

## SUPPLY MANAGEMENT, OPERATIONS AND MARKETING STRATEGIES FOR MSME SUSTAINABILITY: SYSTEMATIC LITERATURE REVIEW

Agung Sudjatmoko<sup>1</sup>, Andi Mohammad Nurdin Halid<sup>2</sup>, Thomy Eko Saputro<sup>3,\*</sup>, Adi Teguh Suprpto<sup>1</sup>

<sup>1</sup> Business Management, Binus Business School Undergraduate, Bina Nusantara University, Jawa Barat, Indonesia

<sup>2</sup> Ekonomi Corporation, Fakultas Ekonomi, Universitas Negeri Makassar, Sulawesi Selatan, Indonesia

<sup>3</sup> Industrial Engineering Department, Universitas Muhammadiyah Malang, Jawa Timur, Indonesia

Corresponding author email: [thomysaputro@umm.ac.id](mailto:thomysaputro@umm.ac.id)

### Article Info

Received: Jun 23, 2024

Revised: Jul 27, 2025

Accepted: Aug 04, 2025

OnlineVersion: Aug 10, 2025

### Abstract

This research aims to present a systematic literature review addressing the development of supply management, operations, and marketing strategies which can sustain the success of the sustainability implementation for MSMEs. Several papers is collected from the scholarly journals published in the last five years. The findings indicate that digital entrepreneurship assistance, which can help develop digital skills and create more sustainable business flows, plays a significant role for MSMEs to sustain their business sustainability. A sustainable marketing strategy can help MSMEs increase market access, especially using digital strategies, making it easier for MSMEs to reach a wider market. Our systematic literature review has a limitation. The discovery of the sustainability practice on MSMEs only focuses on three aspects including supply management, operations, and marketing strategy. To complement the limitation of the current study, future research lies on the comparative analysis of sustainability practice on MSMEs and larger enterprises by considering other essential aspects including finance, human resources, and competitiveness. Operational management for MSMEs, especially MSMEs in the food sector, is also key in maintaining business operations during the COVID-19 pandemic. This study discuss, further using the Systematic Literature Review method to highlight Supply management, operations and marketing strategies for the sustainability of MSMEs so that they become a reference for business actors in developing their businesses and also for new business actors, of course, especially for policymakers in empowering and MSME development.

**Keywords** Marketing Strategy, Operations, Supply Management, Sustainability.



© 2025 by the author(s)

This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

### INTRODUCTION

Business performance is critical for competitive and sustainable businesses in the current era of global industrialization (Zhai et al., 2018; Mahdi et al., 2019; Ferreira et al., 2020). Business performance is vital for long-term survival and competitiveness. The key company's success is

sustainable competitive advantage, which allows the company to outperform competitors in terms of sales, profit margins, and employee and customer retention (Adawiyah & Adhitya, 2021; Antwi et al., 2025; Ikhsan et al., 2025). Sustainability refers to actions taken to ensure a company can survive. For businesses to survive and thrive, it is very important to understand the meaning of sustainability. The welfare of small and medium enterprises (MSMEs) is significantly influenced by business sustainability (O’Gorman, 2001; Masurel, 2007; Moore & Manring, 2009; Williams & Schaefer, 2013; Kot, 2018).

The participation of the general public as business actors is at the core of the government's current commitment to economic progress (Modgil et al., 2022). Micro, small, and medium enterprises are useful tools to facilitate this kind of economic expansion. Micro, Small and Medium Enterprises (MSMEs) are part of the business sector that can be relied on as an indicator of financial stability at the local and regional levels, even in the face of major shocks to the country's economy (Raut et al., 2017). Naturally, our daily image or perspective, which directly employs and consumes services, as well as goods and inventions supplied by MSME actors, must be distinct from the existence of MSMEs. Data released on the Ministry of Cooperatives and MSMEs website shows that during 2021 and 2022, MSMEs contributed 64.2 million business units, or 99.99% of all business actors (F. Dewi & Mahendrawathi, 2019). MSMEs have a significant role in the macroeconomic system. MSMEs are found not only in Indonesia but also in every country. The goal of each country is to increase the ability of MSME players so they can grow in their respective industrial commercial activities (Koolwal, 2021). Considering that human desires are unlimited, market players have fantastic potential to meet people's needs (Pourreza et al., 2022; Jarnawi et al., 2025).

However, MSMEs face several challenges that can hinder the growth and sustainability of MSMEs. One of the biggest challenges for MSMEs is the lack of easily accessible, adequate and affordable financing, which hinders them from growing, increasing productivity and competitiveness, as well as investing in innovation (Maulana et al., 2018; Siddique et al., 2025; Syahrul et al., 2025). Another challenge is related to the capacity of MSMEs to adopt sustainable practices, which large companies are increasingly requesting because they want greater transparency and accountability in MSME sustainability efforts (Orji et al., 2020; Julianti et al., 2025).

These limitations for the most part emerge in three fundamental angles of commerce administration, to be specific supply administration, operations, and showcasing methodologies. Contributing variables incorporate restricted get to dependable providers, need of technology-based supply chain administration frameworks, moo administrative and operational capacity, negligible venture in generation innovation, and powerless advanced proficiency and data-driven showcasing methodologies (Gatti et al., 2019; Perdana et al., 2023; Zubair et al., 2025). Restricted assets, moo get to preparing, need of association systems, and powerless back for computerized and coordination's foundation are moreover the most causes of these three angles not being optimized. In this manner, to completely get the imperatives confronted by MSMEs, it is vital to look at the components that lead to imperatives in supply administration, operations, and showcasing techniques, not fair the shape of the imperatives (Gillan et al., 2021).

A few organizations and reports suggest that MSMEs center on supportability and social duty to overcome these challenges. Empowering MSMEs to receive naturally inviting innovation and other biologically inviting procedures is exceptionally imperative in overcoming climate alter (Yuniarta & Purnamawati, 2021). MSMEs confront challenges in executing economically promoting methodologies due to restricted get to to fund. Securing stores for maintainability speculations can be troublesome, and MSMEs may require more assets to contribute to feasible promoting hones (Kot, 2018; Melinda et al., 2024). MSMEs confront a few challenges in executing economical showcasing hones, counting restricted get to to fund, troubles in actualizing economically promoting hones, need of mindfulness, restricted get to to information and innovation, and challenges in measuring the effect of maintainable showcasing hones. Overcoming these challenges requires joint endeavors from different partners, counting governments, money related teach and trade experts. Encouraging MSMEs to adopt sustainable marketing practices and providing the necessary support and training can help them overcome the challenges they face and contribute to a more sustainable future (Adiandari, 2022; S. Dewi, 2023).

This study discusses further using the Systematic Literature Review method to highlight Supply management, operations and marketing strategies for the sustainability of MSMEs so that they become a reference for business actors in developing their businesses and also for new business actors, of course, especially for policymakers in empowering and MSME development.

**RESEARCH METHOD**

The main text should include the previous research on the subject, methodology (for empirical paper) and/or theoretical framework (for review paper), hypothesis (for empirical paper) and/or a research question (for review paper) should be derived/ developed logically based on the previous studies, results of the research, and discussion with an interpretation of the results obtained, finalizing with the conclusion.

An in-depth analysis of recent literature (scientific literature from the last 5 years) should be presented in the theoretical part. The sources from Clarivate Analytics Web of Science and/or Scopus are very welcome. The methodology part should present all methods used for research. Newly developed methods should be described in detail. Programs (software) used for the research should be named. The results should be presented in a precise manner logically in line with the research. The discussion part should present a direct comparison of the results to previous studies. Moreover, all limitations of the research should be highlighted. The conclusion part should discuss the obtained results with direct and special stress on the value-added, as well as policy implication and future research directions. The objective of this study is to identify and analyse the factors that influence the sustainability of MSMEs related to supply management, operations, and marketing strategies. Based on this objective, the research questions were structured as follows:

Table 1. Research question

ID	Variable	Research Question
RQ 1	Supply Management	What are the key supply management challenges faced by MSMEs and how do they affect their sustainability?
		How can sustainable supply management reduce costs, improve efficiency and minimise environmental impacts in MSME supply chains?
		What are the factors that prevent MSMEs from strengthening cooperation with local or community-based suppliers to support sustainability?
RQ 2	Operation	How can MSMEs manage supply risks and increase resilience through sustainable supply management practices?
		What challenges do MSMEs face in adopting automation and technology to improve the sustainability of their operations?
		How can MSMEs measure and monitor the social and environmental impacts of their operations?
RQ 3	Marketing strategy	What are the main obstacles MSMEs face in improving production and distribution processes to achieve sustainability in their operations?
		What factors influence the success of social marketing in supporting MSME sustainability?
		How can MSMEs overcome challenges in utilising social media and online platforms to promote their sustainable products and services?
		How can sustainable marketing strategies shape MSMEs' brand image and strengthen their relationships with customers?

These questions will be answered through a systematic review of the literature relevant to the PICO elements described in Table 2.

Table 2. PICO Summary

Population	All scientific journal articles that have been published in leading databases (such as Science, Direct Crossref and Google Scholar) that discuss the topic of MSME sustainability.
Intervention	Provides insight into how to improve the sustainability of MSMEs in the aspects of supply management, operations and marketing strategy.
Comparison	Challenges to the sustainability of MSMEs in various countries
Outcomes	Improving Sustainable Practices for MSMEs

Articles Collection. At this stage, the required data enters the collection stage and then carries out the analysis process. The results that have been diagnosed will answer all research questions that have been previously determined. The selection of articles to be reviewed can be explained through an elimination process. The elimination process is illustrated in Figure 1. After carrying out the database elimination process, 27 journals were obtained which will be reviewed and discussed in depth.

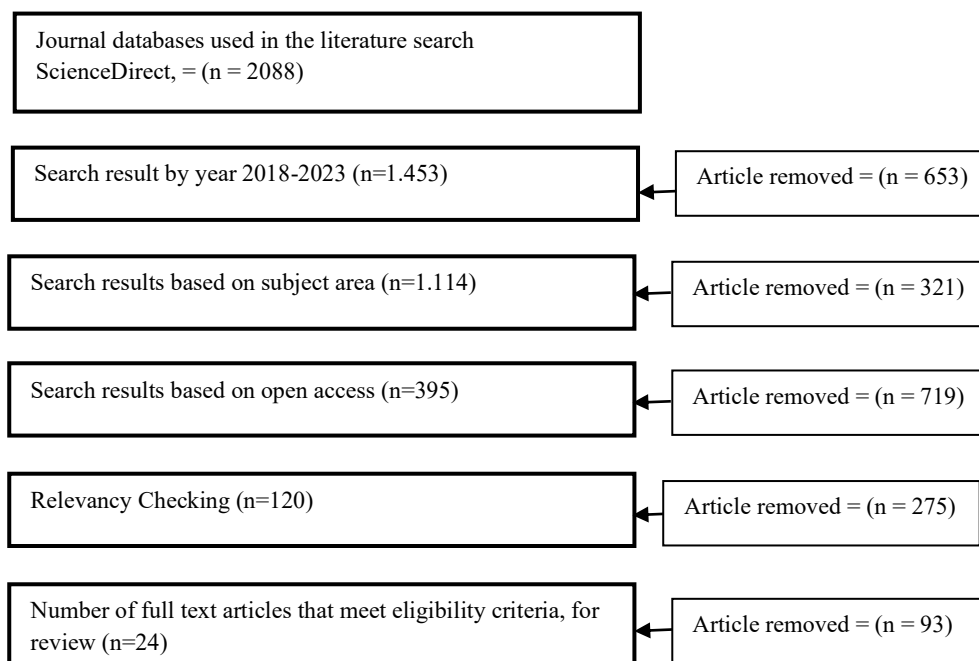


Figure 1. Article collection phases

Inclusion and Exclusion Criteria. At this stage, criteria are determined from the data found, whether the data is suitable to be used as a data source for research or not. Table 3 summarizes the criteria for data that is considered worthy of being a research data source.

Inclusion Criteria	<ol style="list-style-type: none"> <li>1. Year of Publication: 2018 – 2023</li> <li>2. Source type: Journals</li> <li>3. Journal type: Open access</li> <li>4. Document type: articles</li> </ol>
Exclusion Criteria	The data used is only journal papers related to MSME Sustainability.

Relevancy Checking. At this stage, the information found will be assessed using the following criteria: a) Does the journal article cover the sustainability of MSMEs?; b) Do supply management, operations, and marketing strategy appear in journal article abstracts?; c) Does the paper meet eligibility requirements, and is its full text? Analysis data. Data that has been collected in the previous stage will be presented using bibliometric analysis and discuss at this stage. Journal Profile Objectives. The objectives of this journal distribution analysis were to: a. Identify Publication Trends: Understand how publications related to the topic of MSME sustainability have evolved over the years, to illustrate how developed research in this field. b. Analyze Geographical Distribution: By looking at the distribution of articles by region, researchers can understand the influence of regional context on MSME sustainability challenges and policies, as well as practices implemented in different regions. c. Evaluating Journal Sources and Quality: Using Scopus categories, researchers can assess the quality and credibility of selected journals based on Q1, Q2, and Q3 rankings. This also shows the consistency of the quality of the research reviewed. d. Understanding the Research Methods Used: By knowing the type of research methods used in the article, researchers can identify trends in the most widely used research methods in MSME sustainability studies and evaluate whether the methods are comprehensive enough to support the findings.

Keyword Mapping and Author Collaboration through VOSviewer. In this research, VOSviewer is used as a bibliometric visualization tool to analyze the linkage and mapping of keywords, authors, and publication sources of the collected articles. The objectives of using VOSviewer are to: a. Identify research patterns and trends in the topic of MSME sustainability. b. Map collaboration networks between authors or institutions. c. Visually identify the occurrence of important keywords to see the most dominant research focus. d. Present comprehensive bibliographic data. Present bibliographic data in a comprehensive and easy-to-understand manner in the form of visual maps that support qualitative and quantitative analyses of literature review results.

**RESULTS AND DISCUSSION**

Journal Characteristics. After analyzing the data, the researchers found 26 journals that would be in-depth and, therefore, relevant to review. Then, to find out the profile of each data distribution, the researcher carried out a descriptive analysis of the articles to see the shape of the article. By providing descriptive analysis of various article demographics, such as year of publication, country of origin, type and collaboration, researchers can determine trends and discuss their implementation. The results of the Search Process and Data Collection found 27 paper articles that were close to the suitability of the topic to be reviewed. The data is divided into several journal categories. Figure 2 shows the types of journals that have been successfully obtained.

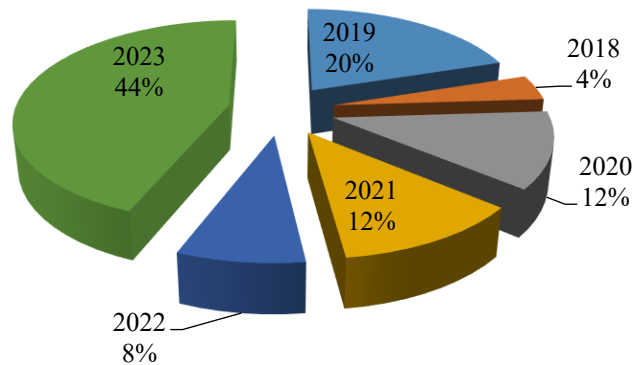


Figure 2. Articles' publication year

This article was studied from 2018 to 2023. From the distribution of journal publication years, it was found that the highest proportion was in 2023 at 44%, while the lowest ratio was in 2018 at 8%.

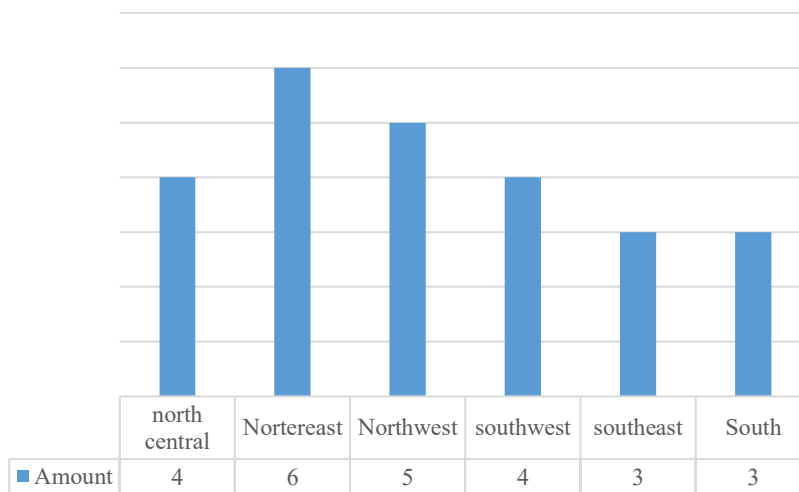


Figure 3. Distribution of articles published by region

Based on Figure 3, the highest proportion obtained from searches is the northwest with 6 articles, then the lowest ratio is in the southwest region.

## Journal

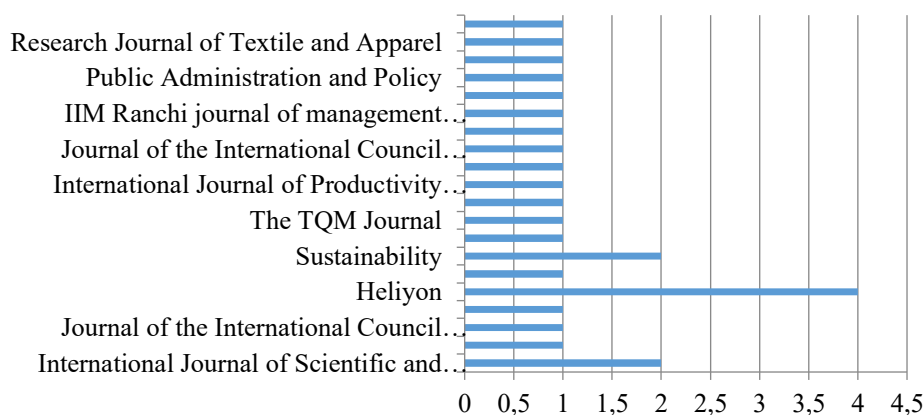


Figure 4. Distribution of research by subject area

The results found are traced one by one by looking at the subject areas that have been found (shown in Figure 4). Most of the studies has been published in Heliyon followed by the studies published in Sustainability. Only one study has been published each in Indian Growth and Development Review, Journal of the International Council for Small Business ISSN: Fulbright Review of Economics and Policy, International Journal of Climate Change Strategies and Management, International Journal of Productivity and Performance Management, The TQM Journal, Journal of Agribusiness in Developing and Emerging Economies, International Journal of Productivity and Performance Management, Journal of Open Innovation: Technology, Market, and Complexity, Journal of the International Council for Small Business, International Journal of Physical Distribution and Logistics Management, IIM Ranchi journal of management studies, Islamic Economic Studies, Public Administration and Policy, Marketing Intelligence and Planning, Research Journal of Textile and Apparel and Processes.

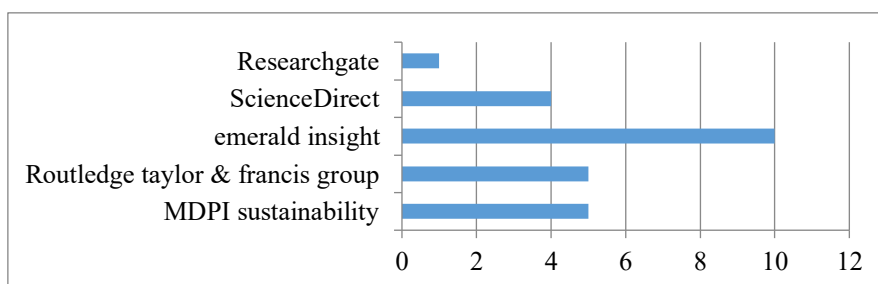


Figure 5. Number of articles according to the publication source

Based on Figure 5, it was found that the distribution of articles was based on publication sources. In Researchgate publications, there is 1 article, ScienceDirect has 4 articles, and Emerald Insight has 10 articles. Furthermore, the publication sources are Routledge Taylor & Francis Group, with 5 articles, and MDPI Sustainability, with 5 articles. Based on the journal quality shown in Figure 6, the data distribution based on Q1, Q2, and Q3 76%, 20%, and 4%, respectively.

## Scopus

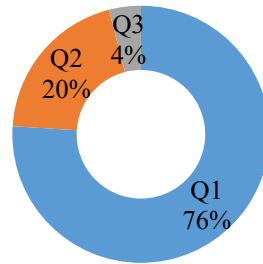


Figure 6. Based on Scopus categories

## Article types



Figure 7. Number of articles based on the types of research method

Judging from the search based on the literature review, it examines five research methods, namely quantitative, mixed methods, point of view, case studies and interviews. The highest proportion was quantitative, with 11 articles, and the lowest ratio was 7 articles.

Based on a systematic review of 15 reputable international journal articles (categories Q1 and Q2), this study evaluates various supply chain, operational, and marketing management strategies implemented by MSMEs in various countries. The main objective is to identify best practices and differences in approaches influenced by the context of developed and developing countries. The following table presents a detailed comparison of each study related to the following aspects: authors and year, country of origin of the study, study objectives, supply management strategies used, main results obtained, implications of the findings, and journal quality category where the study was published. This analysis helps identify consistent patterns in strategies supporting SME sustainability and highlights certain inconsistencies in strategy implementation between developed and developing countries. Emphasis is placed on studies classified in Q1 and Q2 journals, given their high robustness in terms of methodology and the significance of their findings.

Table 2. Summary of Previous Studies Related to SME Supply Chain Management Strategies Based on Country and Journal Category

Author & Year	Negara	Study Objectives	Supply Management/Operations/Marketing Strategy	Results	Implication	Journal Category (Q)
Kumar et al. (2022)	India	Analyzing the impact of digital supply chain	Platform SCM digital & kolaboratif	Improving logistics efficiency & reducing material	MSMEs need digital training & policy incentives	Q1 (J. Clean. Prod.)

Author & Year	Negara	Study Objectives	Supply Management/Operations/Marketing Strategy	Results	Implication	Journal Category (Q)
Santos et al. (2021)	Brazil	integration on MSMEs Assessing the role of green procurement in food MSMEs	Green sourcing dan audit pemasok	waste Proven to reduce environmental impact & costs	Regulatory incentives and certification are important	Q2 (Sustainability)
Lee & Park (2020)	Korea Selatan	Analysis of the lean supply chain in manufacturing MSMEs	Just-in-time, demand forecast	Improving responsiveness & minimizing inventory	Gradual adoption according to business scale	Q1 (Int. J. Prod. Econ.)
Rahman et al. (2020)	Bangladesh	Assessing logistics and marketing barriers in textile MSMEs	Local sourcing, strengthening distribution networks	Infrastructure barriers reduce distribution efficiency	Government logistics support is needed	Q2 (J. Small Bus. Manag.)
Tadesse & Zeng (2019)	Ethiopia	The role of operational innovation in the sustainability of agricultural MSMEs	Post-harvest processing, value chain integration	Simple innovations increase farmer incomes	Access to financing is crucial for innovation adoption	Q2 (Agribusiness)
Zhang et al. (2021)	China	Analyzing digital-based marketing in retail MSMEs	E-commerce & social media platforms	Market penetration is increasing rapidly through digital strategies	Training is needed digital branding	Q1 (Ind. Market. Manag.)
Mensah et al. (2020)	Ghana	Evaluating the operational sustainability of local craft MSMEs	Using local materials & efficiency training	Reducing production costs & increasing profitability	MSMEs need production efficiency technology	Q2 (J. Enterp. Inf. Manag.)
González et al. (2021)	Meksiko	Examining the influence of horizontal collaboration between MSMEs	Consolidating joint procurement & distribution	Logistics cost efficiency & increased bargaining power	Collaboration can be institutionalized	Q1 (J. Bus. Res.)
Ibrahim & Yusoff (2020)	Malaysia	The role of government-linked supply chain support	Supporting incubation & integration of MSMEs in national projects	Increasing export capacity and competitiveness	Program replication to the informal sector	Q2 (Asia Pac. Bus. Rev.)

Author & Year	Negara	Study Objectives	Supply Management/Operations/Marketing Strategy	Results	Implication	Journal Category (Q)
Nair et al. (2021)	India	Effectiveness of influencer marketing for MSME products	Collaboration with micro-influencers	Increasing awareness and sales conversion	Digital content training for small business owners	Q1 (J. Retail. Consum. Serv.)
Boonitt et al. (2020)	Thailand	The impact of market uncertainty on MSME operations	Operational flexibility & supplier diversification	Resilient MSMEs when implementing adaptive models	Need for a risk monitoring system	Q2 (Int. J. Prod. Res.)
Chirisa et al. (2021)	Zimbabwe	Study of input scarcity and MSME adaptation strategies	Utilization of waste and raw material recycling	Increase sustainability and reduce production costs	Material-saving strategies can be replicated globally	Q2 (J. Clean. Prod.)
Wahyuni et al. (2022)	Indonesia	The influence of social integration and local marketing	Community collaboration and local storytelling	Increase customer loyalty and brand identity	Cultural marketing training is needed	Q2 (Small Enterp. Res.)
Abebe & Tekle (2020)	Ethiopia	Transforming traditional supply chains into hybrids	Combining physical and online stores	Reaching new markets and efficient distribution costs	Digital access is key to sustainability	Q1 (Technovation)
Oliveira et al. (2023)	Portugal	Assessing the maturity of supply chain sustainability models in MSMEs	Supply chain audits and benchmarking	Sustainable improvement requires a gradual process	The government needs to support the adoption of sustainability models	Q1 (J. Environ. Manag.)

Network visualization of bibliometric literature: Keywords Analysis. To understand the difficulties, findings, and results of the research, gain a deeper understanding, and select relevant subjects, the researchers reread the articles. Furthermore, the Vosviewer program was used by researchers to facilitate the classification of several clusters found in the 24 articles taken during the cluster determination process. To determine sets and sub-clusters, researchers used theme analysis. Research subjects are linked to related sub-clusters. The results of using Vosviewer to process the analysis of findings can be seen in Figure 8.



Figure 8. Keywords analysis

These clusters indicate the multidimensionality of this field, reflecting its focus on business sustainability, Supply Management, Operations and marketing strategy. The results of the co-word map network visualization of research developments around MSME Sustainability are divided into 7 clusters and 47 topics, summarized in Table 4.

Table 4. Cluster analysis

Cluster	Topic
Cluster 1 is red	Developing countries
	Economic development
	Entrepreneurial ability
	Entrepreneurial leadership
	Entrepreneurial orientation
	Government intervention
	MSME
	Non-banking financial institutions
	Special purpose entity
	Economic policies and managerial
Cluster 2 is green	Effectiveness of National enterprise
	Micro
	National company police
	On the sustainability of policy
	Small and medium enterprises
	Affective commitment
	Cleaner environment
	Computer system and software
	Corporate social responsibility
	Customer relations
Cluster 3 is blue	Green performance
	Innovation capability
	Psychological capital
	Sustainable development
	Across the there
	Medium-sized enterprises
	Critical sustainable factors of MSME
	Regression to estimate
	Small
	This article examines
Cluster 4 is yellow.	We apply order logistics.
	Agro-industry
	Circular economy
	Food safety
	Food supply chain
Cluster 5 purple	Industry 4.0 and cybersecurity
	Flooding
	Greece
	Micro
	Resilience
Cluster 6 light blue	Small and medium-sized enterprises
	Competitiveness and tourism competitiveness
	Entrepreneurs
	Self-efficacy
	Sustainability
Cluster 7 is orange	Sustainable tourism

**Publication Trends and Article Characteristics: Scholarly Dynamics and Geographical Distribution.** A systematic search and selection yielded 27 relevant articles for the period 2018-2023, with a dominance of articles in 2023 (44%), indicating an increased interest and urgency in MSME sustainability issues in recent years. These articles were published in reputable journals and spread across several major publication platforms such as Emerald Insight, Taylor & Francis, and MDPI Sustainability. The regional distribution of publications shows a concentration in the Northwest region with 6 articles, indicating that literature from this region contributes significantly to the development of this topic globally. The types of publications captured span a wide range of subject areas, from management, public policy, economics, to innovation and sustainability. This reflects the interdisciplinarity of MSME sustainability issues. In fact, the journal categories based on Scopus rankings show the dominance of articles in Q1 and Q2 journals, signalling that research on MSME sustainability has become a major concern in the international academic community. The literature review also revealed methodological variations of the articles analysed. Quantitative methods dominated with 11 articles, followed by mixed methods, case studies and interviews. This variety of approaches shows that MSME sustainability issues are studied from various perspectives, both numerically and qualitatively.

**Thematic Mapping and Strategic Implications: Research Focus and Policy Directions for Sustainable MSMEs.** Through the thematic analysis approach, 7 main clusters and 47 research topics were identified that reflect the complexity and multidimensionality of MSME sustainability studies. For example: Cluster 1 (ruddy) highlights the part of government, non-bank monetary teach and entrepreneurial introduction in supporting MSMEs in creating nations. It shows the require for strong auxiliary and administrative mediations. Cluster 2 (green) accentuates the viability of financial and administrative arrangements for little and miniaturized scale undertakings, underlining the significance of consistency and maintainability of national approaches. Cluster 3 (blue) raises issues of emotional commitment, development, social obligation and feasible advancement, which are central to building the long-term versatility and competitiveness of MSMEs. Cluster 4 (yellow) canters on the part of innovation and advanced advancement in supporting MSME supportability. Subjects in this cluster include the utilize of innovation to move forward operational productivity, showcasing, as well as more ecologically neighbourly asset administration. The use of advanced innovations, such as e-commerce and cloud-based administration frameworks, is key in growing markets and moving forward the competitiveness of MSMEs, particularly within the fast-paced advanced period. This accentuates the significance of mechanical adjustment that can fortify MSMEs within the long term, both in terms of financial benefits and social and natural maintainability. Cluster 5 (purple) raises the issue of agro-industry and circular economy. This issue talks about how the rural segment and normal resource-based businesses can change towards a more maintainable economy. The concept of a circular economy, which accentuates reuse, reusing and squander diminishment, is especially significant for MSMEs within the agro segment, which frequently confront issues of squander and reliance on common assets. Supportability in this segment isn't as it were related to the effective administration of assets but moreover to the execution of naturally situated trade hones, in this way opening up openings for MSMEs to improve and move forward their competitiveness. Cluster 6 (light blue) highlights instruction and capacity building as key variables in building MSME supportability. This subject canters on the significance of progressing aptitudes and information for MSME business visionaries, as well as the part of instructive teach in planning them to confront progressively complex trade challenges. Sustainability-oriented instruction and the improvement of administrative, specialized and inventive abilities can fortify the competitiveness of MSMEs and guarantee their long-term practicality. Cluster 7 (orange) canters on feasible tourism and self-efficacy. Within the setting of MSMEs, this theme investigates how the tourism segment can back neighbourhood economies through the advancement of feasible little and medium-sized endeavours. Eco-friendly, community-based and socially capable tourism can help MSMEs to flourish whereas keeping up maintainability values. The cluster moreover highlights the significance of expanding the self-efficacy of MSME business visionaries in overseeing their businesses in a more feasible way, as well as their understanding of the social and natural impacts of trade exercises.

**Supply Management: Drivers and Strategies for MSME Sustainability Development.** For smaller scale, little, and medium-sized undertakings (MSMEs) to be effective and maintainable, successful supply chain administration is fundamental. Both MSMEs and huge undertakings confront supply chain issues, but due to constrained assets and skill, MSMEs regularly battle to overcome these

challenges. Concurring to investigate, the capacity of MSMEs to compete viably within the advertise is influenced by issues such as stock administration, eccentric request, and constrained IT investing (Hakeem, 2019). In expansion, restricted estimate and acquiring control make it troublesome for MSMEs to arrange with providers, coming about in value-based connections that ruin fetched diminishment. Corporate social obligation (CSR) plays an imperative part in feasible supply chain administration, affecting different perspectives of commerce operations and partner engagement (Chang et al., 2023).

This can be especially pertinent to RQ 1: What are the key supply administration challenges confronted by MSMEs and how do they affect their supportability? As CSR hones within the supply chain progress inside administration and partner connections, it makes a difference MSMEs accomplish their supportability objectives by making positive natural, social and financial impacts (Santana et al., 2021). Moreover, RQ 1 inquires how maintainable supply administration can decrease costs, move forward effectiveness, and limit natural impacts, which adjusts with CSR's capacity to progress operational execution whereas assembly supportability objectives. Development capability is another imperative enabler in moving forward supply chain nimbleness, making a difference MSMEs react successfully to changing advertise and competitive conditions. Typically, in line with RQ 1: How can MSMEs oversee supply dangers and progress versatility through economical supply administration hones? Advancement can give MSMEs with a competitive advantage by progressing their capacity to adjust to supply disturbances and guarantee long-term maintainability (Medina et al., 2023). As development plays a key part in fortifying supply chain administration, it underpins MSMEs in assembly their maintainability challenges and fortifying strength.

**Operational: Drivers and Best Practices for MSME Sustainability Development.** In MSMEs, business operations are critical to achieving corporate goals, improving competitiveness, and adapting to a dynamic business environment (Mortenson et al., 2015). Operational strategies, including backward integration to secure control over suppliers, can mitigate challenges that MSMEs face, such as unreliable suppliers or excessive costs (Mohan G. & Baruah, 2019). This relates to RQ 2: What challenges do MSMEs face in adopting automation and technology to improve the sustainability of their operations? As MSMEs look for to progress generation and conveyance forms for more noteworthy maintainability, the integration of innovation and computerization can address key obstructions such as wasteful aspects and tall operational costs. Within the nourishment supply chain, for illustration, effective taking care of, capacity, bundling and transportation forms are basic to keeping up quality whereas limiting squander and natural affect. This interfaces to RQ 2: What are the key boundaries MSMEs confront in progressing production and dissemination forms to realize maintainability in their operations? As MSMEs within the nourishment industry look for to enhance these forms, the integration of best hones and joint operations (CPOs) can offer assistance extend capabilities and capital whereas guaranteeing supportability (Mikalef et al., 2020).

**Marketing Strategy: The Role of Marketing in Promoting Sustainability for MSMEs.** The flexibility of MSMEs, especially inside the post-pandemic period, is massively influenced by progressed displaying and exchange strategies. The capacity of MSMEs to alter through progressed stages moves forward their supportability and fortifies their nearness inside the grandstand Ordinarily exceedingly critical to RQ 3: How can viable displaying methods shape the brand picture of MSMEs and strengthen their associations with clients? By centering on supportability through computerized advancing, MSMEs can develop more grounded associations with clients, increase brand commitment, and drive long-term development. Feasible tourism showcasing offers experiences for MSMEs to advance their maintainability hones (Zhou et al., 2021). Custom-made showcasing methodologies that underscore the effect of economical items and administrations offer assistance construct flexibility and adjust with customer desires of dependable utilization. RQ 3: What variables impact the victory of social promoting in supporting MSME supportability? Considers on economical tourism showcasing appear how advancing supportability can increment client believe, dependability and advertise share, all of which are basic to MSME versatility (Shih & Tsai, 2017). By joining feasible showcasing techniques and accentuating the social and natural impacts of their items, MSMEs can separate themselves within the showcase, which moves forward their maintainability and in general execution.

**Mapping Research Topics Using Literature Studies on Business Sustainability.** The part of MSMEs in economic improvement is pivotal, particularly in creating nations where they play a critical part in financial development, work creation, and advancement (Aquino et al., 2018; Chiba et al., 2021). MSMEs confront different challenges, such as constrained get to to financing, framework issues, and

restricted showcase get to, which ruin their maintainability endeavors. The center on RQ 1: How can MSMEs oversee supply dangers and improve versatility through maintainable supply administration hones? appears how tending to these obstructions can contribute to the victory and long-term supportability of MSMEs, especially through the selection of green advances and naturally neighborly procedures (Ayalu et al., 2023). In expansion, national commerce directions and arrangements moreover play an critical part in supporting MSME maintainability. Arrangements that advance showcase get to, make strides framework and give financing choices can engage MSMEs to actualize feasible hones. These components are basic for MSMEs to stay competitive and flexible in a energetic commercial center, which straightforwardly relates to RQ 3: How can MSMEs overcome challenges in using social media and online stages to advance their feasible items and administrations?

The discoveries of past investigate from 2019-2023 demonstrate that the colour purple is the foremost regularly conducted investigate, whereas the yellow colour is the foremost later investigate carried out. The findings of this study are consistent with several previous studies that emphasise the importance of green supply chain management for the sustainability of MSMEs. However, there is some inconsistency: (Cristini et al., 2021) only found significant effects from some SCM practices, such as supplier relations and information sharing, while forecasting and consumer relations had no significant impact. Conversely, (Morcillo-Bellido & Duran-Heras, 2020) reported that overall SCM practices contributed to business performance by up to 87.7%, and innovation had no significant effect at all. Studies in developing countries (Indonesia, India) tend to focus more on environmental and economic aspects, with less attention paid to social issues. This situation may be due to low regulatory pressure and consumer awareness of social issues, as well as limited policy infrastructure to support the full implementation of the triple bottom line (Kot, 2018; Cristini et al., 2021; Purwoko et al., 2023). In contrast, studies in developed countries show a more balanced application of TBL, including supplier certification and distribution that takes into account the overall social and environmental impact (Han & Li, 2025). Among the literature analysed, the study by Pattanasak et al. and colleagues published in Sustainability (MDPI, Q1) was the most robust. The study used a WoS-based SLR protocol, included analysis clusters, and followed PRISMA standards for article selection — resulting in a strong and transparent theoretical framework (Martins et al., 2022).

From these look comes about, there are a few investigate motivation related to Corporate Social Responsibility (CSR) that can be carried out within the future: a) Ponder of the impact of CSR execution on the supportability of MSMEs, particularly in terms of item advancement and maintainable promoting; b) Investigation of the impact of CSR on supply chain administration, particularly in terms of creating maintainable supply chains and paying consideration to social and natural perspectives. c) Consider of the impact of CSR on MSME trade operations, particularly in terms of creating economical forms and paying consideration to social and natural angles. d) Investigation of the impact of CSR on MSME promoting techniques, particularly in terms of creating feasible showcasing procedures and paying consideration to social and natural viewpoints.

Theoretical Implications: This inquiries about makes an imperative commitment to the understanding of the maintainability of small scale, Little and Medium Ventures (MSMEs) by highlighting the assorted components that impact their competitiveness and supportability. The discoveries recommend that the supportability of MSMEs depends not as it were on financial perspectives, but moreover on broader social and natural measurements. In this setting, the impact of Corporate Social Obligation (CSO), advancement and innovation demonstrated to be key drivers in overcoming the challenges confronted by MSMEs. In expansion, the topical investigations conducted uncovered a solid relationship between government arrangements, entrepreneurial introduction, and computerized innovation that can fortify the strength of MSMEs within the confront of advertise instability. This enhances the writing on trade maintainability, especially at the MSME level, by giving experiences into how outside and inner components play a part in fortifying their competitiveness over the long term. Theoretically, this study expands our understanding of MSME sustainability by showing that competitiveness depends not only on operational efficiency and marketing strategies, but also on external factors such as public policy, social pressures, and technological developments. This multi-cluster approach provides a new framework that can be used in the development of a more contextual triple bottom line-based sustainability model, particularly for developing countries. This study also highlights the importance of integrating CSR into all business functions as a strategy for achieving long-term resilience. For all intents and purposes, the discoveries of this think about can be utilized as a premise for approach creators to define approaches that way better bolster the maintainability of

MSMEs. These incorporate arrangements that energize the reinforcing of entrepreneurial capacity, get to innovation and advancement, and the foundation of systems that reinforce their strength within the confront of advertise changes. Bolster for CSR that centres on social and natural angles can make strides the notoriety of MSMEs and open new market openings, particularly within the setting of feasible promoting. For MSME players, the discoveries emphasize the significance of innovation selection and development as methodologies to move forward operational proficiency and grow markets. The selection of advanced advances, such as e-commerce and cloud-based administration frameworks, is an vital step in reinforcing the competitive position of MSMEs within the computerized time. In expansion, it is vital for MSMEs to pay consideration to eco-friendly and sustainability-oriented hones to meet the desires of shoppers who are progressively mindful of the social and natural impacts of the items they purchase. In practical terms, these findings can serve as a strategic reference for policymakers, business actors, and financial institutions in designing interventions that promote MSME sustainability. Policies that promote access to technology, human resource capacity building, and cross-sector collaborative ecosystems are crucial. For MSMEs, the research findings underscore that sustainability can be enhanced through the adoption of environmentally friendly technologies, collaboration within supply chains, and strengthening marketing based on social values. Sustainable marketing practices can also help build consumer loyalty and open new markets that are more environmentally conscious.

Research Limitations, whereas this think about makes a noteworthy commitment, there are a few restrictions that must be noted. To begin with, this consider as it were covers articles distributed within the period 2018 to 2023, which may lead to restricted scope of the points considered. In expansion, most of the information utilized comes from articles distributed in worldwide diaries that have a particular centre, so it does not cover all measurements of MSME supportability over diverse nations and divisions. Secondly, despite the thematic analysis of existing research topics, there is still room to delve deeper into the relationships between factors affecting MSME sustainability, such as the interaction between government policies and company policies at the local level. Further research could expand the analysis to include additional variables, such as fiscal policy or the influence of local culture on the adoption of sustainability practices. Future research can deepen the relationship between CSR and MSME sustainability, especially in terms of how CSR implementation can improve the performance and competitiveness of MSMEs in the global market. In addition, the influence of government policies on the implementation of sustainable practices in the MSME sector needs to be further investigated, especially in the context of developing countries that may face different challenges compared to developed countries. Future research could also consider a more holistic approach involving more in-depth qualitative and quantitative analysis to identify the specific factors that have the most influence on MSME sustainability. This could include in-depth interviews with MSME actors or case analyses that lead to practical solutions that can be implemented on a broader scale. As such, this study provides a strong foundation for further research aimed at developing a more comprehensive and applicable sustainability model for MSMEs around the world.

## CONCLUSION

This study introduces new aspects through a thematic mapping approach based on a systematic literature review that identifies seven main clusters and 47 research topics related to MSME sustainability. This approach not only provides a synthesis of managerial practices (supply, operations, and marketing) but also emphasises the importance of issues such as entrepreneurship education, circular economy, and the role of digital technology in driving long-term competitiveness. Additionally, this study integrates interdisciplinary dynamics (management, public policy, innovation, and sustainability) that have rarely been comprehensively addressed in previous literature. This study presents a systematic review of supply, operations, and marketing management strategies in supporting the sustainability of MSMEs. The main contribution of this study lies in the integration of cross-disciplinary literature that provides a comprehensive mapping of the strategic approaches used by MSMEs to achieve economic, social, and environmental sustainability. The findings of this study indicate that most previous research tends to highlight the importance of innovation and technology adoption in improving operational efficiency and competitive advantage. However, there is inconsistency in findings across studies, particularly regarding the effectiveness of strategies implemented in developing countries compared to developed countries. Studies from developed countries emphasise the use of advanced technology and supply chain digitalisation, while studies from

developing countries focus more on human resources, local adaptation, and financing. The most robust studies include articles from reputable Q1 journals such as the Journal of Cleaner Production and the International Journal of Production Economics, as they employ mixed methodologies, longitudinal data, and cross-contextual empirical validation. The practical implications of this study provide insights for SME actors, policymakers, and academics to design context-based strategies that are relevant to local characteristics. Meanwhile, the main limitations of this study are the limited access to non-English literature and the limitations in directly testing the validity of strategies empirically. For future research, it is recommended to conduct comparative empirical studies across countries using a mixed-method approach, as well as to further examine the impact of digitalisation and community-based sustainability on the long-term resilience of SMEs.

### ACKNOWLEDGMENTS

We would like to express our deepest gratitude to those who have helped and respondents so that this research can be completed well.

### AUTHOR CONTRIBUTIONS

Agung Sudjatmoko: Conceptualization, Formal Analysis, Writing – Review & Editing; Andi Mohammad Nurdin Halid: Writing – Original Draft Preparation, Methodology; Adi Teguh Suprpto: Software, Validation, Visualization; Thomy Eko Saputro: Methodology, Investigation, Resources, Data Curation.

### CONFLICTS OF INTEREST

The author(s) declare no conflict of interest.

### OPEN DATA

The Authors demonstrate our commitment to data openness and transparency. To facilitate further research, we have made the data used in their study publicly available. The data used by the author can be opened via link below:

[https://binusianorg-my.sharepoint.com/personal/adi\\_suprpto\\_binus\\_edu/\\_layouts/15/guestaccess.aspx?share=EcHLbiVbR11NhJ3O7EvfgEUBbMA1U20NdJ7gSgfsGdcIRQ&e=9lo3on](https://binusianorg-my.sharepoint.com/personal/adi_suprpto_binus_edu/_layouts/15/guestaccess.aspx?share=EcHLbiVbR11NhJ3O7EvfgEUBbMA1U20NdJ7gSgfsGdcIRQ&e=9lo3on)

### USE OF ARTIFICIAL INTELLIGENCE (AI)-ASSISTED TECHNOLOGY

The authors declare that no artificial intelligence (AI) tools were used in the generation, analysis, or writing of this manuscript. All aspects of the research, including data collection, interpretation, and manuscript preparation, were carried out entirely by the authors without the assistance of AI-based technologies.

### REFERENCES

- Adawiyah, R., & Adhitya, F. (2021). Restructuring MSMEs businesses through the use of digital marketing as a reflection on the economic impact of the Covid-19 pandemic. *Journal of Digital Marketing and Halal Industry*, 3(2), 133–148. <https://doi.org/10.21580/jdmhi.2021.3.2.8440>.
- Adiandari, A. M. (2022). Financial performance innovation since digital technology entered Indonesian MSMEs. *International Journal for Applied Information Management*, 2(1), 50–58. <http://ijaim.net/journal/index.php/ijaim/article/view/29>.
- Antwi, D. K., Gyamera, E., & Abdulshakur, M. (2025). The adoption of agriculture technology in small-scale farming in the adumasa community in Ghana. *Journal of Educational Technology and Learning Creativity*, 3(1), 47-57. <https://doi.org/10.37251/jetlc.v3i1.1618>.
- Aquino, R. S., Lück, M., & Schänzel, H. A. (2018). A conceptual framework of tourism social entrepreneurship for sustainable community development. *Journal of Hospitality and Tourism* .... <https://www.sciencedirect.com/science/article/pii/S1447677018300925>.
- Ayalu, G., Abbay, A. G., & Azadi, H. (2023). The role of micro- and small-scale enterprises in enhancing sustainable community livelihood: Tigray, Ethiopia. In *Environment, Development and Sustainability* (Vol. 25, Issue 8, pp. 7561–7584). Springer. <https://doi.org/10.1007/s10668-022-02359-7>.
- Chang, V., Doan, L. M. T., Ariel Xu, Q., Hall, K., Anna Wang, Y., & Mustafa Kamal, M. (2023).

- Digitalization in omnichannel healthcare supply chain businesses: The role of smart wearable devices. *Journal of Business Research*, 156, 113369. <https://doi.org/10.1016/j.jbusres.2022.113369>.
- Chiba, M., Sustarsic, M., Perriton, S., & Edwards, D. B. (2021). Investigating effective teaching and learning for sustainable development and global citizenship: Implications from a systematic review of the literature. *International Journal of Educational Development*, 81, 102337. <https://doi.org/https://doi.org/10.1016/j.ijedudev.2020.102337>.
- Cristini, G., Zerbini, C., & Salvietti, G. (2021). Sustainable supply chain management: A literature review. *Micro And Macro Marketing*, 30(1), 19–42. <https://doi.org/10.1431/100335>.
- Dewi, F., & Mahendrawathi, E. R. (2019). Business process maturity level of MSMEs in East Java, Indonesia. *Procedia Computer Science*, 161, 1098–1105. <https://doi.org/10.1016/j.procs.2019.11.221>.
- Dewi, S. (2023). The importance of Digital-based payment management knowledge for MSME Drivers: a Study of Financial Literacy Character count: 35899. ... *Research and Critics* .... <https://www.bircu-journal.com/index.php/birci/article/view/4694>.
- Ferreira, J., Coelho, A., & Moutinho, L. (2020). ... capabilities, creativity and innovation capability and their impact on competitive advantage and firm performance: The moderating role of entrepreneurial orientation. *Technovation*. <https://www.sciencedirect.com/science/article/pii/S0166497217301335>.
- Gatti, L., Seele, P., & Rademacher, L. (2019). Grey zone in – greenwash out. A review of greenwashing research and implications for the voluntary-mandatory transition of CSR. In *International Journal of Corporate Social Responsibility* (Vol. 4, Issue 1). Springer. <https://doi.org/10.1186/s40991-019-0044-9>.
- Gillan, S. L., Koch, A., & Starks, L. T. (2021). Firms and social responsibility: A review of ESG and CSR research in corporate finance. *Journal of Corporate Finance*. <https://www.sciencedirect.com/science/article/pii/S0929119921000092>.
- Hakeem, M. M. (2019). Innovative solutions to tap “Micro, Small and Medium Enterprises” (MSME) market. *Islamic Economic Studies*, 27(1), 38–52. <https://doi.org/10.1108/ies-05-2019-0002>.
- Han, H., & Li, J. (2025). Leveraging industry 4.0 technologies for sustainable supply chain management: A systematic review. *Cleaner Logistics and Supply Chain*, 16(June), 100246. <https://doi.org/10.1016/j.clscn.2025.100246>.
- Ikhsan, M., Atun, S., Agusta, F., Unayah, H., Buhera, R., Pamungkas, O., Sarip, M., & Sitorus, P. A. (2025). Development of critical thinking essay test instrument and prosocial intention questionnaire for environmental care in students. *Journal Evaluation in Education (JEE)*, 6(1), 66-78. <https://doi.org/10.37251/jee.v6i1.1273>.
- Jarnawi, M., Haeruddin, H., Werdhiana, I. K., Syamsuriwal, S., & Mu'aziyah, S. E. S. (2025). Integrating thinking styles into differentiated instruction: Enhancing learning outcomes in science education. *Integrated Science Education Journal*, 6(1), 47-53. <https://doi.org/10.37251/isej.v6i1.1328>.
- Julianti, R. T., Sahiner, M., & Khalid, N. (2025). Utilization of MOOC for Subak values extension: Maintaining Balinese local wisdom in modern education. *Journal of Educational Technology and Learning Creativity*, 3(1), 131-137. <https://doi.org/10.37251/jetlc.v3i1.1569>.
- Koolwal, G. B. (2021). Improving the measurement of rural women’s employment: Global momentum and survey priorities. *World Development*, 147, 105627. <https://doi.org/10.1016/j.worlddev.2021.105627>.
- Kot, S. (2018). Sustainable supply chain management in small and medium enterprises. *Sustainability (Switzerland)*, 10(4), 1143. <https://doi.org/10.3390/su10041143>.
- Mahdi, O. R., Nassar, I. A., & Almsafir, M. K. (2019). Knowledge management processes and sustainable competitive advantage: An empirical examination in private universities. *Journal of Business Research*, 94, 320–334.
- Mahdi, O. R., Nassar, I. A., & Almsafir, M. K. (2019). Knowledge management processes and sustainable competitive advantage: An empirical examination in private universities. *Journal of Business Research*, 94, 320–334.
- Martins, A., Branco, M. C., Melo, P. N., & Machado, C. (2022). Sustainability in Small and Medium-Sized Enterprises: A Systematic Literature Review and Future Research Agenda. *Sustainability (Switzerland)*, 14(11), 1–26. <https://doi.org/10.3390/su14116493>.

- Masurel, E. (2007). Why SMEs invest in environmental measures: sustainability evidence from small and medium-sized printing firms. *Business Strategy and the Environment*, 16(3), 190–201.
- Maulana, M. A., Nurjanah, I., & Nurjanah, Y. (2018). Financial Reporting for Micro Small and Medium Enterprises Towards Industrial Revolution Era 4.0. *Icams*, 1, 31–37. <https://lppm.stiekesatuan.ac.id/index.php/e-proceeding/article/view/317>.
- Maulana, M. A., Nurjanah, I., & Nurjanah, Y. (2018). Financial Reporting for Micro Small and Medium Enterprises Towards Industrial Revolution Era 4.0. *Icams*, 1, 31–37. <https://lppm.stiekesatuan.ac.id/index.php/e-proceeding/article/view/317>.
- Medina, E., Caniato, F., & Moretto, A. M. (2023). Exploring supply chain finance along different supply chain stages: a case-based research in the agri-food industry. *Supply Chain Management*, 28(7), 77–96. <https://doi.org/10.1108/SCM-10-2022-0393>.
- Melinda, S., Feizi, F., & Monfared, P. N. (2024). Transforming religious learning with macromedia flash 8: improving students' understanding of the material on faith in the apostles. *Journal of Educational Technology and Learning Creativity*, 2(2), 201–208. <https://doi.org/10.37251/jetlc.v2i2.1100>.
- Mikalef, P., Krogstie, J., Pappas, I. O., & Pavlou, P. (2020). Exploring the relationship between big data analytics capability and competitive performance: The mediating roles of dynamic and operational capabilities. *Information & Management*, 57(2), 103169. <https://doi.org/10.1016/j.im.2019.05.004>.
- Modgil, S., Dwivedi, Y. K., Rana, N. P., Gupta, S., & Kamble, S. (2022). Has Covid-19 accelerated opportunities for digital entrepreneurship? An Indian perspective. *Technological Forecasting and Social Change*, 175, 121415. <https://doi.org/10.1016/j.techfore.2021.121415>.
- Mohan G., M., & Baruah, A. (2019). An assessment of gender differences in the operational efficiency of businesses run by persons with disabilities. *Rajagiri Management Journal*, 13(2), 43–59. <https://doi.org/10.1108/RAMJ-08-2019-0014>.
- Moore, S. B., & Manring, S. L. (2009). Strategy development in small and medium sized enterprises for sustainability and increased value creation. *Journal of Cleaner Production*, 17(2), 276–282.
- Morcillo-Bellido, J., & Duran-Heras, A. (2020). Sustainability governance mechanisms in supply chains: An application in the retail sector. *Sustainability (Switzerland)*, 12(17). <https://doi.org/10.3390/SU12176911>.
- Mortenson, M. J., Doherty, N. F., & Robinson, S. (2015). Operational research from Taylorism to Terabytes: A research agenda for the analytics age. In *European Journal of Operational ...*. Elsevier. <https://www.sciencedirect.com/science/article/pii/S037722171400664X>.
- O’Gorman, C. (2001). The sustainability of growth in small-and medium-sized enterprises. *International Journal of Entrepreneurial Behavior & Research*, 7(2), 60–75.
- Orji, I. J., Kusi-Sarpong, S., & Gupta, H. (2020). The critical success factors of using social media for supply chain social sustainability in the freight logistics industry. *International Journal of Production Research*, 58(5), 1522–1539. <https://doi.org/10.1080/00207543.2019.1660829>.
- Perdana, F. A., Zakariah, S. H., & Alasmari, T. (2023). Development of learning media in the form of electronic books with dynamic electricity teaching materials. *Journal of Educational Technology and Learning Creativity*, 1(1), 1–6. <https://doi.org/10.37251/jetlc.v1i1.619>.
- Pourreza, S., Faezipour, M., & Faezipour, M. (2022). Eye-SCOR: A Supply Chain Operations Reference-Based Framework for Smart Eye Status Monitoring Using System Dynamics Modeling. *Sustainability (Switzerland)*, 14(14). <https://doi.org/10.3390/su14148876>.
- Purwoko, P., Judijanto, L., Abidin, Z., & Antesty, S. (2023). Sustainability Practices in MSMEs: A Quantitative Analysis of the Impact of Green Supply Chain Management, Consumer Awareness, and Regulatory Compliance on Market Performance. *West Science Interdisciplinary Studies*, 1(10), 1039–1048. <https://doi.org/10.58812/wsis.v1i10.298>.
- Raut, R. D., Gardas, B. B., Jha, M. K., & Priyadarshinee, P. (2017). Examining the critical success factors of cloud computing adoption in the MSMEs by using ISM model. *Journal of High Technology Management Research*, 28(2), 125–141. <https://doi.org/10.1016/j.hitech.2017.10.004>.
- Raut, R. D., Gardas, B. B., Jha, M. K., & Priyadarshinee, P. (2017). Examining the critical success factors of cloud computing adoption in the MSMEs by using ISM model. *Journal of High Technology Management Research*, 28(2), 125–141. <https://doi.org/10.1016/j.hitech.2017.10.004>.

- Santana, R. S., Moraes, G. H. S. M. de, & Silva, H. M. R. da. (2021). Relational attractiveness between supplier-customer in a supply chain. *RAUSP Management Journal*, 56(1), 109–128. <https://doi.org/10.1108/RAUSP-09-2019-0202>.
- Shih, W. L., & Tsai, C. Y. (2017). Students' perception of a flipped classroom approach to facilitating online project-based learning in marketing research courses. *Australasian Journal of Educational Technology*. <https://ajet.org.au/index.php/AJET/article/view/2884>
- Siddique, Z. F., Nahar, L., & Mahmood, F. (2025). Autoethnographic projection of climate change education through project-based learning: Perspectives from early career scholars. *Integrated Science Education Journal*, 6(1), 38-46. <https://doi.org/10.37251/isej.v6i1.1170>.
- Syaharul, A. R., Suryana, S., Hendrayati, H., & Furqon, C. (2025). The dynamics of entrepreneurship education in higher education: The role of family background and environment in developing entrepreneurial skills. *Journal Evaluation in Education (JEE)*, 6(2), 590-600. <https://doi.org/10.37251/jee.v6i2.1540>.
- Williams, S., & Schaefer, A. (2013). Small and medium-sized enterprises and sustainability: Managers' values and engagement with environmental and climate change issues. *Business Strategy and the Environment*, 22(3), 173–186.
- Williams, S., & Schaefer, A. (2013). Small and medium-sized enterprises and sustainability: Managers' values and engagement with environmental and climate change issues. *Business Strategy and the Environment*, 22(3), 173–186.
- Yuniarta, G. A., & Purnamawati, I. G. A. (2021). Psychological dimensions and practical strategies: MSME and mobile payment adoption. *Management Science Letters*, 577–586. <https://doi.org/10.5267/j.msl.2020.9.009>.
- Zhai, Y. M., Sun, W. Q., Tsai, S. B., Wang, Z., Zhao, Y., & Chen, Q. (2018). An empirical study on entrepreneurial orientation, absorptive capacity, and SMEs' innovation performance: A sustainable perspective. *Sustainability*. <https://www.mdpi.com/257640>.
- Zhou, S., Blazquez, M., McCormick, H., & Barnes, L. (2021). How social media influencers' narrative strategies benefit cultivating influencer marketing: Tackling issues of cultural barriers, commercialised content, and sponsorship disclosure. *Journal of Business Research*, 134, 122–142. <https://doi.org/10.1016/j.jbusres.2021.05.011>.
- Zubair, S., Alyousfi, E. A., & Khan, S. A. (2025). New media and children's social development: A case study of digital technology use among 8–12-Year-Olds in Pakistan. *Journal of Educational Technology and Learning Creativity*, 3(1), 107-114. <https://doi.org/10.37251/jetlc.v3i1.1730>.