

OPPORTUNITY RECOGNITION AND BUSINESS SCALABILITY OF INDIGENOUS STARTUPS IN ENUGU STATE, NIGERIA

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ABSTRACT

This study examined the effect of opportunity recognition on business scalability among indigenous startups in Enugu State, Nigeria. The study specifically investigated the influence of environmental scanning capability and prior entrepreneurial knowledge on business scalability. A descriptive survey research design based on a quantitative approach was adopted. Data were collected from 268 indigenous startups operating within their first five years across Enugu, Nsukka, Oji River, and Awgu using structured questionnaires. Descriptive and inferential statistics were employed for data analysis, and hypotheses were tested using multiple regression analysis in SPSS. The findings revealed that environmental scanning capability and prior entrepreneurial knowledge both exert significant positive effects on business scalability, with environmental scanning capability emerging as the stronger predictor. The study concludes that opportunity recognition is a critical determinant of startup scalability in dynamic and resource-constrained entrepreneurial environments. The study recommends strengthening environmental scanning practices, entrepreneurial learning systems, and market intelligence support mechanisms to improve startup growth and sustainability.

Keywords: Opportunity Recognition; Business Scalability; Environmental Scanning Capability; Prior Entrepreneurial Knowledge; Indigenous Startups; Nigeria.

ABSTRAK

Penelitian ini mengkaji pengaruh pengenalan peluang terhadap skalabilitas bisnis pada startup lokal di Negara Bagian Enugu, Nigeria. Secara khusus, penelitian ini menganalisis pengaruh kemampuan pemindaian lingkungan dan pengetahuan kewirausahaan sebelumnya terhadap skalabilitas bisnis. Penelitian ini menggunakan desain survei deskriptif dengan pendekatan kuantitatif. Data dikumpulkan dari 268 startup lokal yang beroperasi dalam lima tahun pertama di wilayah Enugu, Nsukka, Oji River, dan Awgu dengan menggunakan kuesioner terstruktur. Analisis data dilakukan dengan statistik deskriptif dan inferensial, sedangkan pengujian hipotesis menggunakan analisis regresi berganda melalui SPSS. Hasil penelitian menunjukkan bahwa kemampuan pemindaian lingkungan dan pengetahuan kewirausahaan sebelumnya sama-sama memiliki pengaruh positif yang signifikan terhadap skalabilitas bisnis, dengan kemampuan pemindaian lingkungan sebagai prediktor yang lebih kuat. Penelitian ini menyimpulkan bahwa pengenalan peluang merupakan determinan penting bagi skalabilitas startup dalam lingkungan kewirausahaan yang dinamis dan memiliki keterbatasan sumber daya. Penelitian ini merekomendasikan penguatan praktik pemindaian lingkungan, sistem pembelajaran kewirausahaan, serta mekanisme dukungan intelijen pasar untuk meningkatkan pertumbuhan dan keberlanjutan startup.

Kata kunci: Pengenalan Peluang; Skalabilitas Bisnis; Kemampuan Pemindaian Lingkungan; Pengetahuan Kewirausahaan Sebelumnya; Startup Lokal; Nigeria.

1. Introduction

The global startup ecosystem plays a pivotal role in fostering innovation, enhancing productivity, and generating employment across developed and developing economies alike. Recent evidence indicates that small and emerging firms account for approximately 60–70% of net job creation worldwide, underscoring

their importance in economic development and labour absorption (World Bank, 2023; OECD, 2024). However, startup survival remains a significant concern, as approximately 70% of startups fail within the first five years of operation. Key contributing factors include inadequate recognition of opportunities, limited managerial capability, and challenges in

effectively scaling operations (Global Entrepreneurship Monitor, 2023; OECD, 2024). This global trend underscores a fundamental entrepreneurial challenge: while opportunity identification is common, the conversion of these opportunities into scalable and sustainable businesses is inconsistent.

Entrepreneurial activity in Africa has expanded markedly, driven by increased digital adoption, a youthful demographic, and the growth of both informal and formal enterprises. The continent has attracted over \$5 billion in startup investment in recent years, with prominent ecosystems developing in Nigeria, Kenya, Egypt, and South Africa (Partech Africa, 2024; Disrupt Africa, 2023). Regardless of this progress, scalability remains a structural challenge for African startups. Empirical evidence indicates that while many African entrepreneurs demonstrate strong opportunity recognition, only a small proportion of startups achieve sustained scaling. This limitation is attributed to infrastructural deficiencies, fragmented markets, regulatory inconsistencies, and restricted access to growth capital (African Development Bank, 2023; World Bank, 2023). Consequently, a persistent gap exists between opportunity identification and long-term business expansion in the region.

Nigeria holds a central position in Africa's entrepreneurial landscape as the continent's largest economy and one of its most active startup hubs. The country is home to over 40 million micro, small, and medium enterprises (MSMEs), which account for approximately 96% of businesses and over 80% of employment generation (SMEDAN & NBS, 2021; World Bank, 2023). Nigeria has also produced several high-growth startups, particularly in the fintech and digital services sectors, reinforcing its status as a leading innovation centre in Africa. However, the scalability of indigenous startups remains constrained by infrastructural limitations, unstable policy environments, limited access to venture

capital, and uneven adoption of technology (NBS, 2023; PwC Nigeria, 2024).

Entrepreneurship research in Nigeria has consistently emphasised the importance of opportunity recognition for venture creation, innovation, and business performance. However, limited attention has been given to its role in facilitating business scalability among indigenous startups (Adelekan et al., 2023; Nwankwo & Kanu, 2022). Existing Nigerian studies indicate that entrepreneurs who effectively identify and exploit market opportunities are more likely to achieve improved business performance, competitive advantage, and venture survival (Adelekan et al., 2023; Eze et al., 2021).

While these studies have contributed to understanding entrepreneurial success in Nigeria, their primary focus has been on business formation, performance, and survival, rather than on how opportunity recognition translates into scalable growth. Additionally, research within the Nigerian entrepreneurship ecosystem has largely examined entrepreneurial orientation, innovation capability, access to finance, and business environment factors as determinants of firm growth and sustainability (Olawale & Garwe, 2021; Eniola & Entebang, 2022). Although these studies provide valuable insights into business growth drivers, they offer limited explanations regarding whether and how opportunity recognition capabilities enable startups to expand operations, penetrate new markets, and replicate business models efficiently.

The present study addresses this knowledge gap by investigating how environmental scanning capability and prior entrepreneurial knowledge, as dimensions of opportunity recognition, influence business scalability among indigenous startups in Enugu State, Nigeria. In contrast to previous Nigerian studies that have focused predominantly on venture creation, performance, and survival outcomes, this study examines business scalability as a distinct entrepreneurial

outcome that reflects the capacity of startups to achieve sustained revenue growth, market expansion, and operational replication (Adelekan et al., 2023; Nwankwo & Kanu, 2022). The justification for this study grows from the understanding that opportunity recognition is a multidimensional construct, shaped by environmental scanning and prior entrepreneurial knowledge, as established in entrepreneurship theory (Shane & Venkataraman, 2000; Shane, 2000; Morrison & Clarke, 2024). These dimensions are widely acknowledged as key antecedents of opportunity recognition in entrepreneurial cognition literature, providing a structured framework for understanding how entrepreneurs discover and interpret business opportunities. Accordingly, this study investigates how each of these dimensions influences the business scalability of indigenous startups in Nigeria. Specifically, the study seeks to:

1. Ascertain the effect of environmental scanning capability on the business scalability of indigenous startups in Nigeria.
2. Investigate the effect of prior entrepreneurial knowledge on the business scalability of indigenous startups in Nigeria.

2. Literature Review

2.1 Opportunity Recognition

Opportunity recognition is widely regarded as a fundamental component of entrepreneurship, defined as the capacity of entrepreneurs to identify unmet needs, market gaps, and emerging business opportunities that can be developed into viable ventures (Shane & Venkataraman, 2000; Baron, 2006; Donbesuur et al., 2022). Recent research underscores that opportunity recognition is a key entrepreneurial capability, enabling firms to identify and capitalise on growth opportunities in dynamic markets. Evidence from developing and emerging economies indicates that opportunity identification increases awareness of

market inefficiencies and demand gaps, thereby enhancing entrepreneurs' ability to implement growth-oriented strategies (Akanbi & Salisu, 2022; Nwankwo & Eze, 2023; Bello & Okoye, 2024). Entrepreneurs who excel at recognizing opportunities are better equipped to introduce innovative products, address evolving customer needs, and pursue expansion initiatives that facilitate business scalability. Additional studies demonstrate that opportunity recognition supports venture growth by informing strategic decision-making and guiding resource allocation toward promising market opportunities (Morrison & Clarke, 2024; García & Martínez, 2024; Olatunji & Nwosu, 2024). Therefore, opportunity recognition is increasingly acknowledged as a critical entrepreneurial capability that improves the likelihood of startup scalability and sustained growth.

Environmental scanning capability is recognized as a primary antecedent of opportunity recognition, encompassing the systematic search, collection, and interpretation of external information to identify opportunities and anticipate market shifts (Ibrahim & Yusuf, 2023; Kumar & Sharma, 2024; Okafor & Nwosu, 2024). This capability enables entrepreneurs to monitor customer preferences, competitors' actions, technological advancements, and market trends, thereby enhancing strategic awareness and identifying opportunities. Empirical research shows that entrepreneurs who engage in active environmental scanning are more likely to identify emerging opportunities and make informed strategic decisions that foster business growth and expansion (Mwangi & Kimani, 2024; Ezurike, 2023; Zhang & Liu, 2024). By continuously monitoring the external environment, startups can anticipate market changes, mitigate uncertainty, and adapt proactively to evolving business conditions. As a result, environmental scanning capability is increasingly regarded as a significant driver of entrepreneurial responsiveness and business scalability.

Prior entrepreneurial knowledge is widely studied as a foundational determinant of opportunity recognition, including experiential learning, industry experience, and educational background, which influence how entrepreneurs interpret and make decisions (Shane, 2000; Baron, 2006; Donbesuur et al., 2022). Such knowledge equips entrepreneurs with cognitive frameworks that improve their capacity to identify, assess, and exploit business opportunities. Empirical evidence suggests that entrepreneurs with prior knowledge are more adept at recognizing viable opportunities, accurately interpreting market signals, and making strategic decisions that promote venture growth (Morrison & Clarke, 2024; García & Martínez, 2024; Olatunji & Nwosu, 2024). Experience gained from previous entrepreneurial activities enhances judgment, reduces uncertainty, and strengthens the evaluation of opportunities. Consequently, prior entrepreneurial knowledge is considered a valuable resource that positively influences business scalability and sustainable growth in startups.

2.2 Business Scalability of Indigenous Startups

Business scalability in indigenous startups refers to the ability of firms to expand operations, increase revenue, and replicate their business models efficiently without a corresponding increase in costs. In this context, business scalability specifically denotes the capacity of startups to achieve revenue growth, customer expansion, market penetration, and operational replication while maintaining efficient resource utilization. It is increasingly recognized as a key indicator of entrepreneurial success in emerging economies (Kumar & Sharma, 2024; Mwangi & Kimani, 2024; Okafor & Nwosu, 2024). Recent research indicates that entrepreneurial capabilities significantly enhance scalability by enabling firms to identify growth

opportunities, adapt to market changes, and develop flexible business strategies. Studies demonstrate that startups with strong cognitive and strategic capabilities are more likely to achieve sustained growth and expansion compared to those with weaker entrepreneurial capabilities (Abubakar & Ismail, 2022; Olaniyan & Kalu, 2023; Okwu & Eze, 2024). Scalable startups are characterized by their ability to leverage opportunities, broaden market reach, and improve operational effectiveness without incurring proportional increases in operating costs. These findings support the view that business scalability is strongly shaped by entrepreneurial capabilities that drive growth and expansion.

2.3 Theoretical Framework and Hypotheses Development

The present study is grounded in the sensing dimension of Dynamic Capability Theory (Teece, Pisano, & Shuen, 1997; Teece, 2007), which elucidates how firms identify and interpret opportunities in dynamic and uncertain environments. Dynamic Capability Theory encompasses three interrelated processes: sensing, seizing, and reconfiguring. This research specifically examines sensing as the foundational capability that facilitates opportunity identification, particularly within early-stage indigenous startups.

Emphasising sensing is appropriate, as startups in their formative stages primarily focus on identifying viable market opportunities before committing resources (seizing) or undergoing structural transformation (reconfiguring). Consistent with this perspective, opportunity recognition is conceptualized as a sensing capability that reflects the entrepreneur's ability to detect and interpret emerging opportunities within the business environment.

Accordingly, opportunity recognition is operationalized through two dimensions: environmental scanning capability and prior entrepreneurial knowledge.

Environmental scanning capability refers to the entrepreneur's active search for and interpretation of information on market trends, customer needs, competitors' activities, and technological changes, thereby enhancing awareness of emerging opportunities (Ocasio, 1997; Zahra & George, 2002). Prior entrepreneurial knowledge encompasses accumulated experience, education, and industry exposure that improve cognitive ability to recognize and evaluate viable business opportunities (Shane, 2000; Baron, 2006). Business scalability, the dependent variable, is defined as a startup's capacity to expand operations, increase revenue, enter new markets, and replicate its business model efficiently without proportional increases in cost structures. This construct reflects sustained growth achieved through revenue expansion, market penetration, and operational replication.

In summary, this study posits that environmental scanning capability and prior entrepreneurial knowledge enhance opportunity recognition (sensing capability), which subsequently drives business scalability among indigenous startups.

H₁: Environmental scanning capability positively influences business scalability among indigenous startups in Enugu State, Nigeria.

H₂: Prior entrepreneurial knowledge positively influences business scalability among indigenous startups in Enugu State, Nigeria.

3. Research Methodology

3.1 Research Design and Study Area

This study adopts a descriptive survey research design grounded in a quantitative approach. The design enables the systematic collection of numerical data from indigenous startups and facilitates statistical examination of the relationship between opportunity recognition dimensions and business scalability. The study is conducted in Enugu State, Nigeria,

with a particular focus on major entrepreneurial and commercial centres including Enugu, Nsukka, Oji River, and Awgu. These locations are selected because they host growing concentrations of indigenous startups operating across retail trading, agribusiness, logistics, manufacturing, digital services, and technology-driven enterprises. The study focuses on startups that have operated for the first five years after establishment. This category of businesses is selected because early-stage firms are more actively involved in opportunity recognition, market exploration, resource mobilisation, and growth-oriented strategic activities. Startups during this operational period are also more likely to face scalability challenges stemming from uncertain markets, limited resources, and evolving business models. The selected entrepreneurial ecosystems therefore provide an appropriate context for examining how opportunity recognition influences the scalability of indigenous startups in Enugu State, Nigeria.

3.2 Population of the Study

The study population comprises indigenous startups operating within the selected entrepreneurial hubs in Enugu State, Nigeria. The study specifically targets startups that have operated for not more than five years and are actively engaged in entrepreneurial and growth-oriented activities. These startups operate across sectors such as retail trading, agribusiness, logistics, manufacturing, hospitality, digital services, and technology-driven enterprises.

The respondents are startup founders, owners, managers, and key decision-makers with sufficient knowledge of their businesses' operations and strategic direction. According to the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) and the National Bureau of Statistics (2021), Enugu State hosts a substantial number of micro, small, and medium enterprises, many of which are

startups. Based on sectoral concentration and business registration patterns across the selected locations, the accessible population of indigenous startups operating within their first five years is estimated at approximately 1,500 businesses.

3.3 Sample Size Determination

The sample size is determined using the Taro Yamane (1967) formula for finite populations. Using an estimated population of 1,500 indigenous startups and a 5% margin of error, the formula yields a sample size of 316 respondents. To account for non-response and incomplete questionnaires, an additional 10% is included, resulting in an adjusted sample size of 348 respondents.

Data are collected using structured questionnaires administered through both physical and electronic means to ensure broad coverage across the selected entrepreneurial locations. The instrument captures information on environmental scanning capability, prior entrepreneurial knowledge, and business scalability among indigenous startups in their first five years of operation.

3.4 Research Instrument

The study used a structured questionnaire designed to measure opportunity recognition and business scalability among indigenous startups. All constructs were measured using multi-item scales adapted from established literature.

Table 1. Measurement of Research Variables

Construct	Dimension	Source	No. of Items	Sample Measurement Items	Scale
Opportunity Recognition	Environmental Scanning Capability	Ocasio (1997); Zahra & George (2002)	5	• We monitor customer needs • We track competitors.	5-point Likert Scale (1–5)
	Prior Entrepreneurial Knowledge	Shane (2000); Baron (2006)	5	• I recognise profitable opportunities easily. • My training supports decision-making.	5-point Likert Scale (1–5)
Business Scalability	Revenue Growth, Market Expansion, Operational Replication	Delmar et al. (2003); Lu & Beamish (2006)	5	• We are expanding into new markets. • Our business model is replicable.	5-point Likert Scale (1–5)

3.5 Validity of Instrument

Content and face validity are employed to establish the validity of the research instrument. Questionnaire items are developed from existing literature on opportunity recognition and business scalability to ensure alignment with the study objectives and conceptual variables. The instrument is subsequently reviewed by experts in entrepreneurship, innovation management, and business administration to assess the clarity, relevance, and adequacy of the measurement items. Corrections and recommendations from the

experts are incorporated to refine ambiguous statements and improve the representation of constructs. This process ensures that the instrument effectively captures environmental scanning capability, prior entrepreneurial knowledge, and business scalability among indigenous startups in Enugu State, Nigeria.

3.6 Reliability of Instrument

Reliability is assessed using Cronbach's Alpha to determine the internal consistency of the measurement items. A

pilot study involving 30 indigenous startups outside the main sample is conducted to assess the instrument's reliability. All constructs record Cronbach's Alpha values above the acceptable threshold of 0.70, indicating satisfactory reliability and internal consistency among the measurement items. The results confirm that the instrument is stable and produces consistent outcomes under similar research conditions. The table is presented below:

Table 2. Reliability

Construct	No. of Items	Cronbach's Alpha
Environmental Scanning Capability	5	0.78
Prior Entrepreneurial Knowledge	5	0.81
Business Scalability	5	0.84

3.7 Method of Data Analysis

Data collected for the study are analysed using descriptive and inferential statistical techniques with the aid of the Statistical Package for Social Sciences (SPSS). Descriptive statistics such as frequencies, percentages, means, and standard deviations are used to summarise respondents' demographic characteristics and perceptions regarding the study variables. Inferential analysis is conducted using multiple regression analysis to examine the effect of opportunity recognition dimensions on business scalability among indigenous startups in Enugu State, Nigeria. The hypotheses are tested at the 5% significance level, and decisions are based on p-values ($p \leq 0.05$).

3.8 Model Specification

The study employs a multiple regression framework to examine the relationship between opportunity recognition and business scalability among indigenous startups during their first 5 years of operation in Enugu State, Nigeria. The functional and econometric forms are presented as follows: Business Scalability =

f (Environmental Scanning Capability, Prior Entrepreneurial Knowledge)

Econometric model:

$$BS = \beta_0 + \beta_1 ESC + \beta_2 PEK + \mu$$

Where:

BS = Business Scalability of Indigenous Startups

ESC = Environmental Scanning Capability

PEK = Prior Entrepreneurial Knowledge

β_0 = Constant term

β_1 – β_2 = Coefficients of independent variables

μ = Error term

The model is estimated using multiple regression analysis to determine the individual and combined effects of opportunity recognition dimensions on the business scalability of indigenous startups within their first five.

4. Results and Discussion

A total of 348 questionnaires were distributed to respondents across the selected entrepreneurial centres in Enugu State. Of these, 268 were correctly completed and returned, while the remaining questionnaires were either not returned or improperly completed. This yields a response rate of approximately 77.0%, which is considered adequate for statistical analysis in social science and entrepreneurship research.

4.1 Demographic Profile

This section presents the demographic characteristics of respondents. The analysis provides contextual understanding of the sampled indigenous startups and establishes the appropriateness of the data for examining the relationship between opportunity recognition and business scalability in Enugu State, Nigeria.

Table 3. Demographic Profile of Respondents (N = 268)

Variable	Category	Frequency	Percentage (%)
Gender	Male	158	59.0
	Female	110	41.0
Age of Entrepreneur	18–25 years	49	18.3
	26–35 years	116	43.3
	36–45 years	71	26.5
	46 years and above	32	11.9
Educational Level	Secondary	36	13.4
	OND/NCE	58	21.6
	Bachelor's Degree	126	47.0
	Postgraduate	48	17.9
Firm Age (Startup Age)	Less than 1 year	102	38.1
	1- 3 years	94	35.1
	4 -5 years	72	26.8
Type of Startup	Trading	132	49.3
	Manufacturing	60	22.4
	Services	50	18.7
	Tech/Digital	26	9.7

The demographic profile shows that 59.0% of respondents were male and 41.0% female, indicating moderate gender imbalance in startup ownership. The majority of entrepreneurs were aged 26–35 years (43.3%), followed by 36–45 years (26.5%), suggesting that startup activity is primarily driven by young, economically active individuals. Most respondents held a bachelor's degree (47.0%), indicating relatively high educational attainment among startup founders. In terms of firm characteristics, 38.1% of startups were 1–3 years old, 35.1% were 4–5 years, and

26.8% exceeded five years. This confirms that the sample largely consists of early-stage and growth-oriented firms. Sectoral distribution indicates dominance of trading enterprises (49.3%), followed by manufacturing (22.4%), services (18.7%), and tech/digital startups (9.7%), reflecting the commercial structure of Enugu State's entrepreneurial ecosystem. Overall, the demographic profile confirms that the respondents are well-suited for the study, as they are largely young, educated, and engaged in early-stage entrepreneurial activities.

4.2 Descriptive Statistics of Study Variables

The study variables were measured on a 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree).

Table 4. Descriptive Statistics

Variable	Items	Mean	Std. Deviation	Interpretation
Environmental Scanning Capability (ESC)	5	3.87	0.76	High
Prior Entrepreneurial Knowledge (PEK)	5	3.74	0.80	High
Opportunity Recognition (OR)	5	3.79	0.78	High
Business Scalability (BS)	5	3.83	0.75	High

The descriptive results indicate that respondents generally agreed with the statements measuring the study variables, as all mean scores are above 3.5. Environmental scanning capability (mean = 3.87) recorded the highest score, suggesting that startups actively monitor market trends, competitors, and emerging opportunities. Prior entrepreneurial

knowledge (mean = 3.74) also received a high rating, indicating that experience and accumulated knowledge play a key role in opportunity recognition. Business scalability (mean = 3.83) suggests that many startups perceive themselves as capable of expansion and growth. The relatively low standard deviations indicate

consistency in responses across participants.

4.3 Regression Analysis

- H₁: Environmental scanning capability positively influences business scalability among indigenous startups in Enugu State, Nigeria.
- H₂: Prior entrepreneurial knowledge positively influences business scalability among indigenous startups in Enugu State, Nigeria.

Table 5. Model Summary

Model	R	R ²	Adjusted R ²	Std. Error
1	0.769	0.591	0.586	0.493

The model summary indicates an R value of 0.769, showing a strong positive relationship between opportunity recognition variables and business scalability. The R² value of 0.591 indicates that 59.1% of the variation in business scalability is explained by environmental scanning capability and prior entrepreneurial knowledge. The adjusted R² of 0.586 confirms that the model has strong explanatory power and is not inflated by the number of predictors. This suggests that opportunity recognition is a strong determinant of startup scalability in Enugu State.

Table 6. ANOVA Results

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	72.418	2	36.209	148.62	0.000
Residual	49.932	265	0.188		
Total	122.350	267			

The ANOVA results show an F-value of 148.62 with a significance value of 0.000 ($p < 0.05$). This indicates that the overall regression model is statistically significant. Therefore, environmental scanning capability and prior entrepreneurial knowledge jointly have a significant effect on business scalability among indigenous startups in Enugu State.

Table 7. Coefficients of Regression

Variable	Beta (β)	t-value	Sig.	Decision
Constant	0.741	4.88	0.000	—
ESC	0.336	7.12	0.000	Significant
PEK	0.291	6.03	0.000	Significant

Environmental scanning capability ($\beta = 0.336$, $p = 0.000$) has the strongest positive effect on business scalability, indicating that startups that actively scan their environment are more likely to identify and exploit growth opportunities. Prior entrepreneurial knowledge ($\beta = 0.291$, $p = 0.000$) also significantly influences scalability, suggesting that experience enhances the ability to recognize viable opportunities and scale operations effectively. Overall, both variables significantly predict business scalability among indigenous startups.

4.4 Discussion of Findings

The findings demonstrate that both environmental scanning capability and prior entrepreneurial knowledge significantly enhance business scalability among indigenous startups in Enugu State. Beyond statistical significance, these results offer important theoretical and contextual insights into the strategies early-stage Nigerian entrepreneurs employ to navigate resource-constrained, highly uncertain business environments.

First, the significant effect of environmental scanning capability indicates that startups in Enugu State depend on continuous environmental interpretation to survive and grow. In environments characterised by market volatility, infrastructural deficiencies, and regulatory uncertainty, such as Nigeria, the capacity to systematically monitor customer preferences, competitors' behaviour, and technological changes is a critical adaptive mechanism. This finding extends the work of Baron (2023) and Tang et al. (2024) by demonstrating that environmental scanning serves not only as a strategic advantage but also as a survival-oriented capability, enabling indigenous startups to reduce uncertainty and identify informal or emerging-market gaps that facilitate scalability.

Second, prior entrepreneurial knowledge significantly influences scalability, underscoring the importance of

experiential learning in shaping entrepreneurial judgment. Within the Nigerian startup context, where formal support systems are frequently limited, accumulated business experience serves as a substitute for institutional guidance. Entrepreneurs with prior exposure are more adept at interpreting weak market signals, avoiding costly errors, and making timely opportunity-related decisions. This finding supports Shepherd et al. (2023) and Ott and Hannah (2024) and further suggests that, in emerging economies, entrepreneurial knowledge serves as a cognitive coping mechanism that enhances opportunity recognition under uncertainty.

In the Nigerian context, where persistent constraints on finance and infrastructure exist, opportunity recognition emerges as a decisive capability that determines whether startups survive or achieve scalable growth. Consequently, this study extends the theory by situating opportunity recognition within a resource-constrained African entrepreneurial ecosystem, where environmental awareness and experiential knowledge collectively shape business expansion trajectories.

5. Conclusion

This study examined the effect of opportunity recognition on business scalability among indigenous startups in Enugu State, Nigeria. The findings show that environmental scanning capability and prior entrepreneurial knowledge both have significant positive effects on business scalability, with environmental scanning capability exerting the stronger influence. The results indicate that scalability among

indigenous startups is driven largely by cognitive and learning-based capabilities rather than resource availability alone. Startups that actively monitor their external environment are better able to identify emerging opportunities, respond to market dynamics, and adjust their strategies accordingly. Prior entrepreneurial knowledge also enhances decision-making capacity and strengthens entrepreneurs' ability to recognise and exploit viable opportunities. The study concludes that opportunity recognition is a key determinant of business scalability in resource-constrained and dynamic entrepreneurial environments such as Enugu State. It underscores the importance of strengthening entrepreneurial awareness and experiential knowledge as foundational drivers of sustainable startup growth. Based on the findings, the following recommendations are made:

1. Strengthening environmental scanning practices. Startups should actively engage in systematic market analysis, competitor monitoring, and customer trend tracking to improve opportunity identification and scalability.
2. Enhancing entrepreneurial learning and experience sharing. Entrepreneurs should participate in training programs, mentorship schemes, and peer learning networks to build prior entrepreneurial knowledge that enhances opportunity recognition.
3. Policy support for startup intelligence systems. Government and entrepreneurial support agencies should develop platforms that provide market intelligence and opportunity mapping to support startup growth and scalability.

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