

-RESEARCH ARTICLE-

THE ROLE OF DIGITAL AND FINANCIAL LITERACIES IN DRIVING SME'S DIGITAL INTENSITY FOR STRATEGIC ENTREPRENEURSHIP: A SYSTEMATIC LITERATURE REVIEW AND DIRECTION FOR FUTURE RESEARCH

Ignatius Edward Riantono*

Department of Management, BINUS Business School Doctor of Research in Management, Bina Nusantara University, Jakarta, Indonesia

ORCID: <https://orcid.org/0000-0002-7420-2129>

Email: iriantono@binus.edu

Toto Rusmanto

Department of Management, BINUS Business School Doctor of Research in Management, Bina Nusantara University, Jakarta, Indonesia

ORCID: <https://orcid.org/0000-0002-6600-3525>

Email: trusmanto@binus.edu

Sri Bramantoro Abdinagoro

Department of Management, BINUS Business School Doctor of Research in Management, Bina Nusantara University, Jakarta, Indonesia

ORCID: <https://orcid.org/0000-0002-8010-6571>

Email: sabdinagoro@binus.edu

Dezie Leonarda Warganegara

Department of Management, BINUS Business School Doctor of Research in Management, Bina Nusantara University, Jakarta, Indonesia

ORCID: <https://orcid.org/0000-0001-5425-3079>

Email: dezie@binus.edu

—Abstract—

Small and medium-sized enterprises (SMEs) have become significant drivers of economic growth worldwide, contributing significantly to employment and innovation.

Citation (APA): Riantono, I. E., Rusmanto, T., Abdinagoro, S. B., Warganegara, D. L. (2024). The Role of Digital and Financial Literacies in Driving Sme's Digital Intensity for Strategic Entrepreneurship: A Systematic Literature Review and Direction for Future Research. *International Journal of eBusiness and eGovernment Studies*, 16(2), 365-383. doi:10.34109/ijepeg.2024160218

As the global business landscape undergoes a digital transformation, SMEs face increasing pressure to adapt and integrate digital technologies. This abstract delves into the critical role of digital and financial literacies as predictive factors in determining the extent of digitalization. However, the rate of digital adoption of SMEs is very different. This may be due to the digital and financial capabilities that SMEs and their workers possess. This abstract emphasizes the crucial role of digital and financial literacy as predictors in an increasingly digital-centric business landscape, where small and medium-sized enterprises (SMEs) face the imperative to adopt digital technologies for sustainable growth and competitiveness. Digital literacy encompasses the ability to effectively utilize digital tools and technologies. Digitalization has become a powerful force that is changing traditional business models and operational paradigms. The literature review highlights the main obstacles that SMEs must overcome in order for them to acquire financial and digital literacy. It also looks at ways to overcome these obstacles with the help of policy support, training initiatives, and focused interventions. Policymakers and practitioners stand to gain a great deal from an understanding of the factors that influence SME digital intensity. The article explores possible legislative changes as well as useful tactics to improve SMEs' financial and digital literacy and create an environment that is favourable to strategic entrepreneurship. A literature review is a method for systematically, explicitly, comprehensively, and reproducibly identifying, evaluating, and synthesizing research that has been written and documented by researchers. It can be used to find holes in the literature, synthesize current knowledge, and provide a foundation for future research. In this study, the researchers used various database journals, including Scopus indexed database journals and google scholar. They also use the VosViewer program to perform multi category analysis. In order to shed light on the factors that influence SME digital intensity, this review synthesizes the body of research, paying particular attention to the roles that digital and financial literacy play together. This research advances our knowledge of these factors, which adds to the current conversation on strategic entrepreneurship and establishes the framework for upcoming empirical investigations and useful interventions to assist SMEs in navigating the digital environment.

Keywords: Digital Transformation, Digitalization, Small Business, Digital Intensity, Digital Innovation

INTRODUCTION

The issue of economic growth is a long-term macroeconomic challenge, and Small and Medium Enterprises (SMEs) are crucial to this process. SMEs are vital for economic progress, but they face significant challenges, such as a lack of transparent financial information, which makes it difficult for lenders to assess their financial health (Siagian et al., 2024). This lack of information, along with limited collateral and weak financial management, often discourages banks from providing loans to SMEs, increasing their

risk of default (Yadav & Anshika, 2021). Additionally, SMEs in developing countries struggle with financing due to low financial literacy, which reduces their access to capital and hampers their growth and survival (Karadağ et al., 2015). SMEs also encounter external barriers such as complex legislation, taxation issues, and inadequate access to technical expertise, which hinder their growth and performance. They often receive insufficient support from government agencies, financial institutions, and corporations, limiting their potential contribution to the economy (Atkinson, 2017). Furthermore, participation in the Global Value Chain (GVC) is constrained by resource limitations, including lack of access to financing, technology, and management skills (Jafari-Sadeghi et al., 2021).

The internet and technological advancements have created opportunities for SMEs to improve their competitiveness, enter international markets, and increase productivity (Sudrajad et al., 2023). cloud computing adoption in SMEs include perceived benefits like cost savings, organizational readiness, external pressures, trust and security concerns, and strong top management support, which are crucial for successful implementation (Jayeola et al., 2022). However, SMEs in developing countries adopt e-commerce more slowly than those in developed countries due to barriers like inadequate IT infrastructure, legal concerns, and lack of digital skills (Li et al., 2018). With the advent of Industry 4.0, SMEs must adapt to new technologies to stay competitive. Studies have examined the factors influencing the adoption of e-commerce, with research focusing on technology administrators rather than SME owners or managers (Hadiyati et al., 2024). Recent research emphasizes the importance of digital and financial literacy for SME performance and digitalization, digital strategy, technical capability, and managerial capability significantly influence the digital transformation of Malaysian SMEs, enhancing their competitiveness and operational efficiency in the digital landscape (Ammeran & Abdul Latip, 2024). While digital strategies, organizational behaviour, and IT capabilities influence new venture digitization, the impact of financial literacy remains unclear (Yanto et al., 2022).

However, techno-finance literacy has been found to improve SME performance and risk management techniques (Kulathunga et al., 2020). Digital finance access mediates the relationship between financial literacy and SME performance, with mobile money being a popular digital platform among SMEs in Ghana (Frimpong et al., 2022). Studies suggest that both digital and financial literacy play crucial roles in improving SME performance in a digital economy. Financial literacy is vital for making informed financial decisions, which directly impacts SMEs' growth and competitiveness (Mohamed et al., 2024). The aim of this research is to analyse how digital and financial literacy influence the digital transformation of SMEs in Indonesia. The study focuses on factors such as Owner's Attitudes toward Digital Innovation, Business Complexity, Growth Orientation, Government Intervention, and Business Networking, while exploring the mediating roles of digital literacy and financial literacy in the digital

transformation process. Using a quantitative approach with Structural Equation Modelling (SEM), this study seeks to identify the key drivers of digital engagement in SMEs and understand how digital and financial literacy enhance or impede these factors.

The research will also provide policy recommendations and case studies for creating tailored training programs that help SMEs increase their digital competitiveness and sustainability. This research contributes to understanding how SMEs in Indonesia can overcome barriers to technology adoption and improve their ability to invest in and sustain digital activities. The COVID-19 pandemic significantly impacted Indonesian Micro, Small, and Medium Enterprises (SMEs), forcing them to adapt their marketing strategies. Many MSMEs turned to a combination of offline and online methods as a survival strategy (Kurniawati et al., 2021). As SMEs in Indonesia increasingly recognize the importance of technology for business growth, this study will offer valuable insights into how digital and financial literacy can support their transformation and global market participation. The study significantly contributes to understanding the role of digital and financial literacies in enhancing SMEs' digital intensity. By investigating these literacies as complementary forces, it bridges the knowledge gap in existing research, which often examines them in isolation.

This study provides a comprehensive framework that incorporates critical variables such as business complexity (BC), business networking (BN), and government intervention (GI), offering a nuanced perspective on SMEs' digital transformation journey. It emphasizes how these literacies empower SMEs to navigate challenges and seize opportunities in the evolving digital economy. A key contribution of this research lies in its focus on SMEs in Indonesia, a developing country where resource limitations and external pressures uniquely influence digital adoption. The study adds valuable context-specific evidence, enriching the global understanding of SME digitalization. Moreover, it explores behavioural factors like growth orientation (GO) and owners' attitudes toward digital innovation (OADI), providing deeper insights into the motivational drivers behind digital adoption. Despite the growing interest in SME digital transformation, the research addresses a critical gap: the lack of robust, multi-variable models that integrate both internal capabilities and external influences. By offering empirical findings and actionable recommendations, this study advances both academic literature and policy development to accelerate SME digitalization in emerging markets.

LITERATURE REVIEW

Digital Literacy

Information services are stereotypical, but digital literacy is not. It is one of several new literacy skills established and explored in numerous academic disciplines during the last

few decades (Park et al., 2021). Digital literacy encompasses a complex set of skills, knowledge, and attitudes necessary for effective functioning in digital environments. Information and communication technologies (ICT) along with the internet have fuelled advancements and growth in banking, transportation, economics, and most of all in education in the 21st century. The 21st century citizens are provided with new opportunities that have been created with the advancement of ICT. Hence, individuals need a wide range of abilities, competencies, and skills to adapt to the technological era. This paper provides a literature review of the growing importance of ICT, its wide array of usage, and its influence on various facets of people's daily lives. In addition, the emerging concept of digital literacy through ICT developments, contribution of digital literacy towards the achievement of sustainable development goals, contribution of ICT towards the development of various sectors particularly the education sector, and the work done in this area of digital literacy are summarised. The paper concludes with three new models of digital literacy: four gear model, model for flexible learning, and a model showing the impact of ICT on the learning process (Reddy et al., 2020). Some researchers are conducting a comprehensive examination of digital literacy and its connections to overlapping concepts such as information literacy, library literacy, media literacy, and computer literacy. Their objective is to bring analytical order to the discourse surrounding these terms. The current understanding of digital literacy can be traced back to artistic works. In one of the earliest thorough analyses of the concept, it is posited that digital literacy encompasses "mastering ideas, not keystrokes." While many theorists and practitioners broadly concur with Gilster's perspective, discussions regarding the promotion and instruction of digital literacy frequently place significant emphasis on technical skills. This tendency underscores a similar polarization within the field (Martínez-Bravo et al., 2020). Two opposing viewpoints emerge from the polarization surrounding the nature of competence. As previously noted, the prevalence of competing definitions and contradictions associated with various forms of digital literacy is concerning. However, achieving a complete consensus appears improbable. The origins of this paradox can be attributed to insufficient attention to the fundamental concept of literacy (Murray & Pérez, 2014).

Financial Literacy

Definition of financial literacy "how well a person can understand and use personal finance-related information" (Kumar et al., 2023). The term "financial literacy" in respect to young people is not defined. Following further research, the following definition of financial literacy was developed: "the ability to analyse economic data and make sound financial planning, wealth accumulation, debt reduction, and retirement decisions" (Lusardi & Mitchell, 2014). Bemoans the lack of agreement on a conceptual or operational definition of financial literacy (Tsai & Kuan-Jung, 2017). He highlighted that the definitions he found in previous research can be classified into five categories: knowledge, communication skills, management skills, decision-making abilities, and

confidence in one's ability to adequately plan for future financial needs. The level of financial literacy of a person is determined by how well they understand fundamental financial concepts and how confident they are in their ability to manage their personal finances by making wise short-term decisions and prudent long-term financial plans while keeping an eye on their changing circumstances and the state of the economy (Rasheed et al., 2019).

Small Medium Enterprise (SMEs)

SME is a business that operates independently on behalf of persons or legal entities and is not a part of the larger endeavour, either directly or indirectly (Iskandar, 2022). According to the regulations of the state of Indonesia, SME are newly governed by laws that enter into force, as evidenced by the passage of Government regulation/law No. 20 in the year 2008. The development of SMEs can be divided into four categories, notably:

Livelihood Activities, or informal sector enterprises, advance the interests of a living person.

Micro Enterprise, which is a business that is more forward-thinking in character but lacks an entrepreneurial spirit.

Dynamic Small Enterprise, which is a company that already has an entrepreneurial spirit and can accept subcontracting and exporting work.

Fast Moving Enterprise, which is a business that already has an entrepreneurial spirit and is in the process of being transformed into a major business.

METHODS

A thorough literature review was used in the investigation. A systematic literature review is a process for locating, analysing, and synthesizing research conducted and documented by researchers in a systematic, explicit, thorough, and reproducible manner (Bin & Hui, 2021). SLR has gotten increased attention because of its quick rise in popularity in the management sector, and preliminary studies have provided norms and ideas for doing such review articles in this subject. SLRs are becoming increasingly widespread and have largely supplanted traditional individual review reports in management. A Systematic Literature Review is the research method used. Systematic Literature Review is a process of systematic, explicit, comprehensive, and reproducible identification, evaluation, and synthesis of the body of completed and recorded works generated by researchers (Okoli & Schabram, 2015). The Systematic Literature Review is implemented in six stages, namely:

Defining the research question related to building the theory of the beginning of the

framework on the phenomena being examined.

Determine the qualities of the study are necessary for inclusion craft exclusion criteria and/or examples of research methodologies, the subject of the investigation, the outlet, and the usage of language.

Relevant examples of literature connected with determining the procedure search. For instance, examining databases and references and discovering the key to creating the initial sample.

Select the literature that is concerned with the application of exclusion and/or inclusion criteria.

Synthesis the literature connected with the use of the coding system and extract relevant information from the literature; and synthesis studies to summarize, integrate, or collect findings that differ across key research.

Report the findings relevant to the review's reported results, as well as providing a summary of literature reviews and the conclusions of the thematic discussion.

There are quantitative and qualitative methodologies in the Systematic Literature Review process. A systematic literature review quantitative method is used to synthesis study results using a quantitative approach. While the approach is qualitative in Systematic Literature Review, it is used to synthesis the results of descriptive qualitative research. A systematic literature search is a technique for conducting a thorough literature search. There are three stages. The introduction phase includes scope limitation, research question determination, selection of literature sources and keywords, search process including inclusion and exclusion criteria for article type classification, and execution of data extraction forms for selected articles. Further investigation is required (Meier, 2021). This paper's main question (RQ) can be described as follows: What is the present state of research on the Determinants of SME Digital Intensity for Strategic Entrepreneurship?

This study searched the literature utilizing a database source. Scopus search is utilized as the source database. Selection of instruments to aid in the process of identifying journals and constraints in published journals that the researcher desires. Furthermore, with the assistance of tools, the process of searching within the program may be made more particular sense it can unite word keyword search by writing (AND and OR). The mapping and analysis are carried out with the assistance of the VOS Viewer tools. The database search based on Scopus Search yielded some articles to aid in the process of analysis and assessment so that the author can select and sort out the articles that are relevant to the objective of the research. Furthermore, the VOS viewer tool is used in this study to help map a broad picture of Digital Intensity with Digital and Financial

Literacies for Strategic Entrepreneurship studies around the world. The following is an analysis that will be mapped out by this study:

The author is the name of the author in the published piece, so it is clear who wrote it.

Title, a title that identifies the subjects presented in the article's content, allowing the reader to analyse and describe the topics discussed in the article.

Year, a year of issue that makes the reader aware of the publication of the paper, allowing for better mapping of the research.

Source, a list of sources in published articles so that readers can easily determine which source of the content is published.

Publishers can make it easier for readers to discover who wrote this article.

One effective tool that is frequently used in the process of doing systematic literature reviews is VOS Viewer. Its use is widespread throughout the review process, mainly to support bibliometric data presentation and analysis. First off, VOS Viewer makes it easier to arrange and group a sizable amount of scholarly literature, which enables scholars to find important themes, patterns, and trends in the subject matter they have selected. VOS Viewer facilitates the visual exploration of the relationships between various topics, authors, and publications, allowing scholars to identify influential works and gaps in the available literature. This is made possible by the tool's network visualization features.

Additionally, the capacity of VOS Viewer to produce density visualizations and bibliometric maps improves researchers' comprehension of the evolution and intellectual structure of their field of study, assisting in the synthesis and interpretation of data. Researchers can obtain deeper insights into their field of study, efficiently navigate the wide scholarly environment, and write thorough and strong reviews that promote knowledge in their subject by utilizing VOS Viewer in the systematic literature review process. A literature review taxonomy is a method of categorizing literature reviews based on their qualities. The taxonomy of literature reviews is a popular paradigm for categorizing literature reviews into five categories: emphasis, goal, perspective, coverage, organization, and audience (Hochrein & Glock, 2012). Cooper's taxonomy identifies many forms of literature reviews, such as scoping reviews, selective reviews, tutorial reviews, theoretical reviews, algorithmic reviews, and more. Other academics have also proposed literature review taxonomies, such as the one presented in, which categorizes reviews based on coverage methodology (Hochrein & Glock, 2012).

Table 1 shows a scheme established by Cooper for determining the scope of this

endeavour. Six criteria are used by Cooper's Taxonomy of Literature Reviews to categorize literature reviews: focus, goal, perspective, coverage, organization, and intended audience. The reviewer's primary areas of interest are referred to as the focus, and their objectives for the literature review are the goals. The perspective presupposes responses to the reviewer's personal assessment of the literature review and how he or she articulates a specific viewpoint. Literature reviews serve multiple purposes, including theory development, evaluation, surveying knowledge, problem identification, and historical accounts (Turner, 2018). The organization of the literature review relates to its structure, whereas the coverage describes how thorough the reviewer is in presenting the literature. Lastly, the group of people for whom the literature review is written is the intended audience. Cooper's Taxonomy of Literature Reviews offers a framework for structuring and assessing reviews, making it a helpful tool for organizing and carrying out reviews (Randolph, 2019).

Table 1: Specific Literature Review Characteristics Taxonomy

No	Characteristic	Categories			
1	Focus	Results/Research Outcomes	Methods	Theories	Applications
2	Goal	Synthesis	Criticism Analysis	Identification of Central Issues	
3	Organization	Historical	Conceptual	Methodological	
4	Perspective	Neutral Representation		Espousal of Position	
5	Audience	Specialized Scholars	General Scholars	Practitioners	General Public
6	Coverage	Exhaustive	Exhaustive and Selective	Representative	Central/Pivotal

This article will concentrate on the categories underlined in grey. The subject matter of the literature review can be divided into four self-explanatory groups. Results, methodology, theory, and applications are all considered. The literature has been carefully synthesized to find key themes for forecasting the strength of the factors of SME digital intensity for strategic entrepreneurship. A conceptual review classifies the literature according to related ideas, whereas a methodological review evaluates the literature according to the methods used. Make use of both. Although this document is intended for experts and academics, practitioners and the public may find it useful. This document's material is extensive and well chosen. The goal of this study is to compile prospective indicators for forecasting the level of digital adoption and financial literacy in small and medium-sized firms (SMEs). "What is the current state of research on the Intensity Prediction of Digital Adoption with Digital and Financial Literacy for Strategic Entrepreneurship in Small and Medium Enterprises (SME's?" asks the research question.

The selected sources and keywords are used in the search process. Selected sources are: (1) Scopus; (2) Google Scholar Search. Keywords have been focused on "small and medium enterprises", AND "digital intensity" OR "digitalization" OR "digital" OR

“digitalize” AND "strategic entrepreneurship". So that inquiries based on keywords are possible, as follows: (“small and medium enterprises”, AND "digital intensity” OR "digitalization" OR “digital” OR “digitalize” AND "strategic entrepreneurship"). Exclusion criteria, as indicated in [Table 2](#), are required to exclude works that do not meet the criteria and were published prior to 2017. Paper duplication, deep technological problem, not to be confused with small and medium-sized enterprises (SMEs). The initial phase was completed, and 216 papers were extracted and designated as 'finished studies,' along with review criteria related to addressing research questions. [Table 2](#) summarizes the outcomes for each source database.

Table 2: Data Extraction in Inclusion Criteria

Source	Studies Found
Scopus	16
Google Scholar	200
Total	216

RESULTS AND DISCUSSION

The study on digital and financial literacy in small firms analyses journal sources from 2017 to 2023. A Scopus and Google Scholar search of publications found 216 research papers or journals that met the criteria "digital and financial literacy in SMEs" based on issues covered in the Entrepreneurship Survey.

Descriptive Analysis of Literature Based on the Research Topic

Indeed, digital and financial literacy in SME research is spreading throughout the world. [Figure 1](#) shows the results of mapping 216 research papers or journals from around the world that are undertaking research. [Figure 1](#) depicts that most of the global research on SME digital and financial literacy focuses on knowledge, financial inclusion, digital transformation, midsize firms, digital financial services, education, and COVID-19.

Small Recent studies highlight the critical role of financial literacy and digital technology adoption in enhancing SME performance and sustainability. Financial literacy positively moderates the relationship between digital banking and SME financial performance in Sri Lanka ([Weerakoon & Anuradha, 2024](#)). Financial Literacy and SME Innovation Performance: The Role of Risk-Taking: The purpose of this study is to look into the relationship between financial literacy, innovation performance, and risk-taking in SMEs ([Valenzuela et al., 2021](#)). The effects of measures to expand access to financial services for micro, small, and medium-sized businesses in low and middle-income countries: evidence and a gap map: This study looks at strategies targeted at boosting SMEs' access to credit in low and middle-income countries ([Dela Cruz et al., 2023](#)). This systematic review and meta-analysis examine the impact of financial inclusion and business support interventions for micro, small, and medium-sized

enterprises (MSMEs) in low- and middle-income countries. While these interventions generally show positive effects, their impact is often small and inconsistent (Duvendack & Mader, 2019). Business support services can improve firm performance, revenue, profits, and job creation, but the effects are not large and cost-effectiveness is unknown (Cravo & Piza, 2016).

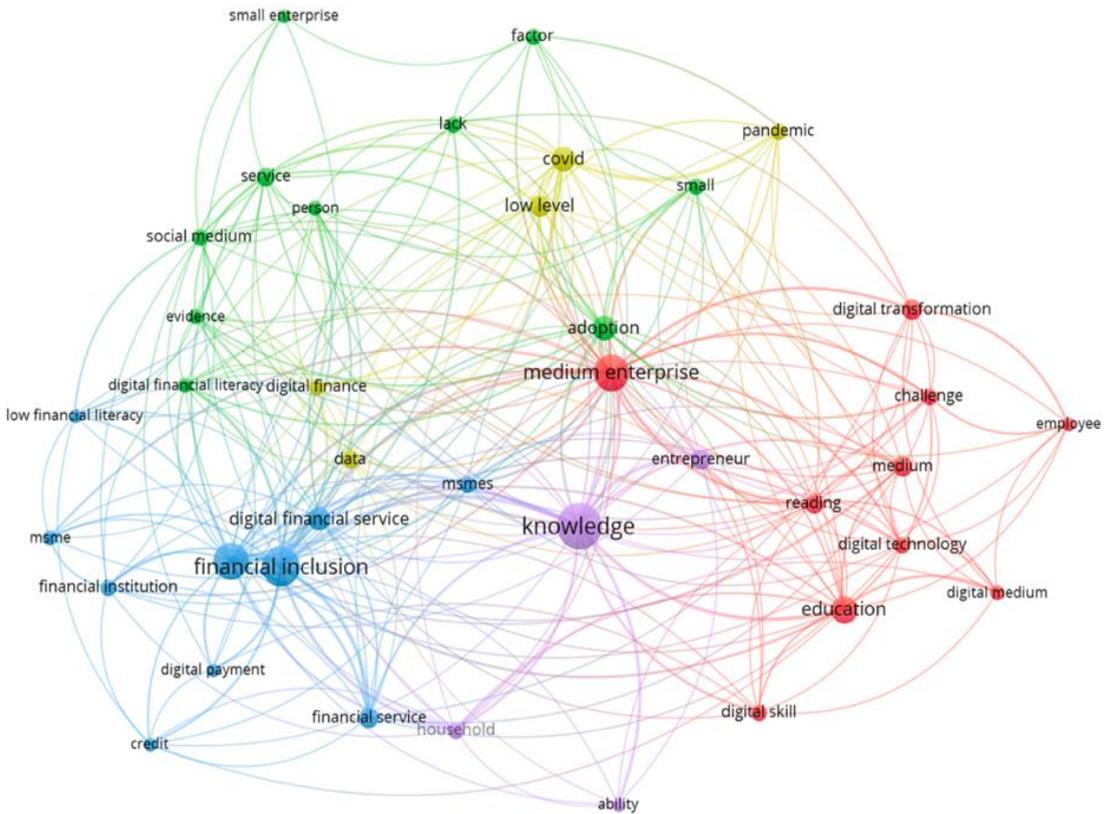


Figure 1: Mapping of Digital and Financial Literacy in Small Medium Enterprise by Research Focus

Digital and financial literacy in small and medium-sized enterprises (SMEs) is a multidisciplinary issue of worldwide significance.

The following articles discuss important facets of this subject: Small business digital and financial literacy research focuses on increasing knowledge and comprehension of digital technologies, financial concepts, and best practices. This involves investigating the influence of knowledge gaps on small enterprises' ability to effectively embrace and use digital tools and make educated financial decisions. The study emphasizes the importance of digital and financial literacy in increasing financial inclusion in SMEs (Togun et al., 2022). This study investigates how SMEs can better comprehend financial services, banking systems, and digital payment methods, allowing them to access

finance, manage their finances, and engage more actively in the formal economy. Digital transformation is a key topic in SMEs study (Suryani et al., 2022). This study investigates how SMEs' ability to adopt technology-driven change in their operations, business models, and customer retention is affected by digital and financial literacy. It investigates the barriers and enablers of digital transformation for small and medium-sized firms, emphasizing the significance of digital skills in this process.

Research frequently focuses on midsize businesses, recognizing their distinct difficulties and potential (Dura, 2022). Investigate the digital and financial literacy needs of midsize firms, find techniques for skill improvement, and investigate how to leverage digital technologies to expand your business and compete with larger enterprises. An important study field is the interplay between digital technologies and financial services in SMEs. Mobile He discusses banking, digital payment systems, fintech advances, and small business usage of financial management technologies. The purpose of this study is to learn how digital financial services may help SMEs enhance their access to credit, efficiency, and decision-making (Luo & Zeng, 2020). The study emphasizes the relevance of education and training programs in improving small business digital and financial literacy. It investigates effective educational methodologies, curriculum creation, and the roles of educational institutions, government initiatives, and industry collaborations in providing small enterprises with the necessary knowledge and skills. The overall goal of the SME digitized, and Financial Literacy Study is to identify insights, best practices, and policy suggestions that can assist SMEs in thriving in an increasingly digitized and complicated financial context. I'm going to do it. Its mission is to empower small businesses and contribute to their long-term success by bridging knowledge gaps, fostering financial inclusion, and accelerating digital transformation (Gosal & Nainggolan, 2023).

Descriptive Analysis of Literature based on Year

Descriptive literary analysis by year entails studying and summarizing the patterns, topics, and qualities of literary works published or produced over various time periods. This analysis can reveal information about the knowledge, education, financial, and digitalization contexts that shaped literature in a certain year or century. Here's a step-by-step guide to conducting a year-based descriptive analysis of literature: Determine whether you want to investigate a certain year or a range of years. You can concentrate on a single year or choose a broader time frame. Collect a representative sample of literary works from the time of your choice. Novels, poetry, plays, essays, and other kinds of literature may be included. Begin by identifying the prevalent themes and genres in that year's or era's literature. Keep an eye out for repeating motifs, concepts, and topics. Investigate the writing styles of the authors from that time. Take note of any changes in writing approaches, story structures, or linguistic trends.

Financial inclusion, digital financial services, digital skills, and digital payment are the

This analysis intends to shed light on the rising importance of these literacies for SMEs by conducting a systematic evaluation of relevant papers from 2019 to 2021, as well as to recommend new routes for future research and practical applications. The methodology section explains the study methods used to collect literature from 2019 to 2021. It describes the databases, search terms, and inclusion/exclusion criteria that were utilized to select relevant papers for analysis, guaranteeing a thorough and representative sample of research conducted during this time. This section analyses the literature from 2019 to 2021 to identify major topics and research findings linked to digital and financial literacy in SMEs throughout this time. It delves into the primary areas of interest, the focus of research investigations, and the ramifications of the findings for the growth and success of SMEs. The purpose of this paper is to examine the literature on technology adoption and digital transformation in SMEs from 2019 to 2021. It explores how SMEs adopted digital technologies into their operations, the hurdles they experienced, and the rewards they gained from digitalization. This section discusses the problems and opportunities that SMEs encountered in acquiring digital and financial literacy from 2019 to 2021 based on a review of the literature. It examines the difficulties to adoption and successful implementation, as well as ways for overcoming them. This section outlines growing areas of interest in the field of digital and financial literacy in SMEs from 2019 to 2021 by highlighting recent advances in the sector. It examines new research avenues, innovative techniques, and developing patterns that emerged throughout this time. This section offers policymakers, SME owners, educators, and other stakeholder's practical consequences and recommendations based on the analysis. These guidelines are intended to help SMEs improve their digital and financial literacy and leverage it for business growth. The conclusion combines the descriptive analysis' important findings and emphasizes the significance of ongoing research to adapt to the changing landscape of digital and financial literacy in SMEs. It emphasizes the importance of continuing efforts to equip SMEs with the information and skills they need to flourish in the digital economy, especially given the trends observed from 2019 to 2021.

Descript if Analysis of Literature based on Journals/Publication

This descriptive analysis gives an overview of the literature on digital and financial literacy in Small and Medium Enterprises (SMEs) available in journals and publications. The study's goal is to highlight the present research landscape, major issues, gaps, and challenges in the context of SMEs' digital and financial literacy. This analysis intends to shed light on the importance of these literacies for the growth and success of SMEs by a comprehensive evaluation of relevant literature, as well as to offer prospective areas for further research and practical implementations. The study of digital and financial literacy in small and medium-sized businesses has been widely published in several journals, notably those focusing on business and economics. [Table 3](#) displays the mapping analysis of digital and financial literacy in small and medium-

sized firms based on the journal's most extensively published business research.

According to [Table 3](#), among the many publications that publish research on digital and financial literacy in small and medium-sized firms are business, economics, governance, and finance. Numerous academic journals, including the Asian Economic and Financial Review, the Journal of Governance and Regulation, the International Journal of Innovative Technology and Exploring Engineering, the Review of Economics and Finance, the Journal of Contemporary Eastern Asia, and the Journal of Eastern European and Central Asian Research, publish research articles on digital and financial literacy in small and medium-sized enterprises (SMEs).

Table 3: Mapping of Digital and Financial Literacy in Small Medium Enterprise by Journals/Publication

Year	Publication
2020	Information (Switzerland)
2020	Journal of Governance and Regulation
2022	Asian Economic and Financial Review
2021	Journal of Governance and Regulation
2022	Contemporary Economics
2019	International Journal of Innovative Technology and Exploring Engineering
2023	Electronic Markets
2023	Lecturer Notes in Networks and Systems
2023	Lecturer Notes in Networks and Systems
2023	Springer Proceedings in Business and Economics
2022	Review of Economics and Finance
2022	Journal of Contemporary Eastern Asia
2023	Journal of Eastern European and Central Asian Research
2022	Proceedings of the European Conference on Games-based Learning
2022	Lecturer Notes in Networks and Systems

CONCLUSIONS

The research on digital and financial literacy in Small and Medium Enterprises (SMEs) demonstrates a growing global emphasis on enhancing these competencies to drive business growth and resilience. Analysing 216 studies reveals key thematic areas such as financial inclusion, digital transformation, midsize firms, education, and the impact of COVID-19. Financial literacy and digital adoption are consistently highlighted as critical enablers of SME performance and sustainability. Studies, such as those by [Weerakoon and Anuradha \(2024\)](#), illustrate how financial literacy strengthens the link between digital banking and financial performance, while explore its role in innovation and risk-taking. The findings underline the importance of targeted strategies to improve access to financial services and digital tools for SMEs, particularly in low and middle-income countries. While interventions like financial inclusion and business support

services often yield positive outcomes, their effects can be inconsistent or limited, emphasizing the need for cost-effective and scalable solutions. Education and training programs are pivotal, equipping SMEs with the digital and financial skills needed to navigate an increasingly complex business environment. From 2019 to 2021, research trends indicate a shift toward integrating digital technologies into SMEs' operations. Digital financial services, mobile banking, and fintech innovations are transforming how SMEs access credit, enhance efficiency, and make informed decisions. Studies highlight the barriers and enablers of digital transformation, emphasizing the significance of digital literacy in overcoming challenges and leveraging opportunities (Suryani et al., 2022). The exploration of midsize firms and their unique challenges further enriches this domain, offering insights into strategies for skill enhancement and leveraging digital tools for competitive advantage. The interplay between digital technologies and financial services, coupled with educational interventions, forms the crux of empowering SMEs to thrive in a digitalized economy (Luo & Zeng, 2020). In addressing the research question, what is the present state of research on the Determinants of SME Digital Intensity for Strategic Entrepreneurship? It is evident that digital and financial literacy are central determinants. These literacies not only bridge knowledge gaps but also foster financial inclusion and accelerate digital transformation, laying the foundation for strategic entrepreneurship. Continued research should focus on uncovering nuanced determinants of digital intensity and creating actionable frameworks to drive SME success in a dynamic economic landscape.

REFERENCES

- Ammeran, M. Y., & Abdul Latip, M. S. (2024). Influencing Factors Of Digital Transformation In Developing Economies: A Case Study Of Malaysia's Sme Sector. *International Journal of Business & Society*, 25(2). <https://doi.org/10.33736/ijbs.7623.2024>
- Atkinson, A. (2017). Financial Education for MSMEs and Potential Entrepreneurs. <https://doi.org/10.1787/bb2cd70c-en>
- Bin, M., & Hui, G. (2021). A systematic review of factors influencing digital transformation of SMEs. *Turkish Journal of Computer and Mathematics Education (TURCOMAT)*, 12(11), 1673-1686. <https://turcomat.org/index.php/turkbilmat/article/view/6102>
- Cravo, T., & Piza, C. (2016). The impact of business support services for small and medium enterprises on firm performance in low-and middle-income countries: a meta-analysis. *World Bank Policy Research Working Paper*(7664). <https://ssrn.com/abstract=2781021>
- Dela Cruz, N. A., Villanueva, A. C. B., Tolin, L. A., Disse, S., Lensink, R., & White, H. (2023). PROTOCOL: Effects of interventions to improve access to financial services for micro-, small-and medium-sized enterprises in low-and middle-

- income countries: An evidence and gap map. *Campbell Systematic Reviews*, 19(3), e1341. <https://doi.org/10.1002/cl2.1341>
- Dura, J. (2022). Determinants of Financial Literacy and Digital Literacy on Financial Performance in Driving Post-Pandemic Economic Recovery. *Journal of Contemporary Eastern Asia*, 21(2). <https://doi.org/10.17477/jcea.2022.21.2.047>
- Duvendack, M., & Mader, P. (2019). Impact of financial inclusion in low-and middle-income countries: A systematic review of reviews. *Campbell Systematic Reviews*, 15(1-2). <https://doi.org/10.4073/csr.2019.2>
- Frimpong, S. E., Agyapong, G., & Agyapong, D. (2022). Financial literacy, access to digital finance and performance of SMEs: Evidence From Central region of Ghana. *Cogent Economics & Finance*, 10(1), 2121356. <https://doi.org/10.1080/23322039.2022.2121356>
- Gosal, G. G., & Nainggolan, R. (2023). The influence of digital financial literacy on Indonesian SMEs' financial behavior and financial well-being. *International Journal of Professional Business Review: Int. J. Prof. Bus. Rev.*, 8(12), 11. <https://doi.org/10.26668/businessreview/2023.v8i12.4164>
- Hadiyati, E., Mulyono, S., & Gunadi, G. (2024). Digital Marketing As Determinant Variable For Improving The Business Performance. *e-Repository Dosen Universitas Gajayana Malang*. [https://doi.org/10.21511/im.20\(3\).2024.03](https://doi.org/10.21511/im.20(3).2024.03)
- Hochrein, S., & Glock, C. H. (2012). Systematic literature reviews in purchasing and supply management research: a tertiary study. *International Journal of Integrated Supply Management*, 7(4), 215-245. <https://doi.org/10.1504/IJISM.2012.052773>
- Iskandar, Y. (2022). The role of digital innovation as A MSME business resilience strategy during the covid pandemic. *Budapest International Research and Critics Institute-Journal (BIRCI-Journal)*, 5(2). <https://doi.org/10.33258/birci.v5i2.5662>
- Jafari-Sadeghi, V., Garcia-Perez, A., Candelo, E., & Couturier, J. (2021). Exploring the impact of digital transformation on technology entrepreneurship and technological market expansion: The role of technology readiness, exploration and exploitation. *Journal of Business Research*, 124, 100-111. <https://doi.org/10.1016/j.jbusres.2020.11.020>
- Jayeola, O., Sidek, S., Abd Rahman, A., Mahomed, A. S. B., & Hu, J. (2022). Cloud computing adoption in small and medium enterprises (SMEs): A systematic literature review and directions for future research. *International Journal of Business and Society*, 23(1), 226-243. <https://doi.org/10.33736/ijbs.4610.2022>
- Karadağ, E., Tosuntaş, Ş. B., Erzen, E., Duru, P., Bostan, N., Şahin, B. M., Çulha, İ., & Babadağ, B. (2015). Determinants of phubbing, which is the sum of many virtual addictions: A structural equation model. *Journal of behavioral addictions*, 4(2), 60-74. <https://doi.org/10.1556/2006.4.2015.005>
- Kulathunga, K., Ye, J., Sharma, S., & Weerathunga, P. (2020). How does technological and financial literacy influence SME performance: Mediating role of ERM

- practices. *Information*, 11(6), 297. <https://doi.org/10.3390/info11060297>
- Kumar, P., Pillai, R., Kumar, N., & Tabash, M. I. (2023). The interplay of skills, digital financial literacy, capability, and autonomy in financial decision making and well-being. *Borsa Istanbul Review*, 23(1), 169-183. <https://doi.org/10.1016/j.bir.2022.09.012>
- Kurniawati, E., Idris, I., Handayati, P., & Osman, S. (2021). Digital transformation of MSMEs in Indonesia during the pandemic. *Entrepreneurship and Sustainability Issues*, 9(2), 316. [https://doi.org/10.9770/jesi.2021.9.2\(21\)](https://doi.org/10.9770/jesi.2021.9.2(21))
- Li, L., Su, F., Zhang, W., & Mao, J. Y. (2018). Digital transformation by SME entrepreneurs: A capability perspective. *Information Systems Journal*, 28(6), 1129-1157. <https://doi.org/10.1111/isj.12153>
- Luo, Y., & Zeng, L. (2020). Digital financial capabilities and household entrepreneurship. *Economic and Political Studies*, 8(2), 165-202. <https://doi.org/10.1080/20954816.2020.1736373>
- Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. *American Economic Journal: Journal of Economic Literature*, 52(1), 5-44. <https://doi.org/10.1257/jel.52.1.5>
- Martínez-Bravo, M. C., Sádaba-Chalezquer, C., & Serrano-Puche, J. (2020). Fifty years of digital literacy studies: A meta-research for interdisciplinary and conceptual convergence. <http://dx.doi.org/0.3145/epi.2020.jul.28>
- Meier, A. (2021). Systematic review of the literature on SME digitalization: multi-sided pressure on existing SMEs. *Digitalization: Approaches, Case Studies, and Tools for Strategy, Transformation and Implementation*, 257-276. https://doi.org/10.1007/978-3-030-69380-0_14
- Mohamed, M. A., Mohamud, I. H., Sahal, A. M., & Farah, M. A. (2024). A bibliometric analysis of academic trends in human resource management practice from 2000 to 2023. *Cogent Business & Management*, 11(1), 2427217. <https://doi.org/10.1080/23311975.2024.2427217>
- Murray, M. C., & Pérez, J. (2014). Unraveling the digital literacy paradox: How higher education fails at the fourth literacy. *Issues in Informing Science and Information Technology*, 11, 85. <http://iisit.org/Vol11/IISITv11p085-100Murray0507.pdf>
- Okoli, C., & Schabram, K. (2015). A guide to conducting a systematic literature review of information systems research. <https://doi.org/10.2139/ssrn.1954824>
- Park, H., Kim, H. S., & Park, H. W. (2021). A scientometric study of digital literacy, ICT literacy, information literacy, and media literacy. *Journal of Data and Information Science*, 6(2), 116-138. <https://doi.org/10.2478/jdis-2021-0001>
- Randolph, J. (2019). A guide to writing the dissertation literature review. *Practical assessment, research, and evaluation*, 14(1), 13. <https://doi.org/10.7275/b0az-8t74>
- Rasheed, R., Siddiqui, S. H., Mahmood, I., & Khan, S. N. (2019). Financial inclusion for SMEs: Role of digital micro-financial services. *Review of Economics and*

- Development Studies*, 5(3), 571-580. <https://doi.org/10.26710/reads.v5i3.686>
- Reddy, P., Sharma, B., & Chaudhary, K. (2020). Digital literacy: A review of literature. *International Journal of Technoethics (IJT)*, 11(2), 65-94. <https://doi.org/10.4018/IJT.20200701.oa1>
- Siagian, H., Basana, S. R., Tarigan, Z. J. H., Novitasari, M., & Jie, F. (2024). Role of supply chain management in improving competitive advantage of Indonesian small and medium enterprises. [https://doi.org/10.21511/ppm.22\(2\).2024.54](https://doi.org/10.21511/ppm.22(2).2024.54)
- Sudrajad, A. I., Tricahyono, D., Yulianti, E. B., & Rosmawati, W. (2023). The Role of Digitalization Performance on Digital Business Strategy in Indonesia MSEM. *International Journal of Professional Business Review*, 8(6), e02260-e02260. <https://doi.org/10.26668/businessreview/2023.v8i6.2260%20>
- Suryani, U., Arief, M., Bramantoro, S., & Hamsal, M. (2022). The impact of digital literacy and e-commerce adoption with O2O business adoption on the performance of small and medium enterprises. *International Journal of eBusiness and eGovernment Studies*, 14(2), 199-223. <https://doi.org/10.34109/ijepeg>
- Togun, O., Ogunrinade, R., Olalekan, O. T., & Jooda, T. (2022). Financial Inclusion and SMEs' Performance: Mediating Effect of Financial Literacy. *Journal of Business and Environmental Management*, 1(1), 23-33. <https://doi.org/10.59075/jbem.v1i1.148>
- Tsai, C.-H., & Kuan-Jung, P. (2017). The FinTech revolution and financial regulation: The case of online supply-chain financing. *Asian Journal of Law and Society*, 4(1), 109-132. <https://doi.org/10.1017/als.2016.65>
- Turner, J. R. (2018). *Literature Review*. <https://doi.org/10.1002/piq.21275>
- Valenzuela, M. C., Martínez-Martínez, S. L., & Soto, J. D. (2021). Financial literacy and innovation performance in SMEs: The mediating effect of risk-taking. In *Financial management and risk analysis strategies for business sustainability* (pp. 58-81). IGI Global. <https://doi.org/10.4018/978-1-7998-7634-2.ch004>
- Weerakoon, W., & Anuradha, P. (2024). Financial Literacy on Digital Banking and Financial Performance among Small and Medium-Sized Enterprises in Sri Lanka. *Asian Finance Review*, 2(01). <https://doi.org/10.31357/afr.v2i01.7441>
- Yadav, Y. C., & Anshika, S. K. (2021). Adverse Events of Paediatric Immunization. *vaccine*, 20, 21. <https://doi.org/10.31254/phyto.2021.10207>
- Yanto, H., Baroroh, N., Hajawiyah, A., & Rahim, N. M. (2022). The Roles of entrepreneurial skills, financial literacy, and digital literacy in maintaining MSMEs during the COVID-19 Pandemic. *Asian Economic and Financial Review*, 12(7), 504-517. <https://doi.org/10.55493/5002.v12i7.4535>