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Entrepreneurial Ecosystem and Startup Sustainability of SMEs in Rivers State, Nigeria.

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ABSTRACT: *This study explores the relationship between the entrepreneurial ecosystem and the sustainability of startups within small and medium-sized enterprises in Rivers State, Nigeria. This investigation addresses the difficulties faced by small and medium-sized enterprises in acquiring essential financial resources and developing adequate human capital to sustain profitability and ensure long-term survival in a competitive and unpredictable business environment. The study employed a survey design to achieve its objectives. An extensive assessment of SME owners and managers in Rivers State was conducted, and a representative sample size was determined using the Krejcie and Morgan (1970) table. Data were collected through a structured questionnaire that evaluated characteristics of the entrepreneurial ecosystem, including access to funding and the development of human capital, as well as variables related to startup sustainability, such as business longevity and profitability. Five structured items were employed to examine each dimension and assess the measurements. The Spearman rank order correlation coefficient was utilised to analyse the data of the study and assess its hypotheses. The results revealed strong and statistically significant relationships between elements of the entrepreneurial ecosystem and measures of startup sustainability, with correlation coefficients of *0.745, *0.708, *0.874, and *0.867. The findings indicate that the entrepreneurial ecosystem, particularly the availability of financial resources and the development of human capital, supports the sustainability of small and medium-sized enterprises in Rivers State. The findings indicate that small and medium-sized enterprises ought to prioritise the enhancement of their workforce and leverage available funding options. Simultaneously, it is essential for policymakers and financial institutions to establish frameworks that facilitate access to loans for SMEs and enhance their capabilities, enabling sustainable growth in the long term.*

Keywords**:** Access to Finance, Business Longevity, Entrepreneurial Ecosystem, Startup Sustainability.

1. Introduction

In today's unstable business environment, when resources are scarce, customer needs are always changing, and global competition is rising, the growth and competitiveness of small and medium-sized firms (SMEs) depend on the sustainability of their startups. Sustainable startups can not only last for a long time, but they can also create value for stakeholders, communities, and the economy over time. In Nigeria, where small and medium-sized enterprises (SMEs) play a big role in the economy and job market, making sure that new firms can last has been very important. This is especially true since most small businesses fail within their first five years (SMEDAN & NBS, 2021). Sustainable startups create steady jobs, encourage innovation in the area, and encourage commerce and investment (Afolabi, 2022). Sustainability is no longer a luxury; it is now a must for small and medium-sized businesses (SMEs) to survive in a world that is becoming more competitive and unpredictable. The entrepreneurial ecosystem, which includes the institutions, networks, regulations, culture, and resources that help or hurt entrepreneurship, is a big factor in how long a firm may stay in business (Stam, 2015; Acs et al., 2017). An effective entrepreneurial ecosystem provides entrepreneurs with access to capital, markets, mentorship, supportive policies, and technology, all of which promote resilience and sustainable growth (Mason & Brown, 2014). Entrepreneurial ecosystems are vital for small and medium-sized businesses (SMEs) to get over structural problems including bad infrastructure, insufficient access to credit, red tape, and laws that change all the time (Adewale & Oyeniran, 2020). Entrepreneurs that are part of robust ecosystems are more likely to come up with new ideas, change their enterprises to fit new market conditions, and keep them going for a long time (Isenberg, 2011).

In an economy that is quickly going digital, small and medium-sized businesses (SMEs) that are good with technology are more likely to grow and stay strong (Nwankwo & Okeke, 2020). Companies that are driven by innovation are more affected by social and economic forces. This lets them improve efficiency, save costs, and meet changing client needs (Kraus et al., 2022). In Rivers State, on the other hand, most small and medium-sized businesses (SMEs) are slow to adopt digitalisation because of problems with infrastructure, low levels of digital literacy, and economic issues. This makes them less competitive and puts their long-term survival at risk (Onugu, 2021). Social networks are also quite important in entrepreneurial ecosystems, especially in places where official institutions aren't very strong. Adomako & Ahsan (2022) say that networks give businesses non-financial resources like information, mentorship, legitimacy, and access to markets. In Rivers State, where entrepreneurs may encounter financial deficiencies and institutional inefficiencies, social capital might act as a substitute for structural resources in facilitating their navigation of entry and growth obstacles. Ecosystems that are healthy and encourage collaboration and networking help startups stay in business by developing trust, partnerships, and collective learning (Zafar et al., 2022). Even while more and more people are starting to believe that entrepreneurial ecosystems might help startups stay in business (Acs et al., 2017; Stam, 2015; Urban & Newman, 2023), there

hasn't been much research on this in Nigeria, especially in Rivers State. Previous research has concentrated on national patterns (Afolabi, 2022; Onugu, 2021), although localised information is still limited. To close this information gap, this study aims to empirically examine the relationship between the entrepreneurial ecosystem and the sustainability of SMEs' startups in Rivers State, Nigeria.

Statement of the Problem

While there is a consensus on the significance of small and medium-sized enterprises (SMEs) in fostering innovation, generating employment, and boosting local economies, the potential for startups to thrive in Rivers State, Nigeria remains uncertain. The concept of sustainability in startups refers to the capacity of emerging enterprises to endure, grow, and generate lasting value, despite fluctuations in the business landscape and competitive pressures (Asah et al., 2020). Despite the significant contribution of startups to Nigeria's GDP and their role in providing employment for millions, studies indicate that a majority of these ventures do not survive beyond the initial five years. This is largely attributed to insufficient resources, overly stringent regulations, and a fragile entrepreneurial ecosystem (Adebisi & Gbegi, 2013; Eniola & Entebang, 2015). This instability poses significant challenges for businesses to endure, while simultaneously hindering small and medium-sized enterprises (SMEs) in their contributions to the state's long-term economic development.

An entrepreneurial ecosystem is made up of various interconnected entities and factors that impact entrepreneurial performance (Isenberg, 2011; Stam, 2015). Studies have shown that Nigerian SMEs function within a delicate environment marked by infrastructural deficiencies, bureaucratic challenges, policy inconsistencies, and insufficient institutional backing (Adegbite & Ayadi, 2011; Uzonwanne, 2015). Startups in Rivers State face a particularly high risk of failure. The absence of strong ecosystem supports such as mentorship, investor networks, and technology adoption platforms raises concerns about the long-term survival and growth of SMEs in the state. Access to entrepreneurial funding is crucial for the survival of startups; however, small and medium-sized enterprises in Rivers State face significant challenges in obtaining affordable credit from formal financial institutions (Ojo, 2018).

The challenges posed by elevated lending rates, stringent collateral demands, and limited access to venture capital or angel funding avenues significantly hinder the growth and transformation of businesses (Beck & Demirguc-Kunt, 2006). The absence of this type of funding often compels entrepreneurs to seek informal financing, which falls short of enabling them to expand their businesses or maintain competitiveness in ever-evolving industries. Furthermore, increasing the utilisation of technology serves as a strategy to support the sustainability of startups in Rivers State. In the current technology-oriented landscape, small and medium-sized enterprises (SMEs) must leverage technology across their operations, marketing, and customer service to grow and maintain resilience (Akpan et al., 2020). However, a significant number of the state's emerging enterprises lack the necessary infrastructure, technical expertise, or access to digital platforms that facilitate efficient operations and customer engagement. The current technological delay poses significant challenges for small and medium-sized enterprises (SMEs) in Rivers State, hindering their ability to compete with counterparts in more favourable environments. While extensive studies have been conducted on entrepreneurship in Nigeria, there remains a notable gap in examining how various components of the entrepreneurial ecosystem influence the sustained success of small and medium-sized enterprises in Rivers State. The present study bridges the gap.

Research Aim and Objectives

The aim of this study is to examine the relationship between entrepreneurial ecosystems and startup sustainability of SMEs in Rivers State, Nigeria. The specific objectives of this study are to determine the relationship between:

i. Access to finance and business longevity of SMEs in Rivers State, Nigeria.
ii. Access to finance and profitability of SMEs in Rivers State, Nigeria.
iii. Human capital development and business longevity of SMEs in Rivers State, Nigeria.
iv. Human capital development and profitability of SMEs in Rivers State, Nigeria.

Research Questions

The following research questions were given in the study;

i. What is the relationship between access to finance and business longevity of SMEs in Rivers State, Nigeria?
ii. How does access to finance relate with profitability of SMEs in Rivers State, Nigeria?
iii. How does human capital development relate with business longevity of SMEs in Rivers State, Nigeria?
iv. What is the relationship between human capital development and profitability of SMEs in Rivers State, Nigeria?

Research Hypotheses

The following research hypotheses were stated and tested in this study;

$Ho_{1:}$ There is no significant relationship between access to finance and business longevity of SMEs in Rivers State, Nigeria.

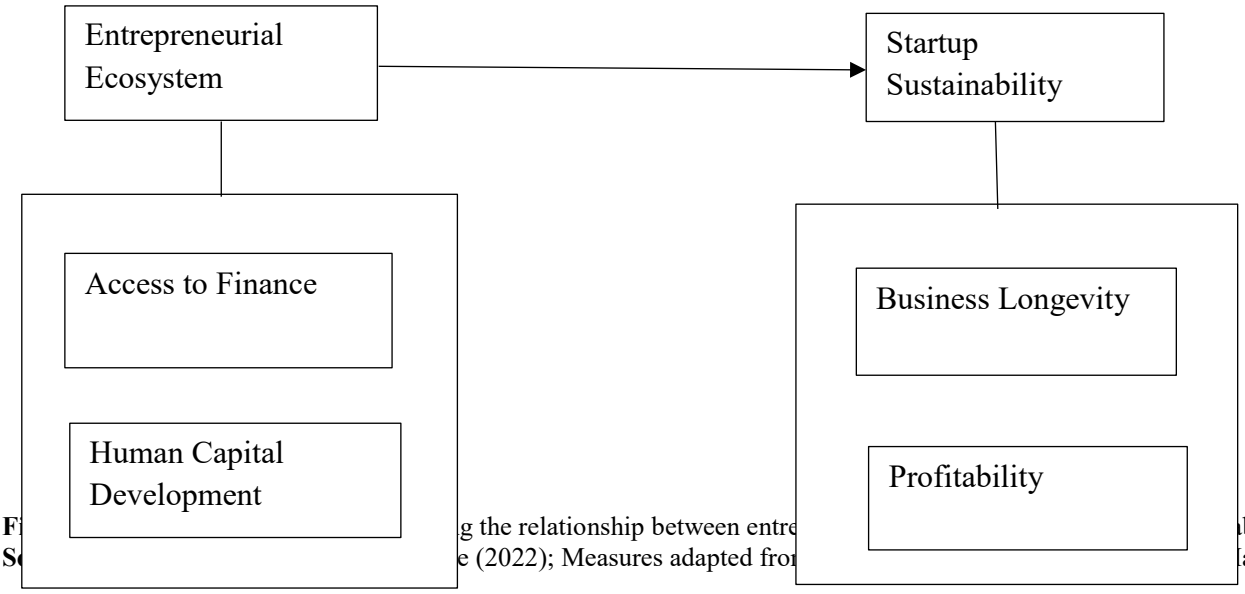
Ho_2: There is no significant association between access to finance and profitability of SMEs in Rivers State, Nigeria.

Ho_3: There is no significant connection between human capital development and business longevity of SMEs in Rivers State, Nigeria.

Ho_4: There is no significant link between human capital development and profitability of SMEs in Rivers State, Nigeria.

Review of Related Literature

Conceptual Framework



Fi g the relationship between entre bility.
S e (2022); Measures adapted fro arsili, (2006).

Entrepreneurial Ecosystem

Malecki (2018) argues that Moore (1993) promoted the examination of a firm as part of an entrepreneurial ecosystem and contributed to the widespread use of the term "ecosystem" in social science. Spigel and Harrison (2017) argue that the concept of an entrepreneurial ecosystem is based on economic geography, regional science, and theories of entrepreneurship. Mason and Brown (2014) characterise an entrepreneurial ecosystem (EE) as an interconnected network comprising entrepreneurial individuals, ventures, support systems, organisations, and practices that work together, both in formal and informal capacities, to foster, regulate, and manage entrepreneurial activities. Galperin & Melyoki (2018) describe the EE as a structured system of rules, regulations, and organisations aimed at supporting and guiding entrepreneurs throughout the various stages of concept development, venture creation, and growth. Various individuals possess diverse perspectives on the components that constitute an entrepreneurial ecosystem. Bachinga, et al., (2020) highlight a viewpoint that emphasises a network of local participants dedicated to fostering long-term prosperity through support and encouragement of new, environmentally sustainable enterprises. This description emphasises the importance of continuous collaboration and indicates that ongoing involvement from individuals is essential. Autio et al. (2018) present a different perspective, characterising ecosystems as an element of the digital economy that utilises technological progress to promote entrepreneurial ventures via innovative changes to organisational frameworks.

Prahalad (2020) describes an entrepreneurial ecosystem as one that enables effective collaboration among individuals, groups, and society in the quest for financial wealth. Ecosystems play a crucial role in uniting individuals with diverse interests and preferences. Entrepreneurial ecosystems have the potential to assist struggling economies and accelerate the growth of those that are already thriving. According to Brown and Mawson (2019), entrepreneurial ecosystems provide a framework for understanding the interplay between individual actions and broader social influences that extend beyond the capabilities of a single person. According to Van Rijnsoever (2020), an entrepreneurial ecosystem consists of individuals who communicate and exchange resources within a network governed by institutional regulations and bolstered by infrastructure. According to Stam (2015), an entrepreneurial ecosystem comprises a collective of individuals and components that collaborate to support the success of entrepreneurs. According to Spigel (2017), entrepreneurial ecosystems consist of a combination of social, political, economic, and cultural elements within a specific region that support the growth and development of innovative start-ups. They also motivate individuals interested in launching their own enterprises and others to embrace the challenges of initiating, financing, and backing high-risk initiatives.

Access to Finance

Access to funding is a critical component of the entrepreneurial ecosystem, as it directly impacts entrepreneurs' ability to initiate, manage, and expand their ventures. The entrepreneurial ecosystem, comprising individuals, institutions, and resources that collaboratively support entrepreneurship, cannot function effectively without financial resources. Finance mobilises the capital required for investment in innovative concepts, product development, infrastructure, and human resources, thereby facilitating entrepreneurial growth and sustainability (Mason & Brown, 2014). Entrepreneurs often encounter difficulties in securing adequate funding due to underdeveloped credit systems, insufficiently established capital markets, and banks' requirements for substantial collateral (Beck & Demirguc-Kunt, 2006). In the absence of financial access, businesses exhibit increased vulnerability, and startups face diminished survival prospects due to their inability to secure necessary funds for navigating market shocks or capitalising on emerging opportunities (Afolabi, 2017). This illustrates why access to finance is consistently viewed as a fundamental element of entrepreneurial ecosystems (Stam, 2015).

In the business sector, funding sources include bank loans, venture capital, angel investments, crowdfunding, and government subsidies. Various methods of obtaining funds can facilitate business expansion in diverse manners at different phases of development. At the start-up stage, seed funding and angel investment play a crucial role. Businesses utilise venture capital and commercial lending as they expand (Cavallo, Ghezzi, & Balocco, 2019). Research demonstrates that SMEs in various African economies, including Nigeria, face significant marginalisation from formal financial sources, leading to a heavy reliance on informal alternatives such as familial or cooperative networks (Abereijo & Fayomi, 2007). Relying on informal funding often constrains growth potential and long-term viability. Subsequent considerations following fund availability include the affordability and appropriateness of the funds. Formal finance remains inaccessible for the majority of small and medium-sized enterprises (SMEs) due to elevated interest rates, constrained repayment durations, and stringent collateral requirements (OECD, 2019). Consequently, authorities and stakeholders in the ecosystem are increasingly implementing financial inclusion programs, credit guarantee schemes, and digital lending platforms to address the funding gap. Access to finance remains a critical factor in shaping the entrepreneurial environment, as it fosters business innovation, competitiveness, and resilience. Insufficient financing can impede entrepreneurial activities, threatening the sustainability of new firms and limiting their contribution to economic development (Beck et al., 2011).

Human Capital Development

The creative potential, expertise, knowledge, and skills that employees and entrepreneurs offer to the business sector are all very important for developing human capital. In addition to money and infrastructure, the quality of human capital helps create a thriving entrepreneurial environment and affects entrepreneurs' capacity to spot opportunities, come up with new ideas, and run enterprises well (Acs, Autio, & Szerb, 2014). Building human capital makes ensuring that entrepreneurs and their employees have the skills they need to do well in changing business settings and help start-ups develop. When it comes to entrepreneurship, human capital includes more than just formal education. It also includes executive skills, specialised knowledge, analytical abilities, and learning from experience.

Unger et al. (2011) assert that entrepreneurs possessing substantial human capital are more adept at identifying lucrative possibilities, optimising resource allocation, and responding to dynamic market conditions. New businesses in underdeveloped nations like Nigeria have a lot less room for creativity and long-term success since they don't invest enough in research, education, and skill development (Adelekan, 2018). Rivers State has a lot of resources, but it doesn't have enough programs to help entrepreneurs learn new skills and improve their businesses. This makes small and medium-sized businesses less competitive. Research indicates that organisations with well-trained employees exhibit greater resilience, creativity, and productivity compared to those with lower skill levels (Marvel, Davis, & Sproul, 2016). This shows how important it is to keep passing on information, mentoring, and increasing capacity to help entrepreneurial ecosystems grow. Also, vocational training, entrepreneurial education, and working with schools and business leaders are all important ways to build a talent pool that will help businesses (Isenberg, 2011). Insufficient human capital development remains one of the most significant impediments to the growth and sustainability of SMEs. Brain drain, weak linkages between business and academia, and limited access to technical training are still problems that make it hard for entrepreneurs to succeed (Adegbite & Adegbite, 2017).

Startup Sustainability

Startup sustainability extends beyond the initial success of a firm. This indicates that the business can endure, grow, and maintain competitiveness in a constantly evolving market. According to Hossain, Akter, and Sultana (2020), startup sustainability refers to the capacity of new enterprises to manage internal and external pressures, adapt to evolving demands, and maintain operations over an extended duration. This indicates that long-term success is a complex concept derived from strength, creativity, adaptable strategies, and support from caring individuals, rather than solely from financial gain. Startups require stable cash flow and reliable returns on investments to cover operating expenses, finance new initiatives, and navigate difficult periods. Singh et al. (2016) argue that profitability serves as the primary indicator of business sustainability, demonstrating a company's capacity to create value for its owners and stakeholders. Inadequate financing frequently leads to early business failure, especially in developing nations where small and medium-sized enterprises encounter limited access to lending institutions. Adejumo and Olaoye (2019) assert that the longevity of a startup is closely correlated with its strength. Startups proficient in risk management, diverse revenue generation, and adaptability are more likely to succeed in unstable environments. According to Marvel et al. (2016),

organisations with proficient employees demonstrate enhanced capabilities in generating innovative ideas, maintaining a competitive edge, and achieving long-term growth.

Robust social networks and positive relationships with stakeholders facilitate trust-building, market access, and resource mobilisation, all contributing to sustainability (Isenberg, 2011). Startups require entrepreneurial resilience, human capital, and ecosystem support to remain operational. Resilient companies enhance outcomes for customers, employees, communities, and the environment, alongside achieving financial success. This perspective is consistent with the triple bottom line framework, emphasising the economic, social, and environmental dimensions of sustainability (Elkington, 1997). Startups employing sustainable methods in their strategies are likely to gain a competitive advantage, attract investment, and ensure long-term market viability. Despite the significant economic potential of SMEs, many new businesses fail due to inadequate infrastructure, unclear policies, limited access to funding, and insufficient institutional support, which diminishes their likelihood of sustainability (Adelekan, 2018). Facilitating the functionality of entrepreneurial ecosystems can significantly mitigate these constraints, thereby enhancing the survival prospects of startups and their potential for long-term contributions.

Business Longevity

The longevity of a business is determined not solely by its years of operation but also by its ability to remain relevant, generate profit, and adapt to various business cycles (Chowdhury, Audretsch, & Belitski, 2019). The capacity of new enterprises to remain operational beyond the initial years serves as a critical indicator of sustainability. Many new enterprises encounter failure within their initial two to three years due to financial, managerial, or environmental challenges (Shirokova, Osiyevskyy, & Bogatyreva, 2016). Successful companies develop adaptable capabilities that allow them to respond effectively to changing markets, technological progress, and socio-economic challenges. Adejumo and Olaoye (2019) assert that strategic flexibility and resilience are critical for the long-term sustainability of a business.

Business longevity encompasses not only survival but also the maintenance of relevance and competitiveness within the market over time. The longevity of a business is contingent upon its ability to establish effective procedures, foster strong relationships with stakeholders, and integrate innovation into its daily operations. Established companies possess the advantage of accumulated knowledge over time, enhancing their capacity to anticipate changes and capitalise on emerging opportunities (Loderer & Waelchli, 2010). Longevity serves as a critical indicator of the effectiveness of entrepreneurial ecosystems in facilitating the establishment of new businesses. Business longevity encompasses resilience, adaptation, and the continuous creation of stakeholder value, making it a critical factor for long-term sustainability.

Profitability

Profitability is perhaps the most important sign of whether a startup will be successful or not. This is because it shows how well a firm can make money from its operations and stay in business over time. Profitability indicates a company's capacity to efficiently utilise resources and transform entrepreneurial inputs into economic value (Singh et al., 2016). Revenue growth may indicate market acceptance, but profitability will ascertain the long-term viability of a company model, ensuring that the enterprise can reinvest, develop, and endure competitive pressures. Financial institutions and venture capitalists are more likely to give money to businesses that are making money since it shows that the business is stable and there is less danger in investing (Alarape, 2020).

Profitability is also important because there isn't much outside investment, so companies have to rely on the money they make to grow and come up with new ideas. Companies that make money consistently are better able to handle changes in the market, hire new people, and encourage new technologies, which makes them more sustainable (Hossain, Akter, & Sultana, 2020). On the other hand, startups that don't make money are more likely to go out of business, even if they do well at first or are well-received by the market. A startup's ability to consistently make money not only ensures its existence, but it also helps create jobs, reduce poverty, and develop the economy.

Theoretical Review

This study is grounded in the Dynamic Capabilities Theory developed by Teece, Pisano, and Shuen (1997). The approach highlights the firm's ability to integrate, develop, and reconfigure internal and external skills in response to rapidly changing contexts. The necessity for adaptation among businesses in Rivers State is underscored by ongoing changes in the economy, technology, and infrastructure. A supportive business environment enhances the flexibility of small and medium-sized enterprises (SMEs), contributing to their sustainability. Dynamic capabilities are crucial for the survival and success of SMEs and start-ups within entrepreneurial ecosystems, particularly in unpredictable and volatile environments.

Companies require resources such as capital, technology, and skilled labour; however, they must also develop the capacity to adapt these resources in response to changing circumstances (Eisenhardt & Martin, 2000). Startups can endure and prosper due to their innovative nature, adaptability in planning, and ability to identify emerging opportunities. Small and medium-sized enterprises (SMEs) in Rivers State, Nigeria, face challenges related to infrastructure, fluctuating regulations, and market dynamics. This situation requires dynamic capabilities. They assist business owners in effectively managing external constraints, fostering resilience, and sustaining their enterprises. The theory offers a comprehensive framework for analysing the ways in which the entrepreneurial ecosystem enhances startup sustainability via adaptation, innovation, and strategic renewal.

Empirical Review

Okpara (2019) examined the impact of financial access on the growth and sustainability of small and medium-sized enterprises (SMEs) in South-Eastern Nigeria. The findings indicated that unfavourable credit options, elevated interest rates, and restrictions on collateral hindered entrepreneurial growth and increased the likelihood of business failure. Enhanced access to funding significantly strengthened startup viability by enabling business expansion, technological adoption, and increased competitiveness. Brown and Mason (2017) examined the significance of financial access within an entrepreneurial ecosystem. Research indicates that regions with superior financial infrastructure, such as venture capital and angel investors, exhibit elevated rates of startup growth. This funding facilitates rapid business growth. Hong, Serfes, and Thiele (2018) found that the presence of venture capital firms and experienced entrepreneurs in a region enhances the likelihood of startup success. Klapper and Love (2010) identified a positive correlation between business growth and the availability of loans in their study. When businesses have improved access to capital, their development accelerates.

Afolabi and Olayemi (2021) investigated the significance of human capital development within SMEs in Lagos State. The findings indicated that companies investing in staff training and the development of entrepreneurial capabilities exhibited greater productivity, longevity, and adaptability than those that did not invest. The research indicates that the development of human capital is crucial for the success of startups, enhancing their innovation and adaptability to dynamic business environments. A 2011 study conducted by Brown, Rocha, and Cowling indicated that firms with greater access to external funding sources, such as angel and venture capital, exhibit higher levels of innovation and growth. Spigel (2017) highlighted the holistic nature of entrepreneurial ecosystems (EEs), positing that the interaction among various components, such as culture, finance, and support networks, plays a more significant role in fostering entrepreneurial success than the simple sum of these individual factors. Stam and Van de Ven (2019) examined the roles of human and social capital in entrepreneurial ecosystems. Research indicates that networks comprising experienced business owners, mentors, and skilled personnel are essential for the growth of new enterprises. These networks facilitate innovation and knowledge exchange.

Eze and Chukwu (2022) investigated the influence of entrepreneurial ecosystems on the performance of small and medium-sized enterprises (SMEs) in Enugu State. The evidence presented indicates that effective government policies, robust infrastructure, and sound institutional arrangements facilitated the survival and growth of businesses. The study confirmed that a structured entrepreneurial ecosystem promotes startup sustainability through the facilitation of innovation, the assurance of resource accessibility, and the reduction of risks. Stam et al. (2014) identified a positive correlation between regional economic growth and the prevalence of entrepreneurial networks. Autio et al. (2014) demonstrate that regions with strong entrepreneurial ecosystems show increased rates of employment creation and business formation. Teixeira et al. (2021) observed that an increase in technology-based companies correlates with a rise in the number of skilled workers. Access to talent correlates with improved performance. Vedula et al. (2019) found that areas with a higher concentration of skilled individuals showed increased company success and entrepreneurial activity, highlighting the critical role of talent in influencing ecosystem dynamics.

Methodology

This study utilises a quantitative research design, specifically a cross-sectional survey method, to explore the relationship between entrepreneurial ecosystems (access to finance and human capital development) and startup sustainability (business longevity and profitability) among SMEs in Rivers State, Nigeria. The population for this study includes owners and managers of registered Small and Medium Enterprises (SMEs) across various sectors in Rivers State. The sample size was determined using the Krejcie and Morgan (1970) sampling table. The necessary sample size for achieving a 95% confidence level is 291 respondents. The estimated number of registered SMEs in Rivers State is approximately 1,200, based on data from SMEDAN. To achieve proportional representation, participants were chosen through stratified random sampling from metropolitan clusters, such as Port Harcourt and Obio-Akpor. The independent variable, entrepreneurial ecosystems, was defined through two dimensions: access to finance and the development of human capital. A set of five items was employed to assess each of these constructs. Five items were employed to evaluate access to financial resources, including the statement, “My business has adequate access to financial institutions or funding sources that support its growth.” Five items were utilised to assess the growth of human capital (for instance, "The availability of skilled workers contributes to the growth of my business"). The criterion variable, startup sustainability, was evaluated based on firm longevity and profitability. Five items were utilised to assess the longevity of a business, including the statement, "The strategies my business employs ensure its survival even in challenging market conditions." Five elements were utilised to measure profitability, including the statement, "My business consistently generates sufficient revenue to remain operational." The assessment of the instrument utilised in this study was conducted through the evaluation of face and content validity. Cronbach's Alpha was employed to assess its reliability. The analysis utilised a Cronbach's Alpha reliability rating of 0.7. Values exceeding 7.0 are considered to be composite reliable. The analysis was conducted utilising Spearman’s rank correlation methods.

Results

A total of 291 questionnaires were distributed, resulting in 270 (92.8%) being returned, which are considered valid responses. The hypotheses test is conducted at a 95% confidence interval, and the decision rule is outlined below.
If $P < 0.05$, we reject the null hypothesis. If $P > 0.05$, we accept the null hypothesis.

Access To Finance and Startup Sustainability

Table 1: Correlation between Access to finance and Startup sustainability

			Access To Finance	Business Longevity	Profitability
Spearman's rho	Access To Finance	Correlation Coefficient	1.000	.745**	.708**
		Sig. (2-tailed)	.	.000	.000
		N	270	270	270
	Business Longevity	Correlation Coefficient	.745**	1.000	.725**
		Sig. (2-tailed)	.000	.	.000
		N	270	270	270
	Profitability	Correlation Coefficient	.708**	.725**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	270	270	270

**. Correlation is significant at the 0.01 level (2-tailed).

Ho_1: There is no significant association between access to finance and business longevity.

Ho_2: There is no significant link between access to finance and profitability.

The relationship between funding access and measures of startup sustainability, such as enterprise lifetime and profitability, shows a statistically significant correlation at $P < 0.05$. The results indicate a robust and favourable relationship between access to finance and business longevity, evidenced by a Rho of 0.745 and a P value of 0.000. A significant positive correlation exists between access to finance and profitability, evidenced by a Rho of 0.708 and a P value of 0.000. Consequently, we dismiss the first null hypothesis and the second hypothesis concerning the relationship between access to capital and the longevity and profitability of a business. The P value (0.000) falls below the 0.05 threshold for significance.

Human Capital Development and Startup Sustainability

Table 2: Correlation between Human capital development and Startup sustainability

			Human Capital Development	Business Longevity	Profitability
Spearman's rho	Human Capital Development	Correlation Coefficient	1.000	.874**	.867**
		Sig. (2-tailed)	.	.000	.000
		N	270	270	270
	Business Longevity	Correlation Coefficient	.874**	1.000	.725**
		Sig. (2-tailed)	.000	.	.000
		N	270	270	270
	Profitability	Correlation Coefficient	.867**	.725**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	270	270	270

**. Correlation is significant at the 0.01 level (2-tailed).

Ho_3: There is no significant correlation between human capital development and business longevity of SMEs in Rivers State, Nigeria.

Ho_4: There is no significant connection between human capital development and profitability of SMEs in Rivers State, Nigeria.

The relationship between human capital development and startup sustainability metrics, specifically company lifetime and profitability, is statistically significant, indicated by a P value of less than 0.05 in the hypothesis. The findings indicate that the

enhancement of human capital exerts a substantial and statistically significant positive influence on business longevity, evidenced by a Rho of 0.874 and a P value of 0.000. Additionally, the development of human capital demonstrates a strong positive correlation with profitability, indicated by a Rho of 0.867 and a P value of 0.000. Consequently, we reject the null hypothesis concerning the correlation between human capital development and indicators of startup sustainability, as the P value (0.000) is below the 0.05 significance threshold.

Discussion of Findings

The study provides strong empirical evidence of a positive and statistically significant correlation between entrepreneurial environment characteristics, such as access to finance and human capital development, and the sustainability of startups within SMEs in Rivers State, Nigeria. The data indicates that access to cash and the development of human capital are critical factors contributing to the long-term viability and profitability of startups.

The correlation between access to finance and business longevity is significant, evidenced by a Spearman's rho of 0.745 ($p = 0.000$). Approximately 80% of the variance in business longevity can be attributed to the entrepreneur's financial access ($r^2 = 0.556$). This suggests that SMEs with improved access to financial resources are better equipped to survive and maintain operations in the long term. This finding is consistent with the research of Beck and Demirguc-Kunt (2006), which emphasised that access to capital is a crucial factor affecting the growth and sustainability of enterprises, especially in SMEs in developing countries. Financial limitations are likely to undermine the investment, innovation, and resilience capacities of small enterprises, consequently diminishing their longevity. The correlation between access to finance and profitability was established with a Spearman's rho of 0.708 ($p = 0.000$) and a r^2 of 0.503. The statement indicates that access to finance significantly enhances the profitability of SMEs, implying that firms with greater financial resources are better positioned to achieve consistent profits and support growth.

The research indicated a significant relationship between the enhancement of human capital and the sustained success of a business ($\rho = 0.874$, $p = 0.000$; $r^2 = 0.764$) as well as its profitability ($\rho = 0.867$, $p = 0.000$; $r^2 = 0.752$). The findings suggest that investment in human capital development significantly enhances the long-term viability and profitability of SMEs, as skilled and knowledgeable personnel improve operational efficiency and support strategic growth. SMEs with strong human capital demonstrate enhanced resilience and financial sustainability in competitive environments (Becker, 1993). The primary finding of the research indicates that a well-structured entrepreneurial ecosystem is essential for the sustainability of SMEs, ensuring their longevity and profitability. This aligns with the findings of Stam (2015) and Autio et al. (2018), indicating that entrepreneurial ecosystems provide companies with essential tools, networks, and skills for sustained growth and success.

Conclusion

This study investigated the correlation between the entrepreneurial ecosystem, specifically access to finance and human capital development, and the sustainability of startups among SMEs in Rivers State, Nigeria. The research demonstrated strong and statistically significant correlations between the dimensions of the entrepreneurial ecosystem and key indicators of startup sustainability, specifically business longevity and profitability. Specifically, SMEs with better access to finance exhibited stronger financial resilience and survival ability, and firms investing in human capital development exhibited stronger resilience, adaptability, and competitiveness in market conditions. The findings highlight the significance of entrepreneurial ecosystems as essential contributors to the sustainability of SMEs. Access to finance enables firms to seize opportunities, fund innovation, and endure external shocks, whereas the development of human capital provides entrepreneurs and employees with the necessary skills, knowledge, and capabilities to improve productivity and secure long-term business sustainability.

The results corroborate the dynamic capabilities theory, which asserts that firms must continuously adapt, reconfigure, and utilise both internal and external resources to attain sustainable competitive advantage. The study advises that policymakers, financial institutions, and business support agencies prioritise policies that facilitate SME access to finance, alongside enhancing training and capacity-building initiatives. SMEs must invest in continuous learning, workforce improvement, and financial management skills as essential strategies for sustainability. The study demonstrates that the entrepreneurial ecosystem, characterised by access to finance and human capital development, has a positive correlation with the sustainability of SMEs in Rivers State.

Recommendations

The subsequent recommendations were proposed:

i. The government and financial institutions should establish specialised funding mechanisms, such as low-interest loans, grants, and microcredit programs, to facilitate access to long-term financing for small and medium-sized enterprises (SMEs).
ii. Small and medium-sized enterprises (SMEs) need assistance from lending institutions and programs that educate them on effective financial management. Effective financial management can optimise investment returns, enhance business efficiency, and increase profitability.
iii. Owners of small and medium-sized enterprises (SMEs) must emphasise the significance of regular training and capacity-building sessions for employees to enhance their skills, creativity, and adaptability. This will enhance the organization's knowledge, improve its problem-solving capabilities, and contribute to the long-term sustainability of the business.

iv. Small business support groups ought to initiate programs that educate individuals on entrepreneurship, provide coaching, and facilitate the acquisition of new technologies. Small and medium-sized enterprises can increase profitability and improve competitiveness in a dynamic market by enhancing employee productivity and management capabilities.

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