separate profit and loss statements and statements of financial position, which were previously often mixed up due to manual recording.

Despite the various successes in implementing digital accounting information systems (AIS), there are still a number of obstacles that are often encountered, including:

a. Low Accounting and Digital Literacy

MSMEs outside urban areas, particularly outside Jakarta, generally lack a grasp of digital risks or basic accounting concepts. This is a major obstacle to implementing a digital-based AIS. Many MSMEs still maintain manual financial records and fail to separate personal and business finances, impacting the quality of financial reports and decision-making (Ulfi Hanifah et al., 2023). Research by Srihastuti & Isnaniati (2020) also shows that AIS implementation in MSMEs in Banyuwangi Village is suboptimal because business owners are unaware of the importance of financial reports and continue to rely on manual and informal record-keeping.

b. Capital Limitations

The transformation from conventional systems to digital technology requires significant costs, both for purchasing hardware such as computers, laptops, or printers, as well as licensed accounting software. Furthermore, user training is required to effectively operate the system (Safira & Ratnawati, 2021). Rizki Mauliansyah & Saputra (2019) also found that the majority of MSMEs lack the financial capacity to purchase commercial accounting equipment or software. Moreover, they are still unfamiliar with utilizing low-cost alternatives such as spreadsheets, which can be used as financial record-keeping tools.

c. Digital Security

With today's technological advancements, crime occurs not only physically but also online, such as through phishing and data theft. This risk is even greater for MSMEs that lack adequate knowledge of digital security (Sari, 2023).

d. Limited Human Resources and Technology Infrastructure

Dewi et al.'s (2022) research in Mataram City showed that the quality of human resources and the availability of technological infrastructure such as computers, laptops, and internet networks significantly influenced the success of digitalizing accounting information systems.

RQ3: In optimizing the implementation of Accounting Information Systems, what strategies can be used by MSMEs?

Based on the various obstacles faced, MSME actors can implement several effective strategies to support the implementation of SIA, namely:

a. Structured Training and Mentoring

MSMEs need hands-on, practice-based education to optimally enhance their understanding of digital accounting. For example, providing training on the use of

Excel and e-commerce platforms has proven effective for the TS Aluminum MSME (Maulidina & Nafiati, 2024).

b. Simple and Affordable Application Utilization

In the early stages of a business, MSMEs are advised to choose accounting software that is easy to use and relatively inexpensive. One example is Zahir Accounting, which has been proven to improve the efficiency and transparency of financial recording and reporting at Paidi Thrift (Rosdiyati., et al, 2024).

c. Multi-stakeholder Collaboration and Strengthening Digital Security Education

SIA implementation can be strengthened through collaboration between local governments, universities, the business community, and other relevant parties to ensure more comprehensive implementation. Furthermore, digital security education is also crucial to prevent cybercrimes such as phishing. These efforts contribute to the achievement of the Sustainable Development Goals (SDGs) through the secure and integrated implementation of SIA (Sampetoding et al., 2024 & Sari, 2023).

By implementing these various digital strategies, MSMEs can expand their reach and enhance their online presence. These strategies not only help attract new potential customers but also foster long-term relationships that can transform existing customers into loyal ones. Optimal use of digital technology enables MSMEs to compete more effectively in an increasingly broad and competitive market. Through digitalization, marketing, sales, and business management processes become more efficient, enabling businesses to grow consistently and sustainably in the face of developments in the digital economy.

CONCLUSION

Based on the results *Systematic Literature Review* Based on a review of 21 relevant journals, this study concludes that digital transformation and the implementation of Accounting Information Systems (AIS) have significantly contributed to strengthening the performance and sustainability of MSMEs in Indonesia. Digital technologies, such as e-commerce, social media, accounting applications, and digital financial services, have been proven to improve operational efficiency, expand market reach, increase revenue, and support data-driven decision-making processes. Digitalization in MSMEs also has a positive impact on the national economy through increased contributions to GDP, job creation, and strengthened competitiveness amidst the increasingly competitive digital economy.

However, research also confirms that optimizing digital transformation still faces several challenges, such as low accounting and digital literacy, limited capital, cybersecurity risks, and limited infrastructure and human resource competencies. To overcome these obstacles, MSMEs require appropriate strategies, including structured training, the use of simple and affordable accounting applications, and multi-stakeholder collaboration with the government, academia, and the business community. By implementing a comprehensive strategy, MSMEs are expected to maximize the potential of digitalization to improve business performance, strengthen business resilience, and make a sustainable contribution to Indonesia's economic growth.

BIBLIOGRAPHY

- Al Omoush, K., Lassala, C., & Ribeiro-Navarrete, S. (2023). The role of digital business transformation in frugal innovation and SMEs' resilience in emerging markets. *International Journal of Emerging Markets*. <https://doi.org/10.1108/IJOEM-12-2022-1937>
- Aprieni, Farida Ratna Meilantika, Latriana Sihotang, & Febrina Vidya Rachma S. (2024). UMKM Memiliki Peran Penting Dalam Perekonomian Indonesia. *JURNAL EKONOMI BISNIS DAN MANAJEMEN*, 2(4), 188–193. <https://doi.org/10.59024/jise.v2i4.976>
- Ario Johan, B., & Lukviana Wati, V. (2023). Transformasi Digital Umkm: Menggali Peluang Dan Tantangan Era Online Shop Di Indonesia. *Triwikrama: Jurnal Ilmu Sosial*, 7(3), 2025–2051. <https://doi.org/10.6578/triwikrama.v7i3.10947>
<https://ejournal.warunayama.org/index.php/triwikrama/article/view/10947>
- Arkhan, M. R., Maria, R., Putri, H., Thariq, A., Gunawan, A., Kirandhis, A. O., Andarini, S., & Kusumasari, I. R. (2024). Strategi Pengembangan Bisnis Digital UMKM Melalui E-Commerce. *Economics And Business Management Journal (EBMJ)* Februari, 3(1), 3–6. <https://www.ejournal-rmg.org/index.php/EBMJ/article/view/191/231>
- Aryanto, A., Farida, I., & Ramahdani, A. (2023). Pengaruh Penggunaan Aplikasi Akuntansi Berbasis Digital Terhadap Kualitas Informasi Akuntansi Dan Kinerja Usaha Pada Umkm. *Journal of Applied Managerial Accounting*, 7(2), 188–199. <https://doi.org/10.30871/jama.v7i2.6626>
- Barefoot, K., Curtis, D., Jolliff, W., & Nicholson, Jessica R. Omohundro, R. (2018). Defining and Measuring the Digital Economy. US Department of Commerce Bureau of Economic Analysis, Washington, DC, 1–24. <http://www.tandfonline.com/doi/full/10.1081/ERC-200027380>
- Bkpm. (2021). Upaya Pemerintah Memajukan UMKM Indonesia | BKPM. <https://www.bkpm.go.id/>, pp. 5–7.
- BPS. (2022). Bps 2022. *Nucl. Phys.*, 13(1), 104–116. <https://www.bps.go.id/id/publication/2022/02/25/0a2afea4fab72a5d052cb315/statistik-indonesia-2022.html>
- Chen, P., Yan, Z., & Wang, P. (2023). How can the Digital Economy Boost the Performance of Entrepreneurs? A Large Sample of Evidence from China's Business Incubators. *Sustainability (Switzerland)*, 15(7). <https://doi.org/10.3390/su15075789>
- Davis, F.D. (1989). "Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology." *MIS Quarterly*
- Dewi, G. A., Wulandari A. A. I., & Sanjiwani, P. D. A., (2024). Digitalisasi Sistem Informasi Akuntansi Pada Kinerja Dan Keberlanjutan Umkm Di Indonesia. *Jurnal Akuntansi Kompetitif*, 7(2). <https://doi.org/10.35446/akuntansikompetif.v7i2.1717>.
<https://ejournal.kompetif.com/index.php/akuntansikompetif/article/view/1717>
- Dewi, L. I. W., Hilendri, B. A., & Kartikasari, N. (2022). Faktor-faktor yang Memengaruhi Digitalisasi Informasi Akuntansi pada UMKM di Kota Mataram. *Riset, Ekonomi*,

- Akuntansi Dan Perpajakan (Rekan), 3(2), 121–136.
<https://doi.org/10.30812/rekan.v3i2.2377>
- Dudhat, A., & Agarwal, V. (2023). Indonesia's Digital Economy's Development. *IAIC Transactions on Sustainable Digital Innovation (ITSDI)*, 4(2), 109–118.
<https://doi.org/10.34306/itsdi.v4i2.580>
- Fauzi, Leni Rahmayana, Ika Wulandari, & Bagus Hari Sugiharto. (2023). Mengapa Digitalisasi Akuntansi Harus di Lakukan Pada Perusahaan UMKM : Sebuah Tinjauan Pustaka. *Jurnal Aktiva : Riset Akuntansi Dan Keuangan*, 5(1), 43-56.
<https://doi.org/10.52005/aktiva.v5i1>
- Fitriani, F. S., Harahap, R. D., & Nurlaila, N. (2023). Perkembangan UMKM Di Indonesia : Peran Pemahaman Akuntansi, Teknologi Informasi dan Sistem Informasi Akuntansi. *Owner*, 7(3), 2518–2527. <https://doi.org/10.33395/owner.v7i3.1427>
- Guo, B., Wang, Y., Zhang, H., Liang, C., Feng, Y., & Hu, F. (2023). Impact of the digital economy on high-quality urban economic development: Evidence from Chinese cities. *Economic Modelling*, 120(January), 106194.
<https://doi.org/10.1016/j.econmod.2023.106194>
- Guo, B., Wang, Y., Zhang, H., Liang, C., Feng, Y., & Hu, F. (2023). Impact of the digital economy on high-quality urban economic development: Evidence from Chinese cities. *Economic Modelling*, 120(January), 106194.
<https://doi.org/10.1016/j.econmod.2023.106194>
- Hakiki, A., Rahmawati, M., & Novriansa, A. (2020). Penggunaan Sistem Informasi Akuntansi untuk Usaha Mikro Kecil dan Menengah (UMKM) di Desa Kota Daro, Kabupaten Ogan Ilir. *Sricommerce: Journal of Sriwijaya Community Services*, 1(1), 55–62.
<https://doi.org/10.29259/jscs.v1i1.12>
- Hardi, Revolino, & Arifin, Agus Zainul. (2023). Pengaruh information dan communication technology adoption serta digital transformation terhadap asset growth UMKM. *Jurnal Manajemen Bisnis Dan Kewirausahaan*, 7(3), 537–548.
<https://doi.org/10.24912/jmbk.v7i3.23866>
- Harjoseputro, Y., & Thomas Adi Purnomo Sidhi. (2021). Pemanfaatan Sistem Informasi Pada Usaha Kecil Menengah Untuk Pencatatan dan Pelaporan Transaksi Penjualan. *Dinamisia : Jurnal Pengabdian Kepada Masyarakat*, 5(5), 1305–1317.
<https://doi.org/10.31849/dinamisia.v5i5.4209>
- Herwanda, B. A., & Restu Ismoyo Aji. (2023). Membangun Identitas Brand Melalui Konsistensi Feeds Instagram @Bawapulang.Official. *Journal of Creative Student Research*, 1(6), 331–344. <https://doi.org/10.55606/jcsrpolitama.v1i6.2958>
- Huynh, Q. L. (2021). The effect of organizational culture on quality of accounting information: Mediating the role of accounting information system. *Accounting*, 7(7), 1689–1694.
<https://doi.org/10.5267/j.ac.2021.4.030>
- Juniddin, Zakaria. *Pengantar Teori Ekonomi Makro*. Jakarta, Penerbit: Gaung Persada Press, 2009.
- Kementerian Koperasi dan Usaha Kecil dan Menengah. (2023). *Data UMKM - Kementerian Koperasi dan Usaha Kecil dan Menengah*. <https://satudata.umkm.go.id/>

- Kominfo, & Katadata Insight Center. (2020). Status Literasi Digital di Indonesia. Retrieved from 1Kominfo, & Katadata Insight Center. (2021). Status Literasi Digital di Indonesia. Retrieved from https://cdn1.katadata.co.id/media/microsites/litdik/Status_Literasi_Digital_diIndonesia%202021_190122.pdf
- Kumorojati, G. S., Mahardhika, G. P., & Setiaji, H. (2021). Digitalisasi Proses Bisnis Penjualan Studi Kasus PT Limas Indra Group. *Automata*, 2(2), 1–7. <https://journal.uui.ac.id/AUTOMATA/article/view/19521>
- Lyonita, I., Maghfirah, P. D., Mediana, S. P., Saleha, B., Zebua, A., Nasution, D. P., Pembangunan, J. E., Sains, F. S., & Pancabudi, U. P. (2024). PENGARUH PENGGUNAAN E-COMMERCE TERHADAP BISNIS UMKM. 1(3), 172–176. doi:[10.62017/jemb.v1i3.827](https://doi.org/10.62017/jemb.v1i3.827)
- Maulidina, C. M., & Nafiati, L. (2024). Penerapan sistem informasi akuntansi, digital marketing dan e-commerce untuk meningkatkan literasi digitalisasi dan kinerja UMKM. *Jurnal Pembelajaran Pemberdayaan Masyarakat (JP2M)*, 5(1), 187–199. <https://doi.org/10.33474/jp2m.v5i1.21506>
- Nurwani, & Safitri, A. (2019). Pengaruh Penggunaan Informasi Akuntansi Terhadap Keberhasilan Usaha Kecil Menengah (Studi Pada Sentra Dodol Di Kec. Tanjung Pura). *Liabilities Jurnal Pendidikan Akuntansi*, 2(1), 37–52. <https://doi.org/10.30596/liabilities.v2i1.3332>
- Permana, T., & Puspitaningsih, A. (2021). Studi Ekonomi Digital Di Indonesia. *Jurnal Simki Economic*, 4(2), 161–170. <https://doi.org/10.29407/jse.v4i2.111>
- Purnomo, S., Nurmalitasari, N., & Nurchim, N. (2024). Digital transformation of MSMEs in Indonesia: A systematic literature review. *Journal of Management and Digital Business*, 4(2), 301–312. <https://doi.org/10.53088/jmdb.v4i2.1121>
- Ramadaey Bangsa, J., Indah Isnawati, S., Fauzi, I., Siswati, A., & Aziz, A. (2024). Implications of the Influence of Digital Marketing in Increasing MSME Product Sales. *Manajemen Dan Akuntansi*, 4(1), 34–42. <https://doi.org/10.35473/jibaku.v4i1.2985>
- Ramli, A., Aswar, N. F., Pratiwi, K. S., & Hamka, R. A., (2023). Pemanfaatan Sistem Informasi Akuntansi Berbasis Digital Mobile Pada Kelompok Usaha Batu Bata Di Kelurahan Limbung, Kecamatan Bajeng, Kabupaten Gowa. *Paramacitra Jurnal Pengabdian Masyarakat*, 1(1), 100–104. <https://journal.ininnawaparaedu.com/paramacitra/article/view/36>
- Raselawati, Ade. Pengaruh Perkembangan Usaha Kecil Menengah terhadap Pertumbuhan Ekonomi pada Sektor UKM di Indonesia. Skripsi. Jakarta: Fakultas Ekonomi dan Bisnis Universitas Islam Negeri Syarif Hidayatullah, 2011.
- Rizki Mauliansyah, Ti., & Saputra, M. (2019). Pengaruh Penerapan Sistem Informasi Akuntansi (Sia) terhadap Kinerja Perusahaan (Studi Empiris pada UMKM di Kota Banda Aceh). *Jurnal Ilmiah Mahasiswa Ekonomi Akuntansi (JIMEKA)*, 4(4), 602–612. DOI: [24815/jimeka.v4i4.1532](https://doi.org/10.24815/jimeka.v4i4.1532) <https://jim.usk.ac.id/EKA/article/view/15321>
- Rosdiyati., Kurniyawati, I., & Susilawati, E. (2024). Optimalisasi Pengembangan Bisnis Melalui Penerapan Sistem Informasi Akuntansi Digital Pada UMKM (Studi Kasus Fashion Baju Thrift). *Eka Susilawati INNOVATIVE: Journal Of Social Science*

Research, 4, 8447–8463. <https://doi.org/10.31004/innovative.v4i3.11419> <https://j-innovative.org/index.php/Innovative/article/view/11419>

- Saadatul Husna., & Jeni Susyanti. (2024) Analisis Systematic Literature Review Tentang Strategi Pengembangan Bisnis UMKM Melalui Digitalisasi Proses Bisnis. *Jurnal Ilmiah Multidisiplin*, 1(6), 207-216. <https://doi.org/10.62017/merdeka.v1i6.1950> <https://jurnalisticomah.org/index.php/merdeka/article/view/1950?articlesBySimilarityPage=2>
- Safira, B., & Ratnawati, D. (2021). Peran Sistem Informasi Akuntansi dalam Bentuk Digital bagi Peningkatan Kinerja pada Toko Busana Wanita “Damai Indah.” *Jurnal Syntax Admiration*, 2(5), 785–805. <https://doi.org/10.46799/jsa.v2i5.232>
- Sampetoding, E. A. M., Uksi, R., & Pongtambing, Y. S. (2024). Digital Transformation pada Sistem Informasi Akuntansi di Desa. *Jurnal Inovasi Akuntansi (JIA)*, 2(1), 72–77. <https://doi.org/10.36733/jia.v2i1.9046>
- Sari, A. K., & Hwihanus. (2023). *Peranan sistem informasi akuntansi dan implementasi menghadapi pemalsuan data di era digital pada masyarakat desa*. *MRI: Jurnal Manajemen Riset Inovasi*, 1(1), 186–196. <https://doi.org/10.55606/mri.v1i1.648>
- Septiadi B., & Agus I., (2024). Transformasi Bisnis di Era Digital: Analisis Sistematis Terhadap E-Bisnis di Indonesia pada Konteks UMKM. *Journal of Digital Literacy and Volunteering*, 2(1), 38-43. <https://doi.org/10.57119/litdig.v2i1.80>
- Simangunsong, B. Y. P. (2022). Peluang dan Tantangan Usaha Mikro Kecil dan Menengah (UMKM): Systematic Literature Review. *Jurnal Ekonomi Pembangunan (JUREKA)*, 1(1). <https://jurnal.uvt.ac.id/index.php/jureka/article/view/125>
- Sinarwati, N. K., Sujana, E., & Herawati, N. T. (2019). Peran Sistem Informasi Akuntansi Berbasis Mobile Bagi Peningkatan Kinerja UMKM. *KRISNA: Kumpulan Riset Akuntansi*, 11(1), 26–32. <http://doi.org/10.22225/kr.v11i1.1123>. https://www.researchgate.net/publication/332370895_PERAN_SISTEM_INFORMASI_AKUNTANSI_BERBASIS_MOBILE_BAGI_PENINGKATAN_KINERJA_UMKM
- Srihastuti, E., & Isnaniati, S. (2020). Pengaruh Sistem Informasi Akuntansi (SIA) Terhadap Efektivitas Pelaporan Akuntansi UMKM di Desa Banyuwang. In *Journal Management* 19(3). <https://doi.org/10.33557/mbia.v19i3.1219>
- Sudiantini, D., Ayu, M. P., Aswan, M. C. A. S., Prastuti, M. A., & Apriliya Melani. (2023). Transformasi Digital : Dampak, Tantangan, Dan Peluang Untuk Pertumbuhan Ekonomi Digital. *Trending: Jurnal Ekonomi, Akuntansi Dan Manajemen*, 1(3), 21–30. <https://doi.org/10.30640/trending.v1i3.1115>
- Sugiarto. *Ekonomi Pembangunan*. Yogyakarta, 2002.
- Sukirno S. *Makro Ekonomi Teori Pengantar*. Edisi ketiga. Jakarta: Rajawali pers 2016, hal. 423-428.,433-437.
- Sulastri, S., Mulyadi, H., Disman, D., Hendrayati, H., & Purnomo, H. (2023). Resilience Acceleration Model Of Small And Medium Enterprises Through Digital Transformation. *Journal of Eastern European and Central Asian* <https://doi.org/10.15549/jecar.v10i4.1355>

- Surjono. dkk. (2021). Penerapan Standarisasi Laporan Keuangan Umkm Bagi Pengusaha Kecil Menengah Untuk Meningkatkan Kinerja Usaha Pada Umkm Merta Jasa Jurnal Lokabmas Kreatif : Loyalitas Kreatifitas Abdi Masyarakat Kreatif, 2(2), 28. <https://doi.org/10.32493/jlkkkk.v2i2.p28-34.11611>
- Syahputra, R. A., Putri, C. W. A., Maliza, N. O., & Lestari, R. (2023). Peningkatan kemampuan branding UMKM melalui proses digitalisasi bisnis. Jurnal Pengabdian Kepada Masyarakat Nusantara, 4(1), 521–527. DOI : 10.55338/jpkmn. <https://ejournal.sisfokomtek.org/index.php/jpkm/article/view/871>
- Tan, A. W., Ambouw, N. E. B., & Kustiwi, I. A. (2024). Digitalisasi ekonomi SIA: Transformasi sistem informasi akuntansi dalam meningkatkan efisiensi dan inovasi bisnis. *Jurnal Mutiara Ilmu Akuntansi (JUMIA)*, 2(2), 332–341. <https://doi.org/10.55606/jumia.v2i2.2636>
- Tunggaluh, Hartini. Teori Ekonomi Makro. Makassar: tp, 2012.
- Ulfi Hanifah, R., G Agustine, M., & WIDYAKTO, A. (2023). Peran Akuntansi Pada Era Society 5.0 Sebagai Anteseden Terhadap Pertumbuhan Kinerja Umkm Dan Pengaruh Penggunaan Informasi Akuntansi. *Owner*, 7(2), 1732–1751. <https://doi.org/10.33395/owner.v7i2.1485>
- Undang-Undang Republik Indonesia. No. 20 Tahun 2008. Tentang Usaha Mikro Kecil dan Menengah.
- Urohmah, V. A., Zanaria, Y., & Kurniawan, A. (2022). Pengaruh transaksi online (e-commerce), modal usaha dan penggunaan sistem informasi akuntansi terhadap pendapatan UMKM di Kecamatan Metro Barat. *Expensive: Jurnal Akuntansi dan Keuangan*, 1(2), 141–158. <https://doi.org/10.24127/exclusive.v1i2.3007>
- Wardhana, Wisnu Surya. (2020). Strategi Pengembangan kompetensi guru secara mandiri di era literasi digital. Strategi Pengembangan Kompetensi Guru Secara Mandiri Di Era Literasi Digital, (4), 424–431. <http://research-report.umm.ac.id/index.php/SENASBASA>
- Yosi Annisa, & Achmad Fauzi. (2022). Analisis Perilaku Perubahan Pelaku UKM Pada Masa Pandemi Covid-19 Guna Meningkatkan Perekonomian Dengan Pemanfaatan E-Commerce Di Kota Medan. *Jurnal Akuntansi Dan Manajemen Bisnis*, 2(3), 31–35. <https://doi.org/10.56127/jaman.v2i3.339>
- Yulya Ammi Hapsari, Putri Apriyanti, Aldi Hermiyanto, & Fahrur Rozi. (2024). Analisa Peran UMKM Terhadap Perkembangan Ekonomi di Indonesia. *Jurnal Manajemen Dan Ekonomi Kreatif*, 2(4), 53–62. <https://doi.org/10.59024/jumek.v2i4.464>
- Zulkarnain, Eviphantias H. Sinaga, dan N. U. (2022). Klaster Ekonomi Digital Dan Analisis Dampak Ekonomi Digital Terhadap Pemulihan Ekonomi Di Pulau Sumatra. *Sumatranomics*, 3, 1–37. <https://sumatranomics.com/wp-content/uploads/2023/04/13463075940-Juara-3-KLASTER-EKONOMI-DIGITAL-DAN-ANALISIS-DAMPAK-EKONOMI-DIGITAL-TERHADAP-PEMULIHAN-EKONOMI-DI-PULAU-SUMATRA.pdf>