

# Challenges Faced by The MSMEs: Input to Policy Recommendations

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## Abstract

MSMEs play a vital role in economic growth by stimulating employment, promoting revenue distribution, and reducing poverty. MSMEs operate but struggle to compete with larger industries in terms of productivity. This study examined the challenges hindering the growth and performance of MSMEs, aligning with the Sustainable Development Goals (SDGs) to support them, and addressed a critical research gap in localized MSME policy interventions. This research uniquely focused on the specific socio-economic and regulatory conditions that contribute more to a targeted approach for MSMEs. The study employed a descriptive survey with a researcher-made questionnaire, and 303 respondents were selected through simple random sampling. Data analysis utilized percentages, means, Chi-square tests, and ANOVA. Findings indicated that most MSMEs are sole proprietorships engaged in trading, with limited access to finance, technology, and market opportunities. The most pressing concern remains the business environment, particularly regulatory inefficiencies and limited government support. The study revealed significant relationships between business type and business environment, business form, number of employees, years in operation, gross annual revenue, access to finance, access to technology, productivity, and efficiency. The study provided policy recommendations to enhance MSME resilience and align with the Sustainable Development Goals (SDGs), particularly SDG 8 (Decent Work and Economic Growth) and SDG 9 (Industry, Innovation, and Infrastructure).

**Keywords:** Access to Finance; Access to Market; Access to Technology; Business Environment; Productivity and Efficiency.

## 1. Introduction

Micro, small, and medium enterprises (MSMEs) are the backbone of economic growth and industrial development in the Philippines, representing 99.5% of all businesses and contributing significantly to employment for 62.4%. In the 21 economies of the Asia-Pacific Economic Cooperation (APEC), it was argued that MSMEs are the driving force behind job creation, economic growth, and innovation. As a result, they are often described as efficient in stimulating employment, the seeds of big business, and the fuel of national economic engines.

MSMEs also play a vital role in rural communities and remote areas. They contribute to a more equitable distribution of income, disperse economic activities in the countryside, and, most importantly, are powerful forces in alleviating poverty. However, despite the significant role they play in the economy, MSMEs remain far less productive than large firms. They still face various challenges that prevent them from achieving their full potential and growth. MSMEs also face barriers to their long-term survival and development, which reduces the performance of enterprises.

The MSMEs ecosystem, driven by its geographical and economic landscape, is a regional hub for agribusiness, trading, and retail, yet its MSMEs struggle with market expansion, financial accessibility, innovation, adaptation to scientific advancement, and modern business technologies. The lack of structured support mechanisms for these enterprises has resulted in slower business growth compared to more urbanized areas. Addressing these challenges is crucial for fostering inclusive economic development.

In this regard, MSMEs shall embrace innovation and adapt to technological advancements. By integrating digital tools, modern business practices, and innovative strategies, MSMEs can enhance competitiveness, ensure sustainability, and build greater resilience in an emerging progressive economic landscape. Their ability to innovate is not only a driver of productivity but also an important factor in strengthening their role as engines of inclusive and sustainable growth.

This study focused on identifying the multifaceted challenges faced by the MSMEs. Mitigating the challenges faced by MSMEs will help increase productivity, which will not only boost overall economic development but will also foster more inclusive growth and shared prosperity, as the sector employs the majority of businesses and employees. In addition, the study will provide information useful for the agencies concerned in developing policy recommendations for MSMEs to overcome the challenges they face.

Furthermore, this research project aimed to support the Sustainable Development Goals (SDGs) of eradicating poverty and other deprivations, which entail strategies to improve and stimulate economic growth through SDG 8: decent work and economic growth and SDG 9: industry, innovation, and infrastructure.

## 2. Literature Review

### 2.1. Micro, small, and medium enterprises (MSMEs)

The Republic Act No. 9501, or the Magna Carta for MSMEs, defined micro, small, and medium enterprises (MSMEs) in the Philippines as any business activity or enterprise engaged in industry, agribusiness, and/or services with an asset size of up to PHP100 million, excluding land, and an employment size of less than 200 employees. Based on these categories, it is classified as a micro, small, or medium enterprise, regardless of the type of business ownership, such as a single proprietorship, a cooperative, a partnership, or a corporation. In addition, amending Republic Act No. 6977, as amended, otherwise known as the "Magna Carta for Small Enterprises" and, for other purposes, recognizes that MSMEs have the potential to generate more employment and economic growth and therefore can help to provide a self-sufficient industrial foundation for the country. As a result, the State's policy to promote, support, strengthen, and encourage the growth and development of MSMEs in all productive sectors of the economy, particularly rural/Agri-based enterprises, has been declared. The State also recognized the specific needs of MSMEs and undertook to promote entrepreneurship, support entrepreneurs, encourage the establishment of MSMEs, and ensure their continued viability and growth.

Additionally, MSMEs are considered a flexible system that functions in challenging environments. As such, their operation is influenced by a variety of factors, including digital integration, system efficiency, and technology adoption, in addition to market conditions, financial resources, and finances (Ningsih et al., 2022). This perspective highlights the need for Magna Carta-based legislative support to align with the strategies that enhance MSMEs' capacity and adaptability to innovate, digitize, and maintain their resilience in the face of a shifting economic and technological landscape. Therefore, the combination of adaptive enterprise systems and government policy may guarantee that MSMEs are not only protected but also empowered to maintain resilience, competitiveness, and inclusive economic growth.

### 2.2. Status and condition of MSMEs

MSMEs are the foundation of the Philippine economy, as they are the primary drivers of economic growth, job creation, and income support. The government's continued implementation of its financial plan is a sign of recognition of the importance of MSMEs in the country. With this mission, the implementation of policy and provisions is essential to address, sustain, and expand the programs and services of MSMEs. These enterprises undoubtedly contribute to the country's gross domestic product and growing workforce (UP Institute for Small-Scale Industries, 2020).

In 2019, MSMEs accounted for more than 99% of registered businesses in the country and provided about 62% of employment to the workforce. MSMEs account for 25% of the country's total export revenues. It is also estimated that approximately 60% of all exporters in the country fall into the MSME category. The majority of business establishments in the country are MSMEs, which means that the largest part of the workforce is in this sector (Department of Trade and Industry (DTI), 2019).

With the renewed purpose of recognizing MSMEs as a key contributor to the country's economic growth and employment, improved and innovative government initiatives have been developed to ensure sustainable growth for MSMEs and accelerate the achievement of the country's financial objectives. However, despite the availability of the budget allocation, there is still a failure to do so. This is due to a lack of comprehensive strategic planning and prioritization of activities (DTI, 2018). These inefficiencies hinder the growth of MSMEs and diminish their competitiveness in global markets.

An opportunity for overcoming these limitations is the adoption of technology and digital integration. The application of information and communication technologies (ICTs) may enhance operational efficiency, reduce transaction costs, and expand the market reach of MSMEs. Furthermore, access to external resources, such as knowledge networks, financial support, development, and technological expertise, has become a crucial determinant of market success. In this way, the competitiveness of MSMEs becomes increasingly affected by their capacity to utilize digital tools, implement creative marketing strategies, and establish cooperative relationships with banks, government organizations, and business leaders. Such collaboration is essential to ensure that MSMEs maintain their resilience in an increasingly technologically driven and competitive environment (Umami et al., 2024).

Other studies have highlighted how technology-enhanced learning can be an effective tool for the development of MSMEs. According to the Philippine Institute for Development Studies (PIDS), mobile learning can enhance efficiency, reduce costs, and increase access to relevant information and resources, thereby improving competitiveness and decision-making among enterprises (Barroga et al., 2021). Similarly, Matias and Hernandez (2021) emphasize the need for MSMEs to adopt innovations such as cloud computing to optimize business processes, strengthen supply chains, and reduce financial and liquidity challenges. These technologies enhance production and operational sustainability while also opening new markets by providing cost-effective services.

In summary, the present study demonstrates that MSMEs require ongoing government support, strategic digital integration, and e-learning to expand and remain competitive. It will be necessary to address structural inefficiencies and encourage adaptable technical solutions to ensure that MSMEs achieve growth, resilience, and a sustained contribution to national development goals.

### 2.3. Challenges faced by the MSMEs

MSMEs in the Philippines are currently facing numerous challenges, including limited or slow access to finance, a lack of or underdeveloped information technology infrastructure, difficulties in cultivating proper sales channels, and a restricted market reach (Khan, 2021). In addition, the Senate Economic Office (SEPO) in 2012 stated that the constraints often faced by MSMEs can generally be categorized as non-financial barriers, such as heavy regulation, high tax rates, and corruption, as well as financial obstacles, specifically access to finance. The Philippines is lagging behind its neighboring countries in reducing the number of start-up procedures and the cost of starting a business. These non-financial barriers hinder the development of MSMEs, leading to a high cost of doing business, a poor business environment, and discouraging the formation of new MSMEs. The lack of access to financing has been identified as the most significant constraint on the growth and development of MSMEs.

Access to finance, particularly from external sources such as banks and various financial institutions, remains a vital yet limited resource for business growth. Caraballo (2018) highlighted that restricted access to capital remains a significant barrier for businesses. A recent

study by Foxmont Capital Partners and BCG (2025) found that MSMEs account for only 4.1% of total bank financing, which is disproportionately low compared to their economic contributions and the level of support required. The COVID-19 pandemic highlighted these weaknesses, with 79% of microenterprises indicating insufficient working capital despite policy measures (OMFIF, 2022). By September 2023, financial institutions allocated merely 1.80% of their loan portfolios to MSMEs, which is considerably below the mandated level, frequently opting to incur penalties rather than comply with enforced lending regulations (FINEX, 2024). Research has linked this funding deficiency to information imbalances, collateral limitations, and the elevated transaction expenses of assisting small borrowers (Business-World, 2024). In addition to these enduring challenges, the increasing role of technological developments in shaping financial access for enterprises was emphasized. Specifically, the use of digital payment platforms, such as QR Ph, InstaPay, and PESONet, has created transaction records that can be analyzed in relation to lending practices and credit assessment (Bangko Sentral ng Pilipinas (BSP), 2024). Furthermore, the Open Finance Framework, institutionalized by the BSP, facilitates data sharing across financial institutions, offering the possibility of generating borrower profiles from digital footprints (BSP, 2023). Likewise, the emergence of digital banks, established under BSP Circular 1105, has been noted in relation to financial inclusion initiatives, with their operations designed around fully digital onboarding and alternative credit evaluation methods (BSP, 2020).

Innovation and technology are indispensable for MSMEs striving to overcome persistent structural challenges in their business environment. As Khor et al. (2013) argued, perceptions of establishments about the business environment and the consequences of these constraints can have an impact on the health of businesses. Additionally, the business environment within which the firms operate is correlated with the observed growth of the enterprises. The survey requests that businesses indicate the severity of restrictions in utility, tax rates, political and economic instability, and corruption. As evidenced by the Philippines' low ranking in the World Bank's 2020 Ease of Doing Business Report, these difficulties are exacerbated by an unfavorable business climate, regulatory inefficiencies, and the challenges and high costs associated with conducting business.

Incorporating innovation and digital technologies in this situation can help improve adaptability in the face of infrastructure and regulatory limitations, speed up processes, and facilitate easier financing. MSMEs can mitigate some of the negative aspects of the business climate and potentially open doors for expansion and change by integrating digital tools such as cloud management systems, online service platforms, or e-commerce channels (Chan & Asni, 2023).

Market access is another challenge for MSMEs. Rogerson (2013) identifies several issues related to access to markets for SMEs. The first is the sectoral disadvantage, which occurs when a significant number of MSMEs are concentrated in a few sectors with low growth potential. Secondly, MSMEs are often located in areas that are difficult to reach, thereby reducing market access opportunities. Ultimately, MSMEs must enhance the quality of their products to compete in other markets effectively.

Furthermore, many MSMEs struggle to establish and maintain a presence in their desired markets. MSMEs in their target markets have limited access to information on potential buyers' preferences, needs, spending capacity, and willingness to pay (Francisco & Canare, 2019). Innovation and technology, however, offer essential channels to overcome these constraints. Digital platforms and e-commerce systems enable MSMEs to bypass geographic isolation and reach broader customer bases at a relatively low cost. Despite limited internal resources, online platforms and e-commerce help businesses reach new customers and increase value generation.

Another barrier to competitiveness for MSMEs is access to technology. Lack of innovation and technical knowledge was identified as one of the main challenges restricting MSMEs' production in the Philippine MSME Development Plan 2017–2022. According to ADB (2015), inadequate ICT infrastructure compromises access to regional and international industrial networks.

MSMEs are less able to develop and enter new markets due to these restrictions, which also reduce their operational efficiency. However, digital technologies and creativity provide ways to overcome these obstacles. According to research, integrating automation, cloud-based solutions, and digital platforms can significantly enhance productivity, reduce operating expenses, and unlock new markets. Improving digital infrastructure, fostering ICT literacy, and implementing innovation-focused programs and policies are essential to overcoming enduring obstacles to technology adoption and enabling MSMEs to thrive in an increasingly digitalized economy (OECD, 2021).

Most of the cited challenges were faced by the MSMEs, which may affect their growth and development. To achieve sustainable growth for MSMEs, it is essential to enhance the overall business environment and, more importantly, increase access to finance, markets, and technology. This would require strong coordination between national agencies and local government units in the effective implementation of MSME-related policies (SEPO, 2012).

## 2.4. Theoretical and Innovation Perspectives

This study highlights the challenges faced by MSMEs through the integration of several theoretical perspectives that explain their capacity to adopt technology, manage internal resources, and sustain competitiveness. The Technology Acceptance Model (TAM) emphasizes how perceptions of usefulness and ease of use strongly influence the adoption of digital tools. This view is supported by recent empirical data where Capistrano, Gomez, and Isleta (2024) found that digital literacy, trust, and self-efficacy have a significant impact on technology adoption among MSMEs involved in e-commerce in the Philippines. Similarly, Matias and Hernandez (2021) demonstrated that the preparedness of MSMEs for cloud computing adoption depends on cost, familiarity, and perceived benefits. Mia, Jimenez, Habaradas, Rani-eses, Javier, and Enriquez (2024) further demonstrated how the pandemic-induced digital transformation among Philippine MSMEs was affected by barriers, such as infrastructural deficiencies, and facilitators, like digital preparedness. According to additional research, the COVID-19 pandemic accelerated digital transformation by prompting MSMEs to adopt IoT-enabled logistics, AI-driven analytics, and e-commerce platforms to enhance their resilience and competitiveness (Li et al., 2022; UNCTAD, 2021).

The Resource-Based View (RBV), which builds on previous viewpoints, highlights the importance of strategic resources as sources of competitive advantage. According to recent studies, MSMEs reap the most benefits from leveraging organizational culture, entrepreneurial attitude, and regional market expertise. Access to cutting-edge digital technologies is, however, limited by issues such as the business environment, financial accessibility, market accessibility, productivity, and efficiency, all of which frequently erode a company's ability to gain a sustained competitive edge. To overcome its static restrictions, recent conceptual advancements support combining RBV with dynamic viewpoints (Sun, Chen, & Mei, 2023).

The need for businesses to integrate and dynamically adapt in quickly changing environments is emphasized by Dynamic Capability Theory (DCT). For MSMEs, resilience is more about developing the capacity to identify new possibilities, embrace them, and adjust operations to maintain competitiveness, rather than just having financial resources. MSMEs that transitioned to e-commerce and digital service delivery, as demonstrated by the COVID-19 pandemic, showcased dynamic capabilities by reallocating limited resources to meet shifting market demands. However, many businesses failed due to a lack of organizational flexibility, digital skills, and the ability to adapt to new technology (Martin, 2023).

Furthermore, MSMEs' adaptive systems work in complex contexts. Their performance is affected by a variety of factors, including digital integration, system efficiency, and technology adoption, in addition to market conditions, financial resources, and finances (Ning-sih et al., 2022). Furthermore, the institutional framework of the Philippines is firmly rooted in this theoretical link. Known as the Magna Carta for MSMEs, Republic Act No. 9501 sets asset and employment thresholds for MSMEs and recognizes their importance to job creation and industrial sustainability. It needs state policies to support enterprise sustainability, encourage entrepreneurship, and advance MSMEs in all industries.

By emphasizing that MSME development depends not only on the development of internal resources but also on the development of adaptive capacities within an enabling ecosystem, this legislation improves the theoretical perspectives of RBV and DCT. The legal framework that promotes this dual need is provided by Magna Carta, which stresses that resource cultivation and the capacity to adapt to changing business contexts are both necessary for sustainable growth.

By linking technological adoption, adaptive capabilities, and state-supported development policies, the integration of TAM, RBV, DCT, and Magna Carta enhances our knowledge of the difficulties faced by MSMEs. According to these points of view, developing internal capabilities and establishing a supportive external environment that promotes resilience, competitiveness, and inclusive growth are both necessary for empowering MSMEs.

### 3. Research Method

The Input-Process-Output (IPO) model guided the study. Its findings were used to create policy recommendations aimed at helping Micro, Small, and Medium Enterprises (MSMEs) overcome challenges and build successful businesses. The input included essential information, such as MSMEs' business profiles and resource gaps, or the specific challenges they had in areas including the business environment, access to market, access to finance, access to technology, and productivity and efficiency. The Resource-Based View (RBV) views these challenges as chances to create rare, valuable, unique, and distinct (VRIN) resources to improve MSMEs' competitiveness. To obtain a thorough grasp of MSME difficulties. To collect comprehensive data on MSME challenges, the process phase combines quantitative and qualitative methods. The statistical analysis and quantitative surveys assess the magnitude and trends of MSME constraints. Surveys were used to gather data, and statistical techniques were used for analysis and understanding the relationship between the business's profile and the challenges faced by MSMEs. In addition, qualitative techniques such as interviews were utilized for detailed insights into how MSMEs develop resilience through sensing opportunities, seizing them through innovation, and reconfiguring their resources. This phase additionally highlights the Technology Acceptance Model (TAM) on how MSMEs are willing to adopt the digital tools and innovations by considering the usefulness and ease of use, and Dynamic Capabilities (DCT) support financial innovation, sustainable practices, and the adoption of new technologies. The final output is a set of policy recommendations designed to address these challenges and support the growth and sustainability of MSMEs.

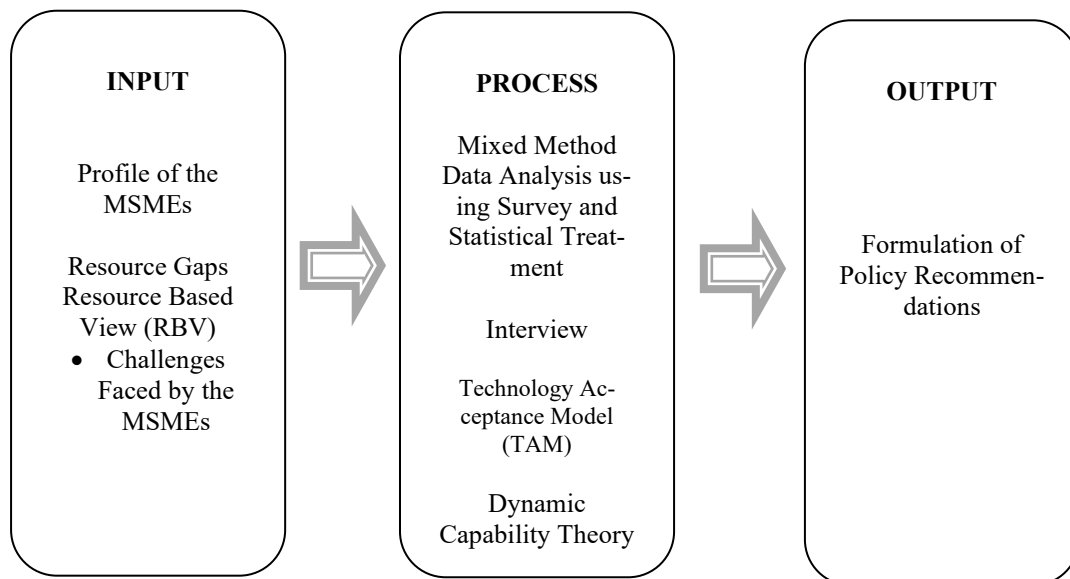


Fig. 1: Conceptual Model

The study used a quantitative research approach, specifically utilizing a descriptive survey method, to assess the challenges faced by MSMEs. This method was applied to effectively gather data on the characteristics, experiences, and perceptions of the respondents. The total population consisted of 2,648 registered MSMEs. A sample of 336 was determined using the Raosoft sample size calculator, ensuring a 5% margin of error and a 95% confidence level. A simple random sampling technique was applied to provide equal representation across the MSME sector, minimizing selection bias and enhancing the reliability and generalizability of the findings. This method allowed for the inclusion of businesses in terms of size, industry sector, and years of operation. The questionnaires were distributed to 336 MSMEs, 303 were completed and returned, resulting in a response rate of 90.18%.

To strengthen the survey results, semi-structured interviews with 20 selected MSME owners and managers were conducted. The purpose of these interviews was to deepen and support the findings by exploring contextual factors. This integration allowed for clarification of survey responses, validation of trends, and the identification of nuanced insights into MSME challenges such as resource constraints, technology adoption behaviors, and strategic responses.

Data were collected using a researcher-made questionnaire, which covered two main areas: the business profile of the respondents and the challenges they faced across five key domains: (1) business environment, (2) access to finance, (3) access to market, (4) access to

technology, and (5) productivity and efficiency. Respondents rated the extent to which they experienced challenges in each area using a five-point Likert scale. The collected data were subjected to statistical analysis.

Data collection was followed by statistical analysis. Descriptive statistics, including frequency, percentage, and mean, were used to summarize MSME profiles and the level of challenges encountered. Relationships within the data are analyzed by inferential statistics. Chi-square tests were conducted to explore the relationship between business characteristics and the challenges reported, while One-Way ANOVA determined which issues were most significant. This approach enabled a clearer understanding of the challenges MSMEs face and informed the development of policy recommendations. The output extends beyond policy recommendations to highlight technological innovation, scientific progress, and competitiveness, where MSMEs grow into resilient and sustainable businesses. The dual lenses of RBV and DCT are seen in these outcomes, which position MSMEs as co-creators of technical advancement and inclusive economic growth by assuring continual adaptability and developing VRIN resources, respectively.

Although the study provides valuable insights into the challenges faced by MSMEs, certain limitations should be acknowledged. First, the study focused exclusively on registered MSMEs, potentially excluding informal enterprises that also contribute significantly to the local economy. Future studies may benefit from adopting a mixed-methods approach and considering the informal enterprises to capture more nuanced, qualitative perspectives from business owners and other relevant stakeholders

## 4. Results

This provides the presentation, analysis, and interpretation of the study's results on the Challenges faced by MSMEs, as input to Policy Recommendations

**Table 1: Profile of MSMEs in terms of Forms of Business**

Forms of Business	Frequency	Percentage
Sole proprietorship	249	82.2%
Partnership	28	9.2%
Corporation	21	6.9%
Cooperative	5	1.7%
Total	303	100%

The table presents the frequency distribution of MSMEs based on their forms of business. It revealed that the majority of MSMEs were sole proprietorships, accounting for 249 establishments or 82.2%. This was followed by partnerships, which made up 9.2% of the total. Corporations comprised 21 firms, representing 6.9%, while cooperatives were the least common, with only 5 establishments or 1.7%. Based on these statistics, sole proprietorships dominated the MSME sector, most likely due to their low start-up costs, simplicity, and ease of operation

**Table 2: Profile of MSMEs in terms of Types of Business**

Types of Business	Frequency	Percentage
Trading	154	50.8%
Manufacturing	22	7.3%
Service	127	41.9%
Total	303	100%

The frequency distribution of MSMEs by type of business indicated that trading businesses had the highest number of respondents, totalling 154 or 50.8%. Service businesses followed closely, with 127 respondents, representing 41.9%. Manufacturing firms were the smallest group, with 22 respondents, accounting for 7.3%. Most of the businesses belonged to the trading sector, as this type of MSME is generally easier to establish and has low capital requirements compared to other industries.

**Table 3: Profile of MSMEs in terms of Industry Sector**

Industry Sector	Frequency	Percentage
Agriculture, Fisheries, Forestry, Agribusiness	17	5.6%
Services	132	43.6%
Mining and Quarrying	1	0.3%
Manufacturing, Construction, and Real Estate Development	18	5.9%
Wholesale and Retail Trade	135	44.6%
Total	303	100%

Most MSMEs operated within the wholesale and retail sector, accounting for 135 establishments, or 44.6% of the total. This was followed closely by the service sector, which consisted of 132 businesses, accounting for 43.6%. In contrast, 18 MSMEs (5.9%) were involved in manufacturing, construction, and real estate development. The agriculture, fisheries, forestry, and agribusiness sector encompassed 17 businesses, representing 5.6%. Mining and quarrying had the lowest representation, with only one company, equivalent to 0.3%. The majority of wholesale and retail enterprises may be attributed to their relatively low start-up costs and operational simplicity.

**Table 4: Profile of MSMEs in terms of Asset Size**

Asset Size	Frequency	Percentage
Total assets not more than 3,000,000	270	89.1%
Total assets of Php 3,000,001 to 15,000,000	22	7.3%
Total assets of Php 15,000,001 to 100,000,000	11	3.6%
Total	303	100%

In terms of asset size, the majority of the MSMEs reported total assets not exceeding ₱3,000,000, with 270 businesses accounting for 89.1% of the total sample. Businesses with assets ranging from ₱3,000,001 to ₱15,000,000 followed, comprising 22 respondents or 7.3%. The smallest group consisted of MSMEs with assets between ₱15,000,001 and ₱100,000,000, representing only 11 respondents, or 3.6%. These

results indicated that most businesses operated with relatively limited assets, placing them within the micro and small enterprise categories as defined by Magna Carta for business enterprises.

**Table 5: Profile of MSMEs in terms of Number of Employees**

Number of employees	Frequency	Percentage
1 - 9 employees	272	89.8%
10-99 employees	28	9.2%
100-199 employees	3	1.0%
Total	303	100%

The frequency distribution of the business profile in terms of number of employees revealed majority of the enterprises have 1-9 employees, with a frequency of 272, equivalent to 89.8 percent. Meanwhile, there are 28 business organizations with 9.2 percent for 10-99 employees. The least profile comprised 100-199 employees, with a frequency of 3, which is equivalent to 10 percent of the total respondents. Most business organizations consist of 1-9 employees, which denotes the size of enterprises that fall into micro and small businesses, characterized by limited capitalization, resulting in a small workforce and constraining their ability to expand in their business operations.

**Table 6: Profile of MSMEs in terms of Number of Years in Operation**

Number of years in operation	Frequency	Percentage
less than twelve (12) months	53	17.5%
1 to 5 years	144	47.5%
6 to 10 years	53	17.5%
11 years and above	53	17.5%
Total	303	100%

Analysis of the respondents' years in business operation revealed that a significant portion of MSMEs had been operating for 1 to 5 years, with 144 respondents accounting for 47.5% of the total. The groups with less than 12 months, 6 to 10 years, and 11 years and above each had an equal number of respondents, with 53 businesses in each category, representing 17.5% respectively. Most businesses operating within the 1 to 5-year is a relatively recent establishment that allows for meaningful experience in navigating the business environment. This trend may be influenced by the impacts of the COVID-19 pandemic, during which many enterprises were forced to close. Some of these closures led to the re-establishment of businesses under new ventures, contributing to the number of respondents operating for less than 12 months.

**Table 7: Profile of MSMEs in terms of Average Gross Annual Revenue**

Average Gross Annual Revenue	Frequency	Percentage
less than Php 1,000,000	238	78.55%
Php 1,000,001 to Php 3,000,000	46	15.18%
Php 3,000,001 to Php 10,000,000	11	3.63%
more than Php 10,000,000	8	2.64%
Total	303	100%

In terms of average gross annual revenue, the majority of MSMEs reported earnings of less than ₱1,000,000, accounting for 238 businesses or 78.55% of the total. A smaller portion, consisting of 46 respondents (15.18%), with a revenue ranging from ₱1,000,001 to ₱3,000,000. MSMEs earning between ₱3,000,001 and ₱10,000,000 represented 11 respondents or 3.63%, while only 8 businesses, or 2.64%, have an annual revenue exceeding ₱10,000,000. These figures highlight that the majority of MSMEs operated within the micro-enterprise category, characterized by limited revenue generation. This trend may be attributed, in part, to the economic disruptions caused by the COVID-19 pandemic, which significantly affected consumer demand and reduced business income across various sectors.

**Table 8: Challenges faced by the MSMEs in terms of Business Environment**

Business Environment As part of the business enterprise, I find that.....	Weighted Mean	Verbal Interpretation
obtaining a business permit and license is time-consuming.	3.16	To a Moderate Ex- tent
there is an excessive number of regulatory and documentary requirements.	3.18	To a Moderate Ex- tent
there is a lack of direct government business support for the sector, like business-related training programs, seminars, and workshops.	2.92	To a Moderate Ex- tent
taxation is at a high rate.	3.12	To a Moderate Ex- tent
some laws and regulations are irrelevant and inconvenient to follow.	2.78	To a Moderate Ex- tent
there are too many procedures and signatories for business permit applications.	3.08	To a Moderate Ex- tent
there is a lack of information about the process of securing business permits and licenses.	2.75	To a Moderate Ex- tent
the cost of fees paid related to business applications is unreasonable.	2.76	To a Moderate Ex- tent
It will take a couple of days to secure a mayor's permit	3.05	To a Moderate Ex- tent
COMPOSITE MEAN	2.98	To a Moderate Ex- tent

As shown in the data above, the business environment received a composite mean score of 2.98, indicating that MSMEs experienced challenges in this area to a moderate extent. This implies that, although the external business environment was not particularly challenging, many MSMEs nonetheless faced significant obstacles. The excessive number of regulatory and documentary requirements emerged as the most pressing concern, with the highest weighted mean of 3.18, still categorized as a moderate challenge. This was followed by issues

related to the time-consuming process of obtaining business permits and licenses, as well as the high rate of taxation, with weighted means of 3.16 and 3.12, respectively, and perceived as moderate in severity.

Other concerns included the perceived irrelevance or impracticality of certain laws and regulations, which received a weighted mean of 2.78, and the unreasonableness of fees associated with business applications, with a weighted mean of 2.76. The least concerning issue, though still rated as a moderate challenge, was the lack of information regarding the process of securing business permits and licenses, which had the lowest weighted mean of 2.75.

Overall, these findings highlight the regulatory and procedural burdens that continue to hinder MSME operations, emphasizing the need for more efficient, transparent, and accessible business processes through digital platforms.

**Table 9:** Challenges faced by the MSMEs in terms of Access to Finance

Access to Finance As part of the business enterprise, I find that.....	Weighted Mean	Verbal Interpretation
Financial institutions often lack the necessary structure to manage their credit policies effectively.	2.41	To a Slight Extent
there is a lack of information on where to obtain financing.	2.39	To a Slight Extent
There are a lot of requirements to avail the credits offered by financial institutions	2.56	To a Moderate Extent
There is a high interest rate on short-term financing.	2.57	To a Moderate Extent
the existing financial records and business plans required for credit evaluation were found to be inadequate and unreliable, which led to disapproval.	2.46	To a Slight Extent
there are limited sources of acceptable collateral for granting loan applications.	2.46	To a Slight Extent
financial institutions provide a small loanable amount and/or credit limit.	2.45	To a Slight Extent
the credit term has a short payment scheme and is not flexible (fixed and not adjustable period of time).	2.43	To a Slight Extent
COMPOSITE MEAN	2.47	To a Slight Extent

The findings presented the challenges faced by MSMEs in accessing financing. The composite mean score of 2.47 indicated that respondents encountered this issue to a slight extent, suggesting that although access to finance was not among the most critical barriers, it nevertheless remained a persistent concern for many MSMEs in sourcing affordable and accessible financing options.

Among the specific issues, the high interest rates on short-term financing emerged as the most pressing problem experienced by the MSMEs, with a weighted mean of 2.57, reflecting a moderate level of difficulty. This was followed by the complexity of credit application requirements imposed by financial institutions, with a weighted mean of 2.56. In addition, the inadequacy and unreliability of existing financial records and business plans often led to disapproval of credit applications, and the limited availability of acceptable collateral further hindered loan approvals. These concerns had weighted means of 2.46 each, indicating that they were also moderately experienced. On the other hand, MSMEs reported slightly lesser difficulties with credit terms that lacked flexibility, such as fixed and short repayment periods, which had a weighted mean of 2.43. Similarly, the lack of institutional capacity to implement appropriate credit policies, with a weighted mean of 2.41, and limited information on where to access financing, with a weighted mean of 2.39, were perceived as less severe but still notable concerns.

These findings suggest that while access to finance was not perceived as a major challenge, the presence of structural, informational, and procedural barriers continued to affect MSMEs' ability to secure adequate funding for their operations and growth. Despite these challenges, the implementation of financial technology (FinTech) can be applied to simplify financial services into more accessible offerings, streamline transactions, and reduce costs, thereby improving MSMEs' access to finance.

**Table 10:** Challenges faced by the MSMEs in terms of Access to Market

Access to Market As part of the business enterprise, I find that.....	Weighted Mean	Verbal Interpretation
There is a lack of prior knowledge about the features and benefits of the products or services in relation to competitors.	2.40	To a Slight Extent
there is a need for appropriate packaging and labeling for the products or services being offered.	3.01	To a Moderate Extent
there is a need for continuous product or service development based on customers' preferences.	3.17	To a Moderate Extent
The price of the products or services is higher than the competitor's price.	2.38	To a Slight Extent
There are limited price promotions (such as price bundling, discounts, and coupons) available for the products or services offered.	2.76	To a Moderate Extent
The basis of the price is the total cost of producing the product or service, plus a markup percentage.	2.91	To a Moderate Extent
The real-time delivery of products or services affects the buying habits of customers.	3.06	To a Moderate Extent
There is a lack of transportation modes in delivering the products or services.	2.44	To a Slight Extent
The business has difficulty connecting with its customers due to the location.	2.36	To a Slight Extent
There is a weak advertising campaign for the products and services available to the market.	2.35	To a Slight Extent
Online (social media, websites, etc.) and offline (trade exhibits, tarpaulins, etc.) promotions are necessary to attract customers.	3.29	To a Moderate Extent
There is a lack of access to support services after the sale	2.37	To a Slight Extent
COMPOSITE MEAN	2.71	To a Moderate Extent

This section focuses on the challenges faced by MSMEs in terms of market access. The results showed a composite mean score of 2.71, indicating that MSMEs encountered a moderate level of difficulty in this area. Among the specific concerns was the challenge of both online and offline promotions aimed at attracting customers, which received the highest weighted mean of 3.29. The need for continuous product development followed, based on evolving customer preferences, with a weighted mean of 3.17. Additional challenges included ensuring real-time product delivery, which affected customer purchasing behavior, and the importance of appropriate packaging and labeling. These concerns had weighted means of 3.06 and 3.01, respectively, and were considered moderately experienced by the respondents. Meanwhile, MSMEs reported slightly fewer difficulties with pricing their products or services competitively, with a weighted mean of 2.38. Problems related to business location, which created barriers in connecting with customers, and weak advertising campaigns for products and services received the lowest weighted means of 2.36 and 2.35, respectively.

Overall, the results revealed that MSMEs moderately struggled with customer engagement, product development, and delivery systems. Concerns related to pricing, location, and promotional strategies were viewed as less critical but still relevant to enhancing market access.

and business performance. Addressing these areas may require the strategic integration of digital platforms and social marketing to strengthen competitiveness and support long-term growth.

**Table 11:** Challenges faced by the MSMEs in terms of Access to Technology

Access to Technology As part of the business enterprise, I find that.....	Weighted Mean	Verbal Interpretation
The enterprise has difficulty adopting new technology, resulting in an operational gap.	2.38	To a Slight Extent
There is a lack of technological assistance in producing innovative products or services.	2.44	To a Slight Extent
The new technology, both software (applications, systems, etc.) and hardware (equipment, machinery, gadgets, etc.), is costly.	2.91	To a Moderate Extent
Employees/workers are unfamiliar with the use of new technologies.	2.23	To a Slight Extent
There is a lack of funds to train existing employees/workers on the latest technology and skills.	2.33	To a Slight Extent
There is a reluctance to adopt new technologies and change business processes.	2.33	To a Slight Extent
COMPOSITE MEAN	2.44	To a Slight Extent

The results indicated that MSMEs had a composite mean of 2.44 in terms of access to technology, reflecting that they experienced this challenge to a slight extent. Among the specific concerns, the cost of acquiring new technology, including both software (such as applications and systems) and hardware (such as equipment and machinery), was identified as the most significant, with a weighted mean of 2.91. This was interpreted as a moderate level of challenge, suggesting that financial constraints played a key role in limiting access to technological advancements. MSMEs often face challenges in adopting new technologies due to the high costs of software and hardware and a lack of technical expertise. However, embracing technological and scientific advancements is essential, as it enhances productivity, competitiveness, and long-term sustainability, enabling MSMEs to streamline operations and meet evolving market demands.

Following this, MSMEs stated that a lack of technological assistance in developing innovative products or services, as well as difficulty in adopting new technology, contributed to operational inefficiencies. These concerns received weighted means of 2.44 and 2.38, respectively, indicating they were experienced to a slight extent.

Additional barriers comprised the lack of funds to train employees in the use of modern technology and skills, and a reluctance to modify existing business processes to accommodate technological change. Both of these issues received a weighted mean of 2.33. The least reported concern was the unfamiliarity of employees with new technologies, which obtained the lowest weighted mean of 2.23. Although these hindrances were rated to a slight extent, they still highlight areas where MSMEs may need support to improve technological adoption and overall productivity.

MSMEs may use digital financial technologies of mobile payments and e-wallets (Agung et al., 2025) like GCash, Maya, Pddlr, a mobile Point of Sale (POS) application, as an easy and affordable solution to digitize transactions, automate recordkeeping, and improve financial management. These platforms may be considered beneficial to MSMEs with limited resources due to being inexpensive, accessible through cellphones, and user-friendly.

Additionally, MSMEs may employ the utilization of social commerce platforms like Instagram and Facebook. In terms of e-commerce, the two main platforms are Shopee and Lazada.

Given that the challenges related to access to technology were experienced only to a slight extent, it is evident that the role of technological and scientific advancements to enhance MSME productivity, competitiveness, and sustainability remains a significant area of consideration. Leveraging technology can support businesses in streamlining operations, improving customer service and relationships, and expanding their target market (Hong et al., 2021).

**Table 12:** Challenges faced by the MSMEs in terms of Productivity and Efficiency

Productivity and Efficiency As part of the business enterprise, I find that.....	Weighted Mean	Verbal Interpretation
there are substandard products or services as a result of a poorly designed process.	2.32	To a Slight Extent
there is a need for streamlining the business process to lessen the numerous procedures.	2.56	To a Moderate Extent
delayed purchase orders reduce product or services production capacity.	2.75	To a Moderate Extent
it takes a lot of time to produce products or services due to the pending delivery of raw materials needed.	2.67	To a Moderate Extent
There is a need for proper product handling, warehouse inventory, and service management	2.96	To a Moderate Extent
there is outdated machinery and equipment used in the production area.	2.31	To a Slight Extent
Employees and workers cannot often perform their jobs effectively and efficiently due to limited training and development programs.	2.40	To a Slight Extent
The resources are limited, particularly in terms of financing support.	2.41	To a Slight Extent
The use of eco-friendly raw materials to produce products or services is not utilized.	2.68	To a Moderate Extent
The stock materials are incorrectly labeled and stored improperly due to limited space, resulting in a longer time to locate and produce their products or services	2.39	To a Slight Extent
quality control inspections of products and services were not performed regularly.	2.48	To a Slight Extent
COMPOSITE MEAN	2.54	To a Moderate Extent

This section identified the challenges faced by the MSMEs in terms of productivity and efficiency. The results revealed a composite mean of 2.54, indicating that respondents encountered these concerns to a moderate extent. Among the specific concerns, the most prominent was the need for proper product handling, warehouse inventory, and service management, which received a weighted mean of 2.96. This suggests that operational systems and logistics were significant areas of concern for many enterprises.

Delays followed, resulting in the processing of purchase orders, which reduced the production capacity for products and services. This issue received a weighted mean of 2.75. Additionally, the limited use of eco-friendly raw materials and the delays in production due to pending deliveries of necessary inputs were both moderately experienced, with weighted means of 2.68 and 2.67, respectively.

Other issues, though perceived to a lesser extent, included the use of outdated machinery and equipment, which received the lowest weighted mean of 2.31. Incorrect labeling and improper storage of stock materials, often caused by limited space, led to longer production times and had a weighted mean of 2.39. Substandard products or services resulting from poorly designed production processes were also noted, with a weighted mean of 2.32.

These findings highlight that MSMEs frequently struggle with productivity and efficiency due to factors such as limited financial resources, inadequate human capital, and a lack of technical and managerial expertise. Many enterprises found it difficult to implement improvements in their production systems. A lack of technical education and low skill levels further hindered their capacity to develop and apply cost-



effective solutions, which negatively impacted labor productivity. Moreover, the reliance on outdated machinery contributed to challenges such as low input availability, high input costs, seasonal fluctuations, and uncertainty in the supply of raw materials.

**Table 13:** Relationship between the profile and the challenges faced by the MSMEs (Business Environment)

Variables	p-values	Computed values	Decision on Ho	Verbal Interpretation
Forms of business	.54	7.98	Accepted	Not Significant
Types of business	.036	4.398	Rejected	Significant
Industry sector	.185	16.138	Accepted	Not Significant
Asset size	.978	1.176	Accepted	Not Significant
Number of employees	.937	1.805	Accepted	Not Significant
Number of years in operation	.529	8.048	Accepted	Not Significant
Average Gross Annual Revenue	.883	4.397	Accepted	Not Significant

This section determined the relationship between various aspects of the business profile, including forms of business, types of business, industry sector, asset size, number of employees, years in operation, and average gross annual revenue, and the challenges MSMEs faced in the business environment.

Based on the analysis, a significant relationship exists between the type of business and the business environment, as evidenced by a computed p-value of 0.036, which is below the 0.05 level of significance. The corresponding test statistic of 4.398 led to the rejection of the null hypothesis. This finding implies that different types of businesses encounter varying regulatory and documentary requirements necessary for operation. The result determined that the type of business plays a critical role in shaping the challenges MSMEs encounter, particularly in relation to regulatory and documentary requirements necessary for operation. Different business types are subject to distinct legal, administrative, and market-based conditions, thereby exposing them to varied compliance burdens. Additionally, trading, manufacturing, and service enterprises interact with the business environment in fundamentally different ways, as unique regulatory frameworks, industry-specific requirements, and market dynamics influence their operations. Consequently, the specific threats and opportunities faced by a firm are largely dictated by its primary mode of operation, underscoring the importance of business type as a determinant of the external pressures experienced by MSMEs.

In contrast, the analysis found no significant relationship between the business environment and other profile variables such as forms of business, industry sector, asset size, number of employees, years in operation, and average gross annual revenue. The p-values for these variables were 0.54, 0.185, 0.978, 0.937, 0.529, and 0.883, respectively, all of which exceeded the 0.05 significance threshold. The test statistics for these factors were 7.98, 16.138, 1.176, 1.805, 8.048, and 4.397, respectively, failing to reject the null hypothesis. This indicates that these aspects of the business profile did not significantly influence the challenges MSMEs faced in the business environment. This outcome suggests that many operational barriers faced by MSMEs in the Philippines are structural in nature and cut across firm characteristics. Research has consistently identified systemic constraints such as bureaucratic inefficiencies, inconsistent enforcement of regulations, high compliance costs, and limited access to government support programs as persistent obstacles, regardless of firm size, age, or revenue level (PIDS, 2024). For instance, both newly established and long-standing enterprises are required to navigate the same fragmented registration and licensing processes. At the same time, MSMEs face similar constraints in accessing finance and adopting digital technologies due to gaps in infrastructure and institutional support. These findings suggest that while the type of business significantly shapes the nature of regulatory and compliance burdens, other profile variables do not exert the same influence because external barriers are widespread and systemic within the Philippine MSME environment.

**Table 14:** Relationship between the profile and the challenges faced by the MSMEs (Access to Finance)

Variables	p-values	Computed values	Decision on Ho	Verbal Interpretation
Forms of business	.009	6.807	Rejected	Significant
Types of business	.836	2.779	Accepted	Not Significant
Industry sector	.275	14.422	Accepted	Not Significant
Asset size	.014	6.101	Rejected	Significant
Number of employees	.006	7.496	Rejected	Significant
Number of years in operation	.021	19.972	Rejected	Significant
Average Gross Annual Revenue	.019	5.49	Rejected	Significant

This section examined the relationship between various business profile factors, such as business form, business type, industry sector, asset size, number of employees, years in operation, and average gross annual revenue, and the challenges MSMEs faced in accessing finance. The analysis established a significant relationship between access to finance and several business profile variables. Specifically, the p-values for forms of business, asset size, number of employees, years in operation, and average gross annual revenue were 0.009, 0.014, 0.006, 0.021, and 0.019, respectively, all below the 0.05 level of significance. The corresponding test statistics were 6.807, 6.101, 7.496, 19.972, and 5.49. These results led to the rejection of the null hypothesis, indicating that these factors significantly influenced the challenges MSMEs faced in access to finance.

The significant association with forms of business may be due to differences in legal structure, which affect creditworthiness and collateral requirements. Asset size was also significant, as larger assets often serve as collateral, improving access to loans. The number of employees indicated business scale, where larger firms might have better financial records and thus better access to credit. Years in operation mattered because more established businesses tend to have proven track records, increasing lender confidence. Lastly, average gross annual revenue reflected business performance, with higher revenues often translating to stronger financial standing and easier access to financing. These factors collectively explain why they significantly influenced the challenges MSMEs faced in obtaining finance.

The findings determined that forms of business, asset size, number of employees, years in operation, and average gross annual revenue have a significant relationship with access to finance. This suggests that financial institutions and lending agencies consider these characteristics as critical indicators of creditworthiness and repayment capacity. The form of business matters because registered entities, such as corporations or partnerships, are often perceived as more stable and accountable compared to sole proprietorships, making them more attractive to creditors. Similarly, asset size serves as collateral and reflects the enterprise's capacity to secure loans. Further, the number of employees reflects organizational scale and potential productivity, both of which strengthen lender confidence. The years in operation indicate business stability and sustainability, with longer operational history reducing the perceived risk for financiers. Lastly, average gross annual revenue directly shows the firm's earning capacity and financial performance, which are essential considerations in credit

evaluations. Collectively, these significant variables highlight that financial access is not uniformly available to MSMEs but is strongly influenced by their structural and financial resource profile.

**Table 15:** Relationship between the profile and the challenges faced by the MSMEs (Access to Market)

Variables	p-values	Computed values	Decision on Ho	Verbal Interpretation
Forms of business	.42	9.061	Accepted	Not Significant
Types of business	.276	7.507	Accepted	Not Significant
Industry sector	.946	5.323	Accepted	Not Significant
Asset size	.056	12.286	Accepted	Not Significant
Number of employees	.917	2.027	Accepted	Not Significant
Number of years in operation	.643	6.947	Accepted	Not Significant
Average Gross Annual Revenue	.708	6.317	Accepted	Not Significant

The relationship between the business profile of MSMEs and the challenges they encountered in access to market was examined using profile variables such as types of business, industry sector, asset size, number of employees, years in operation, and average gross annual revenue, as shown in Table 15.

The computed p-values for all variables—forms of business, types of business, industry sector, asset size, number of employees, years in operation, and average gross annual revenue—were 0.42, 0.276, 0.946, 0.056, 0.917, 0.643, and 0.708, respectively. Since all values exceeded the 0.05 level of significance, and the corresponding test statistics of 9.061, 7.507, 5.323, 12.286, 2.027, 6.947, and 6.317 did not provide sufficient evidence to reject the null hypothesis, it was perceived that no significant relationships existed between these business profile variables and the challenges MSMEs experienced in market access.

This finding indicates that the obstacles MSMEs faced in access to markets were not influenced by their business type, sector, size, employees, length of operation, or revenue. This means that the concerns related to access to market appeared to be widespread and independent of enterprise characteristics. This may imply that systemic or external market conditions, rather than internal business attributes, were more influential in shaping the experiences of MSMEs. Therefore, interventions aimed at improving access to market shall be considered broader structural issues, such as consumer reach, competition, distribution channels, and marketing infrastructure, rather than focusing solely on the business profile of MSMEs.

The result aligns with Aldaba (2012), which argues that MSMEs, irrespective of size or longevity, may face similar barriers in penetrating markets due to structural constraints such as weak distribution networks, inadequate marketing infrastructure, and high levels of competition in both domestic and global markets. Even enterprises that own larger assets or have lengthy years in operation may not necessarily gain easier access to markets if there is limited consumer reach, insufficient digital presence, and an underdeveloped logistics system. Most MSMEs struggle with branding, product visibility, and highlighting the role of external conditions over internal business profiles.

These insights imply that interventions designed to improve MSMEs' market access shall focus less on enhancing digital platforms for marketing, improving supply and distribution channels, strengthening e-commerce adoption, and developing supportive trade facilitation policies. By targeting systemic barriers, policies and programs can provide a more inclusive and enabling environment that benefits MSMEs across all types and sizes.

**Table 16:** Relationship between the profile and the challenges faced by the MSMEs (Access to Technology)

Variables	p-values	Computed values	Decision on Ho	Verbal Interpretation
Forms of business	.011	21.308	Rejected	Significant
Types of business	.196	8.625	Accepted	Not Significant
Industry sector	.149	17.025	Accepted	Not Significant
Asset size	.914	2.063	Accepted	Not Significant
Number of employees	.505	5.308	Accepted	Not Significant
Number of years in operation	.042	17.474	Rejected	Significant
Average Gross Annual Revenue	.509	8.251	Rejected	Not Significant

The findings indicated that the profile variables, specifically, types of business, industry sector, asset size, number of employees, and average gross annual revenue, did not significantly influence the challenges faced by MSMEs in terms of access to technology. This suggests that these variables were not strong predictors of the difficulties enterprises encountered in adopting or utilizing technological tools and systems.

Additionally, the results also revealed that forms of business and the number of years in operation showed a statistically significant relationship with access to technology. Both variables had p-values below the 0.05 level of significance, with corresponding computed values of 21.308 and 17.474, respectively. These findings suggest that the legal structure of a business and its level of industry experience may have influenced its ability to adopt, access, or invest in technological advancements.

More established businesses may have had better familiarity with technology or more resources to invest in digital upgrades. Similarly, the form of business, whether sole proprietorship, partnership, or corporation, could have affected access to technology due to differences in organizational structure, funding capacity, and decision-making processes.

This means that the MSMEs' forms of business, as sole proprietorship, partnership, corporation, or cooperative, are indicators of challenges in access to the use of technology. The study revealed that access to technology adoption varies across forms of ownership. It is apparent that technology is essential in every business in the current age. Notably, many enterprises, particularly sole proprietorships and cooperatives, continue to rely on traditional practices and demonstrate limited digital adoption. This gap may be attributed to factors such as low awareness, insufficient skilled labor, inadequate financial resources, and weak IT infrastructure.

The Philippine MSME Development Plan 2017-2022 identified a lack of knowledge on technology and innovation as one of the key factors limiting the productivity of MSMEs. This is viewed that small firms, often operating as sole proprietorships, are more likely to implement technological adjustments, whereas medium-sized firms tend to adopt less frequent but more substantial innovations. Thus, forms of business and ownership appear to influence both the extent and nature of technological change.

The results also indicate that the number of years in operation has a significant relationship with the challenges faced by MSMEs in terms of access to technology. This suggests that business longevity influences technology adoption. Businesses in long-term operation continue relying on traditional methods with which they are more familiar, rather than shifting to modern digital platforms. However, the COVID-19 pandemic underscored the importance of technological integration and advancement, as most business transactions have increasingly transitioned to online platforms. These findings highlight the necessity of technology support programs that account for business maturity

and organizational capacity, ensuring that MSMEs, particularly those with limited experience or resources, are not excluded from the digital shift.

**Table 17:** Relationship between the profile and the challenges faced by the MSMEs (Productivity and Efficiency)

Variables	p-values	Computed values	Decision on Ho	Verbal Interpretation
Forms of business	.011	21.308	Rejected	Significant
Types of business	.196	8.625	Accepted	Not Significant
Industry sector	.149	17.025	Accepted	Not Significant
Asset size	.914	2.063	Accepted	Not Significant
Number of employees	.505	5.308	Accepted	Not Significant
Number of years in operation	.042	17.474	Rejected	Significant
Average Gross Annual Revenue	.509	8.251	Rejected	Not Significant

The relationship between the business profile of MSMEs and the challenges they encountered in terms of productivity and efficiency was examined in this section. The results showed that most profile variables, including forms of business, types of business, industry sector, asset size, number of employees, and number of years in operation, had p-values of 0.210, 0.085, 0.148, 0.323, 0.819, and 0.170, respectively. All these values were greater than the 0.05 level of significance. Their corresponding computed values of 12.054, 11.124, 17.053, 6.982, 2.922, and 12.768 indicated that these business characteristics were not significantly associated with the challenges MSMEs faced in terms of productivity and efficiency. This suggests that variations in legal form, sector, workforce size, and business age did not statistically affect how firms experienced productivity-related issues.

However, the average gross annual had a p-value of 0.035, which was below the threshold for statistical significance. The computed value of 4.451 supported the presence of a meaningful relationship between revenue levels and the productivity and efficiency challenges reported by MSMEs. Businesses with higher revenue may have been better equipped to optimize labor, materials, and processes, while those with limited income likely faced greater difficulties in sustaining efficient operations. This pattern highlighted the importance of financial capacity in maintaining and improving productivity across enterprises.

The analysis revealed that forms of business and the number of years in operation significantly influence the challenges faced by MSMEs in terms of productivity and efficiency. This relationship may be explained by the structural and organizational differences inherent in business forms. Sole proprietorships and partnerships operate with limited managerial specialization, constrained access to financing, and smaller workforce capacity, which can hinder the adoption of efficiency-enhancing systems and processes. In contrast, corporations' benefit from greater resources and business financing, and collective decision-making mechanisms, which can improve operational efficiency and facilitate investments in productivity-enhancing technologies (Aldaba, 2012). The form of business thus shapes not only the firm's internal capacity but also its ability to cope with operational demands and external pressures.

Similarly, the number of years in operation also plays a critical role in shaping productivity and efficiency outcomes. Newly established firms may struggle with inefficiencies arising from limited experience, underdeveloped systems, and a lack of established networks. Conversely, older firms, with an experienced workforce, may encounter issues due to reliance on outdated practices, which reduce their openness to adopting innovations that enhance efficiency. The findings suggest that both newly established and long-standing firms experience different types of productivity constraints, highlighting the need for technology support programs that are responsive to varying levels of business maturity.

Micro, small, and medium enterprises (MSMEs) need to improve their efficiency and productivity to be able to compete both in the local and global markets. However, other factors that undermine the competitiveness and productivity of SMEs include limited organization and management competencies, human resource constraints, inadequate entrepreneurial ability, and low motivation to innovate due to overreliance on technologies brought in by large multinational enterprises (Asasen et al. 2003; ADB 2015).

**Table 18:** Challenges most faced by the MSMEs

Challenges	Composite mean	Std dev	Verbal Interpretation	Rank
Environment	2.98	0.64	To a moderate extent	1
Access to finance	2.47	0.77	To a slight extent	4
Market access	2.71	0.49	To a moderate extent	2
Technology access	2.44	0.67	To a slight extent	5
Productivity and Efficiency	2.54	0.57	To a moderate extent	3

The challenges faced by MSMEs were assessed, and the findings revealed that the business environment, market access, and productivity and efficiency recorded the highest composite mean scores of 2.98, 2.71, and 2.54, respectively. These were all interpreted as being experienced to a moderate extent. Among these, constraints related to the business environment emerged as the most pressing concern for MSMEs.

This result reflected the burden placed on enterprises by government-related procedures such as business permits, licensing, regulatory and documentary requirements, tax compliance, and adherence to laws. Based on respondents, these processes were frequently time-consuming, involving multiple steps and complex procedures, which created operational delays and increased registration costs. These regulatory limitations were perceived as a significant hassle, particularly for small business owners who often lacked the resources to manage such process effectively.

Additionally, MSMEs pointed out the lack of government support in areas such as training, capacity-building programs, seminars, and other development initiatives that could strengthen their operations. The absence of consistent institutional support left many enterprises without access to the critical knowledge and tools necessary for growth.

This observation aligns with the findings of the Asian Development Bank and the World Bank (2004), which reported that weak infrastructure and poor governance disproportionately impact small enterprises. These institutions found that smaller firms often face longer delays in customs clearance and import processing when compared to larger companies, further hindering their ability to compete effectively in the market.

Equally important is the role of innovation and technology advancement in addressing these challenges. The limited access to technological tools and innovative business models was evident in the relatively lower composite mean for technology access (2.44), to a slight extent, which remains a challenge in digital adoption. Without sufficient investment in digital infrastructure, e-commerce platforms, and productivity-enhancing technologies, MSMEs remain constrained in their ability to expand market reach, improve operational efficiency, and innovate products and services. Integrating technology into business processes can mitigate inefficiencies, streamline compliance, and open

new market channels, particularly in a post-pandemic economy where digital operations are increasingly significant. Thus, policies that foster digital transformation, innovation support systems, and technological upgrading are essential to complement traditional capacity-building interventions and enhance MSME resilience and competitiveness.

## 5. Discussion

Despite their significant contribution to the Philippine economy, MSMEs continued to face persistent challenges that hindered their growth, performance, and long-term sustainability. These limited their ability to scale operations, innovate, and respond effectively to changing market conditions. The findings showed that the regulatory inefficiencies in the business environment, difficulties in accessing finance, weak market penetration, limited technology adoption, and productivity inefficiencies were all experienced to different levels. Among these, the business environment challenge emerged as the most pressing concern, with regulatory compliance procedures such as licensing, taxation, and documentation described as time-consuming, costly, and disproportionately burdensome for smaller enterprises.

The study found that among the five dimensions examined, issues related to the business environment recorded the highest composite mean score of 2.98, interpreted as being encountered to a moderate extent. This revealed that regulatory complexity, such as the process of securing business permits, compliance with local laws, taxation, and licensing requirements, remained the most pressing concern for MSMEs. Respondents described these procedures as time-consuming and burdensome, often involving multiple steps and unclear documentation processes. Many business owners also reported a lack of accessible government support, including training programs, seminars, and operational guidance. These findings align with more recent insights from the Philippine Institute for Development Studies (2025), which emphasized that regulatory burdens, together with inadequate infrastructure and weak governance frameworks, continue to restrain competition, innovation, and productivity, disproportionately affecting MSMEs.

Access to finance emerged as another key concern. MSMEs frequently encountered difficulties obtaining funding from formal financial institutions due to high interest rates, limited collateral, stringent documentation requirements, and a lack of financial literacy. Many turned to private lenders, often at unfavorable terms, to support business operations. The findings supported previous research by Raquiza (2021), who noted that MSMEs commonly relied on internal financing due to systemic barriers within the formal credit market. Furthermore, access to financial services remained more concentrated in urban areas, excluding many micro and small enterprises in rural communities. Access to market was also identified as a significant challenge, with a composite mean of 2.71. Respondents indicated limited engagement in both online and offline promotional activities, low brand visibility, and inadequate customer acquisition strategies. Many MSMEs relied on a small base of loyal clients, lacking the capacity or tools to break into new markets. Recent research by Guillen Jr. and Lim (2023) highlights that while digital tools such as Facebook advertising and growth hacking can significantly boost market reach and profitability, constraints like limited resources and digital capabilities continue to hamper adoption among MSMEs. The study also confirmed challenges like insufficient advertising, poor market information, and growing competition from low-cost imports—exacerbated by distribution inefficiencies and high transaction costs (Ofafa, 2013).

In terms of access to technology, the results indicated that MSMEs were moderately challenged due to high costs of acquiring hardware and software, limited access to technical training, and resistance to adopting new technologies. More recently, Mia et al. (2024) found that during the COVID-19 pandemic, Philippine MSMEs—though increasingly open to digital tools such as e-commerce and virtual platforms—continued to face affordability, capability, and infrastructure barriers to technology adoption. Financial institutions also rarely offered long-term financing for technology acquisition or research and development, further limiting MSMEs' technological advancement. Challenges in productivity and efficiency, with a composite mean of 2.54, were mainly attributed to outdated equipment, lack of skilled workers, poor inventory management, and operational delays. Respondents shared that those difficulties in sourcing raw materials, limited storage space, and substandard production processes often led to inefficiencies. These limitations reduced labor productivity and hindered the ability to produce goods and services competitively.

When exploring the relationships between business profile variables and challenges, the study found no significant association between business environment and variables such as business form, industry sector, asset size, number of employees, years in operation, or gross annual revenue. This suggested that these demographic or structural characteristics did not influence how enterprises experienced regulatory burdens.

However, access to finance showed significant associations with several profile variables—including forms of business, asset size, number of employees, years in operation, and gross annual revenue. This implied that as MSMEs expanded, their need for external funding grew, but their ability to meet financing requirements remained constrained. Limited collateral, short credit terms, and unfamiliarity with financing options contributed to these challenges.

In the case of access to technology, significant relationships were found with the form of business and the number of years in operation. Sole proprietorships and cooperatives, in particular, tended to lag in technology adoption due to limitations in capital, technical skills, and IT infrastructure. The data also suggested that businesses operating for longer periods were more resistant to technological change, often relying on traditional methods. This resistance may have been rooted in comfort with existing practices or perceived risks associated with digital transformation. Nonetheless, the COVID-19 pandemic accelerated the shift to digital transactions, making technology adoption increasingly essential for competitiveness.

No significant relationships were observed between market access and business profile variables. This may reflect the universal nature of market entry barriers across different business types and sizes, particularly in a rapidly evolving digital economy. Regardless of structure or size, many MSMEs struggled with promotional strategies, access to consumer data, and competition from larger firms.

Productivity and efficiency also showed no significant relationship with most business profile variables, except for average gross annual revenue. This finding highlighted that those businesses generating higher revenue may have had better capacity to invest in efficient production systems and skilled labor. Conversely, enterprises with lower revenue faced greater constraints in optimizing operations and managing costs.

This study's findings can be better understood using applied science frameworks. The Technology Acceptance Model (TAM) explains why perceived ease of use and usefulness affect MSME adoption of ICT tools. Similarly, from the perspective of the Resource-Based View (RBV) and Dynamic Capabilities Theory (DCT), the adoption of technology among MSMEs is shaped by the resources they possess and their ability to reconfigure these resources to respond to changing environments. Many enterprises remain constrained by limited financial and human capital, which affects application of technology integration. Additionally, connecting MSME inefficiency to industrial engineering, bottlenecks in procurement and warehousing reflect queuing and flow optimization issues that systems engineering can solve. In the business world, AI and IoT applications in SMEs, such as predictive maintenance, real-time inventory tracking, and data-driven marketing, show how adopting technology can boost productivity and competitiveness.

Overall, the study underscored the multifaceted nature of the constraints MSMEs face. Improving their business environment, increasing access to financing, promoting market engagement, and supporting digital adoption are essential to strengthening their role in economic development. Capacity-building interventions—such as financial literacy programs, digital skills training, streamlined regulatory processes, and targeted government support—can significantly enhance the performance and sustainability of MSMEs across sectors. Beyond administrative reforms, MSMEs need policies that focus on science and technology. Recommendations include government-subsidized adoption of digital platforms, such as e-commerce and cloud enterprise resource planning (ERP). There should also be training on AI-driven analytics for market insights. Additionally, financial support for green technologies like solar energy and eco-friendly packaging is essential. Establishing technology incubators for MSMEs and forming partnerships with engineering universities could speed up the spread of innovation. These steps will help MSMEs become not only economic contributors but also active players in sustainable, technology-driven development. The significance of business types and years in operation on technology access indicates structural and experiential barriers. Sole proprietorships often have limited resources and struggle with ICT adoption because they lack investment capacity. In contrast, older firms tend to resist change due to established routines. On the other hand, revenue levels significantly affect productivity. Financial strength allows firms to acquire modern machinery, invest in process automation, and adopt eco-friendly practices. In addition to the present findings, future research shall further explore the scientific and technological dimensions of MSME development. Future studies are recommended to examine the impact of AI, IoT, and data-driven decision-making tools on MSME productivity, alongside the use of engineering solutions to streamline regulatory processes through a mixed-methods research approach. Such investigations would provide valuable insights bridging socio-economic challenges with applied sciences, thereby enhancing the interdisciplinary relevance and practical significance of MSME research.

## 6. Conclusion

The majority of MSMEs are sole proprietorships engaged in trading, wholesaling, and retailing, with assets under PHP 3,000,000, 1-9 employees, 1-5 years of operation, and average annual revenues below PHP 1,000,000. They encounter moderate challenges in several areas: the business environment, market access, productivity, and efficiency, while facing minimal issues with finance and technology. Specifically, they struggle with excessive regulatory requirements, time-consuming permit processes, high taxation, and limited government support. In terms of finance, MSMEs face high interest rates, stringent credit requirements, and inadequate financial documentation. Market access issues include ineffective promotions, insufficient product development, and inadequate packaging. While the cost of new technology poses moderate challenges, the lack of technological assistance and adoption gaps are less pronounced. Productivity challenges involve poor product handling, inventory management, and delayed production due to raw material issues. The study reveals significant relationships between MSME profiles and their challenges, particularly regarding business types and business environment, and forms of business with finance and technology access. These results provide a basis for the need for policy recommendations that aim to support the growth and sustainability of MSMEs. By identifying key challenges in the areas of business environment, finance, market access, technology, and productivity, the research offers targeted insights for meaningful intervention. The study highlights that, in addition to regulatory change and financial inclusion, utilizing scientific and technical developments is essential for MSME flexibility. The digital transformation offers opportunities for the MSMEs to improve their market accessibility, reduce inefficiencies, and sustain competitiveness through the use of AI, IoT, and cloud computing. Moreover, adoption of these technological trends will optimize supply chain management, streamline production, and expand customer engagement through data-driven strategies. Also, by utilizing green technologies and sustainable engineering techniques, MSME development is more in line with SDGs 9 (Industry, Innovation, and Infrastructure) and 12 (Responsible Consumption and Production). Embedding these technological and scientific insights into MSME strategies, policymakers, and development agencies can design more innovative, future-ready interventions. These recommendations align with the Sustainable Development Goals, particularly SDG 8 (Decent Work and Economic Growth), SDG 9 (Industry, Innovation, and Infrastructure), and SDG 10 (Reduced Inequalities). Policy recommendations extend beyond regulatory reform and financial inclusion to include capacity-building interventions in digital skills, government-subsidized technology adoption, and support for sustainable engineering solutions. The study's outputs are intended to help MSMEs navigate structural and operational barriers while guiding policymakers, development agencies, and financial institutions in building a more supportive and inclusive business ecosystem.

## Input to Policy Recommendations

Currently, MSMEs need policy interventions not only with regards to administrative improvements but also focused on science and technology and innovation. Recommended measures include financial incentives for green technology such as solar energy, eco-friendly packaging, capacity-building on AI-driven analytics for generating market insights, and government-subsidized adoption of digital platforms such as e-commerce and cloud ERP) to be utilized by the MSMEs. To further accelerate resources and capabilities of the MSMEs, the establishment of technology incubators especially designed for MSMEs and collaborative efforts with engineering universities shall be pursued. By taking these initiatives, MSMEs may be positioned as active contributors to sustainable, technology-driven development in addition to their traditional role as economic players.

The formulation of these policy recommendations is grounded on the challenges identified by MSMEs in the areas of business environment, finance, market access, productivity, and technology. These recommendations serve as practical and evidence-based inputs intended to guide policymakers, government agencies, and development institutions in designing targeted interventions that address regulatory inefficiencies, financial barriers, and operational constraints. By aligning these measures with the specific needs expressed by MSMEs, the study ensures that policy directions are not only responsive to on-the-ground realities but also consistent with broader national goals of fostering inclusive growth, competitiveness, and promoting sustainability.

**Table 19.** Input to Policy Recommendations

Challenges faced by MSMEs	Policy Recommendation	Justification
Access to Business Environment	Provide a "digitalized one window" one-stop shop (e-government platform) and integrate payment systems like g., GCash, Maya, and government e-payment gateways. for business registration, permits, and licensing, integrating automation, blockchain-based record systems, and AI-enabled document verification, to reform and simplify the process.	Since the respondents find that the government process in securing permits was too long and costly, the recommendation pursues the continuous improvement of the quality of service to the public, with the commitment to providing efficient,

	<p>Implement the use of chatbots or AI-driven helpdesks for real-time assistance for MSMEs.</p> <p>Simplification of accounting and tax collection procedures, along with the implementation and orientation of MSMEs on the Bureau of Internal Revenue's eServices, to strengthen tax compliance and enhance administrative efficiency.</p>	<p>prompt, and excellent service that will help address the concerns of MSMEs.</p> <p>This approach strengthens MSMEs' adaptive capacity by reducing regulatory delays while leveraging ICT infrastructure as a valuable resource. A digital regulatory system fosters transparency, and improves efficiency, aligning with global smart governance practices.</p>
Access to Market	<p>Identify MSMEs that are not familiar with using digital infrastructure (social media accounts) and facilitate their training to utilize this social commerce platform as promotional tools, thereby increasing customer awareness of their products and services.</p> <p>Requiring business organizations to create their social media and/or website (online) for online/offline marketing.</p> <p>Facilitate MSME participation in "digital trade fairs" and smart marketplaces supported by Augmented and Virtual Reality (AR/VR) technologies for product showcasing.</p> <p>Institutionalize the adoption of AI-driven customer analytics and logistics technology platforms, digital packaging innovations, smart labels, and eco-friendly biodegradable packaging solutions, which will enhance continuous product development aligned with consumer preferences, ensure real-time and reliable delivery systems, and improve packaging and labeling standards, thereby increasing market competitiveness and customer trust.</p>	<p>As the results revealed, the respondents have limited knowledge of product and price promotions, and even lack awareness of different promotional tools to be offered to the clients and customers. The recommendations may be a great help to increase respondents' awareness of the use of online and offline promotional tools.</p> <p>Digital platforms are strategic resources enabling MSMEs to expand market reach and to respond to shifting consumer preferences.</p>
Access to Productivity and Efficiency	<p>Encourage the green manufacturing technologies (including eco-friendly raw materials, renewable energy in production, and waste-reduction technologies) and greening efforts of entrepreneurs and MSMEs to adopt more environmentally sustainable production processes and specialized funding mechanisms for entrepreneurial training and innovations in pursuing environmentally sustainable practices.</p> <p>Provide and supporting entrepreneurial training and innovation to be used in demand forecasting tools that will improve product handling, storage efficiency, and service management.</p> <p>Promote the importance of proper product handling, warehouse inventory, and service management.</p>	<p>It is revealed in the study that the MSMEs encountered a moderate challenge in proper product handling, warehouse inventory, and service management, as well as a lack of seminars on using eco-friendly materials. The recommendations will provide a good avenue for the MSMEs to learn more and be guided on the areas of concern.</p> <p>Green practices represent strategic intangible resources that enhance MSMEs' reputation, adapt to environmental regulations, and consumer demand for long sustainability.</p>
Access to Finance	<p>Keep MSMEs aware of the various financial institutions that offer subsidized and accessible credit, with minimal requirements simplified finance framework.</p> <p>Expand digital financial inclusion through fintech platforms, blockchain-based credit scoring for risk assessments to widen MSMEs' access to credit.</p> <p>Create innovation funds and a technology incubation center providing Research &amp; Development subsidies, grants, and tax incentives for MSME technological upgrading.</p>	<p>The study revealed that MSMEs perceived those challenges in terms of finances are occurring to a moderate extent. The survey found that the respondents were unaware of the various financial institutions that now provide financial support to MSMEs. The suggestions made by the researchers will be of great assistance to them in growing their expertise and connections for further financial support to help run their firm.</p> <p>Fintech platforms and blockchain credit scoring emphasize financial data analytics as valuable resources that create new financing channels and highlight the dynamic capability of firms to integrate emerging fintech solutions into financial strategies.</p>
Access to Technology	<p>Provide Training in Management Information Systems, including Basic Knowledge of Microsoft Office and structured digital upskilling programs covering AI basics, cybersecurity, e-commerce, and digital bookkeeping.</p> <p>Provide structured digital skills training programs and workshops (AI, data analytics, cybersecurity, cloud computing) for MSMEs and their workforce.</p> <p>Establish MSME-focused technology incubators and accelerators in collaboration with universities and engineering institutions.</p> <p>Introduce a comprehensive science and technology development policy under a simplified and streamlined institutional framework, offering a friendly enabling environment for MSMEs.</p> <p>Government subsidized financial assistance to MSMEs for R&amp;D, technology transfer, and technology commercialization (e.g., grants, loans, and tax breaks).</p>	<p>Based on the findings of the study, it is shown that new technology served as a moderately experienced challenge for the MSMEs. The following recommendations will aid them to raise more awareness on access to different technological tools, enhance abilities and skills in performing tasks faster and easier through proper utilization of technology; hence, the participation of the government is encouraged to assist the entrepreneurs since acquiring new technology is somewhat expensive.</p> <p>Human capital enhanced through digital upskilling becomes a strategic resource that highlights the importance of</p>

continuous learning and adaptation to evolving technologies. Incubators help MSMEs build technological resources and dynamic capabilities by reconfiguring partnerships and accessing new knowledge ecosystems.

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