



**DIGITAL ECONOMY CAPABILITIES AND ENTREPRENEURIAL EMPOWERMENT AS
ANTIDOTES OF SUSTAINABLE PERFORMANCE AMONG SMALL AND MEDIUM-SCALE
ENTERPRISES**

BY

Adetowubo-king Sunday Adetayo (PhD): Department of General Studies, Entrepreneurship Unit,
Federal University of Medicine and Medical Sciences, Abeokuta; E-mail: adetowubo-
king@fummasa.edu.ng/ ORCID: 0009-0003-4207-3590

Jimoh, Charles Adefikayo (PhD): Department of Business Administration, Faculty of Management and
Social Sciences, Thomas Adewumi University, Oko-Irese, Kwara State, Nigeria;
E-mail: jimoh.charles@tau.edu.ng/ ORCID: 0009-0000-5579-4993

Wahab Fatai Kayode: Department of General Studies, Entrepreneurship Unit, Federal University of
Medicine and Medical Sciences, Abeokuta

&

Oladotun Funke Precious: Department of General Studies, Entrepreneurship Unit, Federal University of
Medicine and Medical Sciences, Abeokuta

Abstract

This study investigated the roles of Digital Economy Capabilities (DEC) and Entrepreneurial Empowerment (EEPW) in enhancing Sustainable Performance (SP) among SMEs in Ogun State, Nigeria. A mixed-methods approach was used, including a survey of 230 SMEs (with 201 valid responses) and six in-depth interviews with government officials and NASME executives. Quantitative data were analysed using SEM-PLS, while qualitative data were thematically examined. The results showed that DEC has a significant impact on SP ($\beta = 0.342$, $t = 7.892$, $p < 0.001$), while EEPW positively affects DEC ($\beta = 0.407$, $t = 6.630$, $p < 0.001$). The combined effect of DEC and EEPW on SP was substantial ($\beta = 0.622$, $t = 8.443$, $p < 0.001$), indicating that sustainability is maximized when both capabilities coexist. Qualitative insights highlighted key challenges such as limited digital awareness, inadequate training, and poor infrastructure. Entrepreneurial empowerment was found to enhance innovation and decision-making through mentorship, skills development, and resource access. The study recommends policy reforms, digital training initiatives, and strategic collaborations to strengthen SME resilience, emphasizing the synergy between human capacity and technological capability.

Keywords: Digital Economy Capability, Entrepreneurial Empowerment, Sustainable Performance and SMEs

Introduction

The digital economy is transforming the way small and medium-scale enterprises (SMEs) attain sustainable performance. It provides productivity, market growth, and competitiveness through innovation. In both developed and emerging economies, companies that integrate digital capabilities, such as digital infrastructure, e-commerce, data-driven decisions, and platform business models, with entrepreneurial empowerment have a more stable performance and survival over the long term. Research in the United States, the United Kingdom, Germany, China, India, Brazil, South Africa, Kenya, and Malaysia all support that digitally enabled SMEs survive longer, create more jobs, and provide superior environmental and social performance compared to digitally excluded firms (Acs, 2020; Niebel, 2018; Ongori & Migiro, 2022). These nations put money into the national systems of entrepreneurship that incorporated digital capability formation in the policies of the SMEs, thus minimising business mortality and enhancing sustainable performance.

In developed digital economies like the United States, Germany, and the United Kingdom, SMEs adopted cloud computing, digital finance, and online supply-chain service to break the scale constraints and reduce the cost of operation. This reinforced their sustainability and resilience to innovation (Acs, 2020; Niebel, 2018). In



developing economies such as China, India, Brazil, and Malaysia, the coordinated digital policies of the industry and incentives of entrepreneurship allowed SMEs to enter global value chains, which employ 40-60 percent of the country and contribute 30-50 percent of GDP (Naghizadeh et al., 2020). Deliberate digital entrepreneurship programs in the African settlements, i.e., South Africa and Kenya, enhanced the competitiveness of SMEs and financial inclusion, particularly the use of mobile services and digital payment systems. These initiatives minimised the vulnerability of enterprises and business failure (Ongori & Migiro, 2022).

The SME ecosystem in Nigeria is still underdeveloped, even though SMEs constitute more than 90 per cent of the businesses and 80 per cent of the jobs. Nigerian SMEs added roughly 48 % of the GDP, but over 60 % die after five years due to poor digital economy infrastructure, poor entrepreneurial empowerment, lack of infrastructure, and lack of access to innovation resources (Ahmed & McQuiad, 2021). Research indicates that the digital maturity, low ICT integration, as well as low strategic use of digital platforms by many Nigerian SMEs limit their productivity, market access, and long-term sustainability (Khairuddin & Olowosuyi, 2020; Ugege & Stanley, 2020; Ihenyen et al., 2023). As the practice of digital entrepreneurship has shown in Lagos, Ogun, and other commercial centres, the SMEs that have switched to it are doing better than those that have remained with the traditional model, yet adoption is not yet even and formal (Adebayo et al., 2024; Adejare & Norhilmi, 2022; Bankole, 2024). Poor broadband, low digital skills, and weak institutional support have a greater impact on rural and semi-urban SMEs, increasing the performance gap and deteriorating sustainability (Ugege & Stanley, 2020; Unegbu et al., 2024). It has resulted in the consistent closure of businesses, underemployment, and insignificant contribution of SMEs to inclusive development and poverty alleviation, even though they numerically dominate the Nigerian economy (Dasaolu et al., 2023; Nuel-Okoli et al., 2025).

Theoretically, the national systems of entrepreneurship theory describes that the interaction between entrepreneurial capabilities, institutional support, and digital infrastructure is the key to sustainable SME performance (Acs, 2020). According to the dynamic capabilities approach, SMEs should reconfigure digital and entrepreneurial resources constantly to deploy them in response to environmental instability and ensure competitive advantage (Odo & Akinyemi, 2024; Adetowubo-King et al., 2024). In Nigeria, institutions have been poorly coordinated and fragmented in digital empowerment systems, which have restricted the development of these adaptive capabilities by SMEs, exposing them to market shocks and technological shocks (Nickerson, 2021). Empirical evidence indicates that entrepreneurial skills acquisition and digital capacity building can boost the creation of jobs and sustainability of enterprises, but interventions are not fully developed into the national strategies of SME development (Adedeji & Ibronke, 2022; Adeyemi & Olabosinde, 2022; Udoh et al., 2025). Failure by Nigeria to convert the engagement of its digital economy into sustainable performance has led to an increase in unemployment among youth, informal business development, and low industrial competitiveness relative to the economies of their counterparts.

Although there is an increasing body of research on digital transformation, entrepreneurship, and SMEs' performance in Nigeria, current research is mainly limited to the study of these constructs separately or in the short-term effects. Therefore, minimal empirical insights on the joint work of digital economy capabilities and entrepreneurial empowerment as a sustainable SME performance solution are available in Nigeria. This gap underscored the need for a theory-driven and context-specific investigation that positioned Nigeria within global comparative practice while addressing its unique structural and institutional challenges. Small and medium-scale enterprises (SMEs) remain the backbone of Nigeria's economy. They constitute over 90 percent of registered businesses, almost 80 percent of the employment, and almost 48 percent of the national GDP. However, their performance in the long run is poor in comparison with peer economies. Literatures indicate that more than 60 per cent of Nigerian SMEs do not last longer than five years in operation, mostly due to a lack of digitalisation, poor entrepreneurial abilities, inadequate infrastructure, and innovation (Ahmed & McQuiad, 2021). Conversely, Chinese, Indian, Malaysian, South African, and Kenyan firms rely on digital platforms, e-commerce, and structured capacity building to enjoy higher rates of survival, increased productivity, and stronger integration into



global value chains, playing 4060% of GDP and long-term employment growth (Acs, 2020; Niebel, 2018; Ongori and Migiyo, 2022). Poorly distributed access to broadband, limited depth of digital skills, and poorly integrated systems to support entrepreneurship in Nigeria have limited the ability of SMEs to compete, innovate, and scale in a sustainable manner (Khairuddin & Olowosuyi, 2020; Ugege & Stanley, 2020). These issues destroy SDG 8 (Decent Work and Economic Growth) and SDG 9 (Industry, Innovation, and Infrastructure), eroding inclusive growth, industrial stability, and job creation.

Even though recent studies in Nigeria acknowledged the significance of digital transformation and entrepreneurial skills on the performance of SMEs, most of them were limited to short-term financial results, one aspect of digital adoption, or individual empowerment programmes, without seeking their combined and sustainability-related impacts. Experience in Lagos, Ogun, and other business hubs has indicated that digitally empowered and entrepreneurially endowed SMEs do better than their counterparts. However, these practices are occasional and not well institutionalised throughout the country (Adebayo et al., 2024; Bankole, 2024). Nigeria has been strategically important as the largest economy in Africa and the most populous country due to the persistence of high mortality rates, increased unemployment among youth, and poor value-chain participation. Better performance of SMEs would yield many spill-over impacts on poverty reduction and economic stability (Dasaolu et al., 2023; Nuel-Okoli et al., 2025). Nevertheless, an empirical gap exists in answering the question on how digital economy capabilities and entrepreneurial empowerment are mutually antidotes to sustainable performance among Nigerian SMEs.

Research Questions

This research sought to offer evidence-based information that is in tandem with national development agendas and global sustainability objectives. The problem-based argument helped to formulate the following research questions to guide this study:

1. To what extent do digital economy capabilities affect the sustainable performance of small and medium-scale enterprises?
2. What is the impact of entrepreneurial empowerment on the sustainable performance of small and medium-scale enterprises?
3. To what extent does entrepreneurial empowerment affect the digital economy capabilities of small and medium-scale enterprises?
4. How do digital economy capabilities and entrepreneurial empowerment jointly influence sustainable performance among small and medium-scale enterprises?

Methodology

The study adopted a descriptive survey design to test the existing conditions and relationships among variables without controlling the environment. In this way, we were able to take a systematic approach to describe the nature of SMEs and evaluate the relationship between the capabilities of the digital economy and entrepreneurial empowerment and sustainable performance of SMEs. This design was particularly appropriate in establishing the relationship between predictive variables, capabilities of the digital economy, and entrepreneurial empowerment with SME performance based on data obtained directly via the operators of the enterprises. It also helped us to collect data from a large number of respondents in a natural business environment, which made the findings more generalisable. Mixed-methods approach was used in order to understand more and improve the credibility. The quantitative section involved structured questionnaires that were administered to SME owners and managers. The qualitative component entailed face-to-face interviews with the SME executives and other concerned government officials. This combination gave statistical support for relationships between variables and gave explanations in the context. Although the questionnaire provided quantitative relationships, the interviews provided more information regarding the practical experience, policy, and institutional aspects of digital adoption and entrepreneurial empowerment in SMEs.



The sample population was registered members of the Nigerian Association of Small and Medium Enterprises (NASME) in Ogun State, and 672 SMEs in total. Ogun state was selected due to its strategic location as an industrial belt connecting Lagos to other states in Nigeria. There are numerous manufacturing, agro-processing, and service based SMEs in the state, and the increasing industrial estates and digital business have been a boon. NASME was selected as it is an established umbrella organisation that aligns SMEs, offers certifiable data on enterprises, and makes sure that the members are well involved in the formal operation of business. Involving NASME members made the data more credible and guaranteed the legitimacy of the answers given by real SME operators. The sample for the study was 230 SMEs out of the 672 registered members of NASME. This was considered to be a sufficient sample size to represent the population and carry out a strong statistical investigation. The stratified sampling method was used to make sure that the SMEs are represented equally in the two local government areas chosen in the state of Ogun. The stratification was used to minimise sampling bias and gave equal representation to SMEs operating in various operational settings. The researchers used a survey instrument designed by the authors of the research, which was named Digital Economy Capabilities, Entrepreneurial Empowerment and SMEs Performance Questionnaire (DECEESMEPQ). To minimise the central tendency bias and promote clear answers in the questionnaire, the Likert scale of four points (an adaptation of the conventional five-point scale) was used. It was divided into two parts: Section A included the demographic features of the interviewed people, and Section B discussed the questions connected with the digital economy capabilities, SMEs empowerment, and their performance. The research instrument was tested on face validity; its validity was checked by the experts in entrepreneurship and business research who confirmed that it was clear, relevant, and appropriate. The measure of reliability was done using Cronbach's alpha. A pilot study conducted on 10 SMEs in the Ijebu-ode Local Government Area produced a reliability coefficient of 0.85, which was a high internal consistency. SEM Partial Least Squares (PLS) (version 4.4.1.5) was used to analyse quantitative data, and thematic analysis was used to analyse interview data to identify common patterns and insights.

Results

The data analysis in this section includes the information gathered in the research on the digital economy capabilities, entrepreneurial empowerment, and sustainable performance of small and medium-sized enterprises (SMEs). The analysis employed the answers of SME owners and managers who were made to fill in the structured questionnaires. Findings are presented in the form of response rate, demographic features, and descriptive statistics of the study variables. There were 230 copies of the questionnaire that were distributed to sampled SMEs. Among them, 201 were filled correctly, sent, and could be analysed, which was 87.4% response rate. There were 29 questionnaires (12.6%) that were not returned or were not completed. The response rate was also high, which shows that SME operators were willing to respond to the study, which contributes to the reliability and validity of the results.

Table 1 below describes the demographic profile of the respondents to provide background information and to make sure that the data were obtained among the relevant SME operators.

Table 1: Demographic Characteristics of Respondents (n = 201)

Variable	Category	Frequency	Percentage (%)
Gender	Male	118	58.7
	Female	83	41.3
Age	Below 30 years	42	20.9
	31–40 years	76	37.8
	41–50 years	54	26.9
	Above 50 years	29	14.4
Education	Secondary	47	23.4



	Diploma/NCE	61	30.3
	Bachelor's Degree	72	35.8
	Postgraduate	21	10.5
Experience	Below 5 years	63	31.3
	5–10 years	84	41.8
	Above 10 years	54	26.9

Source: Author's Computation, (2026)

As illustrated in the table, the majority of the respondents were men (58.7%), which mean that there was male dominance in the ownership of SMEs, although women made up significant numbers as well. The percentage of respondents who were 3140 years old was higher (37.8%), which implies the high youth and middle-aged engagement in entrepreneurship. Most of them had post-secondary education, which implied a fundamental ability to comprehend digital and entrepreneurial ideas. The majority of respondents have experience in business between 5 and 10 years, which means that the data are obtained by rather experienced SME operators who could give informed responses.

RQ1: To what extent do digital economy capabilities affect the sustainable performance of small and medium-scale enterprises?

Table 2: Descriptive Statistics on Digital Economy Capabilities

Item Statements	Mean	Standard Deviation
We use mobile phones for business transactions	3.412	0.681
My business uses online payment systems	3.287	0.742
We advertise products on social media	3.198	0.763
Internet helps us reach more customers	3.366	0.655
We use digital tools to track sales	2.941	0.821
Online platforms reduce operating costs	2.884	0.803
We communicate with customers online	3.255	0.701
Digital tools improve business efficiency	3.173	0.689
We use digital records for transactions	2.768	0.844
Technology helps our business grow faster	3.324	0.672

Source: Author's Computation, (2026)

The mean scores indicate that the respondents were generally of the opinion that the digital tools helped in conducting business activities, reaching customers, and being efficient. Large mobile usage, online payment, and social media advertising averages suggest that SMEs are becoming increasingly digital. The results of digital record-keeping are lower, which indicates the low or insufficient use of advanced digital systems, which implies poor digital economy skills.



RQ2: What is the impact of entrepreneurial empowerment on the sustainable performance of small and medium-scale enterprises?

Table 3: Descriptive Statistics on Entrepreneurial Empowerment

Item Statements	Mean	Standard Deviation
I have received business training	3.101	0.731
Training improved my business skills	3.245	0.694
I can identify business opportunities	3.312	0.661
I can manage business risks	2.986	0.788
I can make good business decisions	3.268	0.672
I have access to business mentors	2.743	0.812
I can innovate in my business	3.157	0.705
Empowerment programmes improved my confidence	3.084	0.734
I understand market competition	3.196	0.693
Skills gained help my business survive	3.334	0.658

Source: Author's Computation, (2026)

The findings show that entrepreneurial empowerment has a positive impact on the confidence of SME operators, their skills, and decision-making. The fact that there is high consensus in opportunity recognition and business survival means that the use of empowerment programs is applicable, yet the moderate scores in mentorship access imply that there is a lack of formal support.

RQ3. To what extent does entrepreneurial empowerment affect the digital economy capabilities of small and medium-scale enterprises?

Table 4: Descriptive Statistics on Sustainable Performance of SMEs

Item Statements	Mean	Standard Deviation
My business is financially stable	3.042	0.761
Sales have improved over time	3.188	0.714
My business can survive competition	3.121	0.703
We retain customers regularly	3.266	0.684
The business creates employment	2.917	0.806
We reinvest profits into the business	3.094	0.736
The business adapts to market changes	3.172	0.695
We maintain steady growth	3.048	0.751
Business operations are stable	3.109	0.712
The business will continue long-term	3.284	0.669

Source: Author's Computation, (2026)

The respondents perceived their businesses as fairly sustainable, with their strong points in customer retention and flexibility. The fact that employment creation and financial stability are slightly lower implies that sustainability is weak. In general, SMEs demonstrate favorable performance patterns, yet more powerful digital economy strengths and entrepreneur empowerment should be established to stabilise long-term performance.

RQ4. How do digital economy capabilities and entrepreneurial empowerment jointly influence sustainable performance among small and medium-scale enterprises?

SEM – Partial Least Squares (PLS) Analysis

The use of the Partial Least Squares-based Structural Equation Model (SEM-PLS) helped in testing the hypothesised relationships among the variables in the study. In the analysis, the predictive impact of the two independent variables, Digital Economy Capabilities (DEC) and Entrepreneurial Empowerment (EE), was determined to influence the dependent variable, Sustainable Performance (SP), by the small and medium-scale enterprises (SMEs) in the study. In the application, the SEM-PLS method was appropriate for the study for the reasons that it would allow the simultaneous testing of a multitude of relationships, accommodate small and medium-scale sample size, and accommodate non-normal distribution. To the question, the study sought to answer the following research questions in the SEPEAP environment and context: (i) the extent to which digital economy capabilities would influence sustainable performance, (ii) the influence of entrepreneurial empowerment on sustainable performance, (iii) the influence of entrepreneurial empowerment and digital economy capabilities, and (iv) how the two variables would together influence sustainable performance. This study utilised two figures in the testing and analysis of the relationships in the constructs (see Figures 1 and 2). In addition, Table 5 summarises the path coefficients, t-values, and significance levels for all hypothesised paths, providing a clear representation of the strength and direction of relationships in the model. These outputs provide empirical evidence for understanding how entrepreneurial empowerment and digital economy capabilities interact to drive sustainable performance among SMEs in Ogun state, Nigeria.

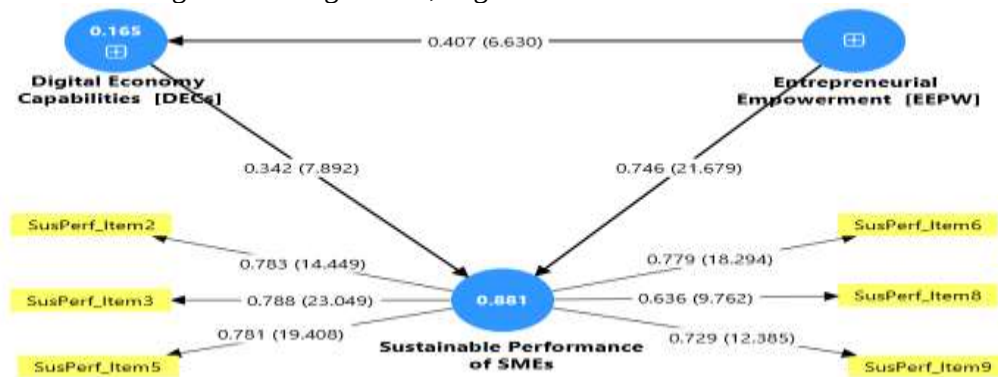


Figure 1: Path Analysis and Tvalues Model for Digital Economy Capabilities and Entrepreneurial Empowerment as Antidotes of Sustainable Performance of SMEs

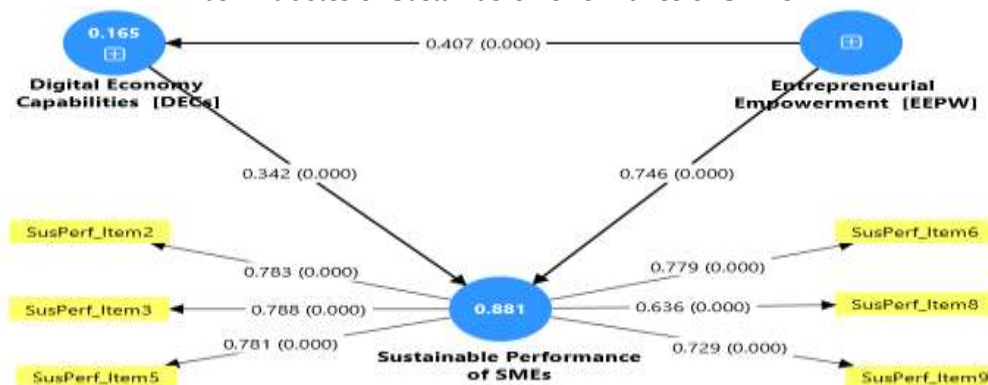




Figure 2: Path Analysis and Pvalues Model for Digital Economy Capabilities and Entrepreneurial Empowerment as Antidotes of Sustainable Performance of SMEs

Table 5: SEM–PLS Path Coefficients

Hypothesised Path	Path Coefficient (β)	t-value	p-value	Decision
DEC $\rightarrow$ SP	0.342	7.892	0.000	Significant
EEPW $\rightarrow$ SP	0.746	21.679	0.000	Significant
EE $\rightarrow$ DEC	0.407	6.630	0.000	Significant
DEC + EE $\rightarrow$ SP (Joint Effect)	0.622	8.443	0.000	Significant

Notes:

5. DEC = Digital Economy Capabilities
6. EEPW = Entrepreneurial Empowerment
7. SP = Sustainable Performance
8. Path coefficients (β) represent the strength and direction of the relationships.
9. t-values > 1.96 and p-values < 0.05 indicate statistical significance at 5% level.

The interviews offered elaborate information on pressures, potential, and effectiveness of policies toward SME performance, as seen in Tables 6 and 7 below.

Table 6: Demographic Characteristics of Interview Participants

Participant	Position/Role	Years of Experience	Sector Focus
P1	Government Official	12	SME Policy & Development
P2	Government Official	9	Digital Infrastructure & Support
P3	Government Official	10	Industrial Development Programmes
P4	NASME Executive Member	8	Small Manufacturing Enterprises
P5	NASME Executive Member	7	Service-Based SMEs
P6	NASME Executive Member	9	Agro-Processing SMEs

Source: Author's Computation, (2026)

These respondents were selected purposely since government officials have first-hand information regarding SME policies, digital infrastructure, and support programmes in Ogun State, which affect SME sustainability. NASME executive members provide realistic front line views and contribute to moderating policy and practice views. The 55 years of experience between them give them valuable and authoritative perspectives concerning the research topic.

Table 7: Interview Questions, Themes, Subthemes, and Responses

Question	Themes	Subthemes	Responses (Government Officials & NASME Executives)
Q1: How do SMEs in Ogun State adopt digital technologies in daily operations?	Digital Adoption	Awareness, Training, Infrastructure	P1: "Many SMEs struggle to integrate digital tools due to lack of awareness." P2: "Training programmes are limited, so adoption is slow." P4: "Some members use social media for marketing but lack advanced systems." P5: "Internet access and cost of devices restrict full adoption."
Q2: What role does Entrepreneurial	Decision-		P1: "Empowered entrepreneurs are more



entrepreneurial empowerment play in SME performance?	Skills	making, Innovation, Risk Management	resilient and adaptive.” P3: “Training and mentorship programmes significantly improve SME decision-making.” P4: “Empowered members innovate more and diversify products.” P6: “Those with access to skills training survive market challenges better.”
Q3: What challenges do SMEs face in achieving sustainable performance?	Operational Challenges	Finance, Market Access, Technology	P2: “Access to funding is the biggest barrier to sustainability.” P3: “Competition and poor infrastructure hinder growth.” P5: “Lack of digital skills affects efficiency and scaling.” P6: “Inconsistent policies make long-term planning difficult.”
Q4: How can government and SME associations improve SME sustainability?	Policy Support	& Training, Funding, Digital Infrastructure	P1: “We need more structured digital training programmes.” P2: “Subsidies for digital tools could enhance adoption.” P4: “Mentorship programmes from experienced entrepreneurs will help.” P5: “Collaboration with tech providers can reduce costs and improve efficiency.”

Source: Author’s Computation, (2026)

The above table reflects four key areas of interest in the interviews, which include: digital adoption, entrepreneurial skills, operational challenges, and policy/support initiatives. According to both government officials and NASME executives, government officials and training of the digital economy make awareness, infrastructure, and training a limiting factor in enhancing SME competitiveness. They always observed that SMEs primarily apply simple digital tools such as social media but do not have sophisticated financial management, e-commerce, or analytics systems. Entrepreneurial empowerment also turned out to be one of the most important motivators of sustainable performance; participants noted that decision-making, innovation, and risk-management skills are the direct predictors of SME survival and growth. Some of the challenges identified included a lack of funding, a lack of access to the market, and unreliable policies. Practical solutions such as mentorship, online training, and subsidised technology were suggested. These qualitative findings support the quantitative findings, that is, a combination of digital economy abilities and entrepreneurial empowerment is necessary to enhance the performance of SMEs.

Discussion of the Findings

The findings from the SEM–PLS analysis revealed that SMEs in Ogun State are well favored by Digital Economy Capabilities (DEC) in enhancing Sustainable Performance (SP) through SEM-PLS analysis. This positive effect is verified by a path coefficient of 0.342, a t -value of 7.892, and a p -value of 0.000. These results are similar to those of Adebayo, Nuberu, and Adebayo (2024), who stated that digital entrepreneurship enhances the sustainability of SMEs in Lagos State. Khairuddin and Olowosuyi (2020) also discovered that the use of digital tools increases operational efficiency, customer accessibility, and competitive advantage. Hence, the SMEs that have strong digital tools (e.g., online payment systems, social media marketing, and digital record-keeping) tend to be more sustainable in their performance. This highlights the importance of integrating digital technologies into the routines of SMEs.



It was also discovered in the analysis that Entrepreneurial Empowerment (EEPW) influences Sustainable Performance to a large extent. It has a path coefficient of 0.746, t -value 21.679, and p -value 0.000 that verify this strength. Adeyemi and Olabosinde (2022) and Udoh, Akpan, and Akpanobong (2025) underscored that the resilience and growth of SMEs are determined by the skills, confidence, and access to resources of the entrepreneurs. Entrepreneurs who are empowered are able to identify opportunities, innovate and handle risks hence they can survive better and perform. According to Clement and Adegboyega (2025), capacity-building programmes significantly enhance SME performance in the state of Lagos. These findings underscore the fact that entrepreneurial empowerment is one of the main pillars of SME sustainability in Nigeria.

Also, the research indicates that Entrepreneurial Empowerment increases Digital Economy Capabilities (path coefficient = 0.407, t -value = 6.630, p -value = 0.000). Both DEC and EEPW have a highly significant positive effect on Sustainable Performance (joint effect = 0.622, t -value = 8.443). This is consistent with Odo and Akinyemi (2024) who observed that entrepreneurial skills assist SMEs to embrace the use of digital tools. Similarly, Acs (2020) and Adetowubo-King, Olatoye, and Oladipo (2024) noted that entrepreneurial competence enhances technological adoption, leading to improved business outcomes. This study reveals that the DEC increases the performance of the SME, but its efficiency is determined by the level of empowerment of entrepreneurs, which makes the processes of the DEC and the entrepreneurs critically interdependent. This dual relationship among the SMEs in Nigeria is empirically evidenced in the study.

This section highlights the results obtained from a series of interviews carried out with key stakeholders of Ogun State and NASME officials, which add insights to the information obtained from questionnaires administered to them. A cumulative 6 interviews were held with 3 government officials from Ogun State Ministry of Commerce, Industry, and Cooperatives, along with 3 NASME executives to discuss their views on digital capabilities of the economy, entrepreneurial empowerment, and sustainability of performance of SMEs operating in Ogun State.

Conclusion

The research confirms the existence of a strong positive relationship between Digital Economy Capabilities and Entrepreneurial Empowerment, and the sustainable performance of SMEs in Ogun State. DEC enhances operations, market penetration, and rivalry. Entrepreneurial empowerment improves decision making, innovations, and risk management. The SEM-PLS analysis discovered that the better the entrepreneurs are empowered, the higher the chances of them adopting digital technologies, thus enhancing the sustainability of their businesses. Besides, Entrepreneurial Empowerment has a greater personal impact on sustainability than DEC, but the combination of the two has the greatest effect. This implies that SMEs cannot afford to use digital tools but human capital and managerial expertise are required to make digital innovations a reality in the form of growth. This research also identified the lapses in mentorship, training and digital infrastructure that may inhibit the complete performance potential of SMEs.

Recommendations

Following the findings, the study makes the below recommendations;

1. Policymakers should incorporate entrepreneurial empowerment and digital transformation into national and state-level policies.
2. Government agencies should initiate or fund projects to enhance access to affordable digital tools and infrastructure.
3. Effective policy implementation should lead to measurable improvements in digital adoption and SME resilience.
4. SME associations and industry stakeholders should spearhead structured entrepreneurship empowerment programs.
5. SME owners and entrepreneurs should participate in empowerment and digital-training programs to enhance their business skills and digital capabilities.



References

- Acs, Z. (2020). National systems of entrepreneurship. special issue. *Small Business Economics*, 46(4), 527–535.
- Adebayo, A., Nuberu, M. O., & Adebayo, A. A. (2024). Digital Entrepreneurship and Sustainability of Small and Medium Enterprises in Lagos State of Nigeria. *FUOYE International Journal of Business and Economics Education*, 1(1).
- Adedeji, E. O., & Ibironke, J. O. (2022). Skill Acquisition in Business Education as a Catalyst to Sustainable National Development. *KWASU International Journal of Education (KIJE)*, 5(1), 260-268.
- Adejare, Y. A. & Norhilm, B. N. (2022). The obstacle challenging SMEs performance in Ogun State, Nigeria. *International Journal of Information Systems and Informatics*, 3(1), 1-14.
- Adetowubo-King, S. A., Olatoye, A. O., & Oladipo, O. T. (2024). Demystifying the Role of Technological Entrepreneurship on the Performance of Medium-Scale Enterprises (MSEs). *Covenant Journal of Entrepreneurship*, 8(1), 55-67.
- Adeyemi, S. O., & Olabosinde, S. T. (2022). Impact of entrepreneurial skills acquisition on enterprise creation in Nigerian Universities. *Journal of Academic Research in Economics*, 14(3).
- Ahmed, S. R., & McQuiad, E. G. (2021). Entrepreneurship and small-scale industry development, in The Common Wealth. *An overview of Nigerian Management Review*, 7(1), 23-34.
- Bankole, O. A. (2024). Assessing digital innovation and sustainable entrepreneurship among business owners and managers in Southwest Nigeria. *Covenant Journal of Entrepreneurship (CJoE)*, 8(1), 68-78.
- Clement, G. O., & Adegboyega, A. D. (2025). Capacity Building as Panacea to SMEs Performance in Lagos State, Nigeria. *Journal of Interdisciplinary Research in Education and Technology (JIRET)*, 1(2).
- Dasaolu, O. A., Okun, I. E., & Abiola, A. I. (2023). Secretarial businesses as an antidote for job creation and poverty reduction among business education postgraduate students. *KWASU International Journal of Education (KIJE)*, 6(1), 1-8.
- Ihenyen, C. J., Ayakoroma, M., Kojo, P., & Bolouimbelemoere, J. (2023). Impact of digital transformation on Nigeria business growth. *International Journal of Advance and Multiple-Purpose Research Development*, 3(3), 18-23.
- Khairuddin, M. B., & Olowosuyi (2020). Digital adoption of SME in Nigeria: The relationship with business performance. *Journal of Management and Muamalah*, 10(2), 21-34.
- Naghizadeh, R., Allahy, S., & Ranga, M. (2020). A model for NTBF creation in less developed regions based on the smart specialisation concept: the case of regions in Iran. *Regional Studies*, 55(3), 441-452.
- Newo, O., Oladipo, V., Ayankoya, A., & Olanrewaju, K. (2023). Entrepreneurship and youth development in Nigeria: policies, practices and effectiveness. *Covenant Journal of Entrepreneurship*, 7(1), 9.
- Nickerson, R.S. (2021). Why interactive computer systems are sometimes not used by people who might benefit from them. *International Journal of Man-Machine Studies*, 15, 469-483.
- Niebel, T. (2018). ICT and economic growth – Comparing developing, emerging and developed Countries. *World Development*, 104(C), 197-211.
- Nuel-Okoli, C. M., Ezeife, A. O., & Adani, N. I. (2025). Exploring small scale businesses influence on employment creation in Nigeria. *Multidisciplinary Journal of Management and Social Sciences*, 2(2).
- Odo, A. C., & Akinyemi, B. O. (2024). Digital Transformation and Competitive Advantage: The Case of SMEs in Nigeria. *Journal of Business and Economic Development*, 5(2), 48-61.
- Ongori, H. & Migiro, S. (2022). Information and communication technologies adoption in SMEs: Literature Review. *Journal of Chinese Entrepreneurship*, 2(1), 93-104.
- Raimi, L., & Raimi, B. O. (2023). An exploratory view of the business ecosystem in Nigeria. *African Journal of Innovation and Entrepreneurship (AJIE)*, 2(2), 119.
- Udoh, J. D., Akpan, N. A., & Akpanobong, U. E. (2025). Entrepreneurial Skills: A Nexus for Employment Generation among Business Education Graduates in Public Universities, South-South Nigeria. *International Journal of Education Framework*, 5(1).



- Ugege, J. E., & Stanley, O. U. (2020). Digital economy challenges faced by micro, small and medium enterprises in rural settings: A Case Study of Uromi Esan North East, Edo State Nigeria. *World Wide Journal of Multidisciplinary Research and Development*, 7(4), 36-40.
- Unegbu, H. C. O., Yawas, D. S., & Dan-asabe, B. (2024). The impact of digital transformation on Nigerian small and medium sized enterprises (SMEs) in the global business landscape. *Journal Mechanical*, 47, 66-85.