



# Nexus Between Business Ecosystem and Micro, Small and Medium Enterprises Performance

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## ABSTRACT

Business ecosystems play a crucial role in shaping the performance of micro, small, and medium enterprises (MSMEs). Through enhanced innovation, social networks, and collaboration, an MSME can leverage such opportunities to gain a competitive advantage, leading to improved performance and sustainable growth. This study examined the relationship between business ecosystems and MSME performance. A sample size of 260 MSME owners was sampled using Taro Yamane's sample size determination formula. However, 247 responses were valid and used to conduct Pearson Product Moment correlation analysis. The results revealed a significant relationship between business ecosystem parameters and MSMEs' performance. Specifically, participation as an indicator of the business ecosystem was found to have a strong significant association with the competitive advantage of MSMEs. Moreover, the results revealed a significant relationship between social networks and the innovative performance of MSMEs. Finally, a strong positive relationship was established between collaboration and the sustainable growth of MSMEs in Nigeria. The study therefore concluded that a robust business ecosystem, characterised by innovation, effective social networks, and strategic collaboration, is crucial for driving MSMEs' competitive advantage, innovative performance, and sustainable growth. Therefore, MSMEs should engage business ecosystems that facilitate innovation, social networking, and collaboration opportunities. This approach will enhance performance metrics such as operational efficiency and strategically position MSMEs to remain competitive while driving sustainable business growth.

**Keywords:** Collaboration, competitive advantage, innovation, MSMEs, performance, social network

## 1. INTRODUCTION

The global economy is largely driven by the performance and sustainability of Micro, Small, and Medium Enterprises (MSMEs) (Vasani & Abdulkareem, 2024). MSMEs are crucial to economic growth, innovation, and job creation, particularly in developing economies. According to the World Bank, MSMEs represent about 90% of businesses and more than 50% of employment worldwide (World Bank, 2020). Examining the factors that influence MSMEs' performance is essential for policymakers, business leaders, and stakeholders in the economic ecosystem (Susanti et al, 2023). MSMEs' performance is closely tied to various factors in the business ecosystem.

The business ecosystem refers to a network of interconnected firms, individuals, and institutions that interact in a dynamic and interdependent manner to create and deliver products or services (Susanti, *et al.*, 2023; Yuliantari & Pramuki, 2022; Adekalu et al., 2013). Moore (2006) introduced the term 'business ecosystems' to describe the collaborative and competitive relationships that organisations engage in to innovate and thrive in complex markets. Within a business ecosystem, firms are not isolated entities but rather participants in a broader system that includes customers, suppliers, competitors, regulators, and other stakeholders. For

MSMEs, participation in a robust business ecosystem is essential for growth, innovation, and long-term sustainability (Isenberg, 2011).

The performance of MSMEs is often measured through various indicators such as profitability, market share, growth, innovation, and competitive positioning (Genty, et al., 2015). These performance metrics are influenced by the resources and support systems available within the business ecosystem. A well-functioning ecosystem provides MSMEs with access to knowledge, technology, financing, and other critical resources necessary for success (Genty et al., 2015). In contrast, a weak or fragmented ecosystem can constrain the growth potential of these enterprises and hinder their ability to compete in increasingly globalized markets (Brink et al., 2019). Furthermore, the performance of MSMEs can also be measured through various indicators, including increased profits, a strong financial position, contributions to productivity, employment and innovation, competitive advantage, an increase in the number of customers, higher sales volumes, employee satisfaction and motivation, and sustainable growth, among others (Hamzani & Achmad, 2016; World Bank Report, 2019).

Competitive advantage is one of the most significant indicators of MSME performance within the business ecosystem (Clarysse et al., 2016). Porter (1985) defines competitive advantage as the ability of a firm to outperform its rivals by offering unique value to customers, either through cost leadership or differentiation. For MSMEs, achieving and sustaining competitive advantage can be particularly challenging due to their limited resources and scale. However, the business ecosystem can play a crucial role in enabling MSMEs to compete effectively. One of the primary ways MSMEs can gain a competitive advantage is through leveraging the resources and capabilities available within the ecosystem. Access to specialised knowledge, skilled labour, and advanced technology can provide MSMEs with the tools needed to innovate and differentiate their products or services.

Innovation is another key indicator of MSMEs' performance and a crucial factor in the business ecosystem. Innovation is the primary driver of economic growth and development, and this is particularly true for MSMEs (Farida & Setiawan, 2022; Genty, 2013). Innovation refers to the process of developing new products, services, processes, or business models that provide value to customers and distinguish a firm from its competitors. Innovation is essential for the survival and growth of MSMEs, especially in highly competitive and rapidly changing markets. Innovation in MSMEs is often driven by their need to overcome resource constraints and respond to specific market challenges. Unlike larger firms, MSMEs may not have extensive research and development (R&D) budgets, but they can leverage their proximity to customers and flexibility to innovate in ways that larger firms cannot (Karina & Astuti, 2022). For example, MSMEs can quickly adapt their products or services to meet changing customer preferences or take advantage of new market opportunities. This type of innovation is often incremental rather than radical, but it can have a significant impact on firm performance and competitiveness (Nimfa, *et al.*, 2023). One of the challenges that MSMEs face in terms of innovation is the lack of access to finance and skilled labour, which can hinder their ability to invest in new technologies or processes necessary to drive innovation.

MSMEs are a key part of sustainable development and can contribute to many of the United Nations' Sustainable Development Goals (SDGs) such as empowering MSMEs for sustainable development. MSMEs play a pivotal role in fostering sustainable development. With 90% of all global businesses falling, under the MSME category, these enterprises are instrumental in creating employment, fostering innovation, and contributing to GDP growth (United States Small Business Administration, 2023). Lambert and Deyganto (2023) posited that access to finance, infrastructure, and institutional cooperation, access to business information, government support, and information technology utilization led to MSMEs' sustainable development in Africa. MSMEs have a huge role to play in the achievement of SDGs, especially Poverty Alleviation (Goal 1), Decent Work and Economic Growth (Goal 8) and Industry Innovation and Infrastructure (Goal 9) (Verma & Nema, 2019).

The business ecosystem significantly influences the capacity of MSMEs to sustain business growth, innovate, and promote competitive advantages (Verma & Nema, 2019; Farida & Setiawan, 2022; Clarysse et al., 2014). A vibrant ecosystem provides firms with access to new technologies, knowledge, and markets, all of which are critical for innovation. Moreover, ecosystems that encourage collaboration between firms, research institutions, and government bodies create an environment conducive to knowledge sharing and technological advancements. MSMEs that are embedded in such ecosystems are more likely to innovate successfully, as they can draw on the expertise and resources of other ecosystem participants (Nimfa et al., 2023).

Despite extensive research on business ecosystems, a significant gap exists in understanding how participation, social networks, and collaboration specifically impact the performance of MSMEs. Much of the literature has focused on larger firms, while MSMEs, especially in developing economies, are underexplored (Acs et al., 2017; Brink, *et al.*, 2019). These businesses face unique challenges within fragmented ecosystems, which limit their access to the resources and networks necessary for innovation, sustainable growth and competitive advantage (Isenberg, 2011). Furthermore, the mechanisms by which MSMEs navigate weak institutional support and fragmented networks to collaborate and innovate have not been sufficiently examined (Gnyawali & Park, 2019).

While collaboration and social networks are recognised as critical to business performance, the challenges that MSMEs face in forming effective partnerships and leveraging these networks have not been fully explored in different contexts, especially in resource-constrained environments (Vasani & Abdulkareem, 2024; Lambert et al, 2023; Abate et al., 2023). Addressing these knowledge gaps is crucial for understanding how MSMEs can achieve sustainable growth through improved ecosystem dynamics. The primary objective of this paper is to examine the relationship between the business ecosystem and the performance of MSMEs. The study aims to address the following specific objectives: (1) to examine the role of participation in fostering competitive advantage for MSMEs; (2) to establish the influence of social networks on MSME innovation; (3) to analyze the role of collaboration in improving MSMEs' sustainable growth.

## 2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

### 2.1 Business Ecosystem

A business ecosystem refers to the dynamic and interconnected environment where various stakeholders, including companies, customers, suppliers, and regulators, interact to create value. This ecosystem is essential for fostering innovation, enhancing competitiveness, and ensuring the sustainability of businesses, particularly for MSMEs (Jin & Robey, 2022). In today's rapidly evolving global markets, a well-functioning business ecosystem provides critical support in terms of resources, market access, knowledge, and partnerships. It enables companies to leverage synergies across various sectors, driving innovation and efficiency.

The concept of business ecosystems has gained prominence as it helps explain how companies, particularly MSMEs, survive and thrive in complex market environments. A strong ecosystem fosters collaboration, networking, and access to finance, which are essential for innovation and growth (Figueroa-Armijos & Johnson, 2021). In such ecosystems, companies can benefit from shared resources, reduced transaction costs, and enhanced learning opportunities. For instance, digital platforms and technology clusters have become pivotal in accelerating innovation through collaborations between MSMEs and larger enterprises (Xu et al., 2023).

Moreover, regulatory frameworks, institutional support, and infrastructure are key elements of a thriving business ecosystem. Governments play a vital role in shaping these ecosystems by providing policies that foster entrepreneurship, innovation, and competitiveness (Porter & Kramer, 2023; Adekalu et. al., 2013). Regulatory support, including tax incentives and streamlined business processes, which are essential in lowering barriers to entry for MSMEs. This, in turn, allows MSMEs to compete more effectively and adapt to market changes. The role of social capital, trust, and cooperation within a business ecosystem cannot be overstated. Networks of businesses can create an environment conducive to risk-sharing and co-creation of new products and services (Rajala & Westerlund, 2022). Thus, a robust business ecosystem enhances the capacity of MSMEs to innovate, adapt, and sustain their growth in competitive markets.

### 2.2. Dimensions of Business Ecosystem.

In ecosystems where support is available, MSMEs are more likely to engage in innovative activities that enhance their competitiveness and growth potential (OECD, 2018). However, the business ecosystem can help mitigate some MSMEs' performance challenges by providing access to financing options, training programmes, and innovation hubs.

In developing economies, government policies and support systems, such as grants, tax incentives, and incubator programmes, can also play a critical role in fostering innovation among MSMEs. For example, studies such as Oladimeji et al. (2018), Abate and Sheferan (2023), and Cruz and Uriz (2022) argued that business ecosystems have a positive and significant effect on MSMEs' financial and non-financial performance using the proxies of participation, collaboration, and social networks.

#### 2.2.1 Participation

Participation of MSMEs with larger firms, research institutions, and government agencies can offer MSMEs strategic advantages that would be difficult to achieve independently. For example, through partnerships with larger firms, MSMEs can benefit from economies of scale, access to new markets, and shared expertise (Acs, 2017; Genty, 2013). Another critical aspect of competitive advantage for MSMEs is their ability to adapt to market changes and respond to customer needs more quickly than larger firms. This agility is often enhanced within a supportive business ecosystem that encourages innovation and flexibility. In competitive environments, MSMEs can also exploit niche markets where larger firms may not be as responsive or focused. By understanding and leveraging the dynamics of the ecosystem, MSMEs can develop competitive strategies that enhance their market positioning and long-term sustainability (Susanti, *et al.*, 2023).

#### 2.2.2 Collaboration

Collaboration is a critical factor that affects the performance of MSMEs within the business ecosystem. Collaboration refers to the process of working together with other firms, individuals, or institutions to achieve common goals. In the context of MSMEs, collaboration can take various forms, including partnerships with

suppliers, customers, competitors, research institutions, and government agencies (Genty, et al., 2015). Collaboration is essential for MSMEs as it allows them to pool resources, share knowledge, and access new markets or technologies that would be difficult to achieve independently (Ezeokoli et al., 2016). One of the main benefits of collaboration for MSMEs is the ability to leverage the strengths and capabilities of other firms or institutions. For example, by collaborating with larger firms, MSMEs can access new markets, benefit from shared marketing efforts, or gain access to advanced technologies. Similarly, collaboration with research institutions can provide MSMEs with access to cutting-edge knowledge and innovations that enhance their competitiveness. In ecosystems where collaboration is encouraged, MSMEs are more likely to engage in strategic partnerships that enhance their performance and growth potential (Zhai et al., 2022).

### **2.2.3. Social Network**

Social networks are vital component of the business ecosystem that influences MSME performance. Social networks refer to the relationships and connections that firms have with other businesses, individuals, and institutions within the ecosystem. These networks are crucial for MSMEs as they provide access to information, resources, and opportunities that may not be available through formal market mechanisms. Godson (2022) highlights the importance of social networks in economic activities, arguing that social relations play a key role in shaping business decisions and outcomes. Social networks can serve as a valuable source of information for MSMEs about market trends, customer preferences, and potential business opportunities. Through their networks, MSMEs can also gain access to critical resources such as financing, technology, and expertise. Moreover, social networks can facilitate trust and cooperation between firms, which is essential for building long-term partnerships and collaborations. In highly competitive environments, social networks can provide MSMEs with a competitive edge by enabling them to access valuable market intelligence and build strategic alliances (Palacios-Marques et al., 2015).

### **2.3 MSMEs Performance**

MSMEs play a critical role in the economy of both developed and developing nations. They contribute significantly to job creation, income generation, poverty reduction, and innovation (Ayyagari et al., 2017). MSMEs are often considered the backbone of many economies, accounting for most businesses worldwide. Their ability to adapt to changing market conditions, innovate to meet consumer needs, and foster entrepreneurship underscores their importance in national economies (Mazzarol, 2020; Genty, et al., 2015). Despite their critical role, MSMEs often face significant challenges such as limited access to finance, markets, and required skilled labour to drive their performance (Beck & Cull, 2014; Genty, 2013). Access to finance remains a primary challenge for MSMEs, as they often struggle to obtain the necessary funding for business process improvement and expansion (Beck & Cull, 2014). Limited credit access from financial institutions impairs their capacity to invest in new technologies or expand market reach, ultimately affecting their overall performance. Moreover, the lack of market access also limits their ability to scale, particularly in competitive environments dominated by larger firms. In addition, MSMEs frequently encounter skill shortages, which reduce their ability to innovate and improve productivity (Genty, 2013; Mazzarol, 2020).

The performance of MSMEs is also influenced by external factors, such as government policies and the regulatory environment. Supportive government policies, such as tax incentives, simplified business registration processes, and access to international markets, can significantly enhance MSMEs' performance (Kumar & Rao, 2015; Genty, 2013). Conversely, bureaucratic barriers and stringent regulations may hinder their growth and sustainability. In recent years, the adoption of digital technologies has emerged as a vital driver of MSMEs' performance, enabling them to improve efficiency, reduce costs, and reach global markets more easily (OECD, 2021). Therefore, enhancing the business environment for MSMEs remains essential for promoting their performance and growth.

It is important to outline the size categories of MSMEs according to the National Policy on Micro, Small and Medium Enterprises. The size category for micro-enterprises includes fewer than 10 employees, and assets of less than five million naira, excluding land and buildings. Small enterprises are classified as having between 10 and 49 employees and assets of less than fifty million naira, also excluding land and buildings. In contrast, medium enterprises are classified as having between 50 and 199 employees, with assets ranging from 50 million to 500 million naira, excluding land and buildings (National Policy on MSMEs, 2011; Genty et al., 2015). This classification will, therefore, help shape the population of this study.

### **2.4 Business Ecosystem and MSME Performance**

The performance of MSMEs is deeply influenced by the business ecosystem in which they operate. This ecosystem includes various interrelated components such as suppliers, customers, competitors, and regulatory bodies. These components collectively influence the operational effectiveness and overall success of MSMEs. Understanding these interactions offers valuable insights into how MSMEs can improve their performance within specific environments.

A key element of the business ecosystem impacting MSME performance is access to resources (Genty et al., 2015). MSMEs often face challenges in securing financial resources, technology, and skilled labour (Atiku &

Abatan, 2021; Randa & Atiku, 2021). The World Bank (2023) highlights that financial constraints are a major obstacle for MSMEs, impacting their ability to invest in growth opportunities and technological advancements. Conversely, a supportive ecosystem that offers access to alternative funding sources and resources can significantly improve MSME performance. For instance, networks and partnerships within the ecosystem can provide MSMEs with the necessary capital and technological support, facilitating better operational outcomes and growth potential.

Market conditions within the ecosystem also play a crucial role in shaping MSME performance. Competitive dynamics and market trends can affect an MSME's ability to sustain profitability and expand its operations. Research by the OECD (2022) indicates that MSMEs operating in ecosystems with favourable market conditions, such as lower entry barriers and better access to market information, tend to perform better. An environment that supports market entry and provides insights into consumer preferences enables MSMEs to align their strategies effectively and capitalize on emerging opportunities.

Regulatory environments within the business ecosystem further influence MSME performance. The complexity and stringency of regulations can either facilitate or hinder MSME operations. According to the International Trade Centre (2021), simplified and supportive regulatory frameworks are essential for MSME's sustainability, as they reduce compliance costs and administrative burdens. Regulations that promote ease of doing business and offer incentives for MSME growth contribute positively to their performance by creating a more favourable operational environment.

Additionally, the strength and nature of relationships within the ecosystem are critical for MSME performance. The Harvard Business Review (2024) notes that MSMEs benefit from strong relationships with customers, suppliers, and other business partners. These relationships can lead to improved business opportunities, enhanced customer loyalty, and more effective supply chain management. Building and maintaining robust networks within the ecosystem allows MSMEs to leverage external support and resources, which can directly impact their performance and competitiveness.

The performance of MSMEs is intricately linked to their business ecosystem. Access to resources, favourable market conditions, supportive regulatory environments, and strong relationships all play significant roles in determining MSME success. By navigating these ecosystem components effectively, MSMEs can enhance their performance and achieve sustainable growth. Based on the insights from the literature, the study positions the following:

*H<sub>i</sub>: There is a significant relationship between business ecosystem and MSMEs performance in Nigeria.*

#### **2.4.1 Participation and Competitive Advantage**

The business ecosystem is a dynamic network of interconnected organisations, including businesses, suppliers, customers, and regulators, all interacting within a specific environment. For MSMEs, performance and competitive advantage within this ecosystem are significantly influenced by various factors. Understanding these influences is essential for MSMEs aiming to thrive in increasingly complex market landscapes. MSMEs' performance is profoundly shaped by their participation. One primary factor is access to resources, particularly financial resources. Financial constraints are a common challenge for MSMEs, often hindering their ability to secure funding for business expansion and innovative performance. According to the World Bank (2023), limited access to financial resources remains a significant barrier to MSME growth. However, ecosystems that provide alternative funding sources, such as networks and partnerships, can alleviate these constraints, thereby enhancing MSME performance.

According to a study by the OECD (2022), partnerships and collaborative efforts can provide MSMEs with access to new technologies, expertise, and market opportunities. By working with larger firms, research institutions, or other MSMEs, smaller enterprises can benefit from shared resources and knowledge, which can lead to improved performance and innovation (Adekalu et al., 2013; Atiku, 2021). For example, joint ventures or strategic alliances can help MSMEs scale their operations and enter new markets more effectively than they could on their own. The competitive landscape influences how well MSMEs can grow and sustain profitability. Research by the OECD (2022) indicates that MSMEs operating in supportive and dynamic ecosystems tend to perform better due to improved market access and reduced barriers, enabling them to respond more effectively to market demands and competition. The International Trade Centre (2021) highlights the importance of regulatory reforms in improving MSME competitiveness by reducing bureaucratic hurdles and compliance costs. In terms of competitive advantage, MSMEs must leverage their capabilities effectively, especially through participation and partnership.

Susanti et al. (2023) studied MSMEs' performance and competitive advantage among female business owners in Indonesia. The study examined the mediating influences of innovation and competitive advantage on the interplay between digital transformation and MSMEs' performance. The findings indicate that digital

transformation has no significant direct effect on the performance of women-owned MSMEs in Indonesia. While innovative, and competitive advantage have significant effects on MSMEs' performance. Based on the extant literature, this study hypothesizes as follows.

*H<sub>2</sub>: There is a significant relationship between participation and competitive advantage for MSMEs.*

#### **2.4.2 Social Network and Innovation**

Innovation is a crucial driver of MSME performance and is heavily influenced by the social network. In a thriving ecosystem, MSMEs are more likely to engage in innovative activities due to the availability of supportive infrastructure, collaboration opportunities, and access to new technologies. The European Commission (2024) emphasizes that social networks fostering innovation, provide MSMEs with the necessary resources and networks to experiment with new ideas and technologies, which is essential for maintaining a competitive edge.

The ability to innovate is often contingent upon the strength of relationships within social networks. One crucial component of this ecosystem is the social network that surrounds these enterprises. Social networks, encompassing relationships with other businesses, stakeholders, and community members, play a significant role in shaping MSMEs' performance. Understanding the impact of these networks can provide valuable insights into how MSMEs can leverage relationships to enhance their performance.

Social networks are vital for MSMEs as they offer access to resources, information, and opportunities that can influence business performance. According to a study by the World Bank (2023), MSMEs benefit from being embedded within networks that provide financial support, market information, and business advice. These networks can include local business associations, industry groups, and informal networks. The connections established through these networks can help MSMEs navigate challenges, identify opportunities, and improve their operational efficiency.

The role of social networks extends to enhancing the innovation capacity of MSMEs. Social networks facilitate the exchange of knowledge and ideas, which can lead to innovative solutions and improvements. Research by the OECD (2022) highlights that MSMEs embedded in robust social networks are more likely to engage in innovative practices. These networks provide access to diverse perspectives and expertise, which can stimulate creativity and support the development of new products and services. Collaboration with other businesses and institutions through these networks can also provide MSMEs with the necessary resources and insights to drive innovation.

Social networks contribute to MSME performance by enabling better market access and customer relationships. The Harvard Business Review (2024) notes that strong social connections can help MSMEs reach new customer segments and build brand loyalty. Networks often provide valuable referrals and endorsements, which can enhance an MSME's market presence and credibility. By leveraging these relationships, MSMEs can improve their sales performance and expand their market reach.

According to Granovetter (2018), social networks are essential for building strong relationships that provide businesses with informal support mechanisms, enabling them to better cope with challenges and seize opportunities. Additionally, research by Zhang and Li (2020) shows that firms with extensive social networks within their ecosystems exhibit higher levels of innovation and resilience, as they can leverage connections to access resources, knowledge, and market opportunities. Based on the insights drawn from the literature, this study hypothesizes that:

*H<sub>3</sub>: There is a significant relationship between social networks and innovation within MSMEs.*

#### **2.4.3. Collaboration and Sustainable Growth**

In the intricate landscape of the business ecosystem, collaboration emerges as a critical factor influencing the performance of MSMEs. The ability of MSMEs to collaborate effectively within their ecosystem can significantly impact their operational success, growth prospects, and competitive edge. Understanding the dynamics of collaboration and its effects on MSME performance provides valuable insights into how these enterprises can leverage cooperative strategies to enhance their outcomes such as sustainable growth.

Collaboration within the business ecosystem enables MSMEs to sustain growth. Collaboration can play a crucial role in enhancing MSME innovation. The World Bank (2023) highlights that collaborative networks often foster an environment conducive to innovation by facilitating the exchange of ideas and expertise. When MSMEs engage in collaborative projects, they gain exposure to diverse perspectives and innovative practices that can inspire new approaches and solutions. This collaborative environment can be particularly beneficial for MSMEs looking to develop new products or services, as it provides access to a broader pool of knowledge and resources.

The benefits of collaboration extend to operational efficiency as well. According to the Harvard Business Review (2024), collaborative efforts can lead to improved efficiency and cost savings for MSMEs. By sharing resources, such as production facilities or distribution networks, MSMEs can reduce operational costs and streamline processes. This shared approach not only helps in achieving economies of scale but also enhances overall business performance by allowing MSMEs to focus on their core competencies while relying on partners for complementary capabilities.

Collaboration strengthens MSMEs' market positioning. Engaging in collaborative partnerships can enhance an MSME's credibility and sustainable growth. The International Trade Centre (2021) notes that collaborations often provide MSMEs with access to established networks and customer bases, which can be instrumental in building brand recognition and expanding market presence. Collaborative relationships can also offer valuable endorsements and referrals, further boosting MSME's reputation and competitive advantage. Collaboration within the business ecosystem is a key driver of MSME performance. By facilitating access to resources, fostering innovation, improving operational efficiency, and enhancing market positioning, collaborative efforts significantly contribute to the success and growth of MSMEs. Embracing collaborative strategies allows MSMEs to leverage their ecosystem more effectively and achieve sustainable performance in a competitive market. Based on the insights drawn from previous studies, the current study hypothesized as follows.

*H<sub>4</sub>: There is a significant relationship between collaboration and MSMEs' Sustainable growth.*

### 3. METHODOLOGY

This study adopted a quantitative approach using a correlational research design to examine the relations between the dimensions of business ecosystems and specific proxies of MSMEs performance (competitive advantage, innovation and sustainable growth). A cross-sectional survey design was incorporated to gather relevant information from the participating MSME owners in Nigeria. The cross-sectional survey research design was executed in this study using a structured questionnaire to collect primary data from owners and executives of MSMEs (that is, printers) in Mushin, Shomolu and Ikotun areas of Lagos State. Creswell (2014) posits that the survey method is used when a researcher aims to gather information from a given sample.

#### 3.1 Research Participants

The population of the study's areas consists of (329 Printers in Mushin; 272 Printers in Shomolu and 103 Printers in Ikotun), totaling 704 MSMEs in Nigeria. Using Taro Yamane's (1967) sample size determination formula, the sample size was rounded to 260. The study employed a convenience sampling technique to select 260 MSMEs involved in printing production/press in Mushin, Shomolu and Ikotun areas of Lagos State, Nigeria. The returned copies of the administered questionnaires that are valid for computation total 247, representing 95% of the target sample. The reason for sourcing information from owners and executives of MSMEs in these study areas was because they are major areas involved in printing in Lagos State and have the highest number of MSMEs in Nigeria.

#### 3.2 Research Instrument

The primary data was collected through the administration of structured questionnaires to owners and executives of MSMEs in the study areas. A 5-point Likert scale was used, with responses structured as follows; strongly agree (5), agree (4), neutral (3), disagree (2), and strongly disagree (1). This allowed respondents to indicate their levels of agreement or disagreement concerning each statement. The validity of the instrument was tested using the content validity index (CVI), through the assessment of two academics and two owners and executives of MSMEs, the assessors rated the instrument on a two-point scale (relevant and not relevant) which gave a value of 0.9054, which indicated that the instrument was highly valid. A pilot study was conducted through the test re-test method to ascertain the extent of reliability of the instrument. The questionnaire was administered twice within fourteen days, and the results of the first and second tests were correlated, which gave a Cronbach alpha of 0.884, this indicated that the instrument was reliable.

#### 3.3 Data Analysis

In testing the research hypotheses formulated to establish the relationship between business ecosystems (measured by participation, social network and collaboration) on MSMEs performance (measured by competitive advantage, innovation and sustainable growth), the correlation analysis was conducted. Descriptive statistics included frequency distribution, simple percentages, mean, and standard deviation. Hypotheses were tested at a 0.05 significance level using Pearson's Product Moment Correlation Coefficient to assess relationships between variables. Data analysis was conducted using the Statistical Package for Social Sciences (SPSS) version 23.0. This method of data analysis aligned with prior studies in similar fields.

### 4. RESULTS

#### 4.1: Business Ecosystems and MSMEs Performance

The results reported in Table 1 show that the mean of the business ecosystem in the study areas was 57.8980, SD = 8.99656, while that of MSMEs performance was 57.2708, SD = 8.82873. The descriptive statistics indicate that there is about the same variability of data points amongst the variables. The correlation coefficient obtained was 0.641 with a p-value less than 0.001. This implies that there is a significant relationship between business ecosystems and MSMEs performance ( $r = 0.641$ ,  $N = 247$ ,  $p < 0.001$ ). The correlation value indicates a positive correlation coefficient at a strong level. This means that a strong business ecosystem significantly enhances MSMEs' performance by offering access to participation, social networks, and collaboration, which helps them innovate, outperform competitors and ensure sustainable growth in dynamic markets.

Table 1: The association between business ecosystem and MSMEs Performance.

Variables	Mean	SD	N	R	P	Remark
Business Ecosystem	57.8980	8.99656	247	0.641***	0.000	Significant
MSMEs performance	57.2708	8.82873				

Note: \*\*\* Significant at 0.000 level.

The results emanating from the specific objectives as incorporated into research hypotheses two to four are tested as follows.

#### 4.2: Participation and Competitive Advantage within MSMEs

As evident in Table 2, the mean of participation was 57.8980, SD = 8.99656, while that of competitive advantage within MSMEs was 64.4447, SD = 9.73240. The descriptive statistics indicate that there is about the same variability of data points amongst the variables. The correlation coefficient obtained was 0.620 with a p-value less than 0.001. The finding shows that there is a significant relationship between participation and competitive advantage within MSMEs ( $r = 0.620$ ,  $N = 247$ ,  $p < 0.001$ ). The correlation value indicates a positive correlation coefficient at a strong level. This means that robust MSMEs participation fosters competitive advantage within MSMEs by providing essential resources, partnership opportunities, and market access, enabling these enterprises to adapt and enhance competitive positioning.

Table 2: The relationship between participation and competitive advantage within MSMEs

Variables	Mean	SD	N	R	P	Remark
Participation	57.8980	8.99656	247	0.620***	0.000	Significant
Competitive Advantage	64.4447	9.73240				

Note: \*\*\* Significant at 0.000 level

#### 4.3 Social Networks and Innovation

The results presented in Table 3 indicate that there is a significant relationship between social networks and the innovative performance of participating MSMEs in Nigeria since the correlation coefficient obtained was 0.646 with a p-value less than 0.001. The result revealed that there is a significant relationship between MSMEs with effective social networks and innovation ( $r = 0.646$ ,  $N = 247$ ,  $p < 0.001$ ). The correlation value indicates a positive and strong correlation coefficient. This means that MSMEs with strong social networks and support within the business ecosystems tend to benefit from enhanced resource access, collaborative opportunities, and market insights, driving innovation, growth, and competitive advantage in dynamic market environments.

Table 3. The interplay between social networks and innovation

Variables	Mean	SD	N	R	P	Remark
Social networks	57.2708	8.82873	247	0.646***	0.000	Significant
Innovation	64.4447	9.73240				

Note: \*\*\* Significant at 0.000 level

Moreso, Table 3 shows that the mean of effective social networks was 57.2708, SD = 8.82873, while that of innovation was 64.4447, SD = 9.73240. The descriptive statistics indicate that there is about the same variability of data points amongst the variables.

#### 4.4 Collaboration and MSMEs Sustainable growth

The analysis of the relationship between collaboration within the business ecosystems and MSMEs' sustainable growth in Nigeria shows that there is a significant relationship between the variables, judging from the obtained correlation coefficient (0.699, p-value < 0.001). This means that there is a significant positive relationship between collaboration and MSMEs' sustainable growth ( $r = 0.699$ ,  $N = 247$ ,  $p < 0.001$ ). The correlation value indicates a positive and strong correlation coefficient. Based on the decision rule and findings of this study, the research hypothesis ( $H_4$ ) is hereby supported. This implies that collaboration within business ecosystems significantly boosts MSME performance and sustainable growth by facilitating resource sharing. Knowledge



exchange, and strategic partnerships, leading to enhanced innovation, operational efficiency, and market competitiveness.

Table 4: The relationship between collaboration and MSMEs' sustainable growth

Variables	Mean	Standard Deviation (SD)	N	R	P	Remark
Collaboration MSMEs Sustainable Growth	64.4362	9.72769	247	0.699***	0.000	Significant
	57.2592	8.81604				

Note: \*\*\* Significant at 0.000 level

## 5. DISCUSSION OF FINDINGS

### 5.1 Participation and Competitive Advantage for MSMEs

The findings underscore that the robust participation of MSMEs in participation is pivotal for improving their competitive advantage. Strong participation offers MSMEs vital access to resources, networks, and knowledge, which are crucial for their growth and success. Adner and Kapoor (2016) assert that firms embedded in supportive ecosystems benefit from enhanced access to financial resources, technological advancements, and market opportunities, which collectively foster innovation and operational efficiency. Furthermore, Zhang and Li (2020) emphasize that well-structured ecosystems facilitate collaboration and knowledge-sharing among MSMEs, leading to higher innovation and resilience. This collaborative environment helps MSMEs adapt swiftly to market changes and competitive pressures. Additionally, Porter and Kramer (2023) highlight that MSMEs in dynamic ecosystems are better positioned to leverage these networks to gain insights and competitive intelligence, thus outperforming rivals. Consequently, MSMEs that effectively integrate into strong business ecosystems can capitalize on these advantages to navigate challenges, seize new opportunities, and achieve sustainable growth in increasingly competitive markets. This comprehensive support system not only enhances their operational capabilities but also strengthens their market position relative to competitors.

### 5.2 Social Network and Innovation within MSMEs

A robust social network plays a crucial role in fostering innovation among MSMEs. By offering essential resources such as financial support, technological advancements, and market access, these social networks significantly enhance MSMEs' ability to innovate and stay competitive (Adner & Kapoor, 2016). The presence of a supportive ecosystem facilitates collaboration among various stakeholders, including suppliers, customers, and other firms, which in turn helps MSMEs leverage complementary capabilities and share knowledge. This collaborative environment is critical for developing new solutions and adapting to evolving market conditions (Zhang & Li, 2020).

Also, having access to extensive networks within the ecosystem enables MSMEs to identify and seize new market opportunities more effectively. These networks provide insights and intelligence that are vital for making informed strategic decisions (Porter & Kramer, 2023). As a result, MSMEs embedded in strong ecosystems are better positioned to innovate, adapt, and improve their competitive positioning. This comprehensive support system not only drives operational efficiency but also strengthens their market presence relative to competitors. Thus, the integration and leverage of resources and networks within a robust business ecosystem are fundamental for the growth and sustained success of MSMEs.

### 5.3 Collaboration and MSMEs' Sustainable Growth

The findings underscore the pivotal role of collaboration within business ecosystems in enhancing the sustainable growth and performance of MSMEs in Nigeria. Collaborative interactions within these ecosystems provide MSMEs with access to shared resources, which include financial capital, technological tools, and expertise (Adner & Kapoor, 2016). This resource sharing is crucial for overcoming the typical limitations faced by MSMEs, enabling them to scale operations and innovate effectively.

The exchange of knowledge among ecosystem participants fosters a learning environment where MSMEs can adapt to new market trends and improve operational efficiency (Zhang & Li, 2020). Such knowledge exchange accelerates the innovation process by exposing MSMEs to diverse perspectives and best practices, which in turn enhances their ability to develop new products and services. Strategic partnerships formed within the business ecosystems further contribute to MSMEs' sustainable growth by opening new market opportunities and enhancing competitive positioning. Porter and Kramer (2023) highlight that the business ecosystems allow MSMEs to leverage the strengths of other businesses, improving their market reach and overall performance.

### 5.4 Practical Implications

The results emanating from this empirical evidence suggest several practical implications to enhance the business ecosystem and improve MSMEs' performance in Nigeria. MSMEs should actively engage in and

contribute to a robust business ecosystem. This will enable MSMEs to leverage access to essential resources, networks, and market insights. MSMEs can enhance their operational efficiency and strategic positioning by taking advantage of opportunities within their business ecosystems, thereby gaining a competitive edge.

To drive innovative performance, MSMEs should immerse themselves in supportive ecosystems that provide technological advancements and collaborative opportunities. This will enable them to adapt to market changes and develop new solutions, thereby maintaining their competitive advantage. Furthermore, MSMEs should focus on cultivating strong social networks within their business ecosystem. Effective social networks facilitate improved access to resources, knowledge exchange, and strategic partnerships, all of which are crucial for overall success and performance. In terms of collaboration and partnerships, MSMEs should actively seek and foster collaborative relationships within their business ecosystems. This involves sharing resources, exchanging knowledge, and forming strategic partnerships. With effective knowledge sharing and strategic partnerships within the business ecosystems, MSMEs can enhance their operational efficiency, innovative performance and market competitiveness, leading to MSMEs sustainability.

### **5.5 Limitations and directions for future research**

Although the study provided invaluable insights, it is not without its limitations. Firstly, the study focussed on some selected MSMEs in Lagos State, Nigeria using a cross-sectional survey design. As a result, the results may not be generalisable to other organisations in Nigeria. Therefore, future studies may involve more organisations using longitudinal research design or replicate this study using organisations in different industries to allow stakeholders to compare results. Furthermore, the quantitative nature of the study means that the study could not explore context-specific variables of the business ecosystem that may influence MSME's performance outcomes. Future studies may adopt a qualitative approach to unearth context-specific issues within the business ecosystem in Nigeria and MSMEs' performance, particularly given the underdevelopment of this research domain.

## **6. CONCLUSION**

The study concludes that the business ecosystem plays a critical role in enhancing the performance of Micro, Small, and Medium Enterprises (MSMEs). A strong business ecosystem substantially contributes to MSMEs' competitive advantage, innovation and sustainable growth. By offering access to essential resources through participation, social networks, and collaborations, these ecosystems empower MSMEs to outperform competitors, innovate and achieve sustainable growth. The interconnected nature of business ecosystems facilitates enhanced operational efficiency and strategic positioning, as MSMEs can leverage shared resources and market opportunities (Adner & Kapoor, 2016).

Innovation within MSMEs is significantly influenced by the business ecosystem. Supportive ecosystems provide MSMEs with critical inputs such as technological advancements and collaborative opportunities that drive innovation. This environment enables MSMEs to adapt swiftly to market changes and develop new solutions, thereby maintaining a competitive edge and sustainable growth (Zhang & Li, 2020). The study also underscores the importance of effective social networks within the business ecosystem. MSMEs with strong social networks benefit from improved access to resources and collaborative opportunities, which contribute to their overall success via innovation. Social networks facilitate knowledge exchange and strategic partnerships, further enhancing MSME performance (Porter & Kramer, 2023).

Collaboration within business ecosystems is pivotal for MSME growth and performance. Collaborative relationships enable MSMEs to share resources, exchange knowledge, and form strategic partnerships, which are essential for innovation, sustainable growth and operational efficiency. This collaboration leads to improved market competitiveness and business outcomes (Harvard Business Review, 2024). In general, the findings emphasize that a robust business ecosystem, effective social networks, and participation through partnership and strategic collaboration are crucial for driving MSME innovation, sustainable growth, and competitive advantage.

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