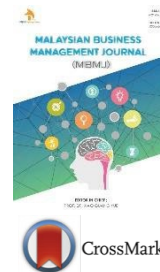




# Malaysian Business Management Journal (MBMJ)

DOI: <http://doi.org/10.26480/mbmj.02.2025.52.59>



RESEARCH ARTICLE

## IMPACT OF SOCIO-ECONOMIC FACTORS IN THE MANAGEMENT OF MSMEs IN SAN PABLO CITY, LAGUNA

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ARTICLE DETAILS

Article History:

Received 15 August 2025  
 Revised 19 September 2025  
 Accepted 25 October 2025  
 Available online 04 November 2025

ABSTRACT

Micro-small-medium enterprises (MSMEs) have played a crucial role in driving significant economic development in various cities across different countries. It is well known that a business's success depends on diverse factors. This study was conducted to determine the socio-economic factors that impact the business owner's success in the management of their micro-small-medium businesses (MSMEs) in San Pablo City in the province of Laguna. The socio-economic factors included income level, educational attainment, employment status, and economic condition, which are attributes that pertain to the quality of life, privileges, and opportunities for improving an individual's status within a society. To test the hypothesis that there was a positive association between the factors and the management in the business, the survey instrument was distributed via online platforms, utilizing Google Forms and other social media, and personal interviews were conducted. A descriptive correlational research design was used to analyze the data obtained from (388) MSMEs who were randomly selected. The results showed a positive association between the factors influencing the management of MSMEs in the area. On this basis, socio-economic factors are taken into consideration in the growth and success of business owners across various industries.

KEYWORDS

MSME, Socio-economic, Management, Micro Business

### 1. INTRODUCTION

The foundation of any economy is its businesses. Micro businesses produce the vast majority of goods and services. Through entrepreneurship, direct employment, and indirect employment, companies expect to employ a large number of workers. They also contribute to reducing poverty in every nation. MSMEs face many challenges in their day-to-day operations. Despite being the backbone of the economy, they must overcome those difficulties to remain afloat in the fast-paced times.

From an overview of the status of MSMEs in the Philippines from the DTI, the aggregate sector of the businesses is composed of Wholesale and Retail Trade (49.48%); Accommodation and Food Service Activities (14.31%); Manufacturing (12.08%); Other Service Activities (6.44%); and Financial and Insurance Activities (4.60%). The microbusinesses, in particular, within the scope of the study's city have been severely impacted by the COVID-19 pandemic, affecting their day-to-day operations, working capital, revenue, workforce, marketing, and management. Many business owners had to consider online opportunities and effectively utilize their capital to keep their businesses afloat. The cost of establishing an online presence, a lack of technical know-how, and logistical difficulties are some of the reasons why local business owners are finding it challenging to embrace e-commerce. E-commerce offers a probable opportunity to reduce operating costs and expand its reach to a broader audience.

Lack of access to suitable and affordable funding is a significant challenge for MSMEs. They usually involve difficulties meeting loan requirements, completing complex application procedures, and providing collateral. MSMEs face intense competition from unregistered companies that offer lower-priced goods, which could lead to a loss of market share. The

expansion of MSMEs may impede restricted access to market hubs and proactive market-seeking practices. A lack of digital skills and limited financial resources for creating a website and engaging in digital marketing make it challenging to adapt to the digital market. Management of a business is no easy task. It requires effort on the part of the company owner. They must overcome significant difficulties to manage their operations effectively and conduct their business profitably.

The study aims to assess the impact of socio-economic factors on the management of micro, small, and medium enterprises in the given area. Comprehensive data were gathered on the socio-economic profiles of MSME owners, specifically their age, gender, civil status, number of dependents, education level, occupational role, income, and business type (Kumar et al., 2024). Analyzing how demographic factors interact could help clarify how the socio-economic factors influence strategic behavior in MSME management under various conditions. Consideration of in-depth local data can reveal trends in how different business types and demographic groups utilize other resources, how they engage with the community, and how easily they can adapt to changing circumstances. It also examines how MSMEs address specific structural constraints in response to changing market dynamics and cultural norms. The results can inform current initiatives and lead to changes in the law that enhance MSME resilience and its long-term impact in the area.

### 2. LITERATURE REVIEW

According to this study, micro, small, and medium-sized enterprises (MSMEs) made up approximately 99% of all registered businesses in the Philippines, with micro-enterprises alone comprising around 90% (Department of Trade and Industry 2024). The reduction in poverty, income inequality, and the generation of employment across the country

Quick Response Code	Access this article online	
	Website: <a href="http://www.mbmj.com.my">www.mbmj.com.my</a>	DOI: 10.26480/mbmj.02.2025.52.59

can be significantly attributed to businesses, due to their essential role in the economy. Yet, labor productivity and poverty reduction remain limited, despite the increase in the number of firms in the country. The recent news reports were part of a 2022 research study by Adviento, Fajarito, Bumanlag, and Camaro, which suggests that the benefits of MSME development are unevenly distributed and may reflect existing gaps in managerial capacity.

A study on the demographics of MSMEs during the COVID-19 pandemic found that the age of business owners significantly impacted their resilience (Mondragon et al. 2024). Younger owners tended to adopt digital tools and employ adaptive strategies to enhance their resilience. They responded more creatively to disruptions. Individual entrepreneurs usually demonstrated increased agility and responsiveness during the pandemic. Entrepreneurs could easily reorganize their operations, effectively respond, and make quick decisions when faced with various challenges. It suggests that business owners, especially sole proprietors, often lack the time for crisis management. They are sometimes less hindered by family duties. Their greater independence enabled them to stay focused and adapt quickly to evolving circumstances. The various situations they have encountered highlight the importance of individual decision-making skills and flexibility in building organizational resilience within a business. A study revealed that women's involvement in MSMEs across the Philippines showed that they tend to have higher levels of education, hold more leadership roles, and navigate business environments differently than men (Solina 2021). Gender also affected access to credit and many business networks. Women entrepreneurs, who mainly benefited from microfinance, also faced gender-specific barriers in specific sectors. In general, studies have revealed that Philippine MSMEs today are predominantly founded and managed by relatively young entrepreneurs, with a growing share of female-led enterprises and those involved in the service and retail sectors.

Innovative and resilient practices are more likely to be adopted by business owners than by employees in lower-level roles, considering the distinction between the roles of owner and employee (Mondragon et al., 2024). Primary occupation influences strategic choices and crisis management of entrepreneurs. Data from national sources indicate that Region 4-A (Calabarzon) hosts a substantial number of MSMEs. Most microbusinesses are family-owned and run by their owners. The demographic trend suggests that many owners may have limited formal education or business training. The circumstances hinder their access to capital, advisory services, and formal networks. Demographic factors such as age, gender, and educational attainment significantly influence an entrepreneur's ability to access capital, markets, and institutional connections.

A study on MSMEs found that addressing issues such as limited access to finance and financial challenges prevalent in the Philippines had a broader socio-economic impact (Adviento et al., 2022). Data from the Bangko Sentral ng Pilipinas and the Philippine Institute for Development Studies in 2024 indicate that women control 58% of MSMEs, while also noting that 37% of men hold leadership positions. Both groups identified limited funding as the primary obstacle to the growth of MSMEs. Entrepreneurs are more frequently relying on personal savings or microloans instead of traditional bank loans. This change is driven by enhanced entrepreneurship education and financial literacy, which have boosted individuals' ability to manage capital effectively.

An international study conducted in Palembang, Indonesia, found that higher financial literacy has a significant impact on the growth and sustainability of micro, small, and medium enterprises (MSMEs) (Zulfadhli et al., 2024). Further demonstrated that financial technology adoption improves MSME performance by increasing financial literacy and facilitating access to financing. A 2021 study in Isabela, Philippines, by Cammayo et al. established a link between low social impact and weak financial performance, noting persistent deficiencies in financial and information and communications technology (ICT) literacy among entrepreneurs (Kumar et al., 2009). These findings underscore the importance of targeted education, particularly in financial literacy, for achieving success in specific sectors.

This study highlights the crucial role of microfinance in expanding access to loans and promoting business development. MSMEs tend to perform better when they can obtain affordable microcredit, which is more feasible for microbusiness growth in the Philippines. Multiple studies indicate that microenterprises face various hurdles in securing capital, including high interest rates, stringent collateral demands, and a lack of awareness. Despite these obstacles, MSMEs have demonstrated increased efficiency, bringing benefits such as job creation and community development, particularly in areas with limited access to cash (Angeles et al., 2019).

A study from the Philippines highlights the crucial role microfinance plays in maintaining financial stability and fostering economic development (Angeles et al., 2019). Although micro, small, and medium enterprises (MSMEs) face hurdles such as high interest rates, strict collateral demands, and limited financial literacy, those with access to microcredit tend to grow and succeed significantly. Despite this, they continue to struggle with funding access. Overall, MSMEs hold strong potential to enhance community growth and generate employment, especially in regions with better access to financial services.

Recent developments in the Philippines have underscored the importance of business associations like cooperatives, trade groups, local chambers, and networks supported by the DTI. As noted, participating in these associations offers advantages such as enhanced pricing knowledge, wider market access, and stronger bargaining power with suppliers (Francisco and Canare 2019). These networks generally focus on branding, shared services, advocacy, and regulatory compliance. When MSMEs join both national and local groups, they can more easily follow regulations, acquire valuable market insights, and establish connections with local suppliers and partners. Furthermore, government-backed and community networks can help small businesses prepare for exports, adopt digital tools, and integrate into larger value chains.

One of the numerous initiatives managed by the Department of Trade and Industry, the Livelihood Seeding Program-Negosyo Serbisyo Sa Barangay (LSP-NSB), is an excellent illustration of how to support MSMEs locally. These initiatives support broader initiatives that emphasize market connections, physical assets, and training to increase enterprise resilience. Although the program achieved high implementation levels in key areas, the evidence revealed moderate challenges in accessing finance and improving the business climate, which should be targeted in future policy updates to achieve a more profound and more equitable impact.

The government coordination and infrastructure were still considered gaps in the support systems of businesses. According to the study, MSME owners in Bukidnon perceived that the enabling environment was only moderately supportive due to the lack of financial services, poor infrastructure, and disorganized development initiatives (Sudaria and Bagares 2025). This conducted a panel data analysis across various regions that showed that investments in roads, bridges, and water supply systems significantly improve productivity in the services and wholesale or retail sectors (Hermoso et al., 2021). Road infrastructure has the most significant impact on business efficiency among all the factors examined in the country. Having an established, trustworthy supply chain, guaranteed seamless deliveries, and effective operations facilitation all rely on improved infrastructure and transportation (Kumar et al., 2024).

In a study, it was found that expanding digital infrastructure, such as broadband connectivity and digital training facilities, in underprivileged areas significantly boosts the competitiveness, operational efficiency, and market access of MSMEs (Kumalasari and Al-Amin 2022). A well-developed road, seaport, railroad, and utility network directly enhances the local business environment for MSMEs. The improvement in the digital infrastructure can also significantly boost the productivity, competitiveness, and ability of MSMEs to enter new markets. This improvement must include putting up training centers and having internet access.

This emphasize the role of social capital in enabling companies to grow and remain competitive (Borazona et al., 2022). Business owners benefit from strong referrals, reliable networks, and shared values, which support their success in tough markets. Human capital, including management training and expertise, also plays a crucial role in a company's success. MSMEs often face intense competition, particularly in retail, food, and travel sectors. To build their human and social capital and stay ahead, these businesses can collaborate with other organizations, participate in training programs, and attend networking events. They can stand out by offering more than just low prices and by forming partnerships that strengthen supply chains and build closer customer relationships. Market and cultural factors also impact the stability of MSMEs. Local networks enable businesses to secure funding, retain clients, and share information, thereby facilitating the effective management of limited resources (Boudreaux et al., 2021). These connections foster trust, which is even more important in uncertain times.

However, demonstrate that social and intellectual capital enhance entrepreneurial planning (Ramos-Rodriguez et al., 2024). Engaging in knowledge-sharing communities helps entrepreneurs identify emerging trends promptly and adapt their strategies accordingly, thereby reducing their susceptibility to external influence shocks. The connection between adaptability and network embeddedness further shows that social capital

boosts an organization's ability to anticipate and respond to economic disruptions.

This study find that local economic changes, driven by shifts in consumer purchasing power, most impact MSME revenues (Quingco and Leonoras 2020). MSME responses, particularly in women-led businesses, are influenced by prevailing cultural norms. During recessions, decreased consumer spending lowers sales, emphasizing the need for adaptable business strategies that can quickly address changing customer needs.

As a study report that cultural norms and customs significantly influence business responses, especially in female-owned enterprises. The study highlights the importance of recognizing both cultural and gender differences. In challenging times, sociocultural support networks enhance decision-making and organizational resilience. Collaborative problem-solving and cultural processes also strengthen emotional resilience. MSMEs operate in complex environments shaped by social, economic, and cultural factors, and these strategies support resilience during financial challenges (Welly et al., 2023).

This study examines the influence of socioeconomic factors, including social conditions, financial resources, network access, and cultural barriers, on the management of micro, small, and medium-sized enterprises (MSMEs) within a local context, to identify and address existing gaps. This will provide a comprehensive insight into the daily operations of local business proprietors in the area. Stakeholders may utilize this localized data to identify areas most in need of support. Such data can inform capacity-building initiatives, policy modifications, digital inclusion programs, and the development of targeted infrastructure for the city's MSME sector. This study aims to harmonize macro-level policies with micro-level experiences, thereby enhancing the understanding of entrepreneurship and fostering the growth of MSMEs in underserved urban areas.

### 3. METHODS

The research employed a descriptive-correlational methodology to investigate the impact of socio-economic variables on the management of MSMEs within the region. The primary data collection instrument was a tailored questionnaire. McDonald's  $\omega$  was employed to assess the internal consistency of the items, with all indicators demonstrating high reliability, each exceeding 0.8. This validates that the survey reliably captures the underlying constructs across various dimensions. The questionnaire covered sections on socio-economic profile, market dynamics, social capital, and access to resources and opportunities. Based on the estimated sample size, a minimum of 370 participants were required. Eventually, 388 respondents completed and returned the questionnaires, which were then analyzed. Data collection was conducted through personalized interviews and online platforms, including Google Forms and social media.

By distributing survey questionnaires to MSME operators, the study collected primary data that allowed for a direct evaluation of their socio-economic profiles, market dynamics, social capital, and resource accessibility. The collected research data were analyzed, which included descriptive statistics such as simple counts, frequencies, percentages, and means. Considering that most variables are categorical-mainly nominal for demographic attributes and ordinal for economic conditions-the Pearson chi-square test was employed to evaluate statistical associations. This method was suitable because it could detect significant relationships without relying on parametric assumptions, aligning well with the study's goal of pinpointing patterns related to MSME development and support.

The study employed a non-parametric statistical approach to examine the connections between ordinal variables, such as resource access, market dynamics, social capital, and socio-economic factors, that influence MSME management. Spearman's Rank Correlation Coefficient was chosen due to its capacity to assess monotonic relationships between ranked variables without presupposing a normal distribution. This methodology facilitated the research in determining both the direction and strength of correlations among the primary variables influencing MSME performance. Its utilization is corroborated by recent empirical investigations within the development and small business sectors, which similarly employed ordinal data analysis to reveal consistent relational patterns within socio-economic contexts.

### 4. THE DATA ANALYSIS

Table 1 presents the respondents' socio-economic profile. It showed distribution by age, gender, civil status, number of dependents, highest

educational attainment, primary occupation, income, and business type.

Table 1: Socio-Economic Profile of the Respondents		
	N	Percentage
<b>Age</b>		
15-25	46	11.86 %
26-35	83	21.39 %
36-45	75	19.33 %
45-55	128	32.99 %
56 and above	56	14.43 %
<b>Gender</b>		
Male	100	25.77 %
Female	288	74.23 %
<b>Civil Status</b>		
Single	121	31.18 %
Married	213	54.90 %
Widowed	27	6.96 %
Others (separated/partners)	27	6.96 %
<b>Number of Dependents</b>		
1-3	250	64.43 %
4-6	55	14.18 %
7-9	9	2.32 %
None	74	19.07 %
<b>Highest Educational Attainment</b>		
Postgraduate	39	10.05 %
Bachelor's Degree	195	50.26 %
Vocational	63	16.23 %
High School Graduate	91	23.45 %
<b>Primary Occupation</b>		
Employed	215	55.41 %
Unemployed	63	16.24 %
Student	5	1.29 %
Homemaker	37	9.54 %
Entrepreneur	68	17.52 %
<b>Income</b>		
Low	92	23.71 %
Lower Middle	157	40.46 %
Middle	139	35.82 %
<b>Business Type</b>		
Sole proprietorship	369	95.10 %
Partnership	19	4.90 %

The data in Table 1 showed that the most significant proportion of MSME owners or managers in San Pablo City are aged 45–55 (32.99%), followed by those in the 26–35 and 36–45 age brackets. It indicates that individuals lead many MSMEs in their prime working and decision-making years. Management tends to be more stable among those aged 45 to 55, as they are generally more experienced and have greater savings. Conversely, fewer young people are engaging in entrepreneurship, possibly due to limited resources, experience, or risk appetite, as shown by the lower percentage in the 15–25 age group.

The substantial proportion of women respondents, accounting for 74.23%, indicates notable female engagement in MSME management within the city. This may indicate a growing prevalence of women-owned enterprises or suggest that women perceive MSMEs as a viable avenue for income generation, especially in regions with limited employment prospects. Additionally, it may reflect the impact of microfinance and livelihood initiatives that frequently emphasize the economic empowerment of women.

More than half of the respondents (54.9%) are married, which may suggest that family responsibilities and household needs influence their entrepreneurial pursuits. Married individuals may work for MSMEs either to supplement their household income or as their main source of income. Various household arrangements seem to impact the MSME landscape, as evidenced by the combined percentage of singles and others (13.92%).

Most respondents (64.43%) have between one and three dependents, emphasizing that family responsibilities are a significant concern for MSME managers. It may affect their financial decisions, risk tolerance, and time allocation. Individuals without dependents (19.07%) might have more flexibility to allocate resources and reinvest in their businesses.

Approximately fifty percent of the respondents possess a bachelor's degree; however, a significant proportion have only completed high school or vocational training. Postgraduate education represents a relatively small segment. Most MSME managers possess formal education, providing skills in marketing, financial management, and strategic planning. MSMEs are still accessible to individuals without higher degrees, which is crucial for inclusive economic growth since many owners only have high school or vocational training.

Over half of the respondents are currently employed, indicating that many MSME owners might be juggling their businesses with other jobs, possibly to ensure financial stability. The individuals primarily identifying themselves as entrepreneurs constitute 17.5% of a group dedicate to working full-time on their respective businesses. The data indicate that MSMEs play a vital role in the mitigation of unemployment and underemployment by providing alternative opportunities for homemakers and unemployed individuals beyond conventional employment in the community.

Most of the respondents belong to lower-middle and middle-income groups. It suggests that MSMEs are primarily owned and operated by individuals with modest earnings. It also suggests that MSMEs could offer opportunities for improved financial stability or additional income. The drop in high-earners starting their own businesses can also draw attention to the challenges many MSMEs have in becoming profitable or expanding.

The findings indicate that independent management is clearly preferred, with sole proprietorships coming in first. MSMEs are attracted to this type of business. It is appealing in comparison to other corporate structures due to its simple setup, which involves a few legal procedures and grants immediate decision-making authority. This setup, however, may limit access to expansion opportunities and funding.

Note: 1.00 – 1.80 = Strongly Disagree; 1.81 – 2.60 = Disagree; 2.61 – 3.40 = Neither Agree nor Disagree; 3.41 – 4.20 = Agree; 4.21 – 5.00 = Strongly Agree

The respondents' responses on how the environment and socio-economic factors influence the management of micro, small, and medium-sized businesses (MSMEs) in San Pablo City, Laguna, are displayed in Table 2. The analysis considers two components of access to opportunities and resources, in addition to market dynamics and social capital.

The first element focuses on opportunities and the accessibility of resources. There is strong agreement for dependable infrastructure access as evidenced by the highest average score (M = 4.36). This implies that dependable infrastructure is regarded as a crucial element for efficiently supporting MSMEs. The local infrastructure scored an average of 4.04, indicating a general level of agreement. Access to capital for starting new businesses and development support services scored 3.89 and 3.80, respectively, both reflecting a verbal interpretation of agree. The aspect with the lowest rating was business networks or associations, which had a mean of 3.70, still falling within the range of agreement. An average score of 3.96 reflects a strongly perceived need, highlighting the ongoing significance of resource accessibility for MSMEs in the region.

In the second dimension, which examines market dynamics and social capital, the data indicated a stronger socio-economic impact. The highest average score was 4.43 for social capital within the community, with dependence on local networks and relationships close behind at 4.27; both received a rating of strongly agree. These findings highlight the vital role that social connections and community bonds play in business operations. Changes in income levels or purchasing power (M = 4.18), competition levels (M = 4.05), and sensitivity of businesses to local cultural norms and traditions (M = 3.67) were all perceived as Agree. The overall average score of 4.12 for this dimension underscores the significant impact of socio-economic factors on the operational environment of MSMEs.

The findings indicated that structural and socio-economic environmental factors significantly influenced the management of MSMEs in San Pablo City. The consistently high mean scores indicated that these companies faced persistent challenges with social networks, competition, infrastructure, and capital access. These problems needed to be addressed with responsive policy measures and community-based support networks. Most respondents (64.43%) have between one and three dependents, emphasizing that family responsibilities are a significant concern for MSME managers. It may affect their financial decisions, risk tolerance, and time allocation. Individuals without dependents (19.07%) might have more flexibility to allocate resources and reinvest in their businesses.

Approximately fifty percent of the respondents possess a bachelor's degree; however, a significant proportion have only completed high school or vocational training. Postgraduate education represents a relatively small segment. Most MSME managers possess formal education, providing skills in marketing, financial management, and strategic planning. MSMEs are still accessible to individuals without higher degrees, which is crucial for inclusive economic growth since many owners only have high school or vocational training. The data in Table 1 showed that the most significant proportion of MSME owners or managers in San Pablo City are aged 45–55 (32.99%), followed by those in the 26–35 and 36–45 age brackets. It indicates that many MSMEs are led by individuals in their prime working and decision-making years. Management tends to be more stable among those aged 45 to 55, as they are generally more experienced and have greater savings. Conversely, fewer young people are engaging in entrepreneurship, possibly due to limited resources, experience, or risk appetite, as shown by the lower percentage in the 15–25 age group.

Table 2: The Socio-economic Influence and Environment in The Management of MSMEs		
	Mean	Verbal Interpretation
<b>Access to Resources and Opportunities (Socio-economic Influence)</b>		
Access to capital to start a business	3.89	Agree
Business development support services	3.80	Agree
Business-related networks or associations	3.70	Agree
Reliable access to infrastructure	4.36	Strongly Agree
Availability of infrastructure in the locality	4.04	Agree
<b>Composite Mean</b>	<b>3.96</b>	<b>Very High Need</b>
<b>Market Dynamics and Social Capital (Socio-economic Environment)</b>		
Level of competition	4.05	Agree
Reliance on local networks and relationships	4.27	Strongly Agree
Social capital in the community	4.43	Strongly Agree
Changes in the income levels or purchasing power	4.18	Agree
Business sensitivity to changes in local cultural norms and traditions	3.67	Agree
<b>Composite Mean</b>	<b>4.12</b>	<b>Very High Need</b>

Table 3: Association of Socio-Economic Factors of Respondents to the Extent of Management of MSMEs						
Variable 1	Variable 2	$\chi^2$	Df	p-value	Contingency Coefficient (C)	Cramér's V
Gender	Extent	1.14	3	0.768	0.0541	0.0542
Civil Status	Extent	10	12	0.614	0.159	0.0928
Primary Occupation	Extent	116	12	<.001	0.480	0.316
Business Type	Extent	1.73	6	0.943	0.0665	0.0472
Age	Extent	23.6	12	0.023	0.239	0.142
Number of Dependents	Extent	5.98	9	0.742	0.123	0.0717
Highest Educational Attainment	Extent	70.3	9	<.001	0.392	0.246
Income	Extent	147	12	<.001	0.524	0.355

Table 3 shows how socio-economic factors affect management practices among MSME owners in the area. Income showed the strongest link with MSME management, supported by data indicating a significant correlation ( $\chi^2 = 147, p < .001, C = 0.524, V = 0.355$ ). Entrepreneurs with higher incomes likely have better access to capital and resources, enabling more effective business management. A moderate but meaningful relationship was found between management and primary occupation ( $\chi^2 = 116, p < .001, C = 0.480, V = 0.316$ ). This suggests that proprietors engaged in skilled trades or business roles likely gain from enhanced financial discipline and decision-making capabilities. The variable for highest educational attainment showed a significant connection ( $\chi^2 = 70.3, p < .001, C = 0.392, V = 0.246$ ), suggesting that entrepreneurs with higher education levels are more likely to adopt organized management practices. Overall, the results indicate that education, occupation, and income are crucial factors influencing entrepreneurial sustainability and success. The result was the same as in the study which highlights the

essential role of human capital in the growth of MSMEs, particularly in times of economic difficulty (Kwilinski et al., 2019).

Age showed a weaker but still significant connection to MSME management ( $\chi^2 = 23.6, p = 0.023, C = 0.239, V = 0.142$ ). Older entrepreneurs likely managed more effectively due to experience and maturity. The variables gender ( $\chi^2 = 1.14, p = 0.768$ ), civil status ( $\chi^2 = 10, p = 0.614$ ), business type ( $\chi^2 = 1.73, p = 0.943$ ), and number of dependents ( $\chi^2 = 5.98, p = 0.742$ ) showed no significant associations with MSME management. These factors exhibited low coefficients and minimal effect sizes, suggesting that they did not significantly influence how respondents managed their businesses. These results corroborate the findings who emphasized that demographic characteristics such as gender or marital status do not function as predictors of MSME performance (Syamsudin et al., 2020).

**Table 4: Correlation Matrix of Socio-Economic Influence on the Extent of Management of MSMEs**

		SEI01	SEI02	SEI03	SEI04	SEI05	Extent
SEI01	$\rho$	—					
	df	—					
	p-value	—					
SEI02	$\rho$	0.480***	—				
	df	386	—				
	p-value	<.001	—				
SEI03	$\rho$	0.542***	0.320***	—			
	df	386	386	—			
	p-value	<.001	<.001	—			
SEI04	$\rho$	0.455***	0.403***	0.516***	—		
	df	386	386	386	—		
	p-value	<.001	<.001	<.001	—		
SEI05	$\rho$	0.427***	0.052	0.602***	0.512***	—	
	df	386	386	386	386	—	
	p-value	<.001	0.31	<.001	<.001	—	
Extent	$\rho$	0.047	-0.009	0.062	-0.003	0.019	—
	df	386	386	386	386	386	—
	p-value	0.353	0.862	0.222	0.95	0.708	—

Note:  $\rho$  = Spearman's rho correlation coefficient, \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Table 4 shows that SEI01, representing one dimension of the socio-economic characteristics of respondents, had moderate and statistically significant positive correlations with SEI02 ( $\rho = 0.480, p < .001$ ), SEI03 ( $\rho = 0.542, p < .001$ ), SEI04 ( $\rho = 0.455, p < .001$ ), and SEI05 ( $\rho = 0.427, p < .001$ ). According to the results, individuals who scored higher on the SEI01 also tended to score higher on other socio-economic measures. The pattern illuminated the interconnectedness of the socio-economic factors evaluated within the study.

SEI03 demonstrated itself as a pivotal variable, exhibiting statistically significant correlations with all other socio-economic indicators. Its highest correlation was with SEI05 ( $\rho = 0.602, p < .001$ ), then with SEI01 ( $\rho = 0.542$ ), SEI04 ( $\rho = 0.516$ ), and SEI02 ( $\rho = 0.320$ ), all significant at the .001 level.  $\rho = 0.516$ , and SEI02 ( $\rho = 0.320$ ), all significant at the .001 level. It implied that SEI03 potentially captured a socio-economic aspect that overlapped with or influenced various other factors relevant to the respondents' circumstances.

Additionally, SEI04 demonstrated consistent and significant correlations with SEI01 ( $\rho = 0.455$ ), SEI02 ( $\rho = 0.403$ ), SEI03 ( $\rho = 0.516$ ), and SEI05 ( $\rho = 0.512$ ), with all correlations significant at the  $p < 0.001$  level. Similarly, SEI05 shared strong positive relationships with SEI03 and SEI04. It did not, however, demonstrate a significant correlation with SEI02 ( $\rho = 0.052, p = 0.310$ ), suggesting that these two indicators have a weak or insignificant relationship. This discrepancy implied that while the majority of socio-economic factors were interconnected, some

dimensions—like those measured by SEI02 and SEI05—might reflect different or non-overlapping socio-economic profiles.

Notably, no statistically significant correlation was observed between the socio-economic indicators and the variable designated as "Extent," which presumably evaluated the quality or degree of MSME management practices. The correlation coefficients ranged from  $-0.009$  (SEI02) to  $0.062$  (SEI03), and none of the corresponding p-values reached the conventional level of significance. These results showed that there was no consistent monotonic relationship between the socio-economic variables of individuals and the management scope of MSMEs in the sampled population.

The absence of strong links between management scope and socio-economic indicators suggests that, while these factors were internally consistent and could reflect broader economic conditions, they did not show a direct relationship with MSME management practices. This disconnect highlights how variables such as managerial experience, business environment, access to support programs, or psychological traits like entrepreneurial resilience can influence MSME performance and management.

The correlation analysis verified relationships among the socio-economic factors studied. Notably, SEI03 stands out as a key component of the socio-economic structure for MSME owners in the region. This highlights the importance of employing more advanced and detailed modeling techniques, especially since no significant connections were found

between these socioeconomic factors and management strategies. Future research could explore mediating or moderating variables to understand

better how socio-economic conditions influence the management outcomes of micro, small, and medium-sized enterprises.

**Table 5: Correlation Matrix of Socio-Economic Environment on the Extent of Management of MSMEs**

		SEI01	SEI02	SEI03	SEI04	SEI05	Extent
SEI01	$\rho$	—					
	df	—					
	p-value	—					
SEI02	$\rho$	0.300***	—				
	df	386	—				
	p-value	<.001	—				
SEI03	$\rho$	0.157***	0.182***	—			
	df	386	386	—			
	p-value	0.002	<.001	—			
SEI04	$\rho$	0.424***	0.476***	0.194***	—		
	df	386	386	386	—		
	p-value	<.001	<.001	<.001	—		
SEI05	$\rho$	0.417***	0.207***	0.145***	0.321***	—	
	df	386	386	386	386	—	
	p-value	<.001	<.001	0.004	<.001	—	
Extent	$\rho$	0.006	0.015	0.004	0.004	-0.008	—
	df	386	386	386	386	386	—
	p-value	0.911	0.768	0.937	0.943	0.880	—

Note:  $\rho$  = Spearman's rho correlation coefficient, \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Table 5 displays the key connections among the five socioeconomic environment (SEE) variables. The numerous statistically significant relationships among these variables underscore the influence of market dynamics and social capital, suggesting that micro, small, and medium-sized enterprises (MSMEs) operate within a complex network of social and economic factors.

SEE01 shows strong associations with SEE02 ( $r = 0.300, p < .001$ ), SEE04 ( $r = 0.424, p < .001$ ), and SEE05 ( $r = 0.417, p < .001$ ). It suggests that in more competitive environments, MSMEs are more likely to rely on community connections and adapt to both cultural and economic changes. In highly competitive local marketplaces, entrepreneurs may have employed local networks to maintain their competitiveness while also adapting their strategies to local economic and cultural trends.

SEE02 showed moderate correlations with SEE04 ( $r = 0.476, p < .001$ ) and SEE05 ( $r = 0.207, p < .001$ ), and a weaker but significant correlation with SEE03 (Social Capital in the Community;  $r = 0.182, p < .001$ ). These results highlighted the critical role of informal local connections in MSME operations. Entrepreneurs who maintained strong community relationships appeared more attuned to economic shifts and cultural changes.

SEE03 demonstrated weaker correlations overall, yet it was significantly related to SEE04 ( $r = 0.194, p < .001$ ) and SEE05 ( $r = 0.145, p = .004$ ). Although these values were relatively low, they suggested that MSMEs located in communities with higher levels of trust and social cohesion were more likely to recognize shifts in income and cultural norms effectively. The presence of community-level social capital likely fostered

cooperation, information exchange, and collective responsiveness.

Out of all the variables in the matrix, SEE04 had the highest correlation. The relationships with SEE01, SEE02, SEE03, and SEE05 were characterized as moderate to strong. These findings suggest that fluctuations in income have a significant impact on MSMEs' ability to engage with their communities, navigate competitive landscapes, and adapt to cultural differences. Entrepreneurs are likely to have closely observed local purchasing power and modified their pricing, marketing, and product strategies accordingly to maintain competitiveness.

SEE05 also played a notable role, moderately correlating with SEE01, SEE02, and SEE04. This indicated that cultural awareness operated in tandem with economic awareness in shaping MSME strategies. Entrepreneurs appeared to adjust their business practices in response to community traditions, religious events, or local beliefs, particularly when competition and income dynamics demanded responsiveness.

In contrast to the interconnectedness of the five SEE variables, the Extent variable, which measured the perceived degree to which socio-economic factors influenced business management, showed no statistically significant correlation with any of the socio-economic indicators (all  $p > .05$ ). The highest coefficient appeared with SEE02 ( $r = 0.015$ ), but this remained non-significant ( $p = 0.768$ ). This lack of association pointed to a perception gap among MSME owners. Although objective socio-economic conditions influenced their operations, entrepreneurs did not invariably recognize or acknowledge the impact of these factors. Contexts often underestimate formal economic trends, relying instead on experience or intuition.

**Table 6: Spearman's Rank Correlation Matrix for Variables**

Variable	SEI 01	SEI 02	SEI 03	SEI 04	SEI 05	SEE 01	SEE 02	SEE 03	SEE 04	SEE 05	Ext-N
SEI 01	—	0.480***	0.542***	0.455***	0.427***	0.196***	0.555***	0.205***	0.398***	0.292***	0.342***
SEI 02	0.480***	—	0.320***	0.403***	0.052	0.197***	0.419***	0.034	0.393***	0.05	0.223***
SEI 03	0.542***	0.320***	—	0.516***	0.602***	0.592***	0.600***	0.211***	0.397***	0.545***	0.462***
SEI 04	0.455***	0.403***	0.516***	—	0.512***	0.493***	0.488***	0.048	0.560***	0.124*	0.277***
SEI 05	0.427***	0.052	0.602***	0.512***	—	0.661***	0.476***	0.217***	0.440***	0.518***	0.512***
SEE 01	0.196***	0.197***	0.592***	0.493***	0.661***	—	0.291***	0.149**	0.440***	0.434***	0.424***

**Table 6 (cont):** Spearman's Rank Correlation Matrix for Variables

<b>SEE 02</b>	0.555***	0.419***	0.600***	0.488***	0.476***	0.291***	—	0.182***	0.476***	0.207***	0.422***
<b>SEE 03</b>	0.205***	0.034	0.211***	0.048	0.217***	0.149**	0.182***	—	0.194***	0.145**	0.153**
<b>SEE 04</b>	0.398***	0.393***	0.397***	0.320***	0.560***	0.440***	0.476***	0.194***	—	0.321***	0.450***
<b>SEE 05</b>	0.292***	0.05	0.545***	0.124*	0.518***	0.434***	0.207***	0.145**	0.321***	—	0.153**
<b>Ext-N</b>	0.342***	0.223***	0.462***	0.277***	0.512***	0.424***	0.422***	0.153**	0.450***	0.512***	—

p-value: Significance levels indicated by asterisks (\* p < .05, \*\* p < .01, \*\*\* p < .001)

The Spearman's correlation analysis outlined significant relationships among the dimensions of Socio-economic Influence (SEI), Socio-economic Environment (SEE), and the extent to which socio-economic factors influence the management of Micro, Small, and Medium Enterprises (MSMEs), designated as Ext-N. All SEI indicators (SEI 01 through SEI 05) presented in Table 6 demonstrated robust and statistically significant positive correlations among one another, with correlation coefficients spanning from moderate to high. For instance, SEI 03 and SEI 05 demonstrated a strong correlation of 0.602 (p < .001). These findings suggested that different elements of socio-economic influence are interconnected and often appear together. It suggested a coherent structure in which different dimensions of socio-economic influence reinforced each other in shaping MSME management practices.

The SEE variables also showed strong internal consistency. Several variables within this category were significantly correlated, such as SEE 01 and SEE 05 (r = 0.434, p < .001) and SEE 02 and SEE 04 (r = 0.476, p < .001). These patterns implied that environmental components affecting MSMEs tended to interact or overlap, forming a mutually reinforcing system of external socio-economic conditions.

Moderate to strong correlations were found between the SEI and SEE variables, with coefficients mainly ranging from 0.196 to 0.661, and most reaching statistical significance at p < .001. Notably, the correlation between SEI 05 and SEE 01 was particularly high (r = 0.661, p < .001), indicating that certain aspects of socio-economic influence are closely connected to features of the surrounding socio-economic environment. This implies that MSMEs impact both direct and contextual socio-economic factors in a complementary manner.

All SEI and SEE indicators showed a positive correlation with the Ext-N variable, which represented the overall socio-economic contribution to MSME management. Most of these correlations were statistically significant, ranging from 0.153 to 0.512. Ext-N showed the strongest correlations with SEI 05 (r = 0.512, p < .001) and SEE 04 (r = 0.450, p < .001), highlighting these factors as crucial influences on MSME management processes.

The findings highlight a complex relationship between the socio-economic characteristics of MSMEs and their operational activities. There was a strong internal consistency of the Socio-economic Environment (SEE) and Socio-economic Influence (SEI) variables, supporting a solid conceptual foundation. There was also a significant link between SEI and SEE, suggesting an ongoing interaction between specific factors and the broader socioeconomic environment that affects business operations.

Both SEI and SEE in managing MSMEs have a significant effect, as highlighted by their link with Ext-N. The results demonstrate the importance of providing MSMEs with specialized support. Considering the particular social and economic conditions in the area, as well as the broader surroundings, will be highly advantageous. It can also assist MSMEs in becoming more productive and ensuring long-term, sustainable growth by fortifying these essential elements (Kumar et al., 2023).

**5. CONCLUSION**

The research indicates that socio-economic factors have a significant impact on the management of Micro, Small, and Medium-Sized Enterprises (MSMEs). Management often involves complex and unpredictable methods. The socio-demographic profiles do not comprehensively account for all the observed variations in the factors. There are demographic factors with limited predictive capacity in shaping the

decision-making behaviors of business owners, including dependents, marital status, and gender. Other factors also have strong statistical links to managerial actions, such as income, education, and primary occupation. The research results indicate that the socio-economic conditions form a highly interconnected context framework. Various factors, including experience, informal education, flexible strategies, and local support networks, shape the skills of entrepreneurs. The management skills of a business owner are affected not only by their socio-economic background but also by ongoing interactions between external factors, as well as personal initiative. There were also important key factors, such as access to local infrastructure, income levels, and purchasing power, that have a strong link to managerial effectiveness in a business. Addressing the interconnected elements is a crucial element to improving the resilience and long-term sustainability of MSMEs at the local level. To better understand sustainable MSME management, future research should explore the relationships among psychological, behavioral, and institutional factors, especially in emerging economies and decentralized regions such as urban areas and barangays.

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