

A Bibliometric Review Study on a Decade of MSMEs: Major Challenges, Problems, and Prosperity

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Abstract:

This study presents a comprehensive bibliometric analysis of dynamic business environment research from the Web of Science database 2014 to 2024, with a focus on innovation, risk management, skills development and globalization in SMEs. With the help of Nvivo and Biblioshiny, the study identifies key business research topics, such as the impact of digital transformation on MSME performance and the impact of risk management on access to credit. The research highlights the transformative role of the Internet in business models and the importance of aligning education policy with the needs of the labor market. The analysis aims to map the academic landscape, identify research trends, and uncover areas ripe for further exploration to enrich understanding of business dynamics and contribute to the knowledge base.

Keywords: Web of science database, Bibliometric Review, Digital Transformation, Risk Management, Internet Influence, Skill Development.

Introduction

MSMEs in India face several challenges that impede their growth, which is crucial to the country's GDP, export revenues and job creation. Financial constraints, a lack of business intelligence, outdated technology and tough competition from global players are significant obstacles (Ramcharran, 2017; Rawat, 2017; Shetty et al., 2020). SMEs often struggle with financial assistance because of a lack of guarantees, extensive papers, and concerns about the repayment of the loan (Nkundabanyanga et al., 2014). Technological upgrades are necessary because many SMEs depend still on outdated technology, and there is an urgent need to improve the skills of employees. In addition, MSMEs often suffer from lack of business knowledge, which affects smooth operations (Alfarizi et al., 2023; Arranz et al., 2023; Klimczak et al., 2017; Merino et al., 2014; Scholz et al., 2024). The increase in the cost of procurement

of raw materials creates additional difficulties, but NSIC's 'Raw Material Assistance System' provides financial assistance for these procurements. The challenges to recruitment are caused because the limited brand recognition of SMEs is not enough for them to get access to a big talent pool. (Howe-Walsh et al., 2023) Issues Regarding MSME India -Though this sector is the backbone of Indian economy but it also faces several problems and few of them are listed below: these often face obstacles which do not allow them to proceed further or sustain for a longer period. The five challenges, distressingly for India these persist. Skilled labor capacity: A major barrier for MSMEs is lack of access to skilled labor (Majkova et al., 2014; Roy et al., 2015) Though India has a sizable workforce, the issue was more pronounced within MSMEs that typically operate in niche areas that demand particular specialisation. Lack of skilled operators for the proper operation of machines, financial management, and marketing or sales. It further limits the ability of MSMEs to upscale new-age technology and innovate — both critical for long-term growth and, most importantly, for achieving post-pandemic competitiveness. MSMEs often struggle to get the essential capital to start their daily operations or expansion (Ahmad et al., 2022; Ashby, 2016; Wolter & Roesch, 2014). The absence of collateral or a credit history, together with a bad credit score, can severely restrict the eligibility of the loan. High interest rates, complicated documentation, and prolonged processing times further exacerbate the difficulties of accessing credit. While government initiatives such as the Credit Guarantee Fund for Micro and Small Enterprises exist to provide MSMEs with affordable credit, the demand for more affordable financing remains, especially for micro-small and start-ups. Improving digital payment systems and financial information can strengthen credibility and facilitate the acquisition of funding. This research examines the research repository of the Web of Science database from 2014 to 2024, focusing on the dynamic nature of the business environment. Innovation, risk management, skills development, and globalization all face new challenges in the ever-evolving business world because of technological advancements, changes in the global market, and shifting

consumer preferences. Understanding these factors is crucial for sustainable success. The aim of the study is to conduct a bibliometric analysis using Biblioshiny and Nvivo to examine the core themes prevalent in contemporary economic research. Key areas of focus include Innovation and performance, examining the impact of different innovation strategies on high-performing MSMEs Risk management and access to credit, examining the relationship between SMEs' risk management strategies and their access to credit, The Impact of the Internet, Assessing how the Internet has changed business models, competition, and industry performance skills development and labor market, assessing the effectiveness of policies and education in developing skills aligned to labor market needs, considering industry requirements analyzing the impact of international expansion on business performance in relation to company size, industry and market complexity. The bibliometric review aims to systematically search the breadth of the scientific literature to identify research trends, key research areas, and subject contexts. This approach is expected to illuminate the current landscape of business research and identify fruitful areas for further investigation, significantly improving our understanding of the complex dynamics in the business sector and contributing valuable to the body of knowledge.

Methodology

This study (Toigo, 2017) search strategy is used to identify research articles on Micro, Small and Medium Enterprises (MSMEs) in the Web of Science database. Database: Web of Science Core Collection permissions: The search includes publications from the following Web of Science indices: Science Citation Index (SCI) - 2013 to 2024, Emerging Sources Citation Index (ESCI) - 2005 to 2024, Index to Social Sciences & Humanities Proceedings (ISSHP) - 2013 to 2024, Social Sciences, Citation Index (SSCI) - 2013 to 2024, Science Citation Index Expanded (SCIE) - 2013 to 2024 Search Strategy: The search strategy used an iterative approach to refine the results: Initial search: Keywords : "MSME" (All fields). This comprehensive search yielded numerous articles (2003).

Focusing search: Refine keywords: "Sme" (should-search within topic) have been added to capture synonyms or related terms. This is significantly The results were increased (15879). Include spelling errors: Added "mmse" (All fields) to account for possible typos. This further expanded the results (29106). Topic refinement: "Problems" and "Perspectives". "(Should-search within topic) have been added to focus on articles that discuss challenges and opportunities for MSMEs. This significantly reduced the results (765). Time frame: Publication dates: The search was limited to articles published between 2014 and 2024 (11 years). This further narrowed the selection (733). Subject area: Topic areas: Restricted the search for articles that are categorized in the Web of Science under Management, Business or Economics. This led to a more manageable set of results (306). Language restriction: Language: The search was limited to English language articles (290). Document Type: Article Format: Focuses on peer-reviewed journal articles (202). Final Search: The final search string combined all refined items: MSME (All fields) Sme (Should - search within topic) Issues (Should - search within topic) Perspectives (Should - search within topic) Publication years: 2024 OR 2023 OR 2022 OR 2021 OR 2020 OR 2019 OR 2018 OR 2017 OR 2016 OR 2015 OR 2014 Web of Science Categories: Management OR Business OR Economics languages: English Document Types: Articles this search returned 202 articles published in English between 2014 and 2024 (April) that focused on the challenges of MSMEs (Toigo, 2017).



Data Analysis and Results

RQ1: How does different innovation influence the economic outcomes of MSMEs across various sectors?

MSMEs faced numerous challenges including policies,

supply chain disruptions and reduced consumer spending. To prevent MSMEs from failing, governments provided financial support and introduced various practices and policies (Metaxas & Duquenne, 2015; Mishra, 2020). However, there is a need for post-pandemic survival strategies for MSMEs (Kaya, 2022; Sharma et al., 2023). This (Olaore et al., 2020; Sukaatmadja et al., 2021) highlights the importance of innovative practices for MSMEs to succeed in a highly competitive and crisis-prone environment. Innovation involves the introduction of new technologies or management practices to increase operational efficiency and meet customer needs more effectively and profitably (Lesakova, 2019). The (Caniels et al., 2015; Ncube & Zondo, 2018) primary motivation for innovation is improved performance, measured by the attainment of institutional goals related to sales, profitability, competition, market share, and other strategic objectives. Higher performance levels are indicators of business success (Hasan et al., 2017; X. Li et al., 2024; Singh & Rastogi, 2023; Solilova et al., 2019). Alfarizi et al., (2023) emphasize that digital transformation opens up new growth opportunities for MSMEs, especially in Indonesia, the ASEAN leader in the digital economy. However, challenges such as infrastructure and economic trends require in-depth analysis to grasp the complex factors that impact small business sustainability amid the vast technicalities of technology and business management. A study was conducted to examine the factors affecting the adoption of Industrial Advancement Technology 4.0 and Community Economic Trends by Indonesian MSMEs for sustainable digital business performance. 231 Indonesian MSME owners who qualified through targeted sampling were surveyed. The research confirmed all hypothesized factors that support sustainable digital business performance. To foster a digital SME mindset, small business globalization is critical. Integrating big data and IoT can address business challenges and foster an innovative culture that enables employees to use technology effectively. Strategic initiatives and the use of external roles can address business unit challenges and promote sustainable digital MSMEs. Collaboration with Quintuple Helix players could further drive the sustainable

Top ten studies related to the impact of various innovations on the economic performance of MSMEs in various industries

Authors	Study	Key Findings
Shetty et al., (2020)	Digital-MSME Initiatives in India	Digital India program supports MSMEs' cloud adoption, enhancing policies and technical diffusion.
Roopa & Nishitha, (2021)	Covid Impact on IPOs in SME Platforms in India	COVID-19 affected MSMEs' revenue and IPO performance, highlighting the need for supportive schemes.
Alfarizi et al., (2023)	Technological Challenges in Indonesian Digital MSMEs	Identifies infrastructure and public economic trends as key challenges for sustainable digital business.
Wiadi et al., (2023)	E-marketing Impact on MSME's Purchase Decisions	E-marketing elements influence sustainable consumer behavior and purchasing decisions.
Kumar et al., (2017)	Cloud Computing Suitability for Indian SMEs	Evaluates cloud computing benefits and challenges for SMEs, suggesting suitability for Indian SMEs.
Kana et al., (2022)	Socio-economic Factors Influencing Credit Decisions	Gender, education, markets served, industry, and collateral significantly affect credit decisions.
Brenes Bonilla et al. (2016)	Semi-formality Rate in Costa Rican SMEs	Examines the prevalence of semi-formal enterprises and the role of municipal management.
Edoho, (2016)	Entrepreneurship Policy Critique in Nigeria	Framework for opportunity entrepreneurship policy to stimulate economic growth and alleviate poverty.
Upadhyaya et al. (2017)	B2B E-Marketplace Adoption in Indian Small Firms	Identifies factors influencing B2B e-marketplace adoption among Indian MSMEs.
Gómez et al., (2022)	Crowdlending as Financing for Peruvian MSMEs	Explores MSMEs' willingness to demand financing through Crowdlending in Peru.

RQ:2 How did risk management practices influence MSMEs' ability to secure credit from banks and other financial institutions?

Effective credit risk management is vital for SMEs to ensure stable cash flows and a stable financial environment (Nkundabanyanga et al., 2014). With limited resources and low tolerance for financial failures, MSMEs need to manage credit effectively to support their growth and sustainability (Szewieczek, 2021). Unlike large enterprises that have dedicated credit risk analysis teams, MSMEs face difficulties in accessing accurate customer information, which can lead to inefficient credit management and volatile cash flows (Cowling et al., 2020; Otto, 2023). Large companies benefit from a standardized credit policy that ensures a consistent assessment of customers' credit risk. In SMEs, the credit management team often performs multiple financial roles, resulting in multi-tasking and potential inefficiencies (Edoho, 2016; Mishra, 2020). Unlike large companies, they have specialized credit risk management teams focused on credit risk analysis, which enables them to manage credit risk

more effectively. For SMEs seeking exponential growth and global expansion, credit risk management must be ensured (Cowling et al., 2020; Kana et al., 2022; Nkundabanyanga et al., 2014; Otto, 2023). Challenges include limited access to data, limited resources, a lack of standardized credit policies, management of various credit portfolios, adaptation to market changes, and balancing growth with risk management. Kana et al., (2022) explored the socio-economic factors that influence small entrepreneurs' decisions to take credit from banks. A quantitative analysis employing binary logistic regression and the Cumulative Distribution Function (CDF), aimed to identify the relationship between these decisions and their influencing factors. Data was gathered via a questionnaire from 130 small licensed business representatives across five industries in 2022, using stratified random sampling. The findings showed that gender, education level, markets served, industry type, and collateral significantly impact the decision to take bank credit. It suggests that banks and the Yogyakarta government could develop mechanisms to encourage entrepreneurs to use banking credit

resources. Wolter & Roesch, (2014) present a novel approach in finance, risk analysis, and risk management by evaluating the 'resurrection' of defaulted firms and incorporating observable 'cure' events into SME default predictions. Using a new set of cure-related data, the study predicts default and cure events individually. innovative method of credit risk, which is unprecedented to our knowledge, identifies various firm-specific and macroeconomic risk drivers that influence both default and cure events. highlights significant variables that enable a tailored default risk assessment alongside a personalized cure probability, reducing the overall default risk. estimations are based on a database of 5,930 predominantly small and medium German firms, encompassing over 23,000 financial statements from January 2002 to December 2007. The findings underscore the importance of integrating cure information into credit risk evaluations for risk management, given its substantial impact on default risk probability and the bank's potential profit from a cured firm. Cragg & McNamara, (2018) explored the dynamics of supply chain management, risks, and IT in global supply chains, focusing on MSMEs. It aimed to enhance market access and sourcing practices for SMEs by proposing an ICT-based framework to overcome agency-related challenges in global partnerships. The research involved a case study of four French SMEs in the farming and agri-business sector, examining their management of international supply chains. The findings highlighted six barriers to effective supply integration: asymmetries, contractual design, supplier dependence, product specifications, supply chain complexity, and performance monitoring. Significant contribution is the development of a conceptual framework offering ICT solutions to mitigate these barriers, reducing risk exposure to externalities and agency problems. The study was conducted by (Cragg & McNamara, 2018). Nikolic et al., (2021) explore the critical role of SMEs in a country's economy. Their aims to prioritize SME failure factors to pinpoint the most significant ones. By identifying these key factors, SMEs can devise optimal strategies to enhance the business environment and eliminate encountered obstacles. this used a novel hybrid model combining Fuzzy Analytic Hierarchy Process (FAHP) and Preference Ranking Organization

Method for Enrichment Evaluation (PROMETHEE) for this ranking. The application of the ABC method to the results further isolates the most impactful factors, which include economic, capacity, political, electricity supply, receivables/payables management, and legislative issues. Conclusively, the above findings imply that the primary issues affecting SMEs are a combination of their business environments and internal problems. Therefore, reducing the risk of failure would largely depend on reforming the business environment and ensuring proactive problem-solving within enterprises. Khan and Badjie, (2022) investigate a blended Islamic finance framework with regard to SMEs so as to achieve the SDGs. This framework is informed by a combination of philanthropic, private and public sector drivers alike, but the alignment around impact criteria is an important pre-condition. We rest on this set of proposals defined in terms 4Zeros & SS (zero-waste, zero-emissions, zero-interest and peace bonds or freedom dividends/royalty, estate duty) to steer the financial engineering of products integrating these dimensions. "By using incentive-compatible financial structures, such a fund can effectively mobilize funding to the most impactful entrepreneurs or SMEs for significantly lower costs and with self-sustaining revenue". the blueprint comprises the private sector for financing, philanthropists providing funds management costs, public sector as facilitator and SMEs reaping from subsidized funding. Thus, a mixed-contract model of this sort that provides auction-like offers and bids as the social subsidy can create outcomes that benefit all parties involved while also attracting more resources to increase the development impact on one hand and provide some relief for SMEs from high commercial rates on other. In our final selection, Cowling et al.(2020) , investigate the key determinants of short-term credit provision and its potential pricing for UK SMEs by considering both regional and firm-specific drivers (including credit risk assessments). Based on a large dataset got from the SME Finance Monitor survey, show that even though banks apply fair assessment of applications in terms of access at regional level, they cannot do so for price. The work finally finds evidence of both a direct and an indirect effect by which regional disparities affect the allocation and pricing by banks of short-term credit, which is consistent

with there being a price penalty for peripheral regions. Bengo & Arena, (2019) research on the relationships between banks and small to medium social enterprises in access of credit and lending technologies. It critiques this correlation using a conceptual framework for small and medium-sized payment loan furnishing facilities developed by Berger & Udell,(2006). This study improves the knowledge base by describing bank lending technologies used to evaluate SMSEs for credit and shows an assessment on how well such technology work from a social ecosystem perspective that could inform some possible nearer found developments. The methodology consists of adapting a conceptual framework from Berger and Udell, 2006 to SMSEs, and further develop it through an empirical case study of five Italian banks. From these results, it was concluded that reforms on the current loan structure needed to be made in order to improve SMSE credit access. It also showed how government policies could affect financial institutions. The survey suggests that the relationship between SMSEs and Italian banks is still relatively unstructured. The objective of S. Kumar & Rao, (2015) is to develop a conceptual framework in order to determine which factors would impact the financing decisions of SMEs at large and also resultantly help us explore their financing preferences. Our framework is developed on the basis of an extensive literature review which is done on major determinants and then empirical work done in SMEs' capital structure and financing. It depresses lacks of finance with equal distribution to SMEs WordPress-based Website Design and Development. Some of the issues identified in this regard are demand gap (access to financial resources is limited due to lack of applications), supply gap (accessibility of finance being restricted as not enough application emanate from) knowledge gaps (insufficient information about financing sources and processes) and benevolence gaps .Analyzing a variety of studies allowed the authors to develop the framework (Figure 2) that explains how financing preferences are consistent with SMEs. This therefore not only resolves the extant finance gap of SMEs but also tries to explore key issues behind the access to finance problem including important determinants of capital structure and sources where SME's can find financing options for their

companies. The proposed framework also helps policymakers improve the existing lending infrastructure and technologies while assisting managers in designing an ideal capital structure for their firms. Ramcharran, investigates the effect of bank loans on the efficiency of MSMEs in India for 1979-2013. The study also uses the production function methodology to estimate a non-homogeneous production function that yields time-varying econometric estimates of productivity. This approach allows for the assessment of policy changes in efficiency. The findings suggest bank loans, which are the primary financing source for SMEs, have significant policy implications for capital allocation and risk management. The study reveals an increase in the productivity of bank credit, with output elasticity rising from 0.76 to 1.23. Conversely, labor productivity is initially negative but shows improvement. The efficiency of the sector has also improved, as indicated by the returns to scale increasing from -0.89 to 0.607, primarily because of the growing productivity of bank credit. A reduction in the number of financially distressed units with substantial outstanding debt has contributed to this enhancement. However, current challenges in the banking sector could raise borrowing costs and reduce credit availability, affecting SME productivity. The study emphasizes the importance of policies that enhance worker skills and decrease the prevalence of financially distressed units to boost efficiency.

Top Keywords Co-occurrence



RQ:3How has the Internet changed business models, competitive dynamics, and performance in various industries?

The internet has revolutionized business communication, enabling global connections and a multitude of new communication channels(Caniels et al., 2015; Yuldinawati et al., 2018). The creation of ARPANET in the 1960s and 1970s laid the groundwork for the internet, which was significantly advanced by Tim Berners-Lee's introduction of the World Wide Web in 1991. The internet has expanded the customer base of businesses from local to global markets, facilitated remote work, and led to digital marketing and business automation(Kapteyn & Wah, 2016; Murphy & Leonard, 2016). Emerging technologies like IoT, AI, and blockchain are poised to further influence business communication, along with progress in internet security and e-commerce(Le et al., 2023; Makhmadshoev et al., 2015; Mayanja et al., 2024; Ncube & Zondo, 2018). Technology has allowed for global reach and personalized customer experiences, as well as data-driven inventory management and customer engagement. FinTech innovations have introduced digital banking services, revolutionizing financial transactions. The emergence of e-

commerce platforms and online marketplaces has eliminated geographical barriers for businesses(Kusuma et al., 2020). Companies now use data analytics and business intelligence to make informed decisions. The Internet has profoundly changed business models, competition, and performance in numerous sectors. Business Model Transformation Traditional companies have been forced to refine their internal structures and strengthen their external reach because of the Internet(Macqueen et al., 2020; Rodic, 2017). This change is driven by the cross-industry integration of Internet technologies, which promotes innovation and efficiency. Competitive Environment The Internet has altered the dynamics of the industry and influenced pricing strategies and product uniqueness. This has reduced overall profitability and hindered the achievement of lasting operational benefits(Castellani et al., 2024; Dad'o et al., 2015). Improved Performance The introduction of the Internet has resulted in lower operating costs, increased sales, and improved customer loyalty for most businesses. This has allowed companies to expand their markets and interact with suppliers more effectively(Dad'o et al., 2015; Ding et al., 2016; Le et al., 2023; Malecka, 2016).

Following the top studies list:

Author(s)	Study Findings	Suggestions
Shetty, Jp et al.(2020)	Digital-MSME can be effectively implemented with Digital India to support cloud adoption in SMEs.	Link policy generation with diffusion through participatory governance.
Roopa, P; Nishitha, P(2021)	COVID-19 affected SME IPOs negatively, showing a decline and reduced returns.	Improve schemes to assist small businesses during crises.
Alfarizi, M et al.(2023)	Challenges in digital adoption for Indonesian MSMEs need exploration for sustainable digital business.	Support factors for sustainable digital business performance.
Wiadi, I; Mudrika et al.(2023)	E-marketing elements impact sustainable consumer behavior in SME's snack product purchase decisions.	Focus on trust and continuation intention for sustainable consumer behavior.

RQ:4 How do government policies and educational institutions influence the development of industry-relevant skills in the labor market?

The main effects of government measures and educational institutions on the development of skills required in the labor market are diverse(Feng et al., 2021). Government policies help shape the skills development landscape and

create frameworks that promote the acquisition of skills aligned with the needs of the industry(Metaxas & Duquette, 2015; Mishra, 2020). Educational institutions play a critical role in equipping individuals with the skills and ensuring that their curricula and programs align with industry requirements to prepare graduates for the

workplace. Collaboration with industry through partnerships between government, education and industry can lead to more effective skills development programs that directly address the needs of the labor market (Amjad et al., 2020; Evans, 2016). Adaptability and innovation are critical for both government policy and educational institutions to keep pace with evolving skills requirements across diverse industries. Education and training are vital contributions to the capability build up of the workforce, which in turn has an influence on the employment prospects, productivity and earnings of individuals. Research shows that they are one of the most important indicators for measuring work performance in the labour market; a higher level of education and training are key to a safer job and better pay scale since it is also associated with a higher level of problem solving (Gorgenyi-Hegyés & Fekete-Farkas, 2019). Moreover, the participation in such programmes allows workers to adjust to skill-biased shocks to the labour market, such as labor saving technological progress and the emergence of new industries. In the course of training, there are a number of different things that range from actually being able to learn on the job as an intern to actually serving as a formalized education center (Diehr & Wilhelm, 2017). Not only does this drive career growth, it makes the workforce more employable and employable. Education and training have a significant role in promoting the rest of the economy, helping build capital for higher rates of growth, limiting unemployment and declining income disparities. Better education, better training, and with that, higher incomes (which means everything) that help to eliminate income gaps and ensure greater equity in society. Employers and governments spend money on education and preparation for the workforce from which eventually all can grow to be a tax-paying member of society (Zenner-Hoeffkes et al., 2021). As the supply of labor expands, wage rates may fall, putting a decreasing pressure on wages. This effect may be detrimental to workers in sectors with low entry barriers (Ivanova, 2017). Areas requiring higher education and training offer higher wages because of a shortage of skilled workforce and substantial investments required for training and education. A nation's education system is crucial to its economic success, enabling it to maintain competitive and

comparative advantages (Sukaatmadja et al., 2021). The economy thrives with a workforce capable of managing industries where it has a competitive advantage. Both employers and workers benefit from a highly skilled workforce, which leads to economic consequences and beneficial external factors (Sharfaei et al., 2022; Sukaatmadja et al., 2021). Zenner-Hoeffkes et al., (2021) highlight that the debate on skills, skill shortages, and employability continues to be a significant international issue in economic reform and training policies (Gorgenyi-Hegyés & Fekete-Farkas, 2019). Despite this, differing perceptions persist. Interviews with 30 managers across two job roles—hospitality front-desk staff and automotive technicians—revealed not only differences in desired skills across these roles and countries but also challenges in recruiting young people (Purwati et al., 2021). The study noted the impact of generational shifts and the trend towards academization on the employment of young workers, and underscored the inadequacy of the general education system in preparing youth for the workforce (Kim & Kim, 2021). It also suggested that the influence of a country's skill formation system is secondary to the sector in which SMEs operate. Amjad et al., (2020) In the era of automation and artificial intelligence, the demand for sustainable entrepreneurship to generate employment has significantly increased. Recognizing their pivotal role in this development, business schools globally have offered entrepreneurship education (EE). However, as EE is still in its nascent stage, it often employs pedagogical methods not specifically tailored for entrepreneurship, which do not meet the practical needs of entrepreneurs. Graduates frequently lack various entrepreneurial skills, particularly in entrepreneurial marketing (EM), a critical area for the survival and growth of SMEs (Amjad et al., 2020). The deficiency in EM skills is also cited as a primary reason for entrepreneurial ventures' failure. Such failures not only demoralize entrepreneurs but also undermine the efforts of governments and private entities to foster entrepreneurship in their economies. Therefore, acknowledging the vital role of EM education, this underscores the educational gaps in EM, suggests directions for future research, and offers practical recommendations for academic leaders in business schools to enhance their pedagogical approaches.

Klimczak et al., (2017) The findings highlight the complex challenges SMTEs face in collaborating for technology acquisition and implementation, often preferring to work with other SMEs because of difficulties in engaging with larger enterprises and institutions. Despite these challenges, SMTEs do not view the vulnerability and exposure to collaboration risks as a major concern, although they acknowledge certain risk factors ranging from legal issues to the soft competencies of partners. Egels-Zanden, 2016; Olaore et al., (2020) While conceptual studies on this integration abound, empirical research on actual corporate practices remains scarce. This contributes to bridging this gap by examining how Nudie Jeans Co, a Swedish SME, incorporates worker rights within its global value chain, choosing to source only from democratic nations with fair working conditions. also reveals that incorporating social sustainability into global value chain strategies is an evolving process, entailing political considerations, traceability, and compromises in product development. This work lays the groundwork for future empirical research on sustainability and strategy. Caloffi et al., (2022) Analyzing Italian regional policy programs from 2011 to 2014, they examined a policy mix of technology and innovation advisory services aimed at enhancing SMEs' innovation awareness, alongside innovation vouchers to subsidize their acquisition of knowledge-intensive services. Using a propensity-score-matching method for multiple treatment levels, they discovered advisory services outperformed innovation vouchers and matched the efficacy of policy mixes in boosting SMEs' innovation and R&D collaboration. Upadhyaya et al., (2017) Prior research indicates that B2B e-marketplace offers ample opportunities for MSMEs to access global markets and enhances their competitiveness. There is limited empirical research on B2B e-marketplace use by Indian MSMEs, as also on the factors that influence their adoption. As adoption of B2B e-marketplace is in its growth stage in India, there is a need to understand the factors that influence the adoption. Simba & Ojong, (2017) highlights the key aspects of engaged scholarship, collaborative learning, and actor-network theory (ANT). It employs a narrative literature review methodology, using a thematic synthesis of literature on engaged scholarship,

collaborative learning, and ANT to construct a novel multi-layered theoretical framework. The findings suggest that engaged scholarship can bridge the gap between theory and practice in entrepreneurship/SME research, promoting interaction between researchers and practitioners and reconciling their divergent perspectives. The co-production and co-creation of knowledge may address practitioners' concerns about the relevance and practical application of academic research. This contributes to the advancement of engaged scholarship theory and practice, proposing its development as a standard in entrepreneurship and small firm research, and enabling academics to provide comprehensive solutions to practical issues. Han et al., (2014) The study reveals that business and entrepreneur characteristics significantly influence SMEs' utilization of bank support in financial decision-making. By fully engaging with bank support and fostering long-term relationships with banks as key network partners, SMEs can substantially mitigate their financial challenges. the research acknowledges the importance of bank advice as an alternative to entrepreneurial human capital, particularly when bankers leverage confidential information to tailor the type and extent of support offered to their clients. In their Wolter & Roesch, (2014) evaluate the 'resurrection' of defaulted firms by incorporating observable 'cure' events into the default prediction for SMEs. Olaore et al., (2020) explore the increasing trend of Nigerian firms pursuing a global presence. The valuates the advantages and disadvantages of full internationalization versus regional presence, noting the lack of empirical research on the subject. Kahiya & Dean, (2015) set out to investigate the impact of export barriers at two distinct times, 1995 (t(0)) and 2010 (t(1)). The study hypothesized a reverse correlation between affect, represented by confidence, and the intensity of export barriers, suggesting that as exporter confidence decreases, the impact of export barriers grows. Used two random probabilistic samples from New Zealand's SME exporters in 1995 and 2010, with the same survey instrument, the study employed exploratory and confirmatory factor analysis for preliminary analysis and binary logistic regression to test the hypothesis. The findings showed a significant shift in the influence of export barriers over time, with the 2010 exporters being

significantly more inclined to view export barriers as influential compared to their 1995 counterparts, especially in areas such as logistics, internal resources, trade barriers, domestic market factors, and currency issues. This implies that managerial perception of the business environment, reflected in exporter confidence, can shape the perceived impact of export barriers. A pessimistic outlook within the export sector heightens the perceived influence of barriers, shifting the focus from commonly researched factors like organizational structure and internationalization to managerial outlook on export opportunities. This study is unique in its theoretical approach to predicting and empirically validating the temporal changes in the influence of export barriers, diverging from the traditional cognitive or objective perspectives prevalent in export barrier research. Paul, (2020) introduces the SCOPE framework, designed to strategize for SMEs aiming to export, compete, and thrive globally. SCOPE is an acronym for Strategies to analyze the Challenges, Opportunities, and Problems to export. Using a multiple case study approach, the research draws on semi-structured interviews with senior managers from SMEs across three European nations, revealing both internal and external challenges faced by these enterprises. The study also integrates a Pentagon model to enhance the theoretical examination of SME internationalization. Soriya et al., (2022) explore the relationship between intellectual capital components and profitability in Indian SMEs. Profitability metrics include ROA, ROE, and BP. The study encompasses 345 SMEs listed on the NSE and BSE. Diagnostic tests were conducted to address heteroscedasticity, autocorrelation, and endogeneity. A two-step GMM estimation examined the impact of intellectual capital on SME profitability, revealing significant influence from human and physical capital, especially in their interaction with structural capital on ROA and BP. This research aids policymakers, entrepreneurs, and small business owners in identifying key capital components to enhance firm profitability. Caloffi et al., (2022) assess the efficacy of innovation policy mixes versus individual instruments. They analyzed Italian regional policy programs from 2011 to 2014, focusing on a mix of technology and innovation advisory services to improve SMEs' innovation

awareness. Sharfaei et al., (2022) investigated the challenges faced by international SMEs, particularly how they manage industry forces to achieve performance goals. The study, focusing on the Iranian market, assessed competitive advantage as a potential mediator between industry forces and SME performance. The study finds that, despite Iran's enormous economic potential measured through factors such as large population size and richness of natural resources or sophisticated manufacturing industry, competitive advantage does not mediate the effect of the five industry forces on SME performance. Therefore, it is crucial for international SMEs to be aware of industry dynamics in meeting the desired performance goals, particularly when such firms operate within developing economies fraught with higher levels of uncertainty. According to Hilmersson et al., (2021), pursuant to its capability to be improvised and adapted, SMEs have more likelihood in creating new international opportunities; In doing so, Imb and Yeung propose that if established processes are non-conforming entrepreneurs who have previously experienced unpredicted services from customers which diverted to be the products of new market potential that network learning of a firm adapts become an "inside" story within the international business network. Finally, international opportunity integration. Waniak-Michalak and Michalak discuss the coordinating of actors who supported a network in favor of an alternative micro-financing system in transition conditions. Through the lens and by transcriptive means of actor-network theory (ANT), this article presents focused research, in-depth interviews, and document analysis. These results provide evidence of how the diverse individual goals can enable or prevent the emergence of common goods. The results of the research indicate the aims and issues that need to be resolved in order to create a network intended to build a sustainable market economy programs deployment in Poland. This study found that the government, SMEs, banks and NGOs played central roles in this work. Existing MFI network has been successful in providing entrepreneurs capital, borrowers that would have not otherwise had access to loans due willingness or ability. Though they warn of the potential for some actors to bring about its collapse through unethical behavior or morph into something entirely

different. Potential changes in guarantee fund financing methods, reduced EU financial support, evolving entrepreneurial needs, and further shifts in the Polish banking sector could all contribute to the emergence of a new network and system. Blazy et al., (2014) examine the decision-making processes of small and medium-sized French firms facing financial distress, particularly their choices between bankruptcy and informal renegotiations. The study portrays the process as a sequential game where stakeholders initially decide to pursue informal renegotiation. Therefore, depending on the renegotiation equilibrium selected by the debtor, the firm's debt will either be successfully or unsuccessfully restructured. Among them; are the research made by Castela et al., (2018) on the role of innovation as a management skill within the SMEs. They argue solutions must be truly holistic — that is integrative — in the analysis of SME innovation capabilities, and propose applying cognitive mapping and the analytic hierarchy process (AHP) to do this. This paper presents the research and development of a non-parametric approach to evaluate SME innovation capability in an SME context using a socio-technical perspective. Based on group consultations with IT entrepreneurs and CEOs of SMEs, this method was shown to work well for identifying innovative SMEs; an analysis of the sensitivity confirmed these results. This underscores the importance of utilizing cognitive mapping and AHP in the evaluation of SME innovation capability, as the process-oriented nature of the model cautions against unadjusted extrapolations. The utility and wider applicability of this naming convention was also acknowledged by the panel of experts who participated in the study, representing a new addition — as several applicants on the same research topic had not previously described the strategy. Nkundabanyanga et al., (2014) aimed to explore the connection between commercial bank lending terms, financial literacy, and SMEs' access to formal credit. In their cross-sectional study, they analyzed responses from 384 SME owners or managers in Uganda. Confirmatory factor analysis was utilized to distill key factors representing commercial lending terms, financial literacy, and formal credit access. The study found positive correlation between bank lending terms perception and

financial literacy with access to credit by SMEs. It is also important to note that only the business type and its turnover influenced credit access, whereas collateral or loan repayment periods did not. Subsequently, interest rate appears to be important as it can explain 31% of the variance in the credit access of SMEs. Nonetheless, the research has a geographical limitation as it only targeted SMEs located in Kampala. Hence its application to other context may be limited. Based on the results, it was concluded that investors need to improve financial literacy coupled with competitive interest rate for SMEs to get better access key credit protectors. Singh & Rastogi (2023) examined skillfully the changing scenarios of corporate governance in small and medium enterprises with reference to their listings on SME exchanges. The purpose of this study is to examine the effect of corporate governance on the financial performance of listed SMEs in developing economies, with India as a specific example. Corporate governance is measured through promoters' ownership concentration and information disclosures. Scope/Sample size: The research covers 88 SMEs listed on the Bombay Stock Exchange (BSE) SME platform from the years of 2018 to 2020, and a primary data approach is applied for this secondary data through Panel Data Analysis as well as Fixed Effects Model in Cluster Robust Standard Errors which is tested for relationships between variables. The results indicate that there is no relationship between a level of ownership concentration and financial performance, however, the information disclosures decline financial performance which means that agency problems and information asymmetry are widespread among companies. Tota as the authors state “These findings reveal inefficiencies in the governance of SMEs and indicate that corporate governance practices are not being fully leveraged by listed SMEs”. The implications of this research underscore the importance of corporate governance for SME owners and managers, especially as SME listings alter the governance landscape, causing adherence to near-international corporate governance standards. The study provides insights into how ownership and information disclosures can influence SME financial outcomes, offering valuable information for policyholders and academics.

Discussion

The study discusses the impact of different innovation strategies on high-performing MSMEs and highlights the importance of digital transformation and technology adoption for sustainable business growth (Caloffi et al., 2022; Feng et al., 2021; Hardie, 2016; M. A. S. Khan et al., 2022; Lesakova, 2019; H. Li et al., 2020; Macqueen et al., 2020; Prem, 2019; Rumanti et al., 2021; Toigo, 2017) (Castellani et al., 2024; Dad'o et al., 2015). It examines the relationship between MSMEs' risk management strategies and their access to credit (Belas et al., 2016; Kaya, 2022; Klimczak et al., 2017; Zhai et al., 2022). The role of socioeconomic factors in influencing credit decisions is highlighted (Bengo & Arena, 2019; Chang, 2015; Crisan et al., 2015; Kana et al., 2022; Kovban & Kohut, 2019; Kryeziu et al., 2022; Meng et al., 2016; Rani & Khan, 2014; Wickert, 2016). It also assesses how the Internet has changed business models, competition and industry performance (Caniels et al., 2015; Yuldinawati et al., 2018). The shift towards e-commerce and digital marketing is noted (Alfarizi et al., 2023; Arranz et al., 2023; Civelek et al., 2023; W. Li et al., 2016; Scholz et al., 2024). It also evaluates the effectiveness of policies and education in developing skills aligned with the needs of the labor market, considering industry requirements and organizational size (Metaxas & Duquenne, 2015; Mishra, 2020) (Amjad et al., 2020; Evans, 2016). Finally, captures the essence of the document's content and focuses on the dynamic nature of the business environment and the factors that are crucial for sustained success in various industries (Handrito et al., 2021; Taipale-Erävala et al., 2014).

Conclusion

The study highlights the significant role of digital transformation in improving the economic outcomes of MSMEs, particularly through the adoption of Industry 4.0 technologies and e-marketing strategies. Studies show that socioeconomic factors and risk management practices are critical to MSMEs' ability to secure credit, which is critical to their growth and sustainability. The Internet has revolutionized business models and competitive dynamics across industries, driving improved performance,

efficiency and customer loyalty through e-commerce and digital marketing. Government policies and educational institutions play a key role in developing industry-relevant skills, with an emphasis on adaptability and innovation to meet the changing needs of the labor market. These are core themes and insights from business research over the last decade and provide insights into the challenges and opportunities for MSMEs in a dynamic business environment.

Further research

This study provides guidance for future work by examining how specific Industry 4.0 technologies (such as IoT, AI, and automation) impact MSME productivity, efficiency, and competitiveness. Explore case studies and empirical evidence to understand the nuances. Discover innovative digital marketing approaches tailored to MSMEs. Consider topics like social media marketing, content marketing, and personalized customer experiences. How can MSMEs use these strategies effectively? Explore supply chain management practices that improve MSME resilience. How can they mitigate disruptions (e.g. pandemic-related challenges) and build resilient supply networks? Dive deeper into credit access for MSMEs. Investigate alternative financing models, FinTech solutions, and ways to improve credit scores. What role do financial institutions play in supporting MSMEs? Discover programs and initiatives to upskill MSME employees. How can training and skills development increase productivity and adaptability in a rapidly changing business landscape?

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