ENTREPRENEURSHIP COLLABORATION AND BUSINESS SUSTAINABILITY: AN EMPIRICAL STUDY OF SMEs IN SOUTH-WEST NIGERIA

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ABSTRACT

Entrepreneurship collaboration has become essential for enhancing business sustainability among small and medium-sized enterprises (SMEs). However, SMEs in South-West Nigeria face challenges such as limited resources, market competition, and regulatory constraints, hindering their sustainability efforts. Collaboration helps SMEs overcome these obstacles by pooling resources, sharing knowledge, and leveraging synergies, thus enhancing long-term viability. Despite its importance, there is limited empirical research on the impact of entrepreneurship collaboration on SME sustainability in this region. This study addresses this gap by investigating the effect of entrepreneurship collaboration on business sustainability among SMEs in South-West Nigeria. Using a descriptive research design, data were collected from 384 SME operators registered with SMEDAN and analyzed through regression analysis. The results showed that entrepreneurship collaboration accounts for 65.1% ($R^2 = 0.651$) of the variation in business sustainability. Dimensions of collaboration, such as networks ($\beta = 0.309$), resource sharing $(\beta = 0.145)$, collaboration intensity $(\beta = 0.104)$, and knowledge exchange $(\beta = 0.948)$, had significant positive effects on SME sustainability. The study concludes that entrepreneurship collaboration significantly influences SME sustainability and recommends fostering a conducive environment through supportive policies, networking opportunities, and capacity-building initiatives. These findings have practical implications for policymakers, business support organizations, and SME practitioners in South-West Nigeria and beyond.

Keywords: Collaboration Intensity, Collaboration Networks, Innovation and Adaptability, Knowledge Exchange, Resource Sharing.

INTRODUCTION

Small and medium-sized enterprises (SMEs) are crucial drivers of economic development and job creation worldwide (Kritikos, 2014; OECD, 2017). However, SMEs, particularly in South-West Nigeria, face significant challenges such as

limited access to resources, intense market competition, and regulatory constraints (Adebisi & Bakare, 2019; World Bank, 2020). To overcome these challenges and enhance sustainability, entrepreneurship collaboration has emerged as a strategic necessity (Naudé, 2013; Bosma *et al.*, 2020). Through

collaboration, SMEs can pool resources, share knowledge, and leverage synergies, thereby boosting innovation and adaptability (McGrath & O'Toole, 2019). Critical dimensions of entrepreneurship collaboration such as collaboration networks, resource sharing, collaboration intensity, and knowledge exchange play a pivotal role in enhancing SME resilience and long-term viability (Kollmann, Stöckmann, & Kensbock, 2017).

Collaboration networks are particularly vital as to forge strategic enable **SMEs** partnerships, access new markets, share risks, and improve competitive advantage (Martínez-Conesa, Soto-Acosta, & Palacios-Manzano, 2017). These networks contribute to innovation by bringing in diverse perspectives and novel ideas while also enhancing adaptability by enabling SMEs to respond swiftly to market changes (Wang & Rajagopalan, 2015). Resource sharing, which involves the joint utilization of financial, human, and physical resources, not only reduces operational costs but also fosters innovation and scalability, allowing firms to optimize resource use and respond to demand fluctuations (Lee, Lee, & Garrett, 2019).

The intensity of collaboration, which refers to how deeply and frequently SMEs engage in collaborative activities, significantly affects the strength of partnerships and the alignment of objectives. Higher business collaboration intensity builds trust and coordination, which are essential for sustaining a competitive edge and driving continuous innovation (Díez-Vial & Montoro-Sánchez, 2016). Effective knowledge exchange further enhances SMEs' ability to adopt best practices, innovate, and remain competitive (Martinez-Conesa et al., 2017). By sharing insights and expertise, SMEs can improve their innovation capabilities adaptability, staying informed about industry trends and overcoming operational challenges (Roxas, Chadee & Roxas, 2018).

Entrepreneurial collaboration, defined as strategic partnerships between entrepreneurs and businesses, has been identified as a potential solution to the obstacles faced by SMEs. By accessing shared resources, knowledge, and networks, SMEs can enhance their innovation capacity and competitive advantage. Recent studies suggest that such collaborative efforts can significantly improve business performance and sustainability by harnessing synergies and mitigating risks (Abiodun & Ibidunni, 2023). This highlights the potential of entrepreneurial collaboration as a strategy to support SME sustainability in Nigeria.

Achieving business sustainability for SMEs in Nigeria is complex, involving economic, social, and environmental dimensions. SMEs must navigate a challenging landscape characterized by unstable economies, inconsistent policies, and inadequate infrastructure (Nwosu, 2022). Entrepreneurial collaboration offers a pathway to address these challenges by promoting collective resource allocation and problem-solving. However, there is a significant research gap concerning the specific impact of these collaborations on SME sustainability in Nigeria.

Most existing literature focuses on isolated aspects of SME success, such as financial outcomes or innovation, without adequately addressing how entrepreneurial collaboration influences overall business sustainability. Moreover, these studies often fail to consider the unique socio-economic and cultural factors shaping the Nigerian business environment, limiting the applicability of their findings to the local context (Adebayo, 2021).

The lack of comprehensive empirical evidence on how different dimensions of entrepreneurship collaboration contribute to SME sustainability underscores the need for focused research. Specifically, there is a pressing need to understand how collaboration networks facilitate market expansion and risk-sharing (Martinez-Conesa *et al.*, 2017), how resource sharing optimizes operational efficiency and innovation (Lee, Lee & Garrett, 2019), and how collaboration intensity and knowledge exchange foster trust, coordination, and the adoption of best practices (Roxas, Chadee & Roxas, 2018). This study aims to fill this research gap by examining the impact of entrepreneurship

collaboration on business sustainability among SMEs in South-West Nigeria. Understanding these dynamics is crucial for informing policymakers, business support organizations, and SME practitioners, thereby aiding in the formulation strategies of that promote sustainable growth and resilience in the SME sector. The specific objective is to explore how collaboration networks, resource sharing, collaboration intensity, and knowledge exchange influence the overall sustainability of SMEs.

LITERATURE REVIEW AND THEORETICAL FOUNDATION

Entrepreneurship collaboration is a key factor in promoting business sustainability, particularly for SMEs in South-West Nigeria. Studies highlight that collaborative networks foster innovation, resource sharing, and knowledge exchange, which are critical to SMEs resilience and long-term sustainability (Afolabi & Mordi, 2018; Ogujiuba & Okezie, 2020). In the Nigerian context, partnerships among SMEs and with external stakeholders mitigate resource constraints and enhance market reach (Eze. 2021). Furthermore, collaboration facilitates access to financial and technical support, which drives business performance and sustainability (Olamade, 2019). These interactions contribute environmental, social, and economic sustainability, ensuring the SMEs' competitive advantage in the region.

Entrepreneurship Collaboration

Entrepreneurship collaboration plays a vital role in fostering growth and innovation among small and medium-sized enterprises (SMEs) in Nigeria. Recent studies have shown that collaborative entrepreneurship and diversity management significantly enhance performance and competitiveness of these businesses. Obinna, et al (2022) found that cultivating cooperative networks and embracing diversity positively impacts SME success in Nigeria, emphasizing the need for inclusive practices to boost competitiveness prosperity. Similarly, Kolade, et al (2021) highlighted the benefits co-creating of

entrepreneurship education through collaborations between universities, industries, and the public sector, stressing the importance of networking and diversity for enhancing profitability.

Obinna, et al (2020) further emphasized the crucial role of collaborative entrepreneurship in performance, urging improving **SME** policymakers and business leaders to prioritize initiatives that foster cooperative networks and inclusivity. Overall, the evidence suggests that a thriving entrepreneurial ecosystem in Nigeria relies on collaborative ventures, knowledgesharing, and inclusive practices. To drive sustainable entrepreneurial growth, particularly policymakers, educational institutions, and business leaders must work together to create an environment that supports these collaborative efforts.

Business Sustainability

Business sustainability involves a firm's ability to manage its social, economic, and environmental impacts to ensure ethical, responsible, and enduring success. Svensson, *et al* (2016) describe it as managing the effects of business on ecosystems and stakeholders, highlighting three key dimensions: financial, social, and environmental (Abreu & Toldy, 2019; Glavas & Mish, 2015). Savitz (2013) argues that sustainability benefits stakeholders, enhances societal quality of life, and ensures environmental protection.

In the current globalized and competitive business environment, SMEs must go beyond focusing solely on profit margins. They should consider the broader impact of their activities on environmental and social factors (Fischer *et al*, 2020). Emphasizing sustainability provides SMEs with multiple benefits and a competitive edge (Kwarteng *et al.*, 2016). Those committed to sustainable practices prioritize environmental values and social responsibility in decision-making processes (Hanaysha *et al.*, 2021). Thus, integrating economic, social, and environmental goals is fundamental to corporate sustainability (Kristensen & Mosgaard, 2020).

Some researchers see business sustainability as sustainable strategies to achieve using competitiveness, focusing on innovation, integration, and collaboration (Bari et al., 2022; Kraus et al., 2017). Pojasek (2007) and Kickul & Lyons (2020) suggest that sustainability aligns with a company's mission and vision, enabling long-term success through effective resource use and strategic planning (Gohar et al., 2015). In this context, business sustainability is a strategic approach viewed as entrepreneurs use to enhance competitive advantage and ensure long-term viability. It involves a continuous analysis and decisionmaking process that spans various company functions, grounded in a clear understanding of both present and future transitions.

Entrepreneurial Collaboration and Business Sustainability

Business sustainability refers to a firm's ability to manage its social, economic, environmental impacts to ensure long-term success. Svensson, et al (2016) emphasize that this involves managing business effects on ecosystems and stakeholders, focusing on three dimensions: financial. social. environmental (Abreu & Toldy, 2019; Glavas & Mish, 2015). According to Savitz (2013), sustainability not only benefits stakeholders but also improves societal quality of life and ensures environmental protection.

In today's globalized and competitive environment, small and medium-sized enterprises (SMEs) must consider more than just profit margins. They should account for the broader impact of their activities on both the environment and society (Fischer et al., 2020). Embracing sustainability offers SMEs various benefits, including a competitive (Kwarteng et al., 2016). SMEs that prioritize sustainable practices incorporate environmental values and social responsibility into their decision-making processes (Hanaysha et al., 2021). Thus, integrating economic, social, and environmental goals is essential for corporate sustainability (Kristensen & Mosgaard, 2020).

Researchers also view business sustainability as a way to achieve competitiveness through

sustainable strategies, focusing on innovation, integration, and collaboration (Bari, et al., 2022; Kraus et al., 2017). Pojasek (2007) and Kickul & Lyons (2020) argue that aligning sustainability with a company's mission and vision fosters long-term success by optimizing resource use and strategic planning (Gohar et al., 2015). Overall, business sustainability is a strategic approach that enhances competitive advantage and ensures long-term viability by continuously analyzing and adapting to current and future challenges.

Dimensions of Entrepreneurship Collaboration and Sub Hypotheses Development

Collaboration Networks as a Dimension of Entrepreneurship Collaboration and its Relative Influence on business sustainability

Collaboration networks in entrepreneurship involve the interconnected relationships between entrepreneurs and various entities such as businesses, academic institutions, government agencies, and non-profits (Hruskova, Mason, & Herzog, 2022). These networks are vital for exchanging information, resources, and support, which are crucial for entrepreneurial success. They foster innovation, resource sharing, and strategic alliances, all of which are essential for business sustainability (Balasubramanian & Iyer, 2015).

collaboration networks Strong provide entrepreneurs with access to financial resources, human capital, and technological expertise. For example, partnerships with academic institutions can offer technological support, while alliances with financial institutions can improve access to capital (Stuart & Sorenson, 2007). These networks also enable entrepreneurs to form alliances that facilitate market strategic expansion and entry into new markets, providing local knowledge, distribution channels, and credibility (Gulati, 1998).

Additionally, collaboration networks help entrepreneurs mitigate risks and enhance resilience by diversifying their connections and spreading risks. Research shows that robust

networks promote innovation and knowledge transfer, leading to better business performance (Powell et al., 1996). Therefore, we proposed that: H1: Collaboration networks as a dimension of entrepreneurship collaboration has positive and significant influence on business sustainability.

Resource Sharing as a Dimension of Entrepreneurship Collaboration and its Relative Influence on Business Sustainability

Resource sharing involves the mutual exchange and utilization of resources, such as financial capital, knowledge, technology, and physical assets, among entrepreneurs and their partners (Dun *et al.*, 2022). This collaborative practice leverages the strengths of each entity, leading to synergistic benefits that enhance business sustainability and growth. According to Roundy (2017), resource sharing is a fundamental aspect of entrepreneurship collaboration, crucial for business success.

Key elements of resource sharing include access to funding and investment opportunities through networks (Wurth, Stam & Spigel, 2022), sharing of skills and labor (Spigel, 2020), exchange of technological tools and innovations (Oh, Clayton & Feldman, 2022), and dissemination of market insights and strategic information (Hruskova et al., 2022). This collaborative approach can significantly enhance financial stability and growth by helping entrepreneurs manage risks and secure necessary funding (Nahapiet & Ghoshal, 1998). It also fosters innovation by combining diverse skills and technologies, leading to new products, services, and business models that provide a competitive advantage (Powell et al., 1996).

Moreover. sharing resources improves operational efficiency by utilizing specialized skills and advanced technologies networks, leading to cost savings productivity gains (Inkpen & Tsang, 2005). It also facilitates market access and expansion by leveraging partners' networks, enabling entrepreneurs to enter new markets and reach broader customer bases (Gulati, 1998). Therefore, we proposed that: H2: Resource sharing as a dimension of entrepreneurship collaboration has positive and significant influence on business sustainability.

Collaboration Intensity as a Dimension of Entrepreneurship Collaboration and its Relative Influence on Business Sustainability

Collaboration intensity refers to the depth and frequency of interactions between entrepreneurial partners, highlighting the level of commitment, communication, and integration within their relationships (Balasubramanian & Iver, 2015; Bergman & McMullen, 2022). It encompasses frequent, meaningful interactions, shared decision-making, and joint problemsolving, resulting in a high degree of interdependence and trust. This intensity fosters environment of trust and communication, essential for innovation and creativity. According to Powell, Koput, and Smith-Doerr (1996), partners engaged in intense collaboration are more likely to share ideas, knowledge, and technologies, leading to innovative solutions and products. collaboration intensity also ensures better coordination and integration of processes, enhancing operational efficiency (Journeault, Perron & Vallières, 2021). Joint efforts in planning and production reduce redundancies and optimize resource utilization (Dyer & Singh, 1998).

Moreover, intense collaboration enables SMEs to develop unique capabilities and leverage complementary strengths, thereby enhancing their competitive advantage (Lavie, 2006). It fosters agility and adaptability, allowing businesses to respond swiftly to market changes and uncertainties. The close interaction among partners facilitates rapid decision-making and the implementation of new strategies, further reinforcing their ability to navigate complex business environments (Eisenhardt & Martin, 2000). Given the foregoing, we proposed that:

H3: Collaboration intensity as a dimension of entrepreneurship collaboration has positive and significant influence on business sustainability.

Knowledge Exchange as a Dimension of Entrepreneurship Collaboration and its Relative Influence on Business Sustainability

Knowledge exchange in entrepreneurship involves sharing explicit and tacit knowledge between entrepreneurs and their partners (Foos, Schum & Rothenberg, 2006; Oranga, 2023). knowledge includes **Explicit** codified information like data and documents, while tacit knowledge encompasses personal insights, experiences, and skills that are harder to transfer (Breznitz et al., 2018; Yasmin et al., 2022). This exchange is vital for fostering innovation, improving decision-making, and enhancing competitive advantage, all of which contribute to business sustainability. It includes sharing explicit knowledge such as market reports and research findings, and tacit knowledge, which involves personal insights shared through direct interaction and collaboration. Knowledge exchange also involves learning mechanisms. including training, workshops, and informal interactions, that facilitate this transfer (Oranga, 2023: Tounkara, 2013).

Knowledge exchange drives innovation by enabling the development of new products, and processes, strengthening services. competitive advantage (David et al., 2023; Powell et al., 1996). It improves decisionmaking by allowing entrepreneurs to leverage collective expertise and insights (Eisenhardt & Santos, 2002). Additionally, it facilitates continuous learning, helping entrepreneurs acquire new skills and competencies, thereby enhancing overall performance (Nonaka & Takeuchi, Moreover, 1995). collaborative knowledge sharing aids in risk mitigation and problem-solving by allowing partners to develop strategies to address challenges effectively (Inkpen & Tsang, 2005; Oranga, 2023). On this note, we proposed that: H4: Knowledge exchange as a dimension of entrepreneurship collaboration has positive and significant influence on business sustainability.

Theoretical Foundation

Several theories have been proposed in perceiving the dynamics of entrepreneurship collaboration and its impact on business sustainability. However, social capital theory, resource-based view (RBV), and dynamic capabilities theory were considered more appropriate for the study.

Social Capital Theory

Social capital theory posits that networks of relationships constitute a valuable resource for individuals and organizations. In the context of entrepreneurship, social capital derived from collaboration networks can provide access to information, financial resources, and opportunities for innovation (Adler & Kwon, 2002).

Resource-Based View (RBV)

The RBV emphasizes the importance of resources and capabilities in achieving competitive advantage. Collaboration networks enable entrepreneurs to access external resources that may not be available internally, thus enhancing their competitive position (Barney, 1991).

Dynamic Capabilities Theory

Dynamic capabilities theory asserts that firms must adapt and reconfigure their resources to maintain a competitive edge (Teece, Pisano, & Shuen, 1997). Intense collaboration helps firms integrate and adjust their capabilities in response to environmental changes. However, this study adopts the Resource-Based View (RBV), which emphasizes that a firm's resources and capabilities are key to achieving competitive advantage and superior performance. In South-West Nigeria, SMEs face challenges that sustainability. Entrepreneurship threaten collaboration provides a strategic way to address these challenges by leveraging shared resources and capabilities. By applying RBV, this study explores how such collaborations enhance business sustainability SMEs. among Leveraging these shared resources enables

SMEs to gain a competitive edge and ensure long-term viability.

METHODOLOGY

This study investigates impact of the entrepreneurship collaboration on business sustainability among SMEs in South-West Nigeria. A descriptive survey design was used to collect data from 132,749 SMEs registered with the Small and Medium Enterprises Development Authority of Nigeria (SMEDAN, 2023) across Lagos, Oyo, Ogun, Ondo, Ekiti, and Osun states. The study focused on SMEs with 101-300 employees, randomly selecting 384 from the total population. This region was chosen due to its high SME concentration and well-organized businesses. The selected SMEs span various

sectors including manufacturing, wholesale, retail, and distribution, ensuring broad applicability of the findings. Data were collected through a self-developed questionnaire using a five-point Likert scale, measuring responses from strongly agree to strongly disagree. Principal Component Analysis (PCA) was conducted using SPSS (Version 27.0) to identify latent factors and validate the instrument. The Kaiser-Meyer-Olkin (KMO) measure and Bartlett's Test of Sphericity confirmed the suitability of the data for PCA, with a KMO value above 0.60. Reliability was ensured through the test-retest method and Cronbach's Alpha, which yielded a reliability index of 0.827, indicating high consistency and reliability.

Table 3:1

Cronbach's Alpha Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items	N
0.831	0.827	20	50

Source: SPSS (Version 27.0) Output 2024

The study utilized both descriptive and inferential statistical analyses to process and interpret the collected data, employing IBM SPSS version 27.0 for this purpose. Descriptive statistics were applied to summarize and illustrate the primary features of the data. This involved calculating measures such as mean, standard deviation, frequency, and percentage to provide a comprehensive overview of the respondents' demographic characteristics and their responses to the questionnaire items.

Multiple regression analysis was used to assess the impact of entrepreneurship collaboration dimensions on business sustainability. Significant relationships were determined based on p-values: if the p-value was below 0.05, the null hypothesis was rejected; if above, it was accepted. This approach clarified the strength and significance of the relationships among the variables.

Model Specifications for the Hypotheses: BuSut = f(ColNet, ReSha, QuaInSh, KnEx)

BuSut = β_0 + β_1 ColNet + β_2 ReSha + β_3 ColInt + β_4 KnEx + ϵ

Where: BuSut= Business Sustainability (Dependent variable)

 β_0 = Intercept of the model.

 β_1 = Estimate of the parameter of the independent variable in the model of the slope.

E= Error term.

ColNet = Collaboration Networks (Independent variable)

ReSha = Resource Sharing (Independent variable)

ColInt = Collaboration Intensity (Independent variable)

KnEx = Knowledge Exchange (Independent variable)

The a priori expectation is as; thus, $\beta_1 > 0$, $\beta_2 > 0$, $\beta_3 > 0$ & $\beta_4 > 0$. According to the a priori anticipation about the link stated above, collaboration networks, resource sharing, collaboration intensity, and knowledge exchange, have a significant positive effect on business sustainability of SMEs. The calculated value would be larger than or equal to the critical value for the null hypothesis to be

rejected; otherwise, the null hypothesis is accepted at any level of significance

RESULTS AND DISCUSSION

Table 4.1 demonstrates a high level of participation from the administered questionnaires. Of the 384 questionnaires distributed, 347 were returned, yielding a response rate of 90.40%. This substantial response rate is deemed satisfactory and reinforces the validity of the instrument used in the study.

Table 4.1 Analysis of Responses to Questionnaire

Description	Frequency	Percentage
Administered	384	100.00
Returned	347	90.40
Not Returned	37	9.60

Source: Field Survey, 2024

Before analysis, tests for out-of-range and missing values were conducted, revealing a 9.60% missing value rate, well below the 20% threshold recommended by Hair et al. (2006). This confirms data accuracy and reliability. Descriptive and inferential statistical analyses were then performed to examine the impact of entrepreneurship collaboration on business sustainability among SMEs in South-West Nigeria. The thorough data preparation and high response rate enhance the robustness of the study's findings and conclusions.

Descriptive Statistics

The study's constructs, including business sustainability (BuSut), collaboration networks (ColNet), resource sharing (ReSha). collaboration intensity (ColInt), and knowledge exchange (KnEx), were subjected to descriptive statistical measurements. The computed values include mean (M), standard deviation (SD), skewness, and kurtosis. These measurements assess the normality distribution and degree of asymmetry for each construct. The results are presented Table in 4.2 below:

Table 4.2

Descriptive Statistics

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	N	Mean	Std.	Skewness		Kurtosis	
			Deviation				
	Statistic	Statistic	Statistic	Statistic	Std.	Statistic	Std.
					Error		Error
BuSut	347	4.06	1.302	-1.311	.131	.459	.261
ColNet	347	4.30	1.100	-1.650	.131	1.862	.261
ReSha	347	2.71	1.622	.248	.131	-1.592	.261
ColInt	347	3.42	1.062	118	.131	450	.261
KnEx	347	4.46	.962	-1.002	.131	1.438	.261
Valid N	347						
(listwise)	347						

Source: Researcher's Computation, 2024 Source: SPSS (Version 27.0) Output 2024

The results of the mean and standard deviation for the constructs, business sustainability (BuSut), collaboration networks (ColNet), resource sharing (ReSha), collaboration intensity (ColInt), and knowledge exchange (KnEx) were presented in table 4.2 as follows: business sustainability (BuSut) (M= 4.06, SD=1.302); collaboration networks (ColNet) (M= 4.30; SD=1.100); resource sharing (ReSha) (M=2.71, SD=1.622); collaboration intensity (ColInt) (M=3.42, SD=1.062);

And knowledge exchange (KnEx) (M=4.46, SD =0.962). All the standard deviation values are below the mean values, indicating normality (Amsami, Ibrahim, & Abdelsalam, 2020).

Furthermore, Skewness and kurtosis tested data normality, with skewness showing how much the distribution deviates from normality by indicating its asymmetry (James, 2021). The reported skewness and kurtosis for the constructs were: business sustainability (BuSut)

(Sk=-1.311, Ko=0.459); collaboration networks (ColNet) (Sk=-1.650, Ko=1.862); resource sharing (ReSha) (Sk=0.248, Ko=-1.592); collaboration intensity (ColInt): (Sk=-0.118, Ko=-0.450); and knowledge exchange (KnEx) (Sk=-1.002, Ko=1.438)

These results indicate that skewness and kurtosis values fall within the acceptable range for normality, suggesting that the distribution of values is statistically suitable for further analysis.

Factor Analysis and Internal Consistency Reliability Results

The Kaiser-Meyer-Olkin (KMO) value and Bartlett's Test of Sphericity were utilized to assess the sampling adequacy and correlations in the data prior to conducting the factor analysis. The values of the KMO and Bartlett test of sphericity for the variables are presented in Table 4.3 below:

Table 4.3 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of S	.532	
	Approx. Chi-Square	1738.561
Bartlett's Test of Sphericity	<u>df</u>	10
	Sig.	.000

Source: Field Survey, 2024

Source: SPSS (Version 27.0) Output 2024

Table 4.3 indicates that all the variables have a KMO (Kaiser-Meyer-Olkin) value above 0.5,

suggesting that the sample size is adequate for factor analysis. Additionally, Bartlett's test of

sphericity shows chi-square values for the variables at 6994.141, with corresponding p-values of 0.000, which are less than the significance level of 0.05. This test assesses whether the correlations between variables are significant enough to justify the use of factor analysis (Field, 2005). The results confirm that Bartlett's test is highly significant (p<0.001), indicating that the data is suitable for further analysis. Detailed information on the factor analysis and internal consistency reliability is presented in Appendix 1: Table 4.4. The results presented in Table 4.4 showed that all 20 items generated components based on Kaiser's criterion, which involves retaining Eigenvalues

greater than 1.0 (Field, 2005). The PCA with Varimax rotation showed that all 20 items were retained for further analysis. Cronbach's Alpha was used to confirm the internal consistency and reliability of these items, as detailed in Table 3.1.

Test of Hypothesis

To predict business sustainability (BuSut), the uses four study explanatory variables: collaboration networks (ColNet), resource sharing (ReSha), collaboration intensity (ColInt), and knowledge exchange (KnEx). The regression results examining the impact of these variables are detailed in Tables 4.5-4.7.

Table 4.5 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	.807ª	. 651	. 650	.357	

a. Predictors: (Constant), KnEx, ReSha, ColNet, ColInt Source: Researcher's Computation, 2024

Source: SPSS (Version 27.0) Output 2024

The model summary presented in Table 4.5 indicates a significant relationship between dimensions of entrepreneurship collaboration and business sustainability. The multiple correlation coefficient (R) value of 0.807 (80.7%) suggests a significant relationship between business sustainability (BuSut) and dimensions of entrepreneurship collaboration, represented by the constructs of collaboration networks (ColNet), resource sharing (ReSha), collaboration intensity (ColInt), and knowledge exchange (KnEx) respectively. The R² value of 0.651 (65.1%) signifies that the independent variables collectively have a variation effect of 0.651 (65.1%) on the dependent variable. This

connotes that the combined effect of these independent variables can explain 65.1% in the variation of the dependent variable. The adjusted R² further confirms the actual effect of the independent variables on the dependent variable, with a value of 0.650 (65.0%). This suggests that collaboration networks (ColNet), resource sharing collaboration (ReSha). intensity (ColInt), and knowledge exchange (KnEx) contribute to the variation in the level of business sustainability (BuSut) among SMEs in South-West Nigeria. This adjusted R² value is considered satisfactory for determining the goodness of fit for the regression model, indicating its usefulness for making predictions.

Table 4.6 Coefficients^a

Mode	:1	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		В	Std. Error	Beta		
	(Constant)	1.459	.130		11.224	.000
	ColNet	.309	.049	.261	6.306	.000
1	ReSha	.145	.040	.180	3.589	.000
	ColInt	.104	.075	.085	1.383	.001
	KnEx	.948	.035	.700	27.379	.000

a. Dependent Variable: BuSut

Source: Researcher's Computation, 2024 Source: SPSS (Version 27.0) Output 2024

The estimated equation of the model is expressed as BuSut = β_0 + β_1 ColNet + β_2 ReSha + β_3 ColInt + β_4 KnEx + ξ

In Table 4.7, the results indicate that business sustainability (BuSut) among SMEs in South-West Nigeria is ascertained to be 1.459 when all other variables are held constant. With a unit increase in collaboration networks (ColNet), resource sharing (ReSha), collaboration intensity (ColInt), and knowledge exchange (KnEx) would increase by 0.309, 0.145, 0.104, and 0.948, respectively, while keeping other variables constant.

Furthermore, as depicted in the table 4.7, the beta coefficient (β) with respect to collaboration networks (ColNet), was 0.309, with t-test value of 6.306 and p<0.005 at 5% level of significance. This posits that collaboration networks as a dimension of entrepreneurship collaboration is a positive predictor of business sustainability among SMEs in South-West Nigeria. Hence, the first hypothesis which states that collaboration networks as a dimension of entrepreneurship collaboration has positive and significant influence on business sustainability is accepted.

The beta coefficient (β) in respect to resource sharing (ReSha) was 0.145, with t-test of 3.589 and p<0.005, at 5% level of significance. This depicts that quality of information shared as a dimension of entrepreneurship collaboration is significantly relevant in predicting research productivity as a key metric of academic staff performance. Thus, we accept the second

hypothesis which states that resource sharing as a dimension of entrepreneurship collaboration has positive and significant influence on business sustainability.

The beta coefficient (β) in respect to collaboration intensity (ColInt) was 0.104, with t-test value of 1.383 and p<0.005, at 5% level of significance. This indicates that reach and accessibility as a dimension of entrepreneurship collaboration is a positive predictor of research productivity as a key metric of academic staff performance. This connotes the need for us to accept the third hypothesis which positions that collaboration intensity as a dimension of entrepreneurship collaboration has positive and significant influence on business sustainability.

The beta coefficient (β) in respect to knowledge exchange (KnEx) was 0.948, with t-test value of 27.379 and p<0.005, at 5% level of significance. This indicates that reach and accessibility as a dimension of entrepreneurship collaboration is a positive predictor of research productivity as a key metric of academic staff performance. This connotes the need for us to accept the fourth hypothesis which establishes that knowledge exchange as a dimension of entrepreneurship collaboration has positive and significant influence on business sustainability.

Discussion of Findings

The primary objective of this study was to examine the impact of entrepreneurship collaboration on business sustainability among SMEs in South-West Nigeria, focusing on four constructs: collaboration networks (ColNet), resource sharing (ReSha), collaboration intensity (ColInt), and knowledge exchange (KnEx). The results demonstrated that each of these constructs positively influences business sustainability (BuSut).

Collaboration networks was found significantly influence business sustainability $(\beta=0.309, t=6.339, P<0.005)$. This implies that collaboration is essential by connecting SMEs, improving market access, credibility, and joint venture opportunities. This finding aligns with Journeault, et al (2021), who emphasize the importance of stakeholder collaboration for sustainability in SMEs. This implies that active participation in collaboration networks enables SMEs to share information, access new markets, and gain support, contributing to their long-term viability (David et al., 2023; Yasmin et al., 2022).

Resource sharing was identified to positively significantly influence business and sustainability (β =0.145, t= 3.589, P<0.005). It involves pooling financial, technological, and human resources among SMEs. Consistent with Dun et al. (2022), effective resource sharing reduces costs, enhances operational efficiency, and supports innovative projects (Xuejun & Xiaopeng, 2024). This would help SMEs resource overcome constraints, improve competitiveness, and sustain operations by optimizing available resources.

Collaboration intensity, reflecting the frequency and depth of interactions, was also found to impact business sustainability positively $(\beta=0.104, t=1.383, P<0.005)$. This supports Min et al. (2023), who found that strong collaboration significantly benefits **SME** sustainability practices. High collaboration intensity builds strong relationships and trust, fostering effective cooperation and innovation. This implies that SMEs that engaged in deep, frequent collaborative activities are more likely to sustain their businesses over time (Malesios et benefiting from 2020). accelerated innovation, enhanced problem-solving, and shared learning.

Knowledge exchange, involving the sharing of information, expertise, and best practices, sustainability positively affects business $(\beta 0.948, t= 27.379, P<0.005)$. The study highlights that active knowledge exchange improves innovation, decision-making, and market competitiveness. This finding underscores the role of continuous learning and adaptation in maintaining business sustainability (Maitreyee, 2019). This implies that by engaging in knowledge exchange, SMEs can stay current with industry trends, adopt new technologies, and implement best practices, contributing to long-term success.

CONCLUSION AND RECOMMENDATIONS

The study concludes that entrepreneurship collaboration significantly boosts business sustainability among SMEs in South-West collaborative Nigeria. Key constructscollaboration networks, resource sharing, collaboration knowledge intensity, and exchange—are crucial for long-term business viability. Leveraging these elements helps SMEs resource overcome constraints, enhance competitiveness. and growth. sustain Consequently, fostering a collaborative environment priority should be a policymakers, business leaders, and support organizations.

Based on the empirical findings, the study recommended the following:

- i) Policymakers should develop programs that promote SME collaboration, such as networking platforms, resource-sharing incentives, and initiatives encouraging deep collaborative interactions.
- ii) Additionally, SMEs should actively pursue collaboration opportunities, including engaging in networks, sharing resources, intensifying collaboration, and exchanging knowledge to boost sustainability.
- iii) Training programs should be offered to SME owners and managers, focusing on collaborative skills like networking, strategic alliances, and

knowledge management to build effective collaboration capabilities.

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