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Emerging Trends in Entrepreneurship and Business Development in the Philippines: A Review

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ABSTRACT: This narrative review synthesizes recent peer-reviewed literature on entrepreneurship and business development in the Philippines, focusing on micro, small, and medium enterprises (MSMEs) that constitute the backbone of the national economy. Literature was identified through searches of Google Scholar, Scopus, and Web of Science using keywords related to MSMEs, entrepreneurship, digital transformation, sustainability, financial inclusion, and entrepreneurship education in the Philippine context. Studies published primarily between 2017 and 2025 were considered, with priority given to empirical and review articles directly relevant to the Philippine setting. Drawing on this body of literature, the review identifies four interrelated trends shaping the Philippine entrepreneurial landscape: digital transformation and technology adoption, sustainable and green entrepreneurship, financial inclusion and access to capital with particular attention to women-led enterprises, and entrepreneurship education as a driver of entrepreneurial intention. The review highlights persistent structural barriers such as infrastructure gaps, limited digital literacy, and constrained access to formal financing, while also pointing to opportunities created by government programs, fintech innovation, and university-based entrepreneurship initiatives. The synthesis is supported by four summary tables and one illustrative figure. The review concludes with policy and practice implications for strengthening the resilience and competitiveness of Philippine MSMEs.

KEYWORDS: Entrepreneurship; MSMEs; digital transformation; financial inclusion; sustainable entrepreneurship; entrepreneurship education; Philippines

1. Introduction

Micro, small, and medium enterprises (MSMEs) form the backbone of the Philippine economy, accounting for the overwhelming majority of registered business establishments and a substantial share of national employment [1, 2]. Over the past decade, the entrepreneurial environment in the Philippines has undergone significant transformation, driven by accelerating digitalization, the lingering effects of the COVID-19 pandemic, evolving consumer preferences, and growing policy attention to inclusive and sustainable growth. The pandemic, in particular, acted as a catalyst that compelled many MSMEs to adopt digital tools such as e-commerce platforms, social media marketing, and digital payment systems simply to survive [2, 3].

At the same time, sustainability concerns have entered mainstream entrepreneurial discourse, with green and socially oriented business models increasingly framed as sources of competitive advantage rather than merely compliance costs [4, 5]. Financial inclusion remains a central policy theme, as a large proportion of Filipino adults and MSME owners-particularly women-continue to face barriers in accessing formal credit and digital financial services [1, 6]. Meanwhile, higher education institutions are being repositioned as incubators of entrepreneurial talent, with entrepreneurship education shown to meaningfully shape students' entrepreneurial intentions and capabilities [7, 8].

Despite the growing body of research on these themes, much of the literature remains fragmented across disciplines and sectors, making it difficult for policymakers, educators, and practitioners to obtain an integrated view of where Philippine entrepreneurship is heading. Specifically, no recent review has systematically synthesized the interplay among digital transformation, sustainability, financial inclusion, and entrepreneurship education as co-evolving dimensions of the Philippine MSME landscape. This gap limits the ability of stakeholders to design cross-cutting interventions that address these interconnected challenges simultaneously. This review addresses that gap by synthesizing recent empirical and conceptual studies into four thematic sections: (1) digital transformation and technology adoption among MSMEs, (2) sustainable and green entrepreneurship, (3) financial inclusion, fintech, and women-led enterprises, and (4) entrepreneurship education and entrepreneurial intention. Each section discusses current findings, persistent challenges, and emerging opportunities, supported by tabulated evidence and an illustrative figure summarizing cross-cutting trends [1−8].

2. Digital Transformation and Technology Adoption Among Philippine MSMEs

2.1. Drivers of Digital Adoption.

The COVID-19 pandemic served as a major accelerant of digital adoption among Philippine MSMEs, as lockdowns and mobility restrictions forced many enterprises to transition toward online marketplaces, social media-based selling, and digital payment systems to remain operational. Studies report that a substantial proportion of MSMEs temporarily ceased operations during the pandemic, while others survived primarily because they were able to digitalize key business functions [2, 3]. Beyond crisis response, digital tools such as e-commerce platforms, cloud-based applications, and digital payment systems are increasingly framed as enablers of efficiency, wider market reach, and improved competitiveness for resource-constrained enterprises [3, 9].

2.2. Barriers to Technology Management.

Despite these drivers, technology adoption remains uneven. Research on MSMEs in regions such as Davao Oriental shows that the Technology-Organization-Environment framework and

Diffusion of Innovation theory, while useful, do not fully capture the realities of enterprises operating in less urbanized settings, where infrastructure gaps and limited technical expertise constrain adoption [9]. Financial constraints have repeatedly emerged as the most acute barrier, particularly for microenterprises, with perceptions of barriers varying according to enterprise size [3]. Unreliable internet connectivity, limited owner IT experience, and constrained financial resources for technology investment are frequently cited enablers or inhibitors depending on whether they are present or absent [3].

2.3. Emerging Opportunities and Policy Implications.

able 1 synthesizes the major digital transformation trends and challenges reported in the reviewed literature on Philippine MSMEs. The findings indicate that the adoption of e-commerce platforms and social media has accelerated significantly, particularly during and after the COVID-19 pandemic, enabling enterprises to expand market access and maintain business continuity. However, many MSMEs continue to face limitations in digital marketing competencies, and adoption remains uneven across different enterprise sizes, with microenterprises generally lagging behind small and medium-sized firms [2, 3].The literature also highlights the growing integration of digital payment systems as an important component of business digitalization. These technologies improve transaction efficiency, customer convenience, and operational performance. Nevertheless, persistent connectivity issues, together with cybersecurity and regulatory concerns, present challenges that may hinder the long-term sustainability and scalability of digital payment adoption [3, 9].

Table 1. Digital transformation trends and challenges among Philippine MSMEs.

Trend / Theme	Key Findings	Associated Challenges	References
E-commerce and social media adoption	Rapid shift toward online marketplaces and social media-based selling during and after the pandemic.	Limited digital marketing skills; uneven adoption across enterprise sizes.	[2, 3]
Digital payment systems	Growing use of digital payment platforms to enhance efficiency and customer reach.	Connectivity issues; cybersecurity and regulatory concerns for long-term scaling.	[3, 9]
Technology management capacity	TOE and DOI frameworks applied to explain adoption patterns in regional MSMEs.	Frameworks remain under-explored for less urbanized and resource-constrained settings.	[9]
Cloud-based applications	Adoption enhances operational efficiency and market reach.	Financial constraints are most acute for microenterprises.	[3]

From an organizational perspective, studies have increasingly employed the Technology–Organization–Environment (TOE) and Diffusion of Innovation (DOI) frameworks to explain digital technology adoption among Philippine MSMEs. While these frameworks provide valuable theoretical insights, their application remains limited in less urbanized and resource-constrained contexts, suggesting the need for further empirical investigation across diverse regional settings [9]. Finally, cloud-based applications have emerged as an important digital innovation that enhances operational efficiency, information management, and market responsiveness. Despite these benefits, financial constraints remain a major obstacle, particularly for microenterprises that often lack the resources required to invest in cloud infrastructure and related digital technologies.

Collectively, these findings suggest that strengthening digital capabilities among Philippine MSMEs requires not only technological adoption but also supportive policies, targeted capacity-building initiatives, and improved access to affordable digital infrastructure and financial resources.

3. Sustainable and Green Entrepreneurship

3.1. Conceptual Foundations of Sustainable Entrepreneurship.

Sustainable entrepreneurship has emerged globally as a pivotal force that reconciles economic prosperity with ecological stewardship, encapsulating the pursuit of profit alongside the resolution of environmental challenges [4, 5]. Unlike conventional entrepreneurship, which primarily emphasizes economic returns, sustainable entrepreneurship integrates environmental and social considerations into business decision-making, creating value for both firms and society. Reviews of green business practices identify circular economy approaches, eco-innovation, sustainable supply chain management, and resource-efficient production as key enablers of sustainability-oriented business models [4]. These approaches encourage firms to minimize waste, optimize resource utilization, and develop environmentally responsible products and services while maintaining long-term competitiveness. This shift reflects the growing recognition that traditional profit-driven business models can contribute to environmental degradation, climate change, and resource depletion, thereby increasing the need for business models that balance economic growth with environmental sustainability [4, 5].

3.2. Sustainability Orientation Among Philippine Firms.

Within the Philippine context, sustainability orientation among small businesses has been linked to the identification and seizing of entrepreneurial opportunities, innovation, and improved firm performance. Sustainability orientation reflects a deliberate strategic commitment by firms to integrate environmental considerations into organizational systems, structures, and operational processes to reduce negative environmental impacts while creating long-term business value. This orientation is influenced by institutional pressures, evolving consumer preferences, and increasing market demand for environmentally responsible products and services. It is commonly associated with practices such as green purchasing, resource-efficient operations, waste reduction, and the development of more sustainable business models [5]. Concrete examples of green entrepreneurship in the Philippines include eco-tourism enterprises in biodiversity-rich destinations such as Palawan and Bohol, community-based waste management cooperatives in Metro Cebu, and agricultural MSMEs that have adopted organic certification and sustainable supply chain practices to access premium export markets. Other enterprises have incorporated renewable energy technologies, environmentally friendly packaging, and circular resource management into their operations to enhance both environmental performance and business resilience. Collectively, these examples demonstrate that sustainability-oriented strategies are not limited to large corporations but are increasingly being embraced by MSMEs seeking environmental credibility, competitive differentiation, and long-term business sustainability.

3.3. Integration with Innovation and Digitalization.

Table 2 summarizes the principal dimensions of sustainable entrepreneurship and their relevance to Philippine MSMEs. The literature indicates that sustainable entrepreneurship extends beyond environmental responsibility by integrating strategic, technological, and institutional factors that collectively enhance long-term business competitiveness.One of the most prominent dimensions is the adoption of green business models, which incorporate circular economy principles, eco-innovation, and sustainable supply chain management. These approaches enable firms to reduce resource consumption, minimize waste generation, and create environmentally responsible products and services. For Philippine MSMEs, particularly those operating in export-oriented industries and tourism-related sectors, green business models provide opportunities to strengthen market competitiveness, satisfy increasing consumer demand for sustainable products, and comply with international environmental standards [4].

Table 2. Dimensions of Sustainable Entrepreneurship and Relevance to Philippine MSMEs.

Dimension	Description	Relevance to Philippine MSMEs	References
Green business models	Circular economy, eco-innovation, and sustainable supply chains.	Potential differentiation strategy for export-oriented and tourism-linked enterprises.	[4]
Sustainability orientation	Deliberate reconfiguration of firm strategy to reduce environmental impact.	Associated with improved firm performance among small Philippine businesses.	[5]
Innovation–sustainability–digitalization nexus	Integrated investment in innovation, digital tools, and sustainability practices.	Suggests bundled interventions may be more effective than standalone sustainability programs.	[10]
Institutional pressures	External pressures shape the adoption of sustainable practices.	Policy and regulatory signals can accelerate sustainability uptake among MSMEs.	[5]

Another important dimension is sustainability orientation, which reflects a firm's deliberate commitment to embedding environmental considerations into its strategic planning and operational activities. Rather than implementing isolated environmental initiatives, sustainability-oriented firms systematically redesign their organizational processes to reduce ecological impacts while maintaining economic performance. Evidence from Philippine businesses suggests that this strategic orientation is positively associated with improved firm performance, indicating that sustainability can serve as a source of competitive advantage rather than merely a compliance requirement [5].

The literature also highlights the growing innovation–sustainability–digitalization nexus, emphasizing that these three elements reinforce one another in supporting business growth and resilience. Investments in digital technologies facilitate the implementation of sustainable practices through improved operational efficiency, data-driven decision-making, and access to wider markets, while innovation enables firms to develop environmentally friendly products, services, and business models. Consequently, Philippine MSMEs are likely to benefit more from integrated interventions that simultaneously promote innovation, digital transformation, and sustainability than from standalone sustainability initiatives [10].

Finally, institutional pressures play a significant role in shaping sustainable entrepreneurship among MSMEs. Government regulations, industry standards, financial incentives, and changing stakeholder expectations encourage firms to adopt environmentally responsible practices. In the Philippine context, supportive policy frameworks, targeted financial assistance, and capacity-building programs can strengthen sustainability adoption by reducing implementation barriers and encouraging greater participation among resource-constrained MSMEs [5]. Collectively, these dimensions demonstrate that sustainable entrepreneurship is a multidimensional process requiring the alignment of strategic orientation, technological capability, innovation capacity, and supportive institutional environments to achieve long-term sustainable development.

4. Financial Inclusion, Fintech, and Women-Led Enterprises

4.1. The State of Financial Inclusion.

Access to finance remains one of the most persistent challenges facing Philippine MSMEs, with a substantial proportion of the adult population historically remaining unbanked or underbanked, thereby limiting opportunities for entrepreneurship and business expansion [1,6]. Limited access to formal financial institutions constrains firms' ability to obtain working capital, invest in technology, and respond to changing market conditions. In recent years, digital finance—including mobile wallets, online banking, and fintech platforms, has emerged as an important mechanism for expanding financial inclusion. Platforms such as GCash have significantly increased access to financial services by enabling digital payments, fund transfers, savings, and other financial transactions without requiring conventional bank accounts. These innovations have contributed to a measurable reduction in cash dependency across both urban and rural communities, lowering transaction costs and improving financial accessibility. Nevertheless, structural inequalities, uneven internet connectivity, digital literacy gaps, and the persistent digital divide continue to limit the benefits of digital financial services, particularly among rural populations and resource-constrained microenterprises [6].

4.2. Women-Led MSMEs and Access to Credit.

Women-owned and women-led enterprises constitute a substantial segment of Philippine MSMEs, with national statistics consistently showing women as primary owners of many micro and small businesses. Despite their significant contribution to employment generation and local economic development, women entrepreneurs continue to face greater barriers than their male counterparts in accessing financial resources and business support services. These challenges extend beyond the general financing constraints experienced by MSMEs, including collateral requirements and limited availability of formal credit. Women entrepreneurs are also affected by gender-specific factors such as social norms that limit the time available for business activities, unequal household responsibilities, lower levels of financial literacy among certain demographic groups, and reduced access to professional and financial networks that facilitate borrowing and business growth [1].

Evidence from government-supported microfinance institutions indicates that women-led enterprises are generally more likely to obtain loan approval because of their strong participation in microfinance programs. However, they often experience greater difficulty in maintaining timely loan repayment due to business vulnerability, fluctuating household income, and limited financial management capacity [11]. These findings suggest that expanding credit availability alone is insufficient to improve entrepreneurial outcomes. Instead, financial inclusion initiatives should be complemented by targeted financial literacy programs, business development services, mentoring, and customized financial products that strengthen women's entrepreneurial capabilities and improve long-term business sustainability [1, 11].

4.3. Fintech Innovation and Regulatory Considerations.

Recent studies highlight fintech innovation as a major driver of financial inclusion in the Philippines. The rapid expansion of mobile banking, digital payment platforms, and other fintech services has broadened access to formal financial systems for individuals and MSMEs that were previously underserved by traditional banking institutions [6]. Beyond improving payment efficiency, fintech solutions facilitate faster transactions, enhance financial record-keeping, and create digital financial histories that can potentially improve MSMEs' eligibility for formal financing. These capabilities support business resilience and enable enterprises to participate more effectively in the digital economy. Concerns relating to consumer protection, cybersecurity, data privacy, interoperability among digital financial platforms, and the regulatory oversight of emerging fintech providers require continued policy attention to ensure safe and inclusive financial ecosystems [6]. Evidence from broader regional studies further demonstrates that financial digitalization can significantly reduce financial disparities in rural communities by overcoming geographical barriers to banking services, reinforcing the importance of fintech-oriented policies for supporting entrepreneurship and inclusive economic development in the Philippine MSME sector [12]. Table 3 synthesizes the principal indicators of financial inclusion identified in the reviewed literature and highlights their implications for entrepreneurship in the Philippines.

Table 3. Financial Inclusion Indicators and Implications for Philippine Entrepreneurship.

Indicator / Theme	Reported Finding	Implication for Entrepreneurship	References
Unbanked adult population	Significant share of adults historically lacked formal bank accounts.	Limits formal credit access for new and existing enterprises.	[1, 6]
Mobile money / e-wallet adoption	Substantial reduction in cash dependency in urban and rural areas.	Expands payment and savings options for MSME owners and customers.	[6]
Women-led MSME loan approval and repayment	Higher approval likelihood but greater repayment challenges among women-led enterprises.	Highlights the need for financial literacy programs alongside credit access.	[11]
Digital finance and rural divide	Digital transformation of finance helps narrow rural financial divides.	Supports rural entrepreneurship and market participation.	[12]

5. Entrepreneurship Education and Entrepreneurial Intention

5.1. The Role of Entrepreneurship Education.

Higher education institutions are increasingly viewed as critical actors in shaping entrepreneurial mindsets and capabilities among Filipino youth [7,m8]. Empirical studies confirm that entrepreneurship education has an important relationship with entrepreneurial success among higher education students, with both educational mechanisms and technological enablement identified as critical influences on entrepreneurial intention. Notably, technological enablement has demonstrated a particularly strong association with entrepreneurial success, reflecting the central role of digital tools in students' academic and entrepreneurial experiences [7]. However, it is important to distinguish between entrepreneurial intention, the desire or plan to start a business, and actual business development outcomes such as venture creation, survival, and growth. The existing Philippine literature predominantly measures intention rather than behavior, and the pathway from intention to sustained entrepreneurial activity remains underexplored. This gap suggests that entrepreneurship education programs may be effective in inspiring interest but may not yet be systematically designed to support students through the subsequent stages of business formation and early-stage enterprise management.

5.2. Entrepreneurial Intention Among Business Students.

Research applying the Theory of Planned Behavior (TPB) and the Theory of Reasoned Action (TRA) to Filipino accountancy and business students highlights the significance of attitudes, subjective social norms, perceived behavioral control, and self-efficacy in shaping entrepreneurial aspirations [13]. Students who hold favorable attitudes toward entrepreneurship, perceive support from family, peers, and educators, and possess confidence in their entrepreneurial capabilities are generally more likely to express intentions to establish their own businesses. These findings reinforce the importance of psychological and social factors in influencing entrepreneurial decision-making, beyond purely economic motivations.

Similarly, studies involving accountancy and business management students demonstrate that the perceived desirability of entrepreneurial careers strongly influences entrepreneurial intention [14]. When entrepreneurship is viewed as an attractive, achievable, and personally rewarding career path, students are more inclined to consider business creation as a viable post-graduation option. Perceptions of feasibility, including confidence in one's ability to recognize opportunities, mobilize resources, and manage business risks, further strengthen entrepreneurial intentions. These findings suggest that higher education institutions play a critical role in fostering entrepreneurial mindsets through well-designed entrepreneurship education, experiential learning opportunities, business incubation programs, mentorship, and exposure to successful entrepreneurs. Such initiatives can enhance students' entrepreneurial self-efficacy, reduce perceived barriers to business creation, and cultivate positive attitudes toward entrepreneurship. In the Philippine context, where MSMEs represent the backbone of the national economy, strengthening entrepreneurial intention among business students is particularly important for promoting innovation, business creation, employment generation, and long-term economic resilience [13, 14].

5.3. Toward an Entrepreneurial Ecosystem in Higher Education.

Beyond individual-level entrepreneurial intention, broader institutional initiatives—such as university-based startup incubators, entrepreneurship education programs, innovation hubs, and industry partnerships—are increasingly recognized as essential components of a supportive entrepreneurial ecosystem [8, 15]. These institutional mechanisms extend entrepreneurship development beyond classroom instruction by providing students with practical learning experiences, mentorship, networking opportunities, business advisory services, and access to entrepreneurial resources. Such support enables aspiring entrepreneurs to develop entrepreneurial competencies, validate business ideas, and acquire the confidence needed to launch and sustain new ventures. Table 4 synthesizes the principal findings from the reviewed studies on entrepreneurship education and entrepreneurial intention within the Philippine higher education context. Collectively, the evidence demonstrates that entrepreneurial intention is shaped by a combination of individual psychological factors and institutional support systems, highlighting the importance of integrated educational strategies that combine entrepreneurship curricula with practical entrepreneurial experiences and ecosystem-based support.

Table 4. Entrepreneurship Education and Entrepreneurial Intention Findings.

Theme	Key Finding	Implication for Practice	References
Entrepreneurial education mechanisms	Critical influence on students' entrepreneurial success.	Curricula should integrate structured entrepreneurship modules.	[7]
Technological enablement	Strongest predictor of entrepreneurial success among studied factors.	Digital tools should be embedded in entrepreneurship pedagogy.	[7]
Attitudes, norms, and self-efficacy	Significantly shape entrepreneurial aspirations of business students.	Programs should build self-efficacy through experiential learning.	[13]
Perceived desirability	Strong driver of entrepreneurial intention.	Interventions should highlight attainability and rewards of entrepreneurship.	[14]

6. Cross-Cutting Synthesis

6.1. Integrated Trend Overview.

Figure 1 provides a conceptual illustration of the relative prominence of the four major thematic areas discussed in this review, namely digital transformation, financial inclusion, sustainable entrepreneurship, and entrepreneurship education. The relative weighting of each theme is derived from the authors' qualitative assessment of the frequency of occurrence across the reviewed literature, as well as the depth and consistency of empirical attention each theme receives in the identified studies. As such, the figure is intended to serve as an interpretive synthesis rather than a statistically derived ranking, and it should be read in conjunction with the detailed discussions and summary tables presented in the preceding sections.

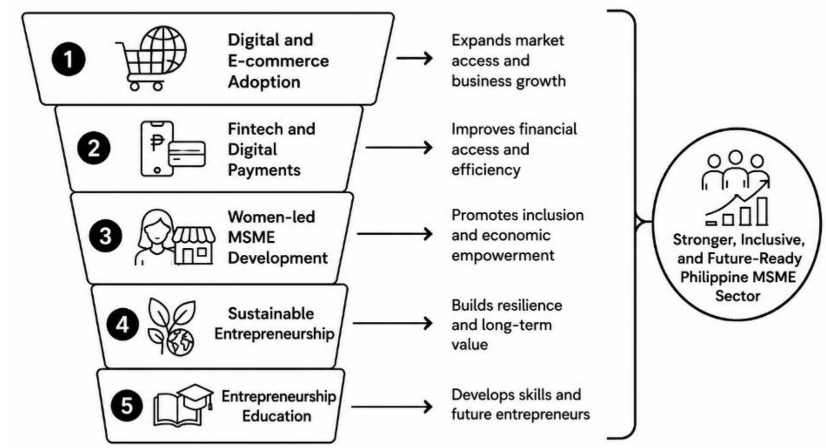

Figure 1. Illustrative Synthesis of Emerging Entrepreneurship Trends in the Philippine MSME Sector.

Digital and e-commerce adoption emerges as the most dominant and consistently represented theme across the literature, reflecting its central role in enabling MSME resilience, market expansion, and operational continuity, particularly in the post-pandemic context. Closely related to this is fintech and digital payment adoption, which functions as a critical enabler of digital commerce by facilitating transactions, improving financial accessibility, and reducing reliance on cash-based systems. Together, these two themes form the core of the digital transformation agenda within Philippine MSMEs. In comparison, women-led MSME development represents a significant but comparatively less extensively explored theme, despite its importance for inclusive economic growth and gender-responsive entrepreneurship. Sustainable entrepreneurship appears as an increasingly visible but still emerging area, with growing attention directed toward green business models, environmental responsibility, and the integration of sustainability principles into MSME strategies. Finally, entrepreneurship education is identified as a foundational but enabling theme, primarily influencing future entrepreneurial capacity through the development of skills, intentions, and attitudes among students rather than through direct firm-level outcomes [15−22].

6.2 Implications for Policy and Practice

The collective evidence from the reviewed literature indicates that the key dimensions of MSME development, digital transformation, financial inclusion, sustainability, and entrepreneurship education, are deeply interconnected rather than independent policy domains. As such, interventions targeting these areas are likely to be more effective when designed as integrated policy packages rather than as isolated initiatives. For instance, fintech adoption simultaneously advances financial inclusion and accelerates digital transformation by enabling MSMEs to access digital payment systems, credit platforms, and online financial services [3, 6, 12]. Similarly, entrepreneurship education programs that incorporate digital tools, business simulations, and exposure to real-world digital platforms can significantly enhance students' readiness to participate in an increasingly technology-driven MSME environment [7, 8]. These synergies suggest that digital capability development should be embedded across both formal education systems and MSME support programs. From a policy perspective, this integrated view implies that governments and development agencies should prioritize multi-dimensional interventions that combine digital literacy training, access to affordable and tailored financial products, incentives for sustainable business practices, and experiential entrepreneurship education [23−30]. Such an approach not only enhances the effectiveness of individual policy instruments but also creates reinforcing feedback loops across sectors. For example, improved digital literacy can enhance fintech adoption, which in turn strengthens financial inclusion and enables greater investment in sustainable and innovative business models.

7. Conclusion

This review has synthesized recent literature on emerging trends in entrepreneurship and business development in the Philippines across four thematic areas: digital transformation, sustainable entrepreneurship, financial inclusion and women-led enterprises, and entrepreneurship education. While Philippine MSMEs have demonstrated resilience and adaptability-particularly in their accelerated adoption of digital tools following the COVID-19 pandemic-persistent challenges remain, including infrastructure gaps, limited access to formal credit, and uneven sustainability orientation. The evidence suggests that future research and policy efforts would benefit from integrated, cross-cutting approaches that link digitalization, financial inclusion, sustainability, and education rather than treating these as separate domains. Such integration may better position Philippine MSMEs to contribute to inclusive and resilient economic growth in the years ahead.

Author Contribution

Juan Andreas Dela Cruz: Conceptualization, Literature Search and Screening, Formal Analysis (thematic synthesis), Writing – Original Draft, Writing – Review and Editing. Maria Elena Garcia: Conceptualization, Literature Search and Screening, Writing – Review and Editing, Visualization. Both authors have read and agreed to the published version of the manuscript.

Competing Interest

The author declares no competing interests, financial or otherwise, that could have influenced the design, execution, interpretation, or reporting of this study.

Data Availability

This manuscript is a literature review. No new datasets were generated or analyzed. All sources cited in this review are publicly available peer-reviewed publications, which are identified in the reference list.

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