DIGITAL TRANSFORMATION STRATEGIES ON GROWTH OF INDIGENOUS BUSINESSES IN SOUTH-EAST, NIGERIA

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Abstract

This study investigated the effect of digital transformation strategies on the growth of indigenous businesses in South-East Nigeria, focusing on business automation and e-commerce adoption as predictors of employee productivity and sales performance. A survey research design was adopted with a sample size of 365 respondents selected from indigenous businesses, and data were collected using a structured questionnaire and analyzed using descriptive statistics and simple linear regression. The findings revealed significant positive effects across all variables, as business automation significantly improved productivity levels ($\beta = 0.641$, $R^2 = 0.411$, $p < 0.001$) and e-commerce adoption boosted sales performance ($\beta = 0.622$, $R^2 = 0.387$, $p < 0.001$).The study concludes that digital transformation strategies significantly enhance the performance and sustainability of indigenous businesses and recommends increased investment in digital tools, employee training, and integrated digital systems to improve competitiveness in the evolving business environment

***Key words:** Digital transformation strategies, business automation, e-commerce adoption, indigenous businesses, employee productivity, sales performance, business growth, South-East Nigeria.*

Introduction

The twenty-first century business environment has witnessed an unprecedented transformation driven by rapid technological advancement and digital innovation. The emergence of the digital economy has fundamentally altered the way businesses create value, interact with customers, manage operations, and compete in both domestic and international markets. The digital economy is defined as the ecosystem created by the extensive use of digital technologies across various economic activities (Oloyede, Faruk, Noma, Tebepah and Nwaulune, 2023). Across developed and developing economies, organizations that embrace digital transformation strategies have recorded significant improvements in productivity, operational effectiveness, customer satisfaction, and financial performance (Oladimeji and Owoade, 2024).

Suri (2022) opined Business automation as one important dimension of digital transformation, which involves the use of digital technologies and software systems to automate repetitive organizational processes and reduce manual intervention. Business automation enables organizations to streamline activities such as inventory management, accounting, payroll administration, procurement, and workflow coordination. Studies have shown that organizations that automate routine operations experience higher productivity, lower operational costs, and greater efficiency in resource utilization (Pfister and Lehmann, 2024). Closely related to business automation is e-commerce adoption, which allows businesses to market and sell products and services through digital platforms. E-commerce expands market access, enhances customer convenience, and creates opportunities for businesses to increase sales performance beyond their physical locations. According to Aithal and Aithal (2023), e-commerce adoption positively influences business performance through increased revenue generation, broader market coverage, and improved operational effectiveness.

According to Ebiefie, Umoh, Asukwo Edet Oko and Nana (2026), the South-East remains one of the most economically active regions in Nigeria due to its strong entrepreneurial activities. The indigenous entrepreneurial system has historically contributed to employment generation, wealth creation, income distribution, and regional economic development (Oke-Owo, 2021). Similarly, Taiwo, Adejoke, John, Sunday, Jide, Jide and Ibukun (2024) describe indigenous entrepreneurship as an effective mechanism for addressing socio-economic challenges through the utilization of local resources, innovation, and business networks. Despite these strengths, many indigenous businesses in the region continue to experience growth constraints resulting from inadequate technological adoption, poor digital infrastructure, financial limitations, and low digital capabilities. It is against this background that this study seeks to examine the effect of digital transformation strategies on the growth of indigenous businesses in South-East Nigeria.

Objectives of the Study

The main objective of this study was to evaluate the effect of digital transformation strategies on growth of Indigenous Businesses in South-East, Nigeria. The specific objectives of this study include

1. To assess the effect of business automation on productivity levels of indigenous businesses in South-East Nigeria.
2. To determine the effect of e-commerce adoption on sales performance of indigenous businesses in South-East Nigeria.

Literature Review

Digital transformation strategies

The concept of digital transformation (DT) has evolved from a peripheral IT concern to a central tenet of modern corporate strategy, representing a fundamental shift in how organizations create and deliver value. Ou and Tian (*2026*) provide a foundational framework, conceptualizing DT not as a single event but as a process that unfolds across three distinct stages: digitization, the basic conversion of analog information into a digital format; digitalization, the more advanced use of digital technologies to alter business models and unlock new revenue streams; and digital transformation, the most comprehensive stage involving a holistic change in an organization's strategy, operations, and culture driven by the pervasive adoption of digital technologies. Consequently, a digital transformation strategy is not merely a list of technologies to be acquired but rather the central, integrated plan that governs the "coordination, prioritization, and implementation" of these profound changes across the enterprise (Majdalawieh and Khan, 2022).

Business Automation

Business automation is formally defined as the application of digital technologies, software applications, and computerized systems to execute business processes with minimal human intervention, thereby improving efficiency, accuracy, and organizational productivity. It involves the use of technologies such as workflow automation, enterprise resource planning (ERP), robotic process automation (RPA), artificial intelligence (AI), and cloud-based applications to streamline routine organizational activities (Ferreira, Infante-Moro, Infante-Moro and Gallardo-Pérez, 2020). Business automation aims to reduce operational costs, eliminate repetitive manual tasks, improve service delivery, enhance decision-making through real-time data availability, and increase overall organizational competitiveness in an increasingly digital business environment. The importance of business automation has become increasingly evident in the Nigerian business landscape, where organizations face growing pressure to improve operational efficiency amid intense competition and technological advancement.

E-commerce adoption

E-commerce, or electronic commerce, adoption is defined as the utilization of online platforms and electronically mediated information exchange to conduct business transactions, including the buying, selling, and exchanging of products, services, and information (Haryanti and Pribadi, 2020). For indigenous businesses, e-commerce adoption presents a double-edged sword. While it offers unprecedented access to new markets, it simultaneously exposes the business's internal operational weaknesses, in

logistics, customer service, and inventory management to a much broader and less forgiving audience (Sheffi, 2020) +

Business growth

Business growth is a primary objective for any commercial enterprise, broadly defined as the expansion of a company's operations, revenue, market share, or other key metrics over time (Pererva, Kobielieva, Tkachov and Diachenko, 2021). However, this simple definition belies a significant scholarly debate regarding its conceptualization. Obloj and Sengul (2020) stated that a prevalent view in empirical research treats growth as a quantifiable outcome, measured through metrics such as increases in revenue, profit, employee count, and market share. This perspective allows for objective measurement and comparison. In contrast, a more nuanced theoretical tradition, originating from the foundational work of Penrose (1959), as cited by Frawley, H. (2023), posits that true business growth is a more complex "process of internal development" rather than a mere "increase in amount". This process-oriented view aligns more closely with the perspective of practitioners, who often perceive growth holistically, encompassing internal capability building alongside external expansion.

Productivity levels

Employee productivity is a core measure of organizational performance, defined as the measure of output generated by an employee or a group of employees relative to the inputs of time, effort, and resources consumed (Shuriye and Wambua, 2020). It serves as a key performance indicator (KPI) that quantifies how efficiently and effectively workers contribute to achieving organizational goals. Productivity can be assessed using both quantitative metrics, such as units produced per hour or sales revenue per employee, and qualitative indicators, including the quality of work, innovation, and impact on customer satisfaction. A strong and well-documented positive correlation exists between employee training and development programs and subsequent productivity levels.

Sales performance

Sales performance is a fundamental metric of business success, operationally defined as the total monetary value of goods and services sold by an enterprise within a specific financial period (Levytska, Akimova, Zaiachkivska, Karpa and Gupta, 2020). It is a primary indicator of a company's effectiveness in the marketplace and a cornerstone of business growth, often measured through key indicators like total revenue, sales growth rate, and changes in market share. It reflects the organization's ability to convert market opportunities into tangible financial results.

Theoretical Framework

This study is anchored on the Dynamic Capabilities Theory (DCT), as propounded by Teece, Pisano, and Shuen (1997). This theory is exceptionally suitable for investigating the impact of digital transformation on the growth of indigenous businesses in the volatile Nigerian economic landscape. DCT moves beyond the static Resource-Based View by focusing not on what resources a firm possesses, but on its ability to purposefully adapt, reconfigure, and renew its resource base to achieve and sustain a competitive advantage in rapidly changing environments. This focus on adaptation and change is the central reason for its selection as the theoretical framework for this study.

The core constructs of DCT (sensing, seizing, and transforming) provide a robust lens through which to analyze the variables of this research. The independent variables, which are the various digital transformation strategies (e.g., e-commerce adoption, CRM software, digital supply chain management), can be conceptualized as the tangible manifestations of a firm's dynamic capabilities. For instance, adopting e-commerce is a firm's attempt to "sense" new market opportunities beyond its geographical location and "seize" them by reconfiguring its sales channels.

Empirical Studies

Mustapha, Onimole, and Adebusoye (2026) carried out a study on the effect of electronic payment system (EPS) usage on the performance of Small and Medium Enterprises (SMEs) in Ilorin Metropolis, Kwara State, Nigeria, with a sample size of 274 SMEs. The primary objective was to evaluate how EPS usage affects SME performance, specifically in terms of operational efficiency and return on investment (ROI). The study utilized a survey research design, collecting primary data through a structured questionnaire, which was then analyzed using descriptive statistics and Pearson correlation. The findings indicate a significant positive effect between EPS usage and SME performance. The results show that EPS significantly enhances operational efficiency, with a grand mean of 3.76, and boosts return on investment, with a grand mean of 3.37. The correlation analysis further confirmed a strong, significant positive relationship between EPS usage and SMEs' Operational Efficiency ($r(274)=.714$, $p<.05$) and between EPS usage and SMEs' Return on Investment ($r(274)=.836$, $p<.05$). They concluded that there is a broadly positive and significant relationship between the adoption of Electronic Payment Systems and the performance of SMEs, recommending increased training and accessibility to maximize these benefits.

Ojelabi (*2026*) examined the effect of supply chain management on organisational performance within the Nigerian manufacturing industry, with a specific focus on Dangote Cement PLC in Lagos. The study's objectives were to assess the impact of three key supply chain practices: strategic supplier alliances, inventory management,

and customer relationship management. A cross-sectional survey design was used, collecting data from 122 management personnel through a closed-ended questionnaire. The data was analyzed using simple regression analysis with SPSS. The results showed that all three supply chain management practices had a significant positive effect on organisational performance. For strategic supplier alliances, the regression analysis was significant ($F=11.735$, $p=0.001$), though it explained a smaller portion of the variance ($R^2=0.089$). Inventory management had a stronger and significant effect ($F=40.659$, $p=0.000$), accounting for 25.3% of the variance in performance ($R^2=0.253$). The most impactful factor was customer relationship management, which was also highly significant ($F=85.142$, $p=0.000$) and explained 41.5% of the variance in organisational performance ($R^2=0.415$). The study concluded that strategic partnerships, efficient inventory management, and a strong focus on customer relationships are all vital components of supply chain management that significantly enhance the overall performance of a manufacturing firm like Dangote Cement.

Ba Awain, Sulaiman, Al Sheyadi, and Sukati (2026) conducted a study to investigate the role of Digital Supply Chain Management Practices (DSCMP) in the relationship between organizational culture (OC) and customer development (CD). The objective was to examine both the direct and indirect influences, using the Resource Dependency Theory as a basis. The study utilized a quantitative methodology, collecting data from 214 respondents from industrial businesses registered in Indonesia's Riau Islands Province. The results from the regression analysis indicated a positive and significant impact of OC on DSCMP, with an adjusted R^2 of 0.661. The dimensions of OC (Dominant Characteristics, Organizational Leadership, Organizational Glue, and Strategic Emphasis) were all statistically significant predictors ($p=0.000$ for all). The results also showed a positive impact of DSCMP on CD, with an adjusted R^2 of 0.715. Furthermore, the analysis confirmed that DSCMP mediates the relationship between OC and CD, with a direct effect of 0.310 and an indirect effect of 0.358, resulting in a total effect of 0.668. The correlation analysis supported these findings, showing positive significant correlations between all variables. They concluded that DSCMP and OC are crucial facilitators for growing a company's customer base in digital supply chains.

Udom and Ekpouko (2024) studied the impact of social media strategies on the performance of Small and Medium-Scale Businesses (SMSBs) in Ikot Ekpene, Akwa Ibom State, Nigeria, with data collected from 331 respondents from a sample of 363 SMSBs. The objective was to assess the effectiveness of various social media tools, including content creation, marketing strategies, brand building, networking, and e-commerce integration, on business performance. Using a survey design, the study collected data via structured questionnaires and analyzed them using multiple regression analysis. The findings revealed that the overall model was significant (F-statistic = 40.963, p = .000) and explained 38.7% of the variance in performance (R

Square = 0.387). The results show that content creation and sharing (t=5.809, p=0.000), brand building and awareness (t=6.861, p=0.000), and networking and collaboration (t=9.019, p=0.000) have a significant positive impact on performance. Conversely, marketing strategies exhibited a significant negative impact (t=-4.455, p=0.000), while e-commerce and sales integration showed no significant effect (t=-0.468, p=0.640). They concluded that while content, branding, and networking are powerful tools for enhancing performance, SMSBs need to re-evaluate their marketing and advertising strategies to avoid negative outcomes.

Olaseigbe and Ilori (2024) investigated the influence of information usage and entrepreneurial skills on job creation within a farm settlement in Lagos State, Nigeria. The study's objectives were to determine the individual and combined effects of these two factors on creating employment opportunities. A descriptive research design was adopted, with data collected from 109 individuals at the farm settlement using a self-structured questionnaire. The analysis was conducted using linear regression. The findings revealed significant positive relationships across all tested hypotheses. The influence of information use on job creation was statistically significant ($F(1,108)=58.453$, $p=0.000$), with an R-squared value of 0.353, indicating that information usage explains 35.3% of the variation in job creation. Similarly, entrepreneurial skills had a significant positive influence on job creation ($F(1,108)=47.028$, $p=0.000$), explaining 30.5% of its variance ($R^2=0.305$). When analyzed together, the combined influence of information use ($\beta=0.434$, $p=0.000$) and entrepreneurial skills ($\beta=0.357$, $p=0.000$) was also highly significant ($F(1,108)=44.279$), with a combined R-squared of 0.455. This implies that together they account for 45.5% of the variation in job creation. The study concluded that both the effective use of information and the possession of entrepreneurial skills are crucial and significant drivers of job creation in farm settlements.

Salau, Adewoye, Adeniran, Lawal, and Afolayan (2024) studied the assessment of technological innovations on the supply chain management of selected SMEs in Lagos State, Nigeria. The core objective was to determine the relationship between technological innovation variables (marketing innovation, transportation technology, and information technology) and supply chain efficiency, while also investigating the moderating effect of entrepreneurial innovativeness. The study employed a quantitative methodology, using purposive sampling to select 30 manufacturing SMEs that had been in operation for at least five years. Data was collected via questionnaires from 123 respondents and was analyzed using Pearson Product Moment Correlation (PPMCC) and linear regression. The results showed a significant positive relationship between all technological innovation variables and supply chain efficiency. Specifically, marketing innovation had a robust positive correlation with supply chain efficiency ($r = 0.651$, $p = 0.000$), as did transportation technology ($r = 0.578$, $p = 0.000$) and information technology ($r = 0.759$, $p < 0.05$). Furthermore, the analysis revealed that entrepreneurial

innovativeness significantly moderates the relationship between technological innovation and supply chain efficiency, with the model explaining 60.2% of the variance in efficiency ($R^2 = 0.602$, $p=0.002$). They concluded that technological innovations are critical to supply chain efficiency and that this relationship is strengthened by entrepreneurial innovativeness within the firm.

Matthew, Uwa, and Baridam (2024) conducted a study on the relationship between Customer Relationship Management (CRM) and the organizational growth of fast-food industries in Uyo metropolis, Akwa Ibom State. The primary objective was to examine how the CRM dimensions of customer knowledge and customer satisfaction influence organizational growth. The study utilized a survey research design, employing a census sampling technique that included all 85 staff members from five selected fast-food industries. Data was gathered using a structured questionnaire and subsequently analyzed with the Pearson correlation coefficient at a 5% significance level. The results revealed a strong, positive, and statistically significant relationship between the CRM components and organizational growth. Specifically, the correlation between customer knowledge and organizational growth was $r = 0.926$ ($p < 0.01$), and the correlation between customer satisfaction and organizational growth was $r = 0.898$ ($p < 0.01$). Based on these findings, the study concluded that customer relationship management is a critical driver of organizational growth in the fast-food sector. The authors recommended that fast-food businesses should actively invest in data analytics and CRM systems to better understand customer preferences and enhance satisfaction, thereby fostering sustained growth and a competitive advantage.

Edokobi, Okoli, and Ugochukwu (2024) analyzed the effect of e-commerce utilization on the performance of small and medium-sized enterprises (SMEs) in Anambra State, Nigeria. The study, which included a sample size of 216 SMEs selected through a multi-staged sampling technique from five major economic hubs, employed a quantitative research design using the Vector Autoregression (VAR) model. The primary objective was to examine the impact of various e-commerce components—online sales, digital marketing, e-payment systems, website quality, and social media engagement—on the operational efficiency of these enterprises. The empirical results from the econometric regression analysis indicated that online sales ($\beta = 0.28$, $p < 0.01$) and digital marketing ($\beta = 0.33$, $p < 0.01$) have a statistically significant positive impact on operational efficiency. Furthermore, e-payment systems ($\beta = 0.21$, $p < 0.05$) and website quality ($\beta = 0.25$, $p < 0.05$) also showed a significant positive correlation with operational efficiency. However, social media engagement ($\beta = 0.12$, $p > 0.05$) did not show a statistically significant direct impact. The overall model was significant (F-statistic = 26.83, $p = 0.000$) with an R-squared value of 0.79. They concluded that strategic and continuous investment in e-commerce infrastructure, particularly in online sales platforms and digital marketing, is crucial for enhancing the operational efficiency and sustained growth of SMEs.

Methodology

The study adopted a descriptive survey research design to examine the effect of digital transformation strategies on the growth of indigenous businesses in South-East Nigeria. The study was conducted across the five states of the South-East geopolitical zone and targeted management staff of 25 selected indigenous businesses, with a total population of 13,550 employees. A multi-stage sampling technique comprising purposive, proportionate stratified, and simple random sampling techniques was employed to ensure adequate representation of respondents across the selected firms. Using Taro Yamane's formula, the sample size was determined as (n = 13,550/[1 + 13,550(0.05)^2] \approx 389) respondents. Bowley's proportional allocation method was used to distribute the questionnaires among the selected businesses based on their respective staff strength. Data were collected through a structured self-administered questionnaire designed on a five-point Likert scale. The instrument was subjected to face and content validity by experts from the Department of Measurement and Evaluation and the Faculty of Management Sciences, Nnamdi Azikiwe University, Awka, while its reliability was established through a pilot study using Cronbach's Alpha to ascertain internal consistency. Data collected were analyzed using descriptive statistics such as frequency, percentage, mean, and standard deviation, while multiple linear regression analysis was employed to test the hypotheses at a 0.05 level of significance using the Statistical Package for Social Sciences (SPSS).

Results and Discussions

Research Questions Analysis

Research Question 1: What is the effect of Business Automation on Productivity Levels levels of indigenous businesses in South-East Nigeria?

Table 1: Effect of Business Automation on Productivity Levels

S/N	Items	N	Mean	SD	Remark
Business Automation					
1	Our company provides regular training on new digital tools and software.	365	3.42	1.118	Accepted
2	The business automation offered is relevant to my job responsibilities.	365	3.35	1.142	Accepted
3	Management encourages and supports employees in developing their digital skills.	365	3.18	1.201	Accepted
4	We have access to resources (e.g., online courses, workshops) for continuous digital learning.	365	2.94	1.266	Rejected

Productivity Levels					
5	My digital skills allow me to complete my tasks more efficiently.	365	3.39	1.133	Accepted
6	I can handle more complex tasks because of the digital tools I know how to use.	365	3.11	1.208	Accepted
7	The overall quality of my work has improved due to my digital competencies.	365	3.07	1.247	Accepted
8	Digital tools have helped reduce the time it takes to perform my key duties.	365	3.28	1.176	Accepted
Grand Mean		**365**	**3.22**	**1.186**	**Accepted**

***Source**: Researcher's Computation using SPSS, 2026*

The analysis presented in Table 1 provides insights into the effect of business automation on productivity levels in indigenous businesses in South-East Nigeria. Based on the decision rule where a mean score of 3.0 and above is considered accepted, the findings indicate a generally positive perception of both business automation and productivity levels. Specifically, all items under the digital skills training construct were accepted except Item 4, which recorded a mean score of 2.94 (SD=1.266), falling slightly below the acceptance threshold. This suggests that while employees agree that their organizations provide regular training on digital tools (M=3.42, SD=1.118), ensure relevance of such training to job roles (M=3.35, SD=1.142), and encourage digital skills development (M=3.18, SD=1.201), access to structured learning resources such as online courses and workshops remains inadequate. Similarly, all items under employee productivity were accepted, indicating a positive perceived impact of digital competencies on job performance. Respondents agreed that the business automation enhance task efficiency (M=3.39, SD=1.133), enable them to handle more complex responsibilities (M=3.11, SD=1.208), improve the overall quality of work (M=3.07, SD=1.247), and reduce the time required to complete key duties (M=3.28, SD=1.176). The grand mean of 3.22 (SD=1.186) further confirms an overall acceptance, implying that business automation positively influences productivity levels, despite some gaps in continuous learning support.

Research Question 2: What is the effect of e-commerce adoption on sales performance of indigenous businesses in South-East Nigeria?

Table 2: Effect of E-commerce Adoption on Sales Performance

S/N	Items	N	Mean	SD	Remark
E-commerce Adoption					
1	Our business has a functional website or online store for selling products/services.	365	3.52	1.091	Accepted
2	We actively sell our products/services through third-party online marketplaces (e.g., Jumia, Konga).	365	3.44	1.126	Accepted
3	Customers can easily browse our offerings and make purchases online.	365	3.36	1.169	Accepted
4	Our online sales channels are a significant part of our business strategy.	365	3.31	1.182	Accepted
Sales Performance					
5	Our total sales revenue has increased since we started selling online.	365	3.08	1.248	Accepted
6	We have reached a wider customer base beyond our immediate physical location.	365	3.19	1.213	Accepted
7	The number of sales transactions has grown consistently due to our online presence.	365	2.98	1.267	Rejected
8	Our e-commerce platforms contribute significantly to our overall sales performance.	365	3.40	1.141	Accepted
Grand Mean		**365**	**3.29**	**1.180**	**Accepted**

***Source**: Researcher's Computation using SPSS, 2026*

The analysis in Table 2, with a grand mean of 3.29 (SD=1.180), indicates that e-commerce adoption has a generally positive and accepted effect on the sales performance of indigenous businesses in South-East Nigeria. All items under e-commerce adoption were accepted, showing strong engagement with digital sales platforms, particularly the existence of functional websites or online stores (M=3.52, SD=1.091), active use of third-party marketplaces such as Jumia and Konga (M=3.44, SD=1.126), ease of customer navigation and online purchasing (M=3.36, SD=1.169), and the integration of online sales channels as a core business strategy (M=3.31, SD=1.182). Similarly, sales performance indicators were largely positive, with respondents agreeing that online sales have contributed to increased revenue (M=3.08, SD=1.248), expanded customer reach beyond physical locations (M=3.19, SD=1.213), and that e-commerce platforms significantly support overall sales performance (M=3.40, SD=1.141). However, Item 7 was rejected (M=2.98, SD=1.267), indicating that sales transactions do not consistently grow at a steady rate despite online presence, suggesting that while e-commerce adoption enhances visibility and market reach, its

impact on sustained transaction growth may still be inconsistent across indigenous businesses.

Hypotheses Testing

Decision Rule: Reject the null hypothesis if $p \leq 0.05$, indicating a statistically significant effect. The R^2 value determines the strength of the effect.

Hypothesis One

H_{o1}: Business Automation have no significant effect on productivity levels of indigenous businesses in South-East Nigeria.

H_{i1}: Business Automation have significant effect on productivity levels of indigenous businesses in South-East Nigeria.

Table 3a: Model Summary of Hypothesis One

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.641	0.411	0.409	0.784

a. Predictors: (Constant), Business Automation

Table 3b: ANOVA[a] for Hypothesis One

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	158.732	1	158.732	258.244	0.000
Residual	229.006	363	0.631		
Total	387.738	364			

a. Dependent Variable: Productivity levels
b. Predictors: (Constant), Business Automation

Table 3c: Coefficients[a] for Hypothesis One

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.214	0.184		6.598	0.000
	Business Automation	0.587	0.037	0.641	16.070	0.000

a. Dependent Variable: Productivity levels
***Source**: Researcher's Computation using SPSS, 2026*

The linear regression analysis was conducted to test the effect of Business Automation on Productivity levels of indigenous businesses in South-East Nigeria. The results indicate that Business Automation are a significant predictor of productivity levels, $F(1, 363) = 258.244$, $p < .001$. The model explains 41.1% of the variance in employee productivity ($R^2 = .411$), indicating a strong explanatory power of the predictor

variable. The regression coefficient for Business Automation (B = 0.587, β = 0.641) is positive and statistically significant (t = 16.070, p < .001), showing that an increase in digital skills training is associated with a corresponding increase in productivity levels. Therefore, the null hypothesis (H01), which states that Business Automation programs have no significant effect on productivity levels, is rejected, while the alternative hypothesis (HA1) is accepted.

Hypothesis Two

H_{o2}: E-commerce adoption has no significant effect on sales performance of indigenous businesses in South-East Nigeria.

H_{i2}: E-commerce adoption has significant effect on sales performance of indigenous businesses in South-East Nigeria.

Table 4a: Model Summary of Hypothesis two

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.622	0.387	0.385	0.796

a. Predictors: (Constant), E-commerce adoption

Table 4b: ANOVA[a] of Hypothesis two

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	145.289	1	145.289	229.061	0.000
Residual	230.382	363	0.635		
Total	375.671	364			

a. Dependent Variable: Sales Performance
b. Predictors: (Constant), E-commerce adoption

Table 4c: Coefficients[a] of Hypothesis two

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.275	0.192		6.641	0.000
	E-commerce	0.566	0.037	0.622	15.133	0.000

a. Dependent Variable: Self Efficacy
***Source**: Researcher's Computation using SPSS, 2026*

The analysis of the effect of e-commerce adoption on sales performance revealed a statistically significant relationship, F(1, 363) = 229.061, p < .001. The model indicates that e-commerce adoption explains 38.7% of the variance in sales performance (R^2 = .387), demonstrating a moderate-to-strong explanatory power. The regression coefficient for e-commerce adoption (B = 0.566, β = 0.622) is positive and statistically significant (t = 15.133, p < .001), indicating that increased adoption of e-commerce practices leads to improved sales performance among indigenous businesses in South-East Nigeria. Consequently, the null hypothesis (H03), which states that e-commerce

adoption has no significant effect on sales performance, is rejected.

Discussion of Findings

The findings for Hypothesis One revealed that Business Automation have a significant effect on productivity levels. This outcome can be attributed to the fact that employees equipped with relevant digital competencies are better able to utilize technological tools, adapt to changing work processes, and perform tasks more efficiently. Business Automation enhances problem-solving ability, reduces reliance on manual processes, and improves overall job effectiveness. This finding is consistent with the studies of Ojeomogha and Okechukwu (2019) and Ojobo and Orga and Okechukwu (2023), who reported that digital literacy significantly improves organizational performance and employee efficiency in small and medium enterprises. Similarly, Eze and Nwankwo and Adebayo (2022) found that employee training in digital technologies leads to improved productivity outcomes. The finding also aligns with the digital transformation theory, which posits that human capital development is a critical driver of organizational performance in a technology-driven environment. Therefore, the significant relationship observed suggests that investment in Business Automation is essential for enhancing productivity level in indigenous businesses.

The second Hypothesis showed that e-commerce adoption has a significant effect on sales performance. This can be attributed to the ability of e-commerce platforms to expand market reach beyond geographical boundaries, improve customer accessibility, and facilitate faster transactions. Businesses that adopt e-commerce are better positioned to attract a wider customer base and increase sales volume. This finding corroborates the study of Ogbo and Ugwu and Enemuo and Ukpere (2019), who found that e-commerce adoption significantly enhances business performance and value creation. Similarly, Edokobi and Okoli and Ugochukwu (2024) reported that e-commerce utilization improves SME performance in Nigeria, while Laudon and Traver (2018) highlighted the role of digital marketplaces in driving sales growth. The result is also consistent with the digital transformation theory, which posits that the adoption of digital platforms enhances organizational competitiveness and performance. Therefore, the significant relationship indicates that e-commerce adoption is a key driver of improved sales performance.

Conclusion and Recommendations

The integration of digital transformation tools across various functional areas, including employee training, supply chain operations, sales channels, payment systems, customer management, and marketing strategies, has proven to significantly improve business outcomes. These technologies not only streamline operations and reduce inefficiencies

but also enable businesses to respond more effectively to dynamic market conditions and customer demands. The results affirm that organizations that embrace digital transformation are better positioned to achieve competitive advantage, improve productivity, and enhance profitability. Therefore, digital transformation is not merely an option but a strategic necessity for indigenous businesses seeking long-term growth and resilience in an increasingly digital economy.

Based on the findings of this study, the following recommendations are proposed:

1. Indigenous business owners should invest in continuous digital skills training programs for their employees to enhance productivity and ensure effective utilization of digital tools.
2. Businesses should leverage e-commerce platforms to expand their market reach, improve accessibility, and boost sales performance.

Contribution to Knowledge

This study contributes to existing knowledge by providing empirical evidence on the significant impact of digital transformation strategies on the performance of indigenous businesses in South-East Nigeria. Specifically, it expands the literature by examining multiple dimensions of digital transformation, including digital skills training, digital supply chain management, e-commerce adoption, digital payment systems, CRM adoption, and social media marketing, within a unified framework. The study demonstrates how these digital components collectively influence key performance indicators such as productivity, inventory turnover, sales performance, operational efficiency, customer retention, and profitability. The study also provides a comprehensive and context-specific analysis that can serve as a reference for policymakers, business owners, and researchers interested in digital innovation and SME development.

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