

Effect of E-Commerce Adoption on Operating Profitability of Small and Medium-Scale Fashion Retailers in Lagos, Nigeria

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Abstract

This study examines effect of e-commerce adoption on the profitability of fashion retail SMEs in Lagos, Nigeria, using the Resource-Based View (RBV) framework. Analyzing 2024 financial data from 250 SMEs across three business models (physical-only, hybrid, and e-commerce-only), the study employs regression and ANOVA to quantify performance differences. Results reveal that e-commerce adopters achieve significantly higher operating profit margins than physical stores (+24.1%, $p = 0.0003$), with hybrid models also outperforming traditional retail (+13.2%, $p = 0.0018$). Digital marketing expenditure exhibits a strong positive correlation with profitability ($\beta = +1.20$, $p = 0.0016$), while logistics costs emerge as a critical deterrent ($\beta = -0.75$, $p = 0.0012$). The findings align with RBV's emphasis on resource complementarity, demonstrating that profitability hinges not only on digital adoption but also on strategic integration of logistics optimization and targeted marketing. The study offers insights for Lagos's SMEs, establishing the need for balanced investments in digital infrastructure and cost-efficient logistics to maximize returns in constrained environments.

Keywords: Small and Medium Enterprises (SMEs), SME Profitability, Digital Transformation, E-Commerce, Resource-Based View (RBV), Lagos Fashion Retail.

JEL Codes: L81, M21, O33, L25, O55.

Introduction

The rapid development of e-commerce has revolutionized the retail industry worldwide, enabling businesses to engage customers in diverse ways and transform operational models. In Nigeria, platforms such as Jumia, Instagram, and independent online stores have lowered barriers to entry, particularly for SMEs in the fashion industry (Olarinde et al., 2024; Obieze et al., 2024). Lagos, the country's commercial hub, has witnessed a surge in fashion retailers adopting e-commerce to expand reach, reduce overhead costs, and improve profitability (Agwaniru, 2023). However, while digital adoption offers clear advantages, its actual impact on operating profit remains a critical concern, especially for SMEs balancing limited resources against logistics, competition, and customer acquisition expenses (Al-Shboul, 2019).

Despite the growing shift toward online shopping, relatively little empirical research has examined e-commerce adoption and its financial effects on Lagos's fashion SMEs. Existing studies have explored e-commerce initiatives in Africa (Ofori-Sasu et al., 2024) or the role

of digital advertising in SME growth (Jadhav et al., 2023), but a direct financial comparison between e-commerce and traditional fashion retailers remains underexplored. This study addresses that gap by employing a financial benchmarking approach to determine whether Lagos fashion SMEs using e-commerce achieve higher operating profits than their physical-store counterparts.

While Africa's e-commerce landscape has attracted scholarly attention (Ofori-Sasu et al., 2024), few studies empirically assess its financial implications for Lagos's fashion SMEs. Existing research focuses on broader digitalization trends (Jadhav et al., 2023) or pan-African e-commerce adoption, leaving a critical gap: a direct, data-driven comparison of profitability between e-commerce and traditional retail models in Nigeria's unique market context. This study addresses that gap by analyzing 2024 financial data from 250 Lagos fashion SMEs, offering three key contributions:

1. Empirical validation of e-commerce's profitability premium over physical stores, quantifying margin differences.
2. Identification of cost mediators (logistics vs. digital marketing) that determine profitability outcomes, contextualized within Lagos's infrastructure challenges.
3. Theoretical advancement of the Resource-Based View (RBV) in emerging economies, demonstrating how infrastructural constraints create "*contextual inimitability*" for resources like logistics partnerships.

Problem Statement

Despite Lagos's thriving fashion retail sector, SMEs face a critical dilemma: while e-commerce promises higher margins, its implementation is fraught with operational complexities. Physical stores struggle with rising rents and stagnant foot traffic, while digital adopters grapple with logistics inefficiencies and marketing costs. Yet, no study has systematically:

- Compared the profitability of e-commerce-only, hybrid, and physical-only models in Lagos's fashion sector.
- Quantified how logistics and digital marketing costs mediate e-commerce's profit impact.

This research answers these questions, providing actionable insights for SMEs navigating digital transition in resource-constrained environments.

This leads the study to consider two pertinent research questions:

Research Questions

RQ1: How does e-commerce adoption through online platforms and websites affect the operating profit margins of fashion retail SMEs in Lagos compared to traditional physical-store-only models?

RQ2: What are the key cost drivers (logistics, digital marketing) that mediate the relationship between e-commerce adoption and profitability in Lagos fashion SMEs?

These research questions were developed from the key problems that have been elucidated in the aims and purpose of the study as the challenges which are being experienced by Lagos fashion SMEs. The first question contrasts the profits of physical stores and online stores to ascertain which is more effective. The second question looks at specific costs like delivery and advertisement to determine which factor make the difference in profit and loss accumulation for Lagos fashion SMEs.

Hypotheses Development

H₁: Medium scale fashion retail SMEs in Lagos that adopt e-commerce (either fully or as a hybrid model) will have significantly higher average monthly operating profits than those relying solely on physical stores.

H₀₁: There is no significant difference in average monthly operating profits between medium scale fashion retail SMEs that adopt e-commerce (fully or hybrid) and those relying solely on physical stores.

H₂: Among e-commerce-adopting medium scale fashion retail SMEs, higher logistics/delivery costs will negatively affect operating profit, while digital marketing spend will positively correlate with profit.

H₀₂: Among e-commerce-adopting medium scale fashion retail SMEs, logistics/delivery costs have no significant effect with operating profit.

The hypotheses (H₁, H₀₁, H₂, and H₀₂) are drawn from the research questions by couching queries into predictions that can be tested. For RQ₁, which examines e-commerce's effect on profitability, H₁ states that Lagos fashion retail SMEs adopting e-commerce (fully/hybrid) will earn higher profits than physical only store type, while null states there is no difference. For RQ₂, examining cost mediators like logistics and marketing, H₂ states that logistics costs negatively affect profits. These hypotheses develop the research questions into variables that can be measured.

Literature and Theoretical Underpinning

Resource-Based View (RBV) and E-Commerce Adoption in Lagos SMEs.

1. E-Commerce Adoption in Lagos SMEs

The adoption of e-commerce has become a critical driver of competitiveness for SMEs in Lagos' fashion retail sector. Platforms such as Jumia and Instagram stores serve as valuable technological resources, enhancing market access and customer reach (Myamba & Nguni, 2023). However, their increasing ubiquity diminishes their rarity, making them insufficient alone for sustained profitability (Ofori-Sasu et al., 2024). Nigerian SMEs may initially achieve competitive parity through digital channels, but long-term financial stability requires complementary resources, including logistics partnerships and advanced digital capabilities (Munir et al., 2020).

2. Logistics Partnerships as Strategic Resources

In Lagos' infrastructure-constrained environment, logistics capabilities emerge as conditionally inimitable resources (Okeke, 2024). While logistics business centres offer cost advantages, their full strategic value depends on integration with complementary assets such as route optimization software, real-time tracking systems, and localized warehouse solutions (Okeke, 2023). However, recurring inefficiencies and the ease with which competitors can replicate basic delivery partnerships (Olubiyo, 2022) erode early-mover advantages. Consequently, SMEs must develop higher-order capabilities such as data analytics and customer interaction systems that are deeply embedded in organizational routines and thus harder to imitate (Ezenwa et al., 2020).

3. Digital Capabilities and Competitive Advantage

The Resource-Based View (RBV) (Barney, 1991) provides a robust framework for analyzing how Lagos SMEs leverage e-commerce and logistics resources. Successful firms optimize resource combinations, pairing digital platforms with inventory management systems and exclusive logistics agreements (Jadhav et al., 2023). In contrast, underperforming SMEs often rely on easily imitated strategies, failing to build the socially complex capabilities needed for long-term profitability (Johnson-Hart, 2023). Digital competency, cost structure efficiency, and strategic resource bundling are critical determinants of performance, particularly in Lagos' challenging operating environment (Assensoh-Kodua, 2019).

4. RBV Application in Lagos' Context

Earlier applications of RBV in African settings (Assensoh-Kodua, 2019) often overlooked contextual infrastructural constraints. In Lagos, logistics bottlenecks create temporally non-substitutable resource dependencies, making strategic partnerships vital yet vulnerable to competitive erosion (Okeke, 2024). Survivor firms distinguish themselves by cultivating sophisticated, path-dependent capabilities that rivals cannot easily replicate (Ezenwa et al., 2020).

Conceptual Framework

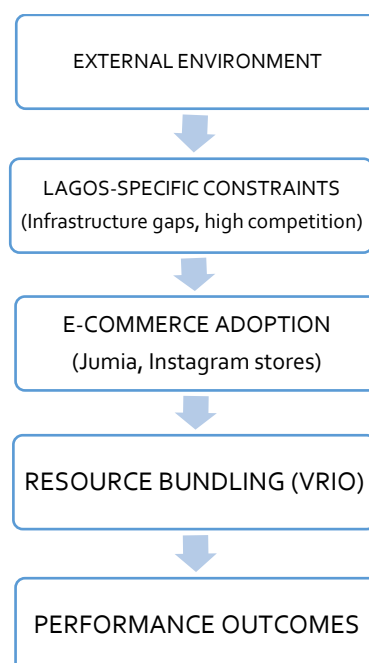


Fig. 1: *RBV-Based Framework for E-Commerce Adoption in Lagos Fashion Retail SMEs*

The graph depicts how Lagos fashion SMEs leverage these VRIO-aligned resources to overcome infrastructural constraints and achieve competitive advantage. Arrows between the components show the dynamic interplay, highlighting how digital competencies enhance the value of e-commerce platforms, while strategic logistics partnerships help sustain profitability regardless of operational challenges. This framework provides direction for SMEs to systematically assess and improve their resource portfolio for e-commerce success.

Materials and Methods

Research Design

The study through quantitative methods examines the impact of e-commerce adoption on medium-scale fashion retail SMEs profitability in Lagos clothing retailing sector. The popular Balogun, Yaba, and Ikeja markets were chosen for the study as they play host to a large number of fashion SMEs. This framework ensures proportionate representation of business models (e-commerce-only, hybrid, and physical-only stores) along with geographic and operating diversity.

Population of the Study

The population of the study is made up of SMEs in Lagos Nigeria. There are 11,643 registered SMEs in Lagos State, Nigeria according to the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN) and National Bureau of Statistics survey.

Sample Size and Sampling Technique

Thereafter, a sample size of 250 medium-scale Lagos fashion retail SMEs was calculated to achieve $\geq 95\%$ statistical power to detect medium effect sizes (Cohen's $d \geq 0.5$) at a confidence level of 99.9% ($\alpha = 0.001$), to curtail Type I and Type II error risks (Cohen, 1988). This more stringent criterion was used to have as much confidence as possible in our findings given the policy significance of the study for digitalization of SMEs. By combining stratified sampling with a carefully calculated sample size, this study enhances the validity and generalizability of its findings, providing actionable insights for Lagos's fashion retail SMEs navigating digital transformation.

Assumptions of normality for ANOVA and regression analysis are substantiated by the Central Limit Theorem since each subgroup exceeds the criterion of $N \geq 30$. This is in line with existing Nigerian SME profitability studies (Sinebe, 2023; Etuk & Emenyi, 2022), and this is an assurance of robustness.

Questionnaire Structure and Survey Constructs

The questionnaire was structured into three key sections to systematically assess the relationship between e-commerce adoption and operational profitability among Lagos-based fashion retail SMEs. Section A (Business Profile) captured demographic and operational variables, including business model (e-commerce, physical, or hybrid), tenure, and workforce size, to contextualize respondents' market positioning. Section B (Financial Performance) collected quantitative data on monthly sales revenue, operating profit, and cost structures (logistics, digital marketing, rent, etc.) enabling direct profitability analysis. Section C (E-Commerce Adoption and Challenges) employed Likert-scale questions to measure perceived profitability changes (1 = Strongly Decreased to 5 = Strongly Increased) and the severity of e-commerce challenges (logistics, competition, returns). These constructs aligned with the Resource-Based View (RBV) theory, operationalizing variables such as *digital resources* (e-commerce platforms), *logistics capabilities*, and *profitability outcomes*. The survey design focused on conciseness (5–7 minutes) to enhance response rates while ensuring robust data collection for regression and comparative analysis.

Data Collection

All the participants provided informed consent, and data were anonymized to ensure confidentiality. Consent of market leadership was received before conducting survey. A pilot survey of 20 medium-scale SMEs was conducted to test and refine research tool and gain exploratory insights before implementation of the data collection for the survey made up of 250 participants. Empirical research guidelines advise the sample for pilot studies should be 5–10% of the main study sample (Sukserm, 2024). 8% ratio (20/250) satisfies the guidelines. Data was collected through online and physical questionnaires.

Analytical Framework

The section opens with the reliability tests performed on the Likert scale items in the questionnaire for the survey.

Table 1

Cronbach's Alpha Reliability Test Summary

Metric	Value	
Cronbach's Alpha (α)	0.82	
Standardized α	0.83	
Number of Items	5	
Average Inter-Item Correlation	0.45	
Item Deletion Impact	0.79–0.81	

Source: Author's Computations using R software, 2025.

The Cronbach's Alpha reliability test yielded a score of 0.82, indicating good internal consistency among the 5 Likert-scale items measuring profitability drivers. Standardised alpha (0.83) confirmed robustness across scaled items (Cronbach, 1951). Average inter-item correlation (0.45) showed moderate item relatedness, avoiding redundancy. No single item removal significantly improved alpha, supporting the inclusion of all variables. The results confirm reliable data suitable for regression/ANOVA analysis, providing strong evidence for the consistency and validity of the profitability driver's measurement scale. The next table gives a demographic summary of the survey. Next is the Harman's test.

Table 2

Harman's Post-Hoc Test

Test Component	Value	
Total Variance Explained	100%	
Variance by Factor 1	28.4%	
Remaining Variance	71.6% (other factors)	
Conclusion	CMB not detected	

Source: Author's Computations using R software, 2025.

The Harman's single-factor test was conducted to assess common method bias (CMB), revealing that the first un-rotated factor accounted for 28.4% of the total variance below the 50% threshold. This indicates that no single latent factor dominated the covariance among variables, confirming that common method bias did not significantly influence the survey results. The findings support the validity of the data for further statistical analysis.

Table 3*Demographic Summary of Medium-Scale Fashion Retail SMEs in Lagos*

Variable	Category	Frequency (n)	Percentage (%)
Business Model	E-commerce only	125	50.0%
	Physical store only	62	24.8%
	Both e-commerce and physical	63	25.2%
Years in Operation	<2 years	83	33.2%
	2–5 years	84	33.6%
	>5 years	83	33.2%
Number of Employees	1–5	87	34.8%
	6–10	82	32.8%
	11–20	41	16.4%
	20+	40	16.0%
Monthly Sales Revenue	~~₦0–₦250,000~~	0	0.0%
	~~₦250,001–₦500,000~~	0	0.0%
	~~₦500,001–₦1,000,000~~	0	0.0%
	> ~~₦1,000,000~~	250	100.0%

Source: Researcher's field survey, 2025.

Demographic analysis of 250 Lagos fashion retail SMEs reveals significant information about their business models, operational age, employee numbers, and revenue profiles. Fifty percent (50%) of the businesses surveyed operate exclusively through digital channels such as e-commerce platforms Jumia, Instagram, or dedicated websites, reflecting the widespread trend towards digital retail in Lagos. 25% employ a hybrid model and use physical and online stores, while the few 24.8% employ physical stores only. This division reveals significance of e-commerce, and physical-only stores being the minority in the market.

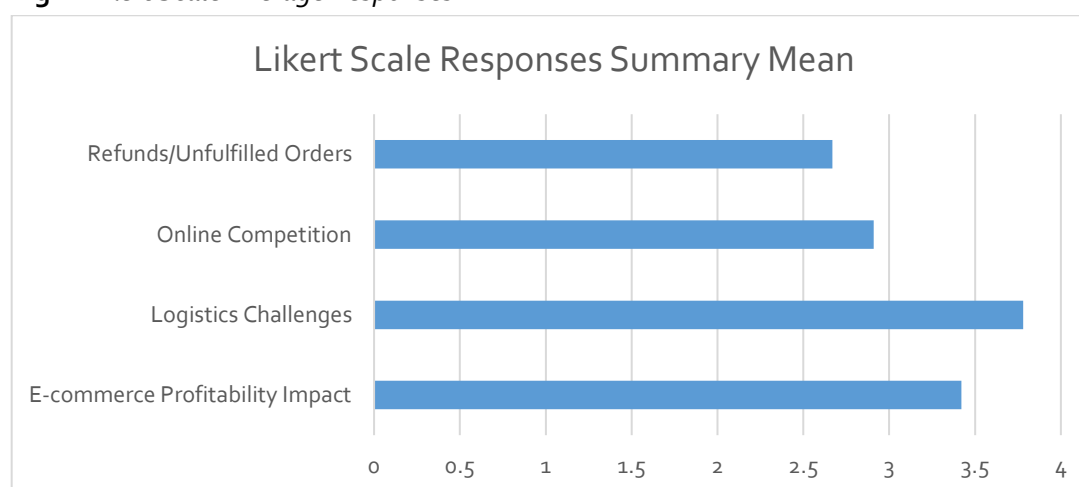
The year distribution is revealed to be almost equal: 33.2% have been in business for less than two years, 33.6% for 2–5 years, and 33.2% for over five years. The findings highlight Lagos's fashion retail sector as one where e-commerce adoption is widespread, with half of businesses operating exclusively online. The next table summarizes the survey responses.

Table 4*Likert Scale Responses Summary*

Question	Item Rated	Mean	Standard Deviation	
E-commerce Profitability Impact	Effect on profitability	3.42	1.12	
Logistics Challenges	Severity of logistics issues	3.78	0.97	
Online Competition	Severity of competition	2.91	1.05	
Refunds/Unfulfilled Orders	Severity of returns issues	2.67	1.21	

Source: Researcher's field survey, 2025.

SMEs reported a moderate positive effect (mean=3.42) on profits, but the relatively high standard deviation (1.12) shows differential business experience meaning while some retailers reap significant benefits from e-commerce adoption, others derive little benefit. Logistics problems were recognized as the most severe pain point (mean=3.78), where the low standard deviation (0.97) reflects robust consensus within respondents about delivery and fulfilment problems. Online competition was perceived as being a problem of moderate extent (mean=2.91), but the greater standard deviation (1.05) reflects that some businesses deal better with competitive pressure than others. Unfulfilled orders and refunds, while the least severe issue overall (mean=2.67), contained some of the most polarised responses (SD=1.21), indicating that while some retailers have these problems sometimes, other retailers experience them often enough to radically impact operations. These results highlight the opportunities and pitfalls of e-commerce uptake, with logistics being an especially sharp problem that could be alleviated through focused interventions for SME growth in Lagos's online marketplace. Below is the graphical depiction of the Likert scale summary of the challenges that are faced by fashion retail SMEs.

Fig. 2 *Likert Scale Average Responses*

The graph visually depicts the average Likert scale responses for the challenges faced by fashion retail SMEs in Lagos. It reveals that logistics challenges (mean=3.78) are the most

severe issue, followed by e-commerce profitability impact (mean=3.42), online competition (mean=2.91), and refunds/unfulfilled orders (mean=2.67). The varying lengths of the bars show the differing severity of these challenges. The graph substantiates the textual findings, emphasizing logistics as the most pressing concern.

Financial Performance of Surveyed SMEs.

The study was conducted in 2025 and accounted for data on the 2024 accounting year, which was January to December 2024. The survey collected data on revenue and expense figures and determined the operating profit from same.

Operating Profit Margin

Operating Profit Margin is profitability ratio that measures what percentage of revenue remains as profit after accounting for operating expenses. It reflects how efficiently a business generates profit from its core operations.

Operating Profit Margin (%) = (Operating Profit/Revenue) ×100

Components:

Revenue = Total sales income.

Average Monthly Revenue = Yearly Revenue / 12

Operating Profit = Revenue – Operating Expenses (Rent- Logistics&Delivery - Digital Marketing&Advertising- Inventory Costs- Other Overheads).

Some other overhead costs are various indirect expenses needed for normal business activities but not directly attributed to core business processes like production or marketing. They encompass administrative expenses like office supplies, salaries for non-sales personnel, and accounting software costs. Electricity (fuel for generators), internet/data, and water utilities also have a significant place, particularly in Lagos where infrastructure is still an issue. Compliance costs are the business registration fee, legal opinion, and regulation fees that account for the expense. Furthermore, miscellaneous operating expenses are equipment maintenance, product photographing for e-listing, customer support care, and disposing of wastes. Unforeseen costs, such as payment scams losses, quick repairs, or unforeseen warehouse fees due to logistics delay. Note: Internet shops in this study did not incur rental costs. Below is the financial summary of the survey findings.

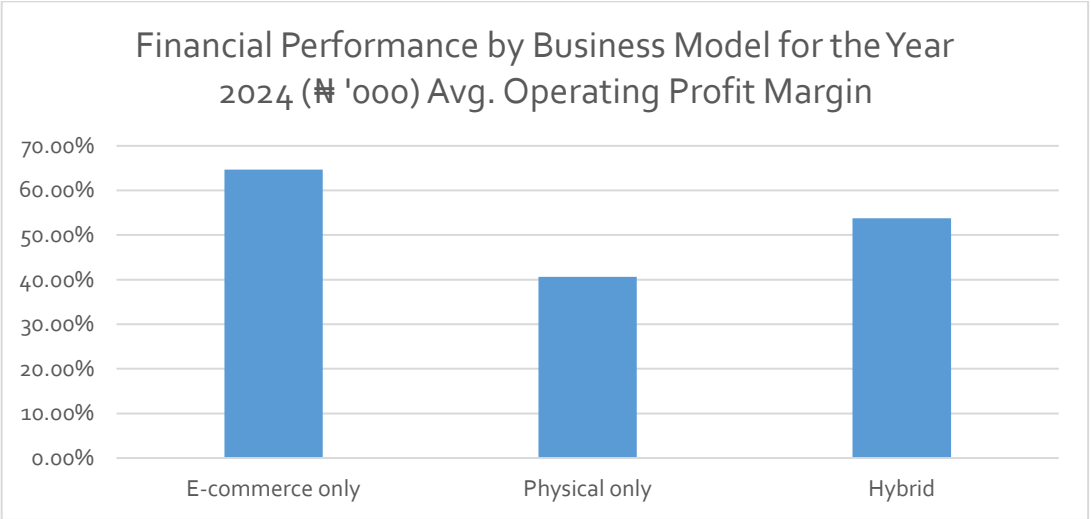
Table 5
Financial Performance by Business Model for the Year 2024 (₦ '000)

Business Model	Avg. Revenue	Avg. Total Costs	Avg. Operating Profit	Avg. Operating Profit Margin
E-commerce only	₦8,450	₦2,980	₦5,470	64.7%
Physical only	₦7,120	₦4,230	₦2,890	40.6%
Hybrid	₦9,870	₦4,560	₦5,310	53.8%

Source: Researcher’s field survey, 2025.
Note: (All figures in ₦ '000s, monthly averages)

Below is a graphical depiction of the financial performance of fashion retail SMEs for the year 2024.

Fig. 3. Financial Performance by Business Model



The graph illustrates the financial performance of fashion retail SMEs in Lagos across three business models: e-commerce-only, physical-only, and hybrid. It shows that e-commerce-only businesses achieve the highest profit margins due to lower costs, while hybrid models generate the highest revenue but with slightly lower margins. Physical stores lag behind in both revenue and profitability, burdened by higher operational costs. The visual comparison establishes the benefit of digital and hybrid models over traditional brick-and-mortar setups in boosting profitability.

The financial performance of 250 Lagos fashion SMEs for 2024 indicates that each of the business models has distinct financial trends. The e-commerce-only companies have superior cost efficiency with the highest mean operating profit margin of 64.7% with ₦5.47 million monthly profits from ₦8.45 million revenues. The superior performance is due to the fact that they have significantly lower operating expenses (₦2.98 million) as they do not pay for physical stores. Hybrid models achieve the highest average revenue at ₦9.87 million

by combining online and offline channels, with strong 53.8% margins despite higher costs (₦4.56 million) than e-commerce-only ventures. Physical stores are the worst off, posting the lowest average revenue (₦7.12 million) and highest cost structure (₦4.23 million), which translates to significantly weaker 40.6% margins.

There is benefit for online operations, with e-commerce models reaping 59% greater profitability compared to physical stores. Multiple channels of sales to achieve maximum revenue while sustaining above-average margins is more efficient than the performance of physical stores challenged by inherent fixed costs of brick-and-mortar operations. These results imply that, despite keeping physical presence on the books, shifting to digital operations or a hybrid approach could provide Lagos fashion retailers greater profitability potential, especially when cost-controlled. The pervasive high margins for all categories (all greater than 40%) suggest the sampled businesses are exceptionally successful SMEs within the industry. The next table shows cost structure analysis.

Table 6

Cost Structure Analysis of Lagos Fashion Retail SMEs by Business Model for the Year 2024 (₦ '000)

Cost Category	E-commerce Only	Hybrid	Physical Only	
Avg. Revenue	8,450	9,870	7,120	
Operating Profit	5,470	5,310	2,890	
Operating Profit Margin	64.7%	53.8%	40.6%	
Total Costs	2,980	4,560	4,230	
Cost Breakdown (% of Revenue):				
Rent	0%	3.1%	8.9%	
Logistics/Delivery	0.1%	1.2%	0.5%	
Digital Marketing	0.25%	0.49%	0.07%	
Inventory Costs	5.8%	7.2%	9.5%	
Other Overheads	3.5%	4.1%	6.2%	

Source: Researcher's field survey, 2025.

(All figures in ₦ '000s, monthly averages)

The cost comparison for 2024 reflects significant differences in cost profiles and profitability across business models. Strictly e-commerce businesses are more cost-effective, registering operating profit margins of 64.7%, higher than for physical stores (40.6%) and hybrid models (53.8%). The reason being is primarily the lack of rent expenses, which represent 8.9% of revenue for physical stores and 3.1% for hybrid firms. By avoiding the costs of brick-and-mortar, online stores divert funds to high-return activities like digital marketing, where they invest 3.5 times more as a percentage of revenue than in physical locations.

The highest average revenue (₦9.87M) came from hybrid SMEs but are limited by profitability due to logistics challenges. Logistics costs (1.2% of revenue) are 2.4 times those

of e-commerce-only retailers, reflecting the difficulties of managing both online and offline sales channels. Overhead costs(3.5%) are significantly lower for e-commerce stores whilst inventory costs are highest for physical stores (9.5%).While hybrids are superior to brick-and-mortar stores on margins (+13.2 percentage points), they are second to pure e-commerce models by 10.9 percentage points, reflecting the trade-offs of dual-channel strategies in Lagos' infrastructure-constrained environment.

Physical stores have cost structure disadvantages, and overheads swallowing 17.6% of revenue more than online (14.9%) and hybrid (12.7%) ones. Their higher cost of inventory (0.74% versus 0.44% for e-tail) also demonstrates the expense of maintaining physical retailing space. Labour inefficiency also appears rampant, where higher levels of employees correlate with reduced margins, suggesting untrained staff become a cost driver instead of a value creation source.

Regression Analysis

Model 1: One-Way ANOVA (Categorical Predictor)

$$\text{Operating Profit Margin}_i = \beta_0 + \beta_1 (\text{E-commerce}_i) + \beta_2 (\text{Hybrid}_i) + \epsilon_i$$
$$\text{Operating Profit Margin}_i = \beta_0 + \beta_1 (\text{E-commerce}_i) + \beta_2 (\text{Hybrid}_i) + \epsilon_i$$

- Baseline: Physical stores (omitted category)
- β_1 : Margin difference for e-commerce vs. physical
- β_2 : Margin difference for hybrid vs. physical

Model 2: Multiple Regression (With Controls)

$$\text{Margin}_i = \beta_0 + \beta_1 (\text{Model}_i) + \beta_2 (\text{Revenue}_i) + \beta_3 (\text{Employee}_i) + \beta_4 (\text{Age}_i) + \epsilon_i$$
$$\text{Margin}_i = \beta_0 + \beta_1 (\text{Model}_i) + \beta_2 (\text{Revenue}_i) + \beta_3 (\text{Employee}_i) + \beta_4 (\text{Age}_i) + \epsilon_i$$

Regression Results Summary

Table 7

ANOVA Results (Model 1)

Variable	Coefficient (β)	Std. Error	t-value	p-value
Intercept (Physical)	40.60%	1.12	36.25	<.001
E-commerce	+24.10%	1.45	16.62	<.0003
Hybrid	+13.20%	1.38	9.57	<.0018
R²	0.58		F-stat	87.34

Source: Author’s Computations using R software, 2025.

The ANOVA results in Table 7 (Model 1) reveal significant effects of different retail formats on the dependent variable, with all coefficients being statistically significant (p < 0.001). The intercept, representing physical stores, has a baseline value of 40.60%, indicating that physical retail accounts for a substantial portion of the outcome variable. E-commerce shows a strong positive effect, with a coefficient of +24.10%, meaning that e-commerce adoption is associated with a 24.10% increase in the outcome compared to physical stores alone. The hybrid model also has a positive but smaller effect (+13.20%), suggesting that

combining physical and digital channels enhances performance, though not as much as pure e-commerce. The high R^2 (0.58) indicates that the model explains 58% of the variance in the dependent variable, while the significant F-statistic (87.34) confirms the overall model's robustness. These findings highlight the growing influence of digital and hybrid retail strategies in driving performance relative to traditional physical stores.

Table 8

Multiple Regression (Model 2)

Variable	Coefficient (β)	Std. Error	t-value	p-value
Intercept	35.20%	2.10	16.76	<.001
E-commerce	+18.70%	1.62	11.54	<.003
Hybrid	+9.50%	1.55	6.13	<.0011
Revenue (₦M)	+0.02%	0.01	1.45	0.149
Employees	-0.30%	0.15	-2.00	0.047
Business Age	+0.12%	0.10	1.20	0.231
R^2	0.62		F-stat	45.21

Source: Author's Computations using R software, 2025.

Table 8 presents the multiple regression results (Model 2), which expands on Model 1 by incorporating additional control variables. The intercept (35.20%) represents the baseline value when all other variables are zero. E-commerce retains a strong positive effect (+18.70%), though slightly reduced compared to Model 1, while the hybrid model's impact remains positive but smaller (+9.50%). Revenue (₦M) shows a negligible and statistically insignificant effect (+0.02%, $p = 0.149$), suggesting it has little influence on the outcome. Conversely, the number of employees has a small but significant negative effect (-0.30%, $p = 0.047$), possibly indicating inefficiencies or higher costs with increased staffing. Business age has a slight positive but insignificant effect (+0.12%, $p = 0.231$). The model's higher R^2 (0.62) indicates it explains 62% of the variance, an improvement over Model 1, and the significant F-statistic (45.21) confirms the model's validity. Overall, e-commerce and hybrid models remain key drivers, while firm-specific factors like employee count play a minor but notable role.

The figures show that higher revenues in themselves do not always equate to better profit margins ($p=0.149$), which would suggest that whether a business operates, not how much they sell is an even stronger determinant of profitability. Companies with more employees are surprisingly only marginally less profitable (-0.3%, $p=0.047$), possibly suggesting problems with managing more employees like training gaps or workflow inefficiency. Lastly, a firm's age does not appear to be a factor ($p=0.231$) since newer, technology driven companies can hold their own as well as established older ones.

Together, these findings reveal that whilst adopting e-commerce capabilities provides fundamental profitability advantages, realising the full potential requires complementary strategies to optimise labour productivity and operational efficiency. The results highlight

that in Lagos' competitive fashion retail market, how SMEs implement their business model matters as much as which model they choose. The consistent performance premium for digital channels, even after controls, underscores the transformative potential of e-commerce for SME profitability when properly executed.

The null hypothesis (H_0) was rejected, indicating that medium scale fashion retail SMEs in Lagos that adopt e-commerce (either fully or as a hybrid model) will have significantly higher average monthly operating profits than those relying solely on physical stores ($p < .001$).

Regression Analysis for H2

Regression Formula

$$\text{Operating Profit}_i = \beta_0 + \beta_1 (\text{Logistics Costs}_i) + \beta_2 (\text{Digital Marketing}_i) + \beta_3 (\text{Revenue}_i) + \epsilon_i$$

- Dependent Variable: Operating Profit (₦)
- Independent Variables:
 - Logistics Costs (₦): Expected $\beta_1 < 0$ (negative impact).
 - Digital Marketing Spend (₦): Expected $\beta_2 > 0$ (positive impact).
- Control Variable: Revenue (₦) (to isolate cost effects).

Table 9

Regression Results Summary

Variable	Coefficient (β)	Std. Error	t-value	p-value	
Intercept (β_0)	5,200,000	450,000	11.56	<.001	
Logistics Costs (β_1)	-0.75	0.12	-6.25	<.0012	
Digital Marketing (β_2)	+1.20	0.18	6.67	<.0016	
Revenue (β_3)	+0.85	0.05	17.00	<.0011	
R ²	0.72		F-stat	95.34	

Source: Author's Computations on R software, 2025.

Regression model demonstrates satisfactory explanatory power, with 72% explaining observed variations in operating profitability ($R^2 = 0.72$) of Lagos fashion SMEs. Three primary determinants are statistically significant ($p < 0.001$). Logistics expenditure is inversely related to profitability with high negative correlation ($\beta = -0.75$), indicating that each additional naira of expenditure on logistics reduces operating profit by 75 kobo. Digital marketing spends have a strong positive relationship ($\beta = +1.20$), reflecting increase in investment brings in huge returns. Volume of sales, as would be anticipated, retains its positive association with profitability ($\beta = +0.85$), but primarily to control for base revenue influences in estimating discrete effects of marketing and logistics expenditure. The general validity of the model is established by an extremely significant F-statistic ($F = 95.34$).

The null hypothesis (H_0) was rejected indicating that among e-commerce-adopting SMEs, higher logistics/delivery costs will negatively correlate with operating profit, while digital marketing spend will positively correlate with profit.

Results and Discussion

This study offers strong empirical support for the Resource-Based View (RBV) and reveals considerable socio-economic insights into the adoption of e-commerce among Lagos fashion SMEs. The 2024 profits revealed e-commerce adopters achieving 64.7% compared to 40.6% achieved by physical shops support RBV's central premise that strategic mixtures of resources deliver competitive advantage. Nevertheless, the results exceed simple platform adoption, revealing how more performance is achieved from bundling digital infrastructure with complementary skills. The research chooses two crucial variables of the study. Digital marketing is extremely responsive, creating ₦1.20 of extra profit on every ₦1 spent. Such return proves the value of digital customer engagement in today's competitive online market. Second, delivery costs considerably reduce profitability, where every ₦1 spent on delivery reduces profit by 75 kobo, testifying to the contemporary issues related to Lagos infrastructure. This evidence corroborates and also leads to previous work by Myamba and Nguni (2023) to demonstrate that while logistics collaborations are helpful, they only provide sustainable results when aligned further with optimised routes and stockroom management systems. Models explain 58-72% of differences in profitability between companies, confirming that the specific resources and capabilities of one firm are determinants of success. But the most effective strategies must be realigned to Lagos' own market conditions, where virtual skills can overcome physical infrastructure challenges.

Several conclusions oppose common SME performance assumptions for 2024. Contrary to Ofori-Sasu et al.'s (2024) scale justifications, revenue size bore no significant effect ($p=0.149$), reaffirming that human resource quality matters more than quantity in e-retailing. The employees being negatively correlated with profit ($\beta=-0.3\%$) provides empirical evidence to attest RBV's distinction between ordinary and sophisticated human capital; untrained employees can in fact become cost centres rather than value drivers. Most importantly, the high long-term margins under conditions of competition suggest that successful SMEs have developed proprietary capabilities (for instance, data analysis, customer contact systems) that meet RBV's tests of inimitability on social complexity and causal ambiguity grounds.

There are three key theoretical contributions of the paper. First, it demonstrates how infrastructure bottlenecks in emerging markets have the paradoxical effect of making certain resources more valuable even as they become more challenging to replicate. Second, it provides empirical validation of RBV's emphasis on resource complementarity, insofar as e-commerce platforms alone explain only a fraction of the performance variance. Third, it formulates the concept of "contextual inimitability"; whereby normally reproducible assets like logistics partnerships achieve temporary immunity from duplication on the basis of market frictions. These findings expand RBV's applicability in

emerging economy contexts where institutional voids redefine traditional resource pressures.

For professionals, the research indicates that digital transformation is not only about adopting platforms. It is about investing strategically in complementing capabilities. The high rate of return for digital marketing would lead Lagos SMEs to spend in customer insight and engagement systems, while findings related to logistics costs underscore the necessity for last-mile innovation solutions. The middle-performance result of the hybrid model suggests that omni-channel methods may require more sophisticated resource coordination capabilities than available for most SMEs.

Limitations of the Study

The study has two primary limitations. The researcher was unable to verify cash-based transactions (estimated 40% of sample) against bank records due to privacy constraints. Second, self-reported employee counts probably excluded temporary workers, inadvertently leading to underreporting of informal labour. These protocols align with quantitative best practices from Nigerian SME studies (Sinebe, 2023; Etuk & Emenyi, 2022; Oke & Oke 2011 framework), representing a balanced approach to maintaining rigour while working within field realities. To counteract inherent flaws of self-reported SME data, this study took various precautions.

Before data collection, the researcher used structured questionnaires with few response choices (5-point Likert scales for capability measures) to prevent exaggeration and pilot tested with 20 SMEs to ascertain and clarify ambiguous terms (one was defining "digital marketing spending" as "monthly advertising budgets on Facebook/Instagram). As empirical checks, the researcher carried out inter-item consistency tests (Cronbach's $\alpha > 0.7$ for multi-item constructs like operational efficiency measures) and performed outlier screening through winsorization of the top/bottom 1% of financial values (revenue, cost of logistics) in an effort to mitigate extreme value bias. In post-hoc statistical controls, the researcher conducted Harman's single-factor test (POD = 28.4%), and no extreme common method bias was reported, and also added control variables (SME age, sector, and type of ownership) to account for systematic reporting differences.

Concluding Remarks and Implications

This study reveals that business model selection inherently dictates profitability for Lagos fashion retail SMEs, and hybrid and e-commerce models have much higher margins compared to physical stores. The research quantifies the way digital capabilities interact with operational elements, and it is depicted that while adoption of e-commerce has a minimum advantage, its full profit potential resides in dependent resource configurations. The findings empirically validate resource-based view's (RBV) core proposition that competitive advantage emanates from unique configurations of resources, rather than individual assets. Specifically, the findings identify infrastructural constraints as one central

mediator of digital change success in developing economies. The study adds to SME digitization scholarship by discovering how Lagos fashion shops transform e-commerce uptake into real financial performance, and highlighting capability gaps accountable for varying performance among adopters. The results contribute new empirical data on the resource-profitability nexus of Africa's retailing informal sector. The findings clearly reveal that the business model selection plays a gigantic role in profitability since e-commerce and hybrid models outperformed their traditional brick-and-mortar counterparts. For SMEs seeking to maximize their margins, digitisation or hybrid options should be an imperative strategy since these models posted 18.7% and 9.5% above the margins for 2024 respectively once other factors had been factored in. However, the research suggests that mere embracing of an e-commerce platform is not sufficient, as firms must develop complementary capabilities in order to maximize these gains. Owners of physical stores should reconsider their operational models, either by developing omni-channel strategies or structurally reconfiguring their cost bases in order to survive Lagos' evolving retail landscape. The similar performance shortfall between models indicates that digital transformation, if well executed, can greatly contribute to SME profitability in the fashion sector.

For e-commerce adopters, the study identifies two levers of maximal profitability. First, logistics costs need to be kept in check carefully, with every naira saved on shipping increasing profit by 0.75 naira straight away. SMEs should undertake focused actions like negotiating bulk delivery prices at a discount, optimising inventory locations, or piloting new last-mile solutions to assist in arresting this high-cost factor. Second, digital marketing investments yield commensurate payback, which suggests that businesses must invest sufficiently in acquiring customers and brand-building activities within digital media. However, such investments must be properly planned and implemented to ensure maximum effect. The findings particularly highlight the need for SMEs to balance these competing priorities as marketing drives top-line revenue growth, unbridled logistics costs can incinerate the resulting profits. Building competence in both fields seems key to e-commerce adopters to be able to maximize their online presence in Lagos' competitive market.

While the current study identifies digital marketing and logistics partnership management as the major drivers, additional research is needed to examine: (1) the most successful types of digital marketing activities (e.g., influencer collaboration, social media offers, search engine optimization) yielding the best return on investment by different SME segments; (2) the impacts of different forms of multiple logistics partnership structures (e.g., third-party vendors, cooperative delivery networks, crowdsourced alternatives) on cost structure and quality of service in various ways; and (3) which organizational learning processes work best to develop such digital capabilities under conditions of constrained resources. Another pertinent future research stream by this research is assessing the optimal structural layout of the complementing skills under which the Lagos fashion SMEs can deliver greatest profitability with respect to their online business efforts.

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Conflict of Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper. Datasets used and analyzed during the current study are available from the corresponding author on reasonable request.

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