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Financial Literacy and Technology Adoption to Strengthen the Profitability and Sustainability of Selected Masbate-Made Crafts, Food and Local Products

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Abstract

This study examined the influence of financial literacy and technology adoption on the business performance of Masbate-made product producers, focusing on profitability and long-term sustainability. Grounded in Human Capital Theory and the Technology Acceptance Model, the study employed a descriptive–correlational research design to analyze the relationships among variables. Data were collected using a structured questionnaire administered to 15 purposively selected MSME owners engaged in crafts, food, and other local products in Masbate. Descriptive statistics and Pearson's r correlation were used to analyze the data. Findings revealed that respondents generally possessed a functional level of financial literacy, particularly in budgeting, record-keeping, pricing, and financial decision-making, although gaps were noted in separating personal and business finances. Technology adoption was high in digital marketing, customer engagement, and digital payment awareness, but the use of advanced financial tools and e-commerce platforms remained less consistent. Business performance indicated stable profitability and positive sustainability, although many enterprises still rely on seasonal markets. Correlation results showed that financial literacy had a strong and significant positive relationship with both profitability ($r = 0.619$, $p = 0.014$) and sustainability ($r = 0.774$, $p = 0.001$). Technology adoption demonstrated a very strong and significant relationship with sustainability ($r = 0.817$, $p = 0.000$), but only a moderate and non-significant relationship with profitability. The study concludes that strengthening financial competencies and expanding digital tool utilization are essential for enhancing MSME performance. It recommends improved financial management practices, increased use of digital financial tools, and expanded participation in e-commerce platforms, supported by targeted training programs. The study aligns with Sustainable Development Goals such as SDG 8 (Decent Work and Economic Growth), SDG 9 (Industry, Innovation, and Infrastructure), and SDG 4 (Quality Education), as it promotes enterprise productivity, innovation, and skill development. Its sustainability impact lies in improving income stability, strengthening local economies, and supporting the long-term viability of rural enterprises.

Keywords: Business Performance, Financial Literacy, Micro and Small Enterprises, Profitability, Sustainability, Technology Adoption

1. Introduction

Financial literacy and technology adoption are increasingly recognized as key drivers of profitability and sustainability among micro and small enterprises (MSEs). In the Philippine context, particularly in Masbate, producers of crafts, food, and local products face persistent challenges in financial management and digital engagement, limiting their ability to sustain operations beyond seasonal markets. This study examines how financial literacy and technology adoption jointly influence business performance, focusing on profitability and long-term sustainability among Masbate-made product producers

1.1 Financial Literacy and Technology Adoption Challenges of Masbate-Made Product Producers

The evolving business environment demands that entrepreneurs possess strong financial management skills and the ability to adopt digital technologies to remain competitive (Lusardi & Mitchell, 2014). In the Philippines, financial literacy significantly influences business performance and survival, particularly among small enterprises, while technology adoption enables firms to expand market reach and adapt to changing consumer behavior. MSEs contribute significantly to local economies by generating income, employment, and preserving cultural identity. In Masbate, local enterprises reflect indigenous creativity and resources, supported by national policies such as the 1987 Philippine Constitution and Republic Act No. 6977, as amended by Republic Act No. 9501. Despite these frameworks, many producers struggle with limited financial literacy—particularly in budgeting, record-keeping, pricing, and decision-making—and low technology adoption, including minimal use of digital marketing and payment systems. These limitations restrict market access and lead to unstable income, emphasizing the need to strengthen both financial and technological capabilities to ensure sustainability.

1.2 Financial Literacy, Technology Adoption, and Business Performance of MSMEs: Literature Synthesis

Financial literacy is widely acknowledged as essential for MSME performance, enabling effective resource management, risk evaluation, and financial stability (OECD, 2020). Empirical studies confirm that financial literacy enhances decision-making, working capital management, and profitability (Bongomin et al., 2017; Morgan and Trinh, 2019; Hasan et al., 2021). In developing economies, it is closely linked to enterprise survival (Lusardi & Mitchell, 2014; Atkinson & Messy, 2012). In the Philippines, financial capability remains a key determinant of MSME resilience, though many rural entrepreneurs still lack adequate financial skills (Bangko Sentral ng Pilipinas, 2022, 2023, 2024; PIDS, 2020). Technology adoption also plays a crucial role in enhancing productivity and competitiveness. Digital tools improve market access, reduce costs, and support operational efficiency (Asian Development Bank, 2021, 2022; IFC, 2018). E-commerce and digital platforms expand business reach (UNCTAD, 2018), while digital transformation has strengthened resilience during crises (World Economic Forum, 2019; World Bank, 2020). In the Philippines, government initiatives support digital adoption, yet rural enterprises continue to face barriers such as limited infrastructure and technical skills (DICT, 2019, 2021; DTI, 2022, 2023; PIDS, 2020). Studies further indicate that financial literacy and technology adoption jointly enhance profitability and sustainability. Entrepreneurs who integrate financial management with digital tools achieve better cost control, efficiency, and long-term performance (Bongomin et al., 2017; Hidayat-ur-Rehman et al., 2025). However, rural MSMEs remain constrained by structural and capability gaps.

1.3 Local, National, and Global Context of MSME Financial Literacy and Digital Adoption

Globally, MSMEs are recognized as engines of economic growth, requiring both financial capability and digital transformation to remain competitive (Lusardi & Mitchell, 2014). In developing economies, financial literacy and technology adoption are critical for enterprise resilience and inclusion (Atkinson & Messy, 2012; ADB, 2022). Nationally, MSMEs account for over 99% of business establishments in the Philippines, making their sustainability vital for economic development (PSA, 2021, 2023). Government agencies such as BSP, DTI, DICT, and DOST have implemented programs to improve financial literacy and digital access (BSP, 2022, 2023, 2024; DTI, 2022, 2023; DICT, 2021). Locally, Masbate's MSEs rely heavily on seasonal selling platforms such as bazaars and trade fairs, limiting consistent income generation. Despite increasing access to mobile technology and social media, many producers have yet to fully utilize digital tools. This local context highlights the need for integrated financial and technological capacity-building.

1.4 Human Capital Theory and Technology Acceptance Model in Masbate-Made Product Enterprises

This study is grounded in Human Capital Theory and the Technology Acceptance Model (TAM). Human Capital Theory emphasizes that knowledge and skills, such as financial literacy, enhance productivity and business performance. Financial competencies—including budgeting, record-keeping, pricing, cost management, and decision-making—enable entrepreneurs to manage resources effectively and support profitability. The Technology Acceptance Model explains technology adoption based on perceived usefulness and ease of use, suggesting that entrepreneurs are more likely to adopt digital tools when they find them beneficial and accessible. In this study, technology adoption includes digital marketing, online selling, digital payment systems, and customer engagement tools. The conceptual framework proposes that financial literacy and technology adoption influence business performance, particularly profitability, sustainability, and continuity of operations. These factors interact to transform small enterprises from seasonal ventures into stable sources of livelihood.

1.5 Research Gap on Financial Literacy, Technology Adoption, and MSME Sustainability in Masbate

Although existing literature confirms the positive effects of financial literacy and technology adoption on MSME performance, most studies focus on national or urban contexts. There is limited empirical research examining these relationships within rural and provincial settings, particularly in Masbate. Local producers of crafts and food products face unique challenges, including limited financial knowledge, low digital adoption, and dependence on seasonal markets. The absence of localized studies addressing these factors creates a significant research gap. This study addresses this gap by analyzing how financial literacy and technology adoption jointly influence profitability and sustainability among Masbate-made product producers, providing context-specific insights for policy and practice.

1.6 Sustainable Development Goals Relevant to Masbate-Made MSME Profitability and Sustainability

This study aligns with several Sustainable Development Goals. It supports SDG 8 (Decent Work and Economic Growth) by enhancing the productivity and sustainability of micro and small enterprises. It contributes to SDG 9 (Industry, Innovation, and Infrastructure) through the promotion of digital adoption and innovation in business practices. It also relates to SDG 4 (Quality Education) by emphasizing financial literacy as a critical skill for entrepreneurship. Additionally, it supports SDG 1 (No Poverty) by strengthening income-generating capabilities of local producers.

1.7 Multidisciplinary Sustainability Contributions of Financial Literacy and Technology Adoption in Masbate Enterprises

The study contributes to socio-economic sustainability by improving income stability and employment opportunities among local producers. It supports educational sustainability through the development of financial and digital competencies. It also promotes technological sustainability by encouraging the integration of digital tools in rural enterprises. Furthermore, the research has implications for community sustainability, as strengthening local enterprises helps preserve cultural identity and supports local economies. It also informs policy and institutional sustainability by providing evidence for targeted interventions by government agencies and support institutions. Overall, the study advances a multidisciplinary approach to sustainability by integrating financial, technological, and socio-economic dimensions in the development of rural MSMEs.

2. Material and methods

2.1 Research Design

The study employed a descriptive–correlational research design, which provides a structured framework for collecting, measuring, and analyzing data to address research problems (John W. Creswell, 2014; Mark Saunders, 2019; Ranjit Kumar, 2011). The descriptive approach was used to determine and present the current level of financial literacy and extent of technology adoption among MSME producers, while the correlational approach examined the relationship between these variables and business profitability and sustainability. This design was appropriate because it enabled the researcher to analyze existing conditions and relationships without manipulating variables, allowing for the generation of reliable data and meaningful insights relevant to entrepreneurs and policymakers.

2.2 Locale of the Study

The study was conducted in the province of Masbate, focusing on selected producers of locally made crafts, food products, and other goods. Masbate is recognized for its cultural heritage, craftsmanship, and small-scale industries, which contribute significantly to the local economy. MSMEs in the province provide livelihood opportunities but often face challenges related to financial management and technology adoption. The locale was selected because it offers a relevant context for examining how financial literacy and digital technology use influence business profitability and long-term sustainability among local producers.

2.3 Respondents of the Study

The respondents were owners of MSMEs engaged in producing Masbate-made crafts, food, and other local products. These individuals were chosen because they are directly involved in managing their businesses and possess knowledge of their financial practices and use of technology. Initially, 21 business owners were identified as potential participants, but only 15 took part in the study due to constraints such as limited time and business responsibilities. Despite this, the participating respondents provided sufficient data for the study's analysis.

2.4 Sample and Sampling Procedure

Sampling involves selecting a subset of individuals to represent a population (John W. Creswell, 2014; Ranjit Kumar, 2011). In this study, purposive sampling, a non-probability technique, was used to select respondents based on specific criteria relevant to the research objectives. The researcher initially identified 21 MSME owners who met the criteria and personally distributed questionnaires to them. However, only 15 completed and returned the survey due to time constraints and work-related commitments. Consequently, the final sample consisted of these 15 respondents, whose data were used to examine the relationships among financial literacy, technology adoption, profitability, and sustainability.

2.5 Research Instrument

The study utilized a structured questionnaire to gather data on the respondents' level of financial literacy, extent of technology adoption, and business performance. The instrument was designed to collect relevant and measurable information from MSME owners, enabling the researcher to systematically analyze their financial practices and use of digital technologies in relation to profitability and sustainability.

2.6 Data Gathering Procedure

The researcher identified qualified MSME owners and personally approached them to request participation in the study. Questionnaires were distributed to the selected respondents to collect data on financial literacy and technology adoption. Some identified participants declined due to limited time and business obligations, resulting in 15 completed responses. These responses were then compiled and prepared for analysis to address the research objectives.

2.7 Data Analysis Techniques

The collected data were analyzed using descriptive statistical tools. Percentage was used to summarize data distribution, while weighted mean and mean were applied to determine central tendencies of responses. Standard deviation measured the variability of the data, indicating how far values deviated from the mean. Pearson's r correlation was employed to assess the strength and direction of the relationship between financial literacy, technology adoption, and business performance variables. These statistical techniques provided a basis for interpreting the data and drawing conclusions regarding the study's objectives.

3. Results and Discussion

3.1 Profile and Characteristics of Respondents

3.1.1 Age Distribution

The data show that most respondents were young adults, with 40.00% aged 20–29, followed by 26.67% aged 30–39, 20.00% aged 40–49, and 13.33% aged 50 and above. This indicates that a large portion of MSME owners involved in Masbate-made products are relatively young. This distribution suggests that younger individuals are actively engaged in entrepreneurial activities, which may influence their openness to innovation and adaptability in business practices. The presence of older respondents, although smaller, reflects a mix of experience and traditional knowledge contributing to business operations.

3.1.2 Sex Distribution

The findings reveal that 66.67% of respondents were female, while 33.33% were male, indicating that women dominate the MSME sector involved in local product production. This suggests that female entrepreneurs play a significant role in sustaining local industries, particularly in crafts and food production. Their strong participation highlights the importance of supporting women-led enterprises in improving economic outcomes and sustainability.

3.1.3 Educational Attainment

The results show varied educational backgrounds, with the largest group being high school graduates (33.33%), followed by college-level (26.67%), college graduates (20.00%), vocational graduates (13.33%), and a small percentage at the elementary level (6.67%). This indicates that most respondents possess at least basic to intermediate education, which may support their ability to understand financial concepts and adopt technology. However, the limited number of higher-level graduates suggests potential gaps in advanced business and financial knowledge.

3.1.4 Type of Products Produced

The findings indicate that 46.67% of respondents produce crafts, 33.33% produce food products, and 20.00% produce other goods. This reflects the diversity of MSME activities in Masbate, with a strong emphasis on crafts, highlighting the province's cultural identity. The presence of food and other products shows opportunities for diversification and market expansion.

3.1.5 Years of Business Operation

The majority of businesses have been operating for 1–3 years (46.67%), followed by 4–6 years (26.67%), less than one year (20.00%), and only 6.67% operating for 7–10 years. This suggests that most enterprises are relatively new, which may explain their ongoing efforts to stabilize operations and improve performance. The limited number of long-established businesses indicates challenges in sustaining operations over extended periods.

3.2 Financial Literacy of Respondents

3.2.1 Budgeting and Record Keeping

The results show that respondents generally find budgeting and record-keeping practices easy, with an overall mean of 4.01. The highest-rated ability was tracking business cash flow, while preparing a simple budget received the lowest rating, though still within the "easy" range. This indicates that MSME owners are capable of managing basic financial records, which is essential for monitoring business performance. However, the slightly lower score in budgeting suggests a need for further improvement in planning financial activities.

3.2.2 Pricing and Cost Management

Respondents also demonstrated an overall "easy" level in pricing and cost management, with a mean of 3.95. Considering production costs when pricing products received the highest rating, while separating business and personal expenses had the lowest rating.

These findings suggest that while respondents understand cost considerations, there may be challenges in maintaining clear financial boundaries between personal and business expenses, which can affect financial accuracy and decision-making.

3.2.3 Financial Decision-Making

The level of financial literacy in decision-making was also rated "easy," with an overall mean of 4.11. Planning for future expenses received the highest rating, while knowing when to save or reinvest had the lowest, though still within the same category. This indicates that respondents are generally confident in making financial decisions and planning ahead, which contributes to business stability. However, refinement in strategic financial decisions, such as reinvestment, may further enhance business growth.

3.3 Technology Adoption of Respondents

3.3.1 Digital Marketing and E-Commerce

The results show a high extent of technology adoption in digital marketing and e-commerce, with an overall mean of 4.16. The use of social media for promotion was rated highest, while selling through online platforms had the lowest rating, though still high. This suggests that MSMEs actively use digital tools to promote products and reach customers, although full integration into online selling platforms may still be developing. The reliance on social media highlights its importance in expanding market reach.

3.3.2 Digital Payment Systems and Financial Tools

Respondents demonstrated a high extent of adoption of digital payment systems, with an overall mean of 3.96. Familiarity with digital payment methods was the highest-rated aspect, while the use of mobile apps and tracking systems received slightly lower ratings. This indicates that while respondents are aware of digital payment options, their consistent use for business operations may still be improving. Enhancing the use of financial technologies can support efficiency and transaction management.

3.3.3 Online Customer Engagement and Communication

The findings reveal a high extent of online customer engagement, with an overall mean of 4.15. Responding to inquiries, communicating through messaging apps, and maintaining relationships online were highly rated. This suggests that MSMEs actively engage with customers through digital channels, which helps strengthen relationships and customer retention. Effective communication contributes to improved customer satisfaction and business performance.

3.4 Business Performance

3.4.1 Profitability

The results indicate that respondents generally agree that their businesses are profitable, with indicators showing that income covers expenses, sales improve during peak seasons, and businesses contribute to household income. This suggests that MSMEs are generating sufficient returns to sustain operations, although profitability may vary depending on seasonal demand and other factors. The ability to meet expenses reflects a stable but potentially modest level of financial success.

3.4.2 Business Sustainability

The findings show that respondents agree their businesses are sustainable, with an overall mean of 4.05. Planning to continue operations received the highest rating, while operating beyond bazaars and trade fairs had the lowest. This indicates that while entrepreneurs are committed to sustaining their businesses, expansion beyond limited selling channels remains a challenge. Strengthening market access and long-term strategies may further improve sustainability.

3.5 Relationship Between Variables

The results show a strong and significant positive relationship between financial literacy and profitability, with a Pearson r of 0.619 and a p-value of 0.014. Similarly, financial literacy and sustainability also exhibited a strong positive relationship, with a Pearson r of 0.774 and a p-value of 0.001. These findings indicate that higher financial literacy is associated with better business performance, both in profitability and sustainability, emphasizing the importance of financial knowledge in managing and growing MSMEs. The relationship between technology adoption and profitability showed a moderate positive correlation ($r = 0.484$) but was not statistically significant ($p = 0.067$). In contrast, technology adoption and sustainability showed a very strong and significant positive relationship, with a Pearson r of 0.817 and a p-value of 0.000. This suggests that while technology adoption may not directly influence profitability in the short term, it plays a crucial role in ensuring long-term business sustainability. The strong relationship highlights the importance of digital tools in maintaining and strengthening MSME operations.

4. Conclusion & Recommendations

The study found that selected Masbate-made product producers generally exhibit a functional level of financial literacy, particularly in budgeting, cost consideration, and financial decision-making, although some practices such as separating personal and business finances are not consistently applied. Technology adoption is evident, especially in the use of social media for promotion and communication, but the use of more structured digital financial tools remains less consistent. Business performance in terms of profitability is relatively stable, indicating that respondents are able to generate sufficient income and maintain operations. Sustainability is also positive, as most respondents intend to continue their businesses, though reliance on seasonal selling channels suggests that long-term stability is still developing. Furthermore, financial literacy shows a strong and significant relationship with both profitability and sustainability, while technology adoption has a strong contribution to sustainability but only a limited direct effect on profitability.

The study recommends strengthening financial management practices by reinforcing consistent record keeping, budgeting, and the separation of personal and business finances. It also suggests encouraging the more consistent use of digital financial tools to improve efficiency and accuracy in transactions. Expanding technology use beyond social media, particularly through online marketplaces and e-commerce platforms, is advised to increase market reach and reduce reliance on seasonal selling channels. Additionally, providing targeted training programs on financial literacy and digital skills can support MSME owners in improving their business operations. Entrepreneurs are also encouraged to engage in long-term business planning to enhance sustainability and profitability. For future research, expanding the sample size and exploring additional variables may provide a more comprehensive understanding of business performance.

The study is limited by the small number of respondents and its focus on selected Masbate-made product producers, which may affect the generalizability of the findings. The results are based solely on the data collected from the participating respondents, and the limited scope of variables considered may not fully capture all factors influencing profitability and sustainability.

Compliance with ethical standards

This study was conducted in accordance with standard research procedures involving the voluntary participation of selected MSME owners in Masbate. Respondents were personally approached by the researchers and were included in the study based on their willingness and availability to participate. Data were collected through structured questionnaires and were used solely for the purposes of analysis aligned with the study objectives.

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