Management Innovation and Sustainability of Small Businesses in Ogun State, Nigeria

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Abstract

Research aim: This paper investigates the effect of management innovation, specifically innovation strategy, organisational culture, human resource innovation, and financial management innovation, on the organisational sustainability of small-scale enterprises in Ogun West Senatorial District, Ogun State, Nigeria.

Methodology/methods: The study was guided by the dynamic capabilities and stakeholder theories. The research adopted a quantitative design using survey data from 400 SMEs, of which 380 valid responses were returned. Data were analysed using the structural equation modelling (SEM). The model reliability, composite reliability, and average variance extracted (AVE) all exceeded acceptable thresholds.

Findings: The innovation strategy and human resource innovation had positive but insignificant effects on sustainability, while financial management innovation was negative and insignificant. Organisational culture showed a strong positive effect ($\beta=0.637$, $p=0.001$), explaining 46.9% of the variance in sustainability.

Conclusion and Practical Implication: Organisational culture is the key driver linking innovation to sustainability. SMEs should strengthen internal values, learning, and adaptability to enhance long-term performance in developing contexts.

Contribution: This study advances knowledge by providing region-specific empirical evidence and integrating theoretical perspectives that explain how management innovation drives sustainability among SMEs in emerging economies.

Keywords: Management innovation, financial management, human resources management, innovation strategy, small and medium enterprises (SMEs), sustainability.

JEL Classification: M10

Introduction

The contemporary competitive business environment has made sustainability a strategic priority that shapes how organisations develop and sustain competitive advantage (Volberda, van den Bosch, Heij, 2013; Oduro, 2024). Amid growing social and environmental pressures, companies are increasingly integrating sustainability principles into their business models to enhance innovation and meet stakeholder expectations (Mazzucato, 2021; Dlamini *et al.*, 2023). Small and medium-sized enterprises (SMEs) in Nigeria play a significant role in employment and GDP (NBS, 2022); however, they continue to face challenges associated with the lack of innovation, insufficient infrastructure, and limited flexibility (Onyemaobi *et al.*, 2022).

While prior studies (*e.g.*, Lopez-Nicolas, Merono-Cerdan, 2011; Banmairuroy *et al.*, 2022; Zhang *et al.*, 2022) have examined the relationships between innovation performance and various factors, few have specifically unpacked management innovation as a multidimensional construct within resource-constrained SMEs in emerging economies. This study extends existing models by integrating the dynamic capability theory and resource-based view to explore how internal innovation processes sustain SME competitiveness in Nigeria's volatile market context. Accordingly, this study examines the effect of management innovation, comprising innovation strategy, organisational culture, human resource innovation, and financial management innovation, on the sustainability of small businesses in Ogun West Senatorial District, Nigeria.

Statement of the problems

Despite the growing acceptance of SMEs as the engines of inclusive growth, a significant number of businesses in the developing economies still face systemic sustainability issues (Kindstrom *et al.*, 2024; Azeem, Kotey, 2023). These problems arose due to limited resources, an unstable policy environment and weak institutional support. This vulnerability was further exposed by the COVID-19 pandemic, when many companies could not cover operational costs or keep their employees as a result of a lack of innovation potential (Atah *et al.*, 2023; Okpara *et al.*, 2022).

Although numerous studies have examined the relationship between innovation and firm performance (Damanpour, Aravind, 2012; Crossan, Apaydin, 2010; Xin *et al.*, 2024), most have treated innovation as a monolithic construct. A few studies have empirically integrated different aspects of management innovation, such as organisational culture, human-resource practices and financial management into a single model to describe sustainability outcomes in SMEs, especially in subnational environments such as Ogun State. This paper addresses this gap by exploring how management innovation collectively influences the sustainability of small businesses, providing contextual evidence from Ogun West Senatorial District, Nigeria.

Objectives of the study

i.   To assess the effect of innovation strategy on sustainability of small-scale businesses in Ogun West Senatorial District, Ogun State, Nigeria.
ii. To explore the extent to which organisational culture influences the sustainability of small-scale businesses in Ogun West Senatorial District, Ogun State, Nigeria.
iii. To examine the effect of human resources innovation on sustainability of small businesses in Ogun West Senatorial District, Ogun State, Nigeria.
iv. To examine the effect of financial management innovation on sustainability of small businesses in Ogun West Senatorial District, Ogun State, Nigeria.

Research hypotheses

HO$_1$: Innovation strategy has no significant effect on the sustainability of

small-scale businesses in Ogun West Senatorial District, Ogun State, Nigeria.

HO$_2$: Organisational culture has no significant influence on the sustainability of small-scale businesses in Ogun West Senatorial District, Ogun State, Nigeria.

HO$_3$: Human resources innovation has no significant effect on the sustainability of small-scale businesses in Ogun West Senatorial District, Ogun State, Nigeria.

HO$_4$: Financial management innovation has no significant effect on the sustainability of small-scale businesses in Ogun West Senatorial District, Ogun State, Nigeria.

1. Literature review

1.1 Management innovation

Management innovation involves introducing new managerial practices, processes, and organisational structures that improve a firm's adaptability, efficiency, and competitiveness (Birkinshaw *et al.*, 2008; Volberda, van den Bosch, Heij, 2013). Shodiya *et al.* (2018) earlier observed that innovation enables SMEs in Nigeria to develop new products and maintain a competitive advantage. In contrast to technological innovation, which is usually more concerned with product development or production processes, management innovation deals with organisational design, decision-making processes, and leadership strategies that help realise strategic goals. Empirical research suggests that management innovation is an important factor for survival and sustainability among small and medium enterprises (SMEs) due to its reinforcement of dynamic capabilities and responsiveness to stakeholders (Oduro, 2024; Dlamini, *et al.*, 2023). However, Onyemaobi *et al.* (2022) note that Nigerian SMEs perform poorly regarding innovations because of poor infrastructure and lack

of managerial capabilities, and it is therefore important to research management innovation in this specific scenario.

1.1.1 Innovation strategy in small-medium enterprises

The innovation strategy offers the conceptual framework that can help SMEs to integrate creativity, technology, and market orientation to maintain sustainable competitiveness (Mazzucato, 2021; Olubiyi, 2022). This includes making businesses sustainable, implementing technologies that are friendly to the environment and coming up with cost-efficient and socially responsible business models (Lopez-Nicolas, Merono-Cerdan, 2011). Sustainability-based approaches can help SMEs stand out and become more resilient (Oduro, 2024; Zhang *et al.*, 2022). Nonetheless, Banmairuroy *et al.* (2022) and Atah *et al.* (2023) stress that the majority of SMEs in Nigeria do not have a formalised innovation strategy but instead improvise when faced with market pressure. This shortcoming interferes with the sustainability in the long term and requires a systematic, innovation-based practice.

1.1.2 Organisational culture in SMEs sustainability

Organisational culture reflects shared values, beliefs, and norms that influence how employees internalise sustainability principles in their daily practices (Hakami, Abdlwahed, 2022). This culture of learning, trust, and collaboration contributes to improving the resilience of SMEs to turbulence in the environment and commitment to continuous improvement (Dlamini *et al.*, 2023). Studies have shown that adaptive cultures stimulate innovation and involvement of stakeholders, thus enhancing performance and survival (Vu, Luu, 2022; Xin, Laila, Zhang, 2024). However, most Nigerian SMEs have hierarchical features that hinder open communications, which limit the possibility of innovation (Okpara *et al.*, 2022). The creation of

value-based cultures that encourage innovativeness and diversity continues to be a crucial step towards long-term expansion.

1.1.3 Human resource innovation in SMEs sustainability

Human resources (HR) innovation encompasses new approaches to talent management, training, and employee engagement that enhance organisational learning and creativity (Aslam *et al.*, 2023). The innovation in HR is especially crucial for resource-limited SMEs, but they need a high level of adaptability (Nam, Luu, 2022; Kindstrom *et al.*, 2024). It has been empirically established that innovation-led performance is triggered by HR practices that ensure autonomy and ongoing learning (Azeem, Kotey, 2023). Nevertheless, many Nigerian SMEs still make use of informal HR systems (Okpara *et al.*, 2022). Combining planned HR novelty can consequently improve the output of knowledge sharing, productivity, and sustainability.

1.1.4 Financial management innovation in smes sustainability

Financial management innovation involves adopting new tools and systems to improve financial planning, access to credit, and sustainability reporting (Hossain, *et al.*, 2023). It has been empirically established that financial innovation promotes liquidity and sustainable growth in SMEs (Atah *et al.*, 2023). However, the challenge of inadequate financial access and poor financial literacy continues to be troubling to Nigerian SMEs (Okpara *et al.*, 2022). The financial management should be strengthened to enhance cash-flow management, profitability, and the survival of the firms in the competitive markets in the long term.

1.2 Small and medium enterprise business

Small and medium-sized enterprises (SMEs) continue to play significant roles in the domestic economies due to their abilities to create jobs and foster technological development at the local level, entrepreneurship, output diversification, and inter-sectoral linkages with more comprehensible large-scale industries. Though there is no widespread definition of SMEs, they are typically defined by the indices of the number of employees, annual turnover, or the amount of fixed assets. According to SMEDAN (2020), small-scale enterprises comprise a workforce of 10 to 49 employees with an annual turnover of 5 to 40M, whereas medium-scale enterprises have a workforce of 50 to 199 employees and an annual turnover of 5 to 400M. These classifications differ depending on the region; moreover, Khan, Dalu (2015) reveal that, in developed and developing countries, SMEs are key drivers of industrial and economic growth. With the increase in the number of SMEs in Nigeria, there arose a need to cluster the policies and operations of the various SMEs. Hence, the formation of the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) in the year 2004, with a mandate to coordinate SME activities in the country.

1.3 Concept of sustainability

Sustainability entails balancing economic growth, environmental stewardship, and social equity to ensure present needs are met without compromising future generations (Brundtland Commission, 1987). It is increasingly being conceived as a dynamic process that includes innovation, stakeholder involvement, and flexibility (Volberda *et al.*, 2013; Oduro, 2024). In the case of SMEs, sustainability involves long-term sustainability in resource efficiency, ethical operations, and continuous improvements (Hossain *et al.*, 2023).

1.4 Theoretical framework

1.4.1 Dynamic capabilities theory (DCT)

Teece, Pisano, and Shuen (1997) developed the dynamic capabilities theory to explain

how firms renew competencies and reconfigure resources to achieve competitive advantage in turbulent environments. In small and medium-sized enterprises, dynamic capabilities are expressed through flexible management practices, adaptive organisational culture, and continuous learning (Eisenhardt, Martin, 2000; Teece, 2014). This theoretical view confirms that managerial innovation is what prepares SMEs to transform any internal weakness into strategic strengths to increase the sustainability outcomes.

1.4.2 Stakeholder theory

The stakeholder theory (Freeman, 1984) states that organisations can create sustainable value through a fair sharing of the interests of various stakeholder groups, such as employees, customers, investors, and local communities. Clarkson (1995) also stresses that institutionalisation of stakeholder expectations in managerial innovation initiatives enhances organisational legitimacy and sustainability in performance. Regarding the case of Nigerian SMEs, this perspective emphasises the paramount role of human resource development innovations, a transparent financial system, and an ethical corporate culture in achieving stakeholder-driven sustainability.

This model explains the interconnected relationships between the independent variable (management innovation measure with innovation strategy, organisational culture, human resource innovation, and financial management innovation) and the dependent variable (sustainability of SMEs) as shown in Figure 1.

1.5 Empirical review

1.5.1 Management innovation and sustainability of SMEs

Empirical studies have continued to highlight the importance of management innovation on the sustainability of small and medium-sized enterprises (SMEs). Studies have shown that adaptability and competitiveness are increased with the implementation of new management structures, processes, and leadership practices (Emeh *et al.*, 2024;

Conceptual Model
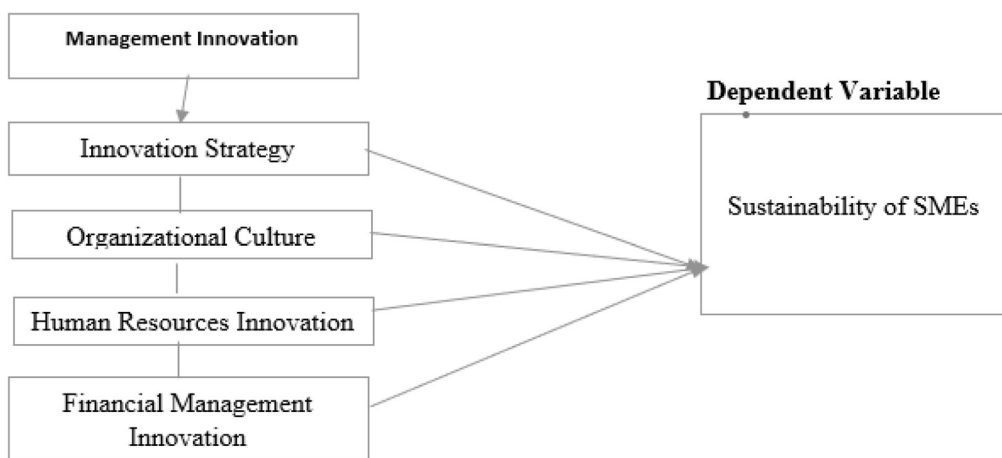**Independent Variable**

Figure 1. Management Innovation and Sustainability of SMEs.
Source: Researcher's conceptual model, 2025.

Oduro, 2024). Emeh *et al.* (2024) found in the Nigerian setting that cultural and business innovations contributed to the competitive advantage of manufacturing SMEs, and Oduro's (2024) meta-analysis indicated that there is a strong correlation between eco--innovation and sustainable performance. Similarly, Onyemaobi *et al.* (2022) and Akiode (2020) believed that the lack of adequate managerial systems and poor innovation potential compromise the survival of SMEs in developing economies. Collectively, these studies show that management innovation acts as a dynamic capability, which allows small firms to foresee change, streamline internal operations, and reach long-term sustainability. Nevertheless, the majority of available research is industry-specific and based on descriptive designs, thus providing few causal explanations. This, in turn, necessitates further, more integrated, cross-sectoral empirical validation of the contribution of management innovation to SME sustainability, especially in less-explored areas like Ogun West.

1.5.2 Effect of innovation strategy on sustainability of small-scale businesses

A large body of evidence has validated that an innovation strategy has a considerable impact on the sustainability of SMEs as it aligns organisational competences with environmental and market changes. Innovation strategies (green, digital, or strategic) in different contexts enable differentiation and long-term competitiveness of SMEs (Onyemaobi *et al.*, 2024; Xin *et al.*, 2024; Akinwale, Akinbode, 2024). Empirical studies in Lagos and Kaduna support the idea of innovation practices to increase operational efficiency and resilience (Olatunle, Gumus, 2023), while Oluwaseun and Adebisi (2024) found that digital competencies lead to positive results in terms of productivity and sustainability. At a global scale, Dasgupta (2021) and Mazzucato (2021) accentuated

that sustainability-oriented innovation strategies can help firms to follow both environmental and financial goals simultaneously. However, most of the research is disproportionately concentrated on manufacturing or green innovation but neglects strategic or marketing-based innovation dimensions (Xin *et al.*, 2024; Oluwaseun, Adebisi, 2024). Besides, most studies use cross-sectional data, and that limits the inference on long-term sustainability impacts. Consequently, it is necessary to conduct more studies to understand the overall impact of innovation strategies in various sectors in enhancing the sustainability of SMEs in emerging markets.

1.5.3 Influences of organisational culture on sustainability of small-scale businesses

Organisational culture is commonly identified as a critical factor in determining SME sustainability and performance. It is also evidenced by the empirical findings from various settings that shared values, commitment of the leadership, and engagement of the employees contribute to innovation and resilience (Dlamini *et al.*, 2023; Kappo-Abidemi *et al.*, 2023; Shodeinde *et al.*, 2023). In Nigeria, Nimfa et al. (2021) and Hakami and Abdlwahed (2022) found that cultures that promote participation and creativity are highly beneficial to competitiveness. Similarly, Lopyaem and Saraphat (2021) have proved that varying forms of culture have a direct impact on the success of enterprises in Thailand. These studies together highlight the importance of culture as a behavioural and strategic process that influences the sustainability orientation. Nevertheless, the current studies are usually limited to small geographical areas and sectoral bias, *i.e.* manufacturing, hospitality or technology. Not many of the scholars combine cross-sectoral or multi-regional samples to evaluate cultural differences in a comprehensive way (*e.g.*, Shodeinde *et al.*, 2023; Dlamini *et al.*, 2023). In this regard, there is a need for more

study to explore how adaptive organisational cultures can strengthen sustainability in SMEs in developing and semi-urban settings like Ogun West.

1.5.4 Effect of human resources innovation on sustainability of small businesses

Recent research corroborates that human-resource (HR) innovation is one of the primary factors that make SMEs more sustainable and competitive due to the high level of creativity, engagement, and productivity among employees (Rizq, Parveen, 2025; Aslam *et al.*, 2023). Learning cultures (such as performance-based appraisal, knowledge sharing, and skills development) are innovated within HR practices and encourage adaptability and long-term growth (Mattjik *et al.*, 2021; Pasek *et al.*, 2022). Vu, Luu (2022) also established that HR innovation supports dynamic capabilities, which enhance capital productivity and innovation performance. Most HR-innovation research remains regionally oriented (Pakistan, Nigeria, and Thailand) and tends to be limited by practice or sector (Aslam *et al.*, 2023; Mattjik *et al.*, 2021). Few have implemented multi-methodology in order to represent causality between HR innovation and sustainability. In turn, the necessity of an empirical study with a broader, cross-cultural, and multidimensional approach lies in the understanding of the role of HR innovation in the sustainability of SMEs in the changing economic environments.

1.5.5 Effect of financial management innovation on sustainability of small businesses

Financial management innovation remains central to SME sustainability, since it enhances the allocation of resources, operational efficiency, and strategic planning. Empirical data reveal that innovative financial practices, including green financing, digital accounting, flexible budgeting, *etc.*, contribute to the improvement of the economic and environmental performance (Sajuyigbe et al., 2024; Khattak *et al.*, 2023). Research on Nigeria and other emerging economies has shown that financial planning, inventory, and working-capital management have direct impacts on the survival and productivity of firms (Atah *et al.*, 2023; Mohammed, Suleiman, 2022; Effioma, Edet, 2020). However, current literature is largely focused on individual aspects of financial innovation and does not address financial management as a complex system (Sajuyigbe *et al.*, 2024; Khattak *et al.*, 2023). In this context, there is a need for holistic and cross-sectoral designs to further extend the knowledge on the role of financial management innovation in SME sustainability in emerging economies.

2. Methodology

2.1 Research design

This study employed a cross-sectional survey research design, which is appropriate for examining the perceptions, attitudes, and experiences of respondents regarding management innovation and the sustainability of small and medium-sized enterprises (SMEs). The cross-sectional approach enables the collection of quantitative data at a single point in time from a large population in a cost-effective and time-efficient manner. This design was chosen because it facilitates the identification of prevailing trends and patterns among SMEs in real-world contexts, aligning with recommendations by Creswell and Creswell (2018).

2.2 Population, sample size determination and sampling technique

The most recent data provided by the Ogun State Ministry of Commerce and Industry show that there were 8,480 small and medium enterprises (SMEs) in the state as of July 2024 (Jolaosho *et al.*, 2025) These enterprises

are clustered into six major industries, which include the education (4,246), other enterprises (1,933), hospitality and hotels (804), oil and gas (628), health (622), and agriculture (247). The educational sector represents the highest concentration of SMEs, with almost half of the total, followed by other enterprises and the hospitality industry.

In terms of senatorial location, 3,441 SMEs are located in Ogun Central (41%), 2,760 SMEs in Ogun West (32%), and 2,279 SMEs in Ogun East (27%) (Jolaosho *et al.*, 2024). The research targeted Ogun West Senatorial District, constituting five Local Government Areas (LGAs): Ado-Odo/Ota, Yewa South, Yewa North, Imeko-Afon, and Ipokia, since it forms a significant portion of SME activity and a rich concentration of business activities.

The SMEs data in Ogun West is as follows: Ado-Odo/Ota (1,744 SMEs), Yewa South (325 SMEs), Yewa North (316 SMEs), Imeko-Afon (197 SMEs), and Ipokia (178 SMEs). Ado-Odo/Ota becomes the business and industrial centre of the district and has a higher representation of education, hospitality, and enterprise. However, Imeko-Afon and Ipokia are characterised by a relatively low density of SMEs; therefore, they are useful to understand the challenges concerning the operational problems of low-activity regions. To focus on the views of different extents of economic activity, the research covered Ado-Odo/Ota, Yewa South, Yewa North, and Imeko-Afon as main sample areas.

Given that the total population of SMEs across these selected LGAs was 2,582, the Cochran (1977) formula for finite populations was applied to determine an appropriate sample size:

$$n = \frac{N(Z^2) \times P \times (1-P)}{E^2 \times (N-1) + (Z^2) \times P \times (1-P)}, \quad (1)$$

Table 1. SMEs population from each local government in ogun west.

Sectors	Ado-Odo Otta	Yewa south	Yewa north	Imeko – Afon	Ipokia	Total
Enterprise	531	64	63	38	31	**727**
Oil & gas	86	21	20	13	11	**151**
Educational	813	134	136	89	83	**1,255**
Health	95	43	39	17	15	**209**
Hospitality & hotels	166	42	41	21	21	**291**
Agricultural	53	21	17	19	17	**127**
Total	**1,744**	**325**	**316**	**197**	**178**	**2,760**

Source: Researcher's analysis from adapted data in Jolaosho (2025), who sourced the data from the Ministry of Commerce and Industry, Oke-Mosan, as of July 24, 2024.

Table 2. Sample size distribution in each local government.

Local government area	Total number of SMEs	Sample size determination
Ado-Odo Otta	1744	$\frac{1744}{2760} \times 400 = 252$
Yewa South	325	$\frac{325}{2760} \times 400 = 47$
Yewa North	316	$\frac{316}{2760} \times 400 = 46$
Imeko – Afon	197	$\frac{197}{2760} \times 400 = 29$
Ipokia	178	$\frac{178}{2760} \times 400 = 26$
Total	**2760**	**400**

Source: Researcher's computation, (2025).

where:
n   –   the desired sample size,
N   –   the total population size
        (2760 SMEs),
Z   –   the Z-score, which is the confidence
        level at 95% or 1.96,
P   –   the estimated proportion of the
        population. Assuming P is 0.5,
E   –   the margin of error. Assuming 5% or
        0.05.

$$n = \frac{2760 \times (1.96^2) \times 0.5 \times (1-0.5)}{0.05^2 \times (2760-1) + (1.96^2) \times 0.5 \times (1-0.5)},$$

$$n = \frac{2760 \times 3.8416 \times 0.25}{0.0025 \times 2760 + 3.8416 \times 0.25},$$

$$n = \frac{2760 \times 0.9604}{6.8975 + 0.9604},$$

$$n = \frac{2650.705}{7.8579} = 337.3.$$

The minimum required sample size was 337, but it was increased by approximately 20% to 400 respondents to account for potential non-response and ensure robustness of the findings, following standard survey research practice (Muhammad *et al.*, 2022; Israel, 1992)

A stratified random sampling method was employed to improve representativeness. A different stratum was made by each LGA, and proportional sampling was done to select the number of SMEs in each LGA. In this regard, Ado-Odo/Ota had a sample population of 270, Yewa South 50, Yewa North 49 and Imeko-Afon 31, totalling 400 individuals. The stratified sampling was appropriate since it ensures that all the important subgroups in the population are sufficiently represented, reducing sampling bias and enhancing precision (Babbie, 2021; Fowler, 2014).

The sampling design reflects the heterogeneity of the SMEs in the Ogun West Senatorial District, both in terms of the high-density business hub at the centre of Ado-Odo/Ota to the less densely industrialised regions of Imeko-Afon, which made the sampling design balanced and representative in assessing innovation and sustainability practices in SMEs in the region. The chosen sample gave a sound empirical basis to the investigation of the relationship between management innovation and the sustainability of the SME sector in the district.

2.3 Research instrument and data collection

To obtain valid and reliable data, a structured questionnaire was developed and administered to the selected respondents. The instrument was designed using previously validated scales and consisted of two major sections. The first section captured respondents' demographic details such as gender, age, educational qualification, and years of business experience. The second section addressed the core study constructs, innovation strategy, organisational culture, human resource innovation, financial management innovation, and business sustainability. All items were rated on a five-point Likert scale ranging from 1 ("strongly disagree") to 5 ("strongly agree").

Items measuring innovation strategy were adapted from Kraśnicka *et al.* (2016). Organisational culture items were derived from Cameron and Quinn's (2006) competing values framework, while human resource innovation items were adapted from Chen and Huang (2009). Financial management innovation was measured based on the scale developed by Illmeyer *et al.* (2017), and business sustainability items were drawn from Cantele and Zardini (2024). The instrument was subjected to face and content validation by three experts in business management and measurement design to ensure clarity, relevance, and appropriateness.

2.4 Pilot study

Before the main distribution of the questionnaire, a pilot study was conducted on twenty (20) respondents who possessed characteristics similar to the target population

but were not included in the final sample. The pilot test was aimed at evaluating the understanding of the items by the respondents, testing the ease of working with the instrument, and checking the clarity of the structure and wording. This exercise gave feedback used in refining the questionnaire before it was administered.

2.5 Validity and reliability of the research instrument

In quantitative management sciences, measurements of social concepts are carried out by using measuring instruments (*i.e.*, questionnaires) (Shodiya, Adekunle, 2022). The reliability and validity tests were conducted using the main study data through confirmatory factor analysis in ADANCO. Cronbach's alpha and composite reliability values above 0.70 confirmed internal consistency, while average variance extracted (AVE) values exceeding 0.50 supported convergent validity. Discriminant validity was established using the Fornell-Larcker criterion.

2.6 Method of data analysis

Data collected were screened and analysed using the Statistical Package for the Social Sciences (SPSS) version 26 and Analysis of Moment Structures (AMOS) version 26. Descriptive statistics such as frequency, percentage, mean, and standard deviation were used to summarise the demographic characteristics of the respondents. Structural Equation Modelling (SEM) with AMOS was employed to test the hypothesised relationships among constructs.

Structural Equation Modelling (SEM) was adopted because the study examined multiple latent constructs, innovation strategy, organisational culture, human resource innovation, financial management innovation, and business sustainability, whose interrelationships could not be effectively captured using traditional regression techniques. The SEM offers a comprehensive and highly analytical framework in which the measurement and structural

aspects of the model are evaluated and improved at the same time, increasing the level of accuracy and explanatory power (Hair *et al.*, 2019). The analytical method involved two steps: the measurement model, which was tested using the confirmatory factor analysis (CFA) to determine the construct reliability and validity; and the structural model, which checked the hypothesised causal relationships between the variables in the study.

Multiple indices were used to evaluate the fit of the model, such as the Chi-square/degrees of freedom (kh2/df), Goodness-of-Fit Index (GFI), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardised Root Mean Square Residual (SRMR). The model was considered acceptable if the indices met the recommended thresholds: kh2/df<3, CFI and TLI>0.90, GFI>0.90, and RMSEA and SRMR<0.08 (Byrne, 2016; Hair *et al.*, 2019).

3. Results and discussion

3.1 Measurement of the model assessment and items loading

The measurement model analysis indicated that all items showed good factor loading, which means they are good representations of their constructs. There were no items with low loadings that needed to be deleted, so the measurement model remained valid and reliable.

3.2 Construct reliability and convergent validity

The reliability and validity values in Table 3 show that all the constructs exceeded the suggested values of internal consistency and convergent validity. The ρc (composite reliability), Cronbach alpha (α) of all constructs exceeded the acceptable minimum of 0.70, which established great internal consistency (Hair *et al.*, 2019). The values of the Average Variance Extracted (AVE) ranged from

Table 3. Construct reliability and convergent validity.

Construct	Dijkstra-Henseler's ρA	Composite reliability (ρc)	Cronbach's alpha (α)	Average variance extracted (AVE)
IS	0.9531	0.9485	0.9484	0.7557
OC	0.8383	0.8373	0.8369	0.5076
HRI	0.9562	0.9504	0.9513	0.7630
FMI	0.9568	0.9488	0.9497	0.7576
BS	0.9481	0.9474	0.9474	0.7502

Source: Extracted from ADANCO VERSION 2.4.

0.5076 to 0.7630, exceeding the minimum 0.50 benchmark (Fornell, Larcker, 1981), hence establishing convergent validity.

Though the Cronbach alpha and composite reliability of most constructs were greater than 0.94, which is likely to create redundancy or common-method bias (Podsakoff *et al.*, 2012), high indices are acceptable in this case. This study constructs are multidimensional and complex areas that require several items to be covered. Additionally, all the item loadings and AVE values were satisfactory, meaning the items made a unique contribution to their constructs. To minimise the risk of bias, procedural controls, including but not limited to respondent anonymity, different item wording, and the design of sections to reduce patterned responses, were implemented. Therefore, high reliability coefficients indicate a strongly coherent measuring instrument, but not redundancy.

3.3 Overall fit model

The overall model fit was done in ADANCO and AMOS software, which allowed strong confirmation of the measurement and structural models. The ADANCO results also provided Standardised Root Mean Square Residual (SRMR) at 0.04842, which is considerably lower than the acceptable limit of 0.08, showing the model has an excellent fit and dULS (1.01981) and dG (1.20421) giving values, which are lower than their HI95 and HI99 critical, confirming high model sufficiency. Likewise, the Confirmatory Factor Analysis (CFA) of AMOS provided the chi-square/df ratio of 2.295, which indicates an adequate fit, and the significance of the chi-square values (2=842.184, df=367, p<0.001), as is common to large samples. The model was also fit by additional global indices; CFI=0.953, TLI=0.948, IFI=0.953 (Hu, Bentler, 1999); RMSEA=0.058 (90% CI:0.053-0.064) within the ample range although PCLOSE=0.004; and NFI=0.920, PNFI=0.832, PCFI=0.8 Though the Hoelter Critical N (0.05) of 186 was not at best the recommended 200, it is relatively acceptable as a good indication of model stability. All these indices prove that the proposed model has an excellent overall fit and fits well in the process of testing the hypotheses.

3.4 Testing of the hypothesis and discussion of findings

Hypothesis one (HO$_1$): Innovation strategy has no significant effect on the sustainability of small-scale businesses in Ogun West Senatorial District, Ogun State, Nigeria.

The effect of innovation strategy (IS) on business sustainability (BS) is positive (but not statistically significant) (0.136, p=0.177). The p-value is more than 0.05; therefore, HO$_1$ was accepted. This means that, according to the data, innovation strategy is not a crucial factor affecting the sustainability of small-scale businesses in Ogun West.

Hypothesis one (HO$_2$): Organisational culture has no significant influence on the sustainability of small-scale businesses in Ogun West Senatorial District, Ogun State, Nigeria.

Table 4. Structural model estimate.

Path	Unstandardised estimate	Standard error (S.E.)	Critical ratio (C.R.)	P value	Standardised estimate (β)
BS ← IS	0.120	0.078	1.533	0.125	0.136
BS ← OC	0.596	0.088	6.807	0.001	0.637
BS ← HRI	0.019	0.064	0.301	0.763	0.029
BS ← FMI	−0.025	0.052	−0.484	0.629	−0.021
R²					0.469

Source: Extracted from AMOS SPSS VERSION 26.

The effect of the organisational culture (OC) on business sustainability is statistically significant is quite high positive (0.637, p=0.001). As the p-value was smaller than 0.05, therefore, HO_2 was rejected. This implies that good organisational culture plays a major role in improving the sustainability of small-scale businesses in Ogun West.

Hypothesis one (HO_3): Human resources innovation has no significant effect on the sustainability of small-scale businesses in Ogun West Senatorial District, Ogun State, Nigeria.

Human resources innovation (HRI) has a statistically insignificant weak relationship with business sustainability (0.029, p=0.734). The p-value is above 0.05. Therefore, $H0_3$ was accepted. This implies that innovation in human resources does not have much effect on the sustainability of small-scale companies in this situation.

Hypothesis one (HO_4): Financial management innovation has no significant effect on the sustainability of small-scale businesses in Ogun West Senatorial District, Ogun State, Nigeria.
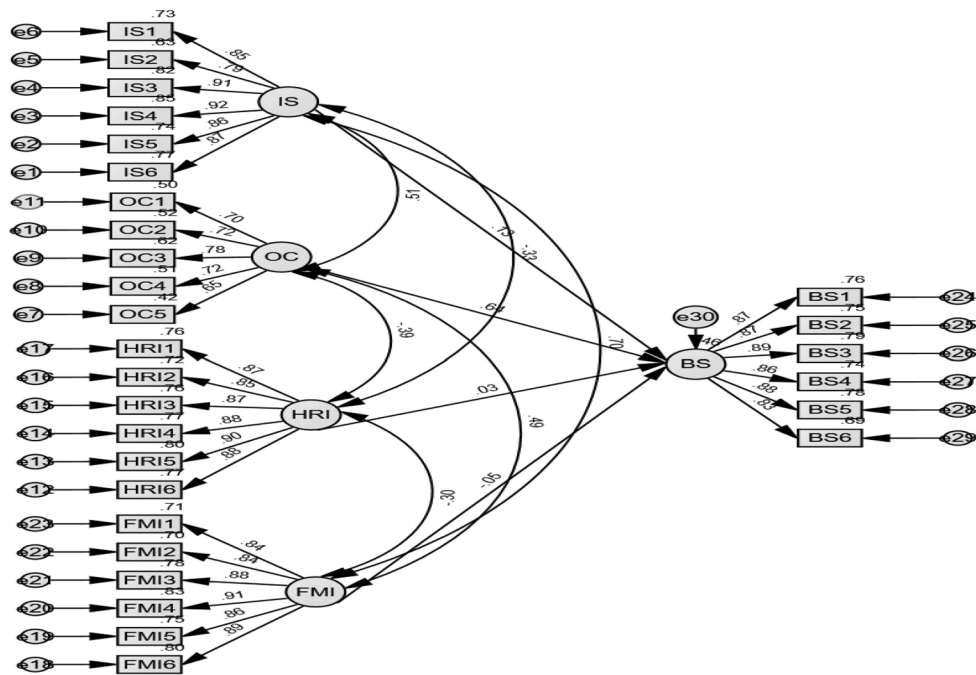

Figure 2. Structural Equation Model. Source: Extracted from AMOS SPSS VERSION 26.

The effect of financial management innovation (FMI) on business sustainability is negative and not statistically significant (-0.046, p=0.557). Given that p>0.05, HO_4 was not rejected. This means that financial management innovation does not have a significant effect on business sustainability in this context.

4. Discussion of findings

The findings of this study revealed that among the four dimensions of management innovation examined, only organisational culture had a statistically significant positive effect on the sustainability of SMEs in Ogun West, while innovation strategy, human resource innovation, and financial management innovation exhibited positive but insignificant relationships. This outcome highlights a critical paradox: although innovation is widely recognised in literature as a catalyst for sustainability, its impact remains limited when internal capabilities are not sufficiently institutionalised.

From the perspective of the dynamic capabilities theory (Teece *et al.*, 1997), firms are expected to achieve sustained competitive advantage by continuously reconfiguring resources in response to environmental change. However, the insignificance of innovation strategy, HR innovation, and financial innovation suggests that these SMEs may be engaging in innovation only at a superficial or informal level. Such capabilities are not incorporated into repeatable routines or are not in line with longer-term strategic systems, which restrains their effectiveness. This finding confirms the argument of Eisenhardt and Martin (2000), which holds that dynamic capabilities can only yield better performance when routinised and incorporated into the main organisational processes. Therefore, the statistically insignificant results are not an indicator of the lack of innovation, but a manifestation of a failure of the institutionalisation of the strategies.

Based on the stakeholder theory (Freeman, 1984; Clarkson, 1995), the insignificance of innovation practices implies that there is no convergence between stakeholder expectations and innovation efforts in SMEs. Innovation in most SMEs is mostly owner-led and not developed with the employees, customers and even financial institutions. This restricts the inclusion of stakeholders, leading to decreased legitimacy and diminished effectiveness in implementation. As a result, innovation exists, but is not socially integrated, and this limits its potential to improve sustainability.

Conversely, organisational culture was the only significant predictor of sustainability, which highlights its underlying importance in improving SME resilience. This is in line with Teece's (2014) perception that culture forms the micro-foundations of dynamic capabilities as it facilitates collective learning, adaptability, and commitment to change. It also strengthens the stakeholder theory, showing that a culture of trust built on shared values helps to align the stakeholders, to engage employees and be sustainable in the long run. These results can be aligned with empirical research findings by Hakami and Abdlwahed (2022), Dlamini *et al.* (2023), and Nimfa *et al.* (2021), which confirm that culture was the working mechanism with the help of which innovation is converted into sustainable performance.

5. Conclusion and recommendations

According to the results obtained from the study, only one of the four dimensions of management innovation, which is organisational culture, was found to have a statistically significant positive effect on business sustainability. This shows that values, beliefs and internal norms of behaviour in small businesses are essential elements that determine long-term viability and resilience. On the contrary, innovation strategy, human resource

innovation and financial management innovation, whilst showing positive correlation with business sustainability, did not show any meaningful statistical implications here.

These findings validate dynamic capability theory by putting a high premium on internal capabilities, especially adaptive culture and internal cohesion in managing environmental uncertainties and business survival. On the same note, the results are also congruent with the stakeholder theory, implying that small businesses that internalise their stakeholder needs, such as employees, customers, and communities, are the more sustainable companies in the long term.

In conclusion, although all the types of innovation are crucial, the research indicates that an organisational culture cannot be ignored in realising the potential values inherent in different types of innovation. Thus, in the case of small businesses in semi-urban and developing environments such as Ogun West, there is a tendency of a more internal value strengthening, learning culture attitude, while adaptability factors are essential in promoting sustainability rather than remote innovation strategies.

5.1 Recommendations

Based on the findings and conclusions made in this research study, the following are the recommendations to be made:

The owner of the SMEs must instil similar values whereby innovation, transparency, and adaptability are encouraged to enhance sustainability.

Businesses should put into practice the practical move of employing innovation strategies that meet the market needs and that complement their current strengths.

SMEs should introduce contemporary human resource activities like training the employees, performance-related rewards and flexible organisational arrangement.

Budgeting tools, digital accounting, and cash flow controls must be utilised to enhance financial efficiency and sustainability among SMEs.

5.2 Contributions to knowledge

The research improves the knowledge of management innovation and business sustainability in the small-scale businesses in the Ogun West Senatorial District, Nigeria. It empirical proves that SME sustainability is affected positively by the organisational culture which also promotes the value and behaviours within the organisations. Nevertheless, innovation strategy and human resource innovation, as well as financial management innovation demonstrated limited direct effect, which implies carrying out deeper analysis of context. The study was based on the combination of the dynamic capability theory and stakeholder theory; in addition to theoretical gap, it filled a regional gap in the research of SME sustainability in developing or semi-urban markets.

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Questionnaire

Section A: Demographic Characteristics

Gender:

Male ☐   Female ☐

Age:

Below 20 ☐   20–29 ☐   30–39 ☐   40–49 ☐   50 and above ☐

Educational Qualification:

O'level ☐   NCE/ND ☐   HND/BSC ☐   Post Graduate ☐

Years of Experience:

Below 5 years ☐   5–10 years ☐   11–15 years ☐   above 15 years ☐

Section B

Please indicate your extent of Agreement to the relevant statements by placing a mark [√] under the options Strongly Disagree = SDA, Disagree = DA, Neutral = N, Agree = A, Strongly Agree = SA

Innovation Strategy. Adapted from Kraśnicka et al. (2016)

S/N	Statements	SDA	DA	N	A	SA
1	Our organisation has implemented new technology and significantly improved management techniques, *e.g.*, knowledge management, quality management.					
2	Our organisation adopted new information systems or technologies to improve decision-making and operations.					
3	There have been significant changes in our organisational structure, *e.g.*, diversification, team-based models.					
4	Our organisation's planning, budgeting, and administrative procedures have been modernised to increase efficiency.					
5	Our organisation have changed our marketing strategies, *e.g.*, digital marketing and customer engagement methods, to remain competitive.					
6	New practices have been introduced to improve internal communication and knowledge sharing across teams.					

Organisational Culture. Adapted from Cameron & Quinn (2006)

S/N	Statements	SDA	DA	N	A	SA
1	The organisational culture in my business emphasises achievement and goal accomplishment, which supports its sustainability.					
2	Formal rules and policies are central to our organisational culture, ensuring smooth operations and long-term sustainability.					
3	Our organisation emphasises acquiring new resources and creating new challenges, trying new things and prospecting for opportunities are valued.					
4	Our organisation places a high value on structured processes and regulations, helping to maintain stability and long-term success.					
5	A clear and consistent organisational culture helps ensure the ongoing sustainability of the business.					

Human Resource Innovation. Adapted from Chen & Huang (2009)

S/N	Statements	SDA	DA	N	A	SA
1	Our organisation offers formal training programs to develop employee skills.					
2	New employees receive structured training when they join the company.					
3	Our organisation trains employees to solve problems and make independent decisions.					
4	Our organisation's hiring decisions prioritise candidates with relevant skills and experience.					
5	Our organisation compensates employees with performance-based rewards.					
6	Our organisation considers candidates' long-term potential for growth within the company.					

Financial Management Innovation Adapted from Illmeyer *et al.* (2017)

S/N	Statements	SDA	DA	A	SA
1	Our organisation is considering establishing and executing internal controls over financial and accounting procedures.				
2	Our organisation conducts appropriate financial planning and reporting.				
3	Our organisation performs in-depth financial analysis.				
4	Our organisation invests in research and development.				
5	Our organisation has a reasonable cash conversion cycle.				
6	Technical innovation is supported and readily accepted.				

Business Sustainability Adapted from Cantele *et al.* (2024)

S/N	Statements	SDA	DA	A	SA
1	Our organisation has formalised a sustainability strategy and regularly reviews related goals and actions.				
2	Our organisation has implemented measures to reduce our environmental impact (*e.g.,* emissions, waste, energy use).				
3	Employees are actively involved in sustainability efforts, including training and awareness initiatives in our organisation.				
4	Our organisation supports the local community through initiatives including skills development and philanthropy.				
5	Our organisation invests in innovation, especially R&D and product improvement that supports environmental or social goals.				
6	Our organisation collaborates with suppliers to ensure sustainability across our value chain, such as sourcing and product quality.				