

Exploring E-Commerce Delivery Challenges in Nigeria: A Dynamic Capabilities Perspective

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Abstract: *Electronic commerce is thriving globally. Despite the many benefits associated with e-commerce retail, its adoption in less-developed countries remains hampered by delivery challenges. This qualitative study investigated the impact of delivery constraints on e-commerce retail and explored remedies adopted by online vendors through the Dynamic Capabilities Framework of ambidexterity. Thirty-two informants from nine e-commerce firms operating in Nigeria participated in in-depth interviews to reveal the delivery challenges, their impacts on online retail, and possible remedies. The findings were analyzed through qualitative-interpretative steps based on thematic analysis. The results indicate that express delivery problems adversely impact e-commerce retail. Insights from the study could provide avenues for addressing the challenges.*

Keywords: E-commerce; Logistics; Express delivery; Dynamics Capabilities Framework; Nigeria

1. Introduction

The Internet has transformed industries in Nigeria from banking [1&2], communication [3], news and information [4], entertainment services [5], and e-commerce [6]. Internet users has grown from a mere 0.1 percent in the year 2000 to 66 percent of the population in 2021 (see Table 1). E-commerce contributes to societal wellbeing through greater convenience and jobcreation[8]. From the comfort of homes, offices, schools, and even while in transit, consumers can place orders for a variety of goods. Delivery of these products range from within the hour to within a week [9]. Nigerian e-commerce firms began to emerge in the early 2000s. They include marketplaces such as Yudala, VConnect, Yakata, Kara, and Jumia [6, 10]. Others are stand-alone enterprises like AjeboMarket and Pinkkess. Global brands such Amazon and China's Alibaba are also popular among Nigerian shoppers. More growth in online retail is expected as Nigeria moves towards a cashless society [2]. To encourage increased participation, government implemented a five-year tax exemption period and enacted the Cybercrimes Act to prohibit, prevent, and punish e-commerce fraud [12]. According to McKinsey & Company, e-commerce spending in Nigeria is projected to grow from \$17 billion in 2017 to \$75 billion by 2025 [11].

Table 1: Nigeria's Internet usage and population growth

Year	Users	Population	% Penetration
2000	200,000	142,895,600	0.1%
2006	5,000,000	159,404,137	3.1%
2009	23,982,200	149,229,090	16.1%
2011	45,039,711	155,404,137	26.5%
2015	92,699,924	181,562,056	51.1%
2016	93,591,174	185,960,241	50.33%
2017	98,687,348	190,873,244	51.7%
2018	112,065,740	195,874,683	57.21%
2019	126,078,999	200,963,599	62.74%
2020	136,114,413	211,400,704	64.39%
2021	141,971,560	214,811,319	66.09%

Source: authors' compilation based on reports from NCC, Statista, United Nations, Internet World Stats

Notwithstanding the positive trends, e-commerce retail faces many challenges. A few online retailers like DealDey, Gloo, Olx, Efritin.com, and even Konga—thought to be the Amazon of Africa with its over \$70 million investment—ended in bankruptcy [13, 14]. Inadequate patronage, trust issues, infrastructural challenges, low product quality, and lack of reliable online payment options [10, 12, 13, 14] are major constraints. Delivery difficulties resulting from poor road network, and inconsistent home and office address system have further complicated the logistics [15, 16]. Jumia is Africa's largest e-commerce retailer listed in the New York Stock Exchange and valued at over 1 billion dollars [13]. Despite being the industry leader, Jumia has posted widening annual losses since 2013 culminating in a 248-million-dollar loss in 2019 [13] (see Figure 1).

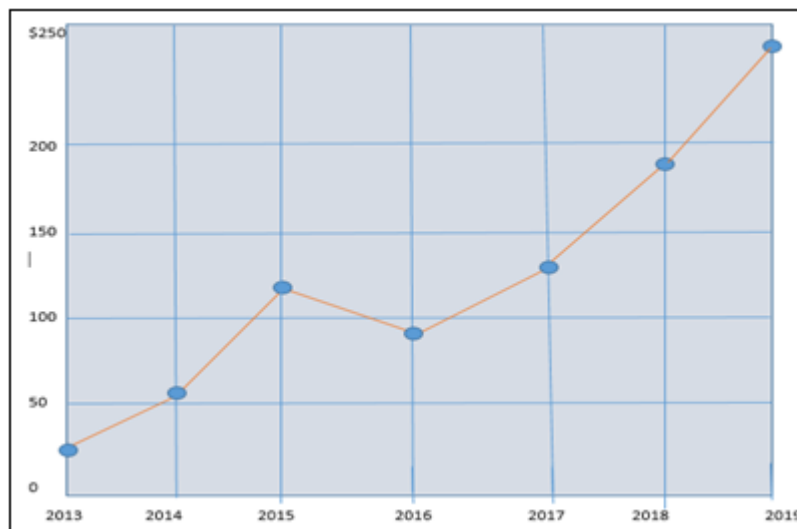


Figure 1: Jumia's Financial Performance 2013 to 2019

Source: Created by the authors from Jumia's official figures

Although research on the use of the Internet for business in Nigeria exist [e.g., 1-4, 6, 7, 10], few have focused on the factors impinging on e-commerce success. It is vital to study these issues—especially those pertaining to express delivery of purchases to customers—and to contribute to solutions. The express delivery industry has escalated with the emergence of e-commerce and is creating more jobs opportunities [17]. This study provides insights into express delivery as a critical element in online retail in Nigeria. The findings could aid e-commerce retailers and their express delivery partners to develop viable operational strategies.

2. Related Literature

Studies on Internet and related technological adoption in Nigeria are emerging [e.g., 1, 18, & 19]. Nigeria accounts for 28 percent of Africa's total Internet usage and is among the fastest growing markets in the world [20] with a projected user penetration of 85 percent by 2023 [21]. Internet advances and applications has created new industries, redefined many, and rendered others redundant. It is a remarkable portal for networking and building relationships, identifying channel partners, tracking logistics, and communicating and monitoring operations [19, 22-25].

Edo, Okodua, and Odebiyi [3] observed that Internet adoption has led to a considerable growth in Nigeria's socio-economic activities. The authors' proposed model [3], using the panel vector auto-regression technique (a model for capturing linear interdependence among many series), linked Internet adoption with greater volume of capital flows, rapid economic growth, and higher level of financial development. Eze and Obono [18] argued that Internet access has led to a considerable transfer of information in Nigeria. They observed that the growing access to information created positive change for individuals, households, and industries [22]. Reviewing the impact of the Internet on the Nigerian banking sector, Tarhini, Mgbemena, Trab, and Masa'deh [1] showed that Nigeria has invested heavily in IT over the years. The investment has transformed the banking industry and has made the industry more efficient in creating greater value for customers and in satisfying investors [1].

The Internet is transforming retail [24]. E-commerce is now a prominent feature of modern life [25] and a potential driver of global economic growth [26]. Ayo, Adewoye, and Oni examined the prospects and challenges of e-commerce strategy implementation in Nigeria from the perspective of consumers [6]. They found that perceived risks and trust issues had the most significant impact on consumers' e-commerce decision. E-commerce increased the amount of goods and services available to consumers in regional locations across Nigeria [27]. However, the legal framework, financial environment, information infrastructure, transportation and delivery system, and human capacity are obstacles to e-commerce [27]. Chiejina [10] studied the Pay on Delivery model as a way of overcoming trust issues impeding e-commerce adoption. The author noticed that, where pay on delivery model is adopted, delivery time is shorter, consumers have greater trust, and are more confident about product quality [10]. Yet only four percent of e-commerce retailers offer the pay on delivery option in Nigeria [10]. Igudia [28] found that, despite comprising 87 percent of Nigerian firms and employing over 70 percent of the labor force, SMEs' e-commerce adoption remains relatively low. SMEs that have adopted e-commerce gained greater access to the global market, and advertising and marketing opportunities [28]. Agwu and Murray [27] found a lack of knowledge of existing opportunities and the potential benefits of e-commerce to be a major barrier to its adoption.

Logistics service providers who ensure the physical movement of goods from retailers to consumers are crucial to the success of e-commerce retail. Delivery service involves the speedy and accurate movement of packages to customers relying on sophisticated networks and reliable tracking [29]. The rapid growth of online retail has created both new opportunities and challenges for the express delivery industry [30]. Online retailers' ability to deliver goods on time to consumers is a key competitive factor. Delivery difficulties have the potential to bring the industry down [31]. For instance, online vendors sometimes refuse orders due to their delivery partners' limited-service capacity [31] leading to lost sales opportunities. There is a gap in the literature as no prior research has investigated delivery issues in Nigeria. Studies that aim to reduce service cost, improve

efficiency and customer satisfaction, and reduce air pollution and traffic congestion problems are needed.

3. Theoretical Framework

For this qualitative study we employed the Dynamic Capabilities Framework (DCF) of ambidexterity since online retailers operate in volatile market conditions. Developed by Teece, Pisano, and Shuenin 1997 [32], DCF contends that firms can reconfigure, update, and integrate existing internal and external resources, competencies, and capabilities to cope with the changing business environment and gain competitive advantage. Ambidexterity, according to Kriz, Voola, and Yuksel [33], is a dynamic capability when a firm reconfigures its competences to maintain a balance between exploring new opportunities and exploiting current practices to adapt to the demands of changing environments. Whereas exploring requires innovation, exploitation relies on gradual adjustments to routines [33]. With DCF we explored e-commerce firms' ability to create new processes in an adaptive response to delivery challenges. We examined their tangible resources (e.g., landed and vehicular properties) and intangible resources (e.g., knowledge and experience) as two propositions to create innovative delivery solutions. In response to dynamic markets and competition, firms must build focal capabilities to better satisfy the industry's needs. This involves retailers' ability to sense threats, take advantage of opportunities, and adapt or reconfigure existing tangible and intangible resources to enhance competitiveness. To this end, the following two research questions guided the study 1.) What factors affect e-commerce retailers' ability to deliver goods effectively to consumers? 2.) How can resources and capabilities be used to enhance the e-commerce industry?

4. Method

We adopted a qualitative multiple-case study approach for this study to gain insight directly from industry players. As qualitative technique is descriptive, subjective, and non-numerical in interpreting and explaining research situations [34], it was more suitable for an exploratory study of this nature. The approach involves examining the essential qualities within human experiences by exploring the broader understanding in natural narratives and conversations [36]. Research shows that case studies provide accurate and sufficient data which helps researchers understand complex business situations [34, 35]. Nine e-commerce businesses with at least four years operational experience in Nigeria were selected for this qualitative multiple-case study. These firms include small and medium-sized enterprises. Although they differ in their product ranges and mode operation, these firms all face delivery challenges. Semi-structured interviews were effective in data collection for an exploratory study since they allowed for further elaboration through follow-on questions. Multiple-case study offered several advantages for this research because it transcends the limits of a single case it. This made it possible for us to create a rational chain of evidence and to focus on actual occurrences, experiences, and events from a large amount of data to provide rich and meaningful descriptions. We were able to identify patterns and relationships which aided the understanding of the theory linked to the issues being studied. The method also helped us to understand causation factors related to the

delivery challenges and enabled us to validate data across the different e-commerce firms.

Data Collection

Data was obtained through interviews of 32 members of staff of nine firms in three locations in Nigeria (Lagos, Delta, and Abuja) between August and November 2021. These small and medium e-commerce enterprises are engaged in online retail with a minimum of five years' operational experience. The respondents included the owners, senior managers, and employees of each firm directly responsible for order-fulfilment and delivery arrangements. Respondents were identified through purposeful sampling and the snowball approach. To achieve a diverse sample, we ensured that the firms were different from each other in characteristics such as location, size, and product offering. Thirteen of the interviews were done in person while others were through Zoom or WhatsApp calls. Each lasted between 52 and 65 minutes. Open-ended questions gave informants the chance to respond to questions without being limited to pre-determined options. Questions were focused around four topics (see Table 2) in line with the research questions and the theoretical framework. These probing questions were used in stages to elicit salient issues, claims, and justifications from the respondents. Written summaries of each interview were sent to each participant before analysis to ascertain the degree to which the data obtained reflected their views and ensure fidelity.

Table 2: The Interview Process

Stages	Guidelines	Sample Questions
Stage 1	Determine firms' delivery strategies whether in-house, 3 rd party, or both.	Can you discuss how your firm handles or manages parcel delivery to customers and what means of delivery are available to you?
Stage 2	Determine how these strategies impact business and firms' overall level of satisfaction.	How satisfied do you think your customers are with the delivery options and approach? Have your strategies met your expectations in terms of speed and performance?
Stage 3	Probe to identify the most common delivery issues faced by the firms.	What specific issues has your business faced with fulfilling customers' orders? Which of these are the most common? How have these challenges impacted your business?
Stage 4	Elicit the views of the firms for remedying the issues.	How best do you think these issues can be addressed using your available resources and capabilities? Are there other delivery approaches you could explore?

5. Results

The data were analyzed using a descriptive and contextual analysis approach. This began with transcribing and reflecting on the interview notes and recordings. The data was edited and coded to identify themes and obtain meaning. These were categorized according to the participants' experiences, and thereafter conceptualized and linked based on opinions on the impact of delivery challenges on e-commerce and how to confront them. We categorized the data using thematic analysis before organizing them into themes and presenting them in a thematic network (web-like summaries that illustrate the main themes). This allowed us

to extractsalient themes in the text. Table 3 represents respondents' demographics.

Table 3: Respondents' demographic profile

Characteristics	Occurrence #
Gender	
Male	10
Female	22
Location	
Lagos	17
Abuja	9
Delta	6
Firm Size	
Small	6
Medium	3
Age	
25-30	7
31-40	17
41-48	6
Education	
High school	2
Undergraduates	23
Postgraduates	7
Role in Organization	
Owner/Manager	13
Handling orders & logistics	19

In total, 69 logistics and express delivery-related attributes were uncovered (see Table 4) from which 17 themes were identified based on frequency of occurrence to form the basic themes. The basic themes were arranged into four organizing themes—delivery challenges; their causes; impacts on the industry; and potential solutions—around the

global theme, *E-commerce Delivery in Nigeria* (see Figure 2). Major delivery challenges are late deliveries ($n = 22$), lost packages ($n = 30$), damages to goods in transit ($n = 16$), unprofessional delivery workers ($n = 32$), and lack of *cash-on-delivery* payment ($n = 25$). Respondents blamed these challenges on inadequate infrastructure ($n = 32$), fewness of delivery firms ($n = 32$), uncooperative customers ($n = 19$), lack of delivery best-practices ($n = 19$), and high costs ($n = 31$). The impacts on e-commerce include financial losses ($n = 32$), customer complaints ($n = 32$), loss of customers ($n = 32$), and negative reviews ($n = 16$). Four suggested remedies to address the challenges are increased use of technology ($n = 32$), supplement third-party firms with in-house delivery ($n = 18$), strategically situate package pick-up points ($n = 21$), and improved staff training ($n = 18$).

Some evidence of ambidexterity was found among the potential solutions. The adoption of technology, establishing in-house delivery, and situating package pick-up points strategically as a replacement for home delivery imply exploration of new opportunities, processes, and innovation to enhance competitiveness. Similarly, improving employee training as a remedy indicates the exploitation of available assets and processes in incremental ways. Shoppers and consumers of online purchases expect to take delivery of merchandises within a reasonable timeframe. In general, this is within two weeks of order placement depending on products and location [37]. Our respondents highlighted the major challenge to the industry posed by late package delivery. Competitive advantages are difficult to sustain since they are conditioned on the ability to satisfy consumer.

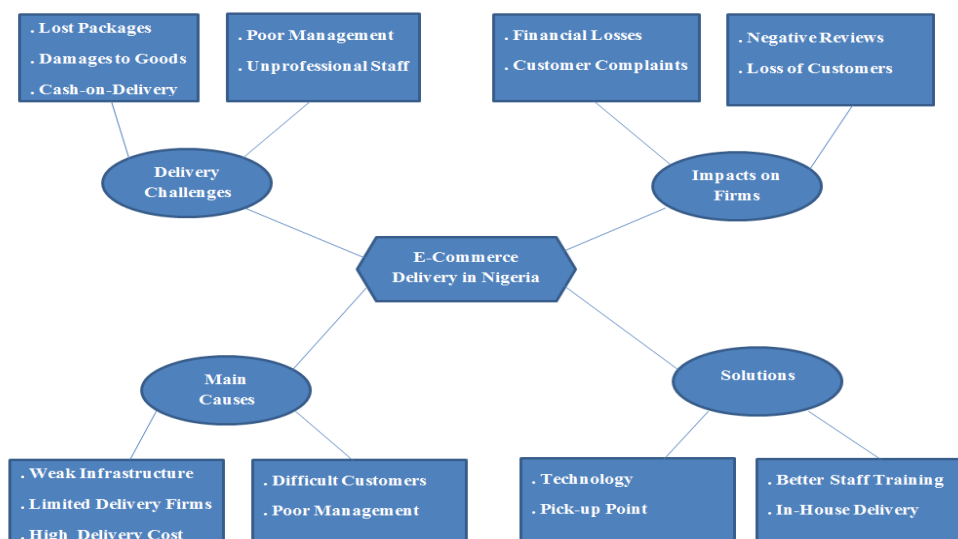


Figure 2: Thematic Structure of Express Delivery in Nigeria

“In terms of speed and performance, the logistics firms do not meet our expectations. This leads to late deliveries of parcels and, customers’ dissatisfaction. I believe what they can do differently to make the difference is to engage more dedicated workers, train them better, and motivate them.” (Respondent 31)

“Late delivery is commonplace in this business. For instance, few weeks ago, it took 11 days for EMS to deliver a parcel to a customer within the same city. Another time they took 20 days to deliver a shirt from Delta State to Kaduna State! That’s more than enough

time to deliver products to locations abroad. Sadly, there are few delivery service providers to most locations; hence we are stuck.” (Respondent 12)

In addition to blaming the delivery firms for late deliveries, respondents identified poor road network and weather conditions as problematic. Further, the dearth of efficient delivery firms was bemoaned. Informants indicated that, while multinational delivery firms like DHL and FedEx are fast and efficient, they are not cost-effective for most vendors. However, e-commerce vendors’ errors were also acknowledged as causing delays and parcel losses.

“Delivery problems have caused our business much trouble. We have lost opportunities and some customers because we could not deliver their products to them satisfactorily. The impact of late delivery includes loss of future sales opportunities and a dent on the firms’ reputation.” (Respondent 22)

“In order to maintain our reputation and offer better services to our customers we had to change delivery companies frequently owing to complaints and negative remarks about the service quality of delivery personnel. Since 2013, we have used at least 16 different delivery companies.” (Respondent 4)

Respondents ($n = 21$) complained about the fewness of delivery firms operating in the country. They have been taken advantage of in certain regions as a result and incurred financial losses and negative online reviews from customers. Interviewees believe improved performance and professionalism among delivery firms would directly boost e-commerce performance.

“We have suffered from monopolistic firms. ...and have lost many parcels in transit. This disappoints customers and makes our business appear incompetent. We never got to win some affected customers back even after we tried fixing the problem”. (Respondent 8)

“As for delivery service charges, we really can't complain even when it seems to be exorbitant. There is a market range which seems reasonable and acceptable but there are no alternatives”. (Respondent 13)

“Some delivery firms’ fees are reasonable, but we pay more for better and faster services”. (Respondent 2)

Respondents ($n = 24$) identified difficulty dealing with some customers during times of delivery. Some customers are unavailable during door-to-door delivery even when they had agreed to a specific time. This situation has led to increased costs from repeat delivery attempts and reverse logistics. Conflicts were also reported between courier and customers during delivery. Customers blame damaged goods on the negligence and improper handling of the courier. Some ($n = 16$) shared experiences of customers changing their minds on their purchases during delivery. This problem is common with the *cash-on-delivery* payment option. A related issue identified is couriers who were attacked and robbed of their packages. Although this is rare, security of delivery personnel is a cause for concern. The impact of difficult customers on businesses can lead to financial losses from replacement costs, shipping and return costs. It creates a lack of trust and confidence in online shopping and between vendors and shoppers.

“We must deal with difficult and uncooperative customers. We have reports of customers quarreling with deliverymen, refusing to accept their packages, or unwilling to pay for goods.” (Respondent 14)

Poor attitude and lack of professionalism on the part of delivery personnel was another major finding. Each informant recounted personal experiences of poor personnel attitudes and its damaging effects on business. This issue is multifaceted. Some deliverymen display poor attitude towards consumers taking deliveries, towards e-commerce vendors, as well as towards their employers. The limited number of delivery firms with nationwide outreach, lack of competition, and high charges of larger companies (e.g., DHL, FedEx, and UPS) result in poor attitudes. The consequences of the lack of professionalism are customers’ complaints, poor reviews, customers’ refusal to accept delivery, and loss of repeat purchases. Inadequate training and skills for the job, low interest in the job, lack of motivation, customers’ unfavorable attitude towards delivery workers, low pay, and the lack of competition in some regions were proffered as reasons for the poor attitudes of delivery personnel.

“Some of these dispatch staff exhibit lousy attitude towards work and customers. Many times, our parcels have been delayed because a staff was too lazy to register them on arrival at their hub before passing them on to be dispatched. Once our parcel was left hanging for weeks and when it was finally delivered the customer had already left town.” (Respondent 12)

“Some delivery personnel lack the requisite skills, hence their poor attitudes. Some have failed to collect payment for items even though they were informed beforehand that the package was ‘pay on delivery’.... Others have received payments and remitted them to us only after arguments!” (Respondent 22)

“I received complaints and poor reviews from consumers over the attitude of the deliverymen and have led to returns of items purchased. Sadly ... ‘pay-on-delivery’ makes it easier for customers to reject items due to the bad-mannered deliverymen. We not only lose money but customers as well!” (Respondent 1)

“The arrogance and poor attitude of third-party couriers have forced us to set-up in-house delivery service and engage staff with the right attitude. We take our customers seriously and thoroughly investigate their complaints. Consequently, our delivery staff perform their functions professionally.” (Respondent 17)

6. Discussion

Delivery and distribution networks (physical transportation) must be efficient and cost-effective to sustain the continued and healthy growth of e-commerce in Nigeria and for society to derive the potential benefits. These findings could be used to determine effective strategies to reduce the impact of the challenges. In line with the dynamic capabilities of ambidexterity the retailers tackle delivery problems by exploiting available capabilities while simultaneously exploring new ones to gain advantage. For instance, most firms would invest in in-house delivery if they had the capital. Table 4 below shows the specific delivery challenges uncovered from the data, their impact on e-

commerce retail, and some recommendations on how to address them. The recommendations could aid both online retailers and their channel partners to improve express delivery services performance.

Table 4: Impact of delivery difficulties on e-commerce retail and recommended solutions

Delivery Issue	Impact on Business	Potential Solutions
Late delivery	<ul style="list-style-type: none"> Customer complaints and threats of boycott Negative reviews Loss of customers and repeat purchases Loss of referral opportunities Weakened customer loyalty 	<ul style="list-style-type: none"> Open and transparent communication with customers about delivery time Get delivery firms to commit to agreed delivery schedules Respond rapidly to complaints, offer apologies and do follow-ups Locate warehouses and parcel collection centers near major markets Leverage on technology such as package tracking features
Lost packages	<ul style="list-style-type: none"> Financial losses Customer complaints and threats of boycott Negative customer reviews Loss of business opportunity 	<ul style="list-style-type: none"> Insure goods Get delivery firms to commit to taking responsibility for package safety Offer consumers immediate replacements Respond rapidly and apologise Encourage delivery firms to improve their recruitment process and to train delivery personnel on handling packages Introduce and utilize technology
Damaged goods	<ul style="list-style-type: none"> Financial loss from costs of goods, shipping, and return fees Customer complaints and threats of boycott Poor customer reviews Loss of confidence in e-commerce and low patronage 	<ul style="list-style-type: none"> Insure goods For high-value goods, arrange for buyers to inspect them before signing for delivery Get delivery firms to be responsible for package safety and delivery Offer immediate replacement Respond quickly and apologise
Reverse logistics	<ul style="list-style-type: none"> Customer complaints Financial losses Negative reviews 	<ul style="list-style-type: none"> For high-value goods, delivery agent should wait for buyers to inspect products and take back damaged goods right away.
Poor attitude of delivery personnel	<ul style="list-style-type: none"> Customer complaints Negative reviews Loss of customers Loss of referral opportunities Customers unwilling to take delivery of items Financial losses 	<ul style="list-style-type: none"> Collaborate with delivery firms to train personnel to improve attitude and quality Respond quickly and apologise Engage and retain dedicated ground staff and delivery personnel Offer incentives to motivate quality performance Where possible, introduce in-house delivery services Sensitize and encourage customers to treat delivery personnel with respect
Cash-on-delivery	<ul style="list-style-type: none"> Safety of delivery personnel Loss of funds (delivery workers fail to remit funds to sellers) Higher frequency of returns and refusal to take delivery Loss of delivery and return fees 	<ul style="list-style-type: none"> Vendors should opt for pay before deliveries where possible Introduce the option of payment at pick-up points closest to customers Get parcel delivery firms to commit to cash remittance after delivery Introduce security measures to protect staff during home deliveries
Market monopoly in regional areas. Limited firms offering door-to-door delivery option outside major cities	<ul style="list-style-type: none"> Financial losses due to high delivery charges Customers unwilling to pay costly delivery fees Loss of customers outside major cities 	<ul style="list-style-type: none"> Collaborate with third-party delivery firms to offer home delivery services in addition to pick-up option at designated hubs Establish more delivery firms Set-up more in-house delivery services Negotiate with larger logistic firms like DHL and FedEx with wider coverage and home delivery services for better pricing
Inadequate adoption of technology	<ul style="list-style-type: none"> Financial losses (lost packages, cost of shipping and returns) Customer complaints and threats to seek alternative sellers Poor customer reviews Loss of customers or loyalty Loss of referral opportunities 	<ul style="list-style-type: none"> Seek out delivery firms that have adopted technology to enhance their services Insist on tracking packages Encourage delivery firms to adopt and utilize new technology
Challenges with customers	<ul style="list-style-type: none"> Unavailable to take delivery Refusal to pay for goods upon delivery Making false claims Losses from shipping and returns costs 	<ul style="list-style-type: none"> Formulate clear terms and conditions and communicate them to customers Enforce the terms and conditions strictly
High delivery costs	<ul style="list-style-type: none"> Loss in profits as customers are unwilling to pay high costs Lost sales opportunities 	<ul style="list-style-type: none"> Investigate low cost options such as state-owned postal services Seek out reliable parcel services managed by transport companies Develop a relationship of mutual support with delivery firms Negotiate favorable pricing with renowned delivery firms like DHL, FedEx & UPS

Many online retailers have difficulties collaborating with third-party logistics service providers in carrying out the vital function of delivering packages to consumers. There is a shortfall when examined through the lens of DCF of ambidexterity which calls for a balance between exploiting available resources and exploring new and innovative processes in the face of difficult market conditions. In line with incremental adjustments to routines that the exploitation wing of ambidexterity proffers, the use of exclusive third-party delivery firms that are dedicated to serving only a set group of online retailers is recommended. This approach could offer an effective platform for synergy and collaboration between the partnering firms and lead to better business performance. There is a viable opportunity for the establishment of more delivery firms in Nigeria to serve the e-commerce market. Applying ambidexterity to create innovation, the results suggest that e-commerce retailers could develop in-house delivery systems similar to those of Amazon, JingDong, and Alibaba. These in-house delivery systems must, however, have features peculiar to the local situation.

7. Conclusion

Technology plays a tremendous role in advancing the economy and overall well-being of societies. E-commerce can potentially raise productivity and profit significantly for firms. With the right business strategy and management, e-commerce can help to reduce transaction costs and facilitate cross-border trade. Specifically, this study had two objectives. The first was to investigate delivery challenges bedeviling e-commerce retailers in Nigeria, their causes, and impacts. The second objective was to explore how these firms deal with the problems and offer potential solutions through the dynamic capability of ambidexterity. As DCF has been applied successfully in volatile business environments, it provides a useful template for e-commerce retailers and their delivery partners operating in increasingly uncertain landscapes. The use of multiple-case study approach allowed us to validate data across the different firms facing common challenges. Our findings indicate that, although the e-commerce retail industry in Nigeria is gaining grounds, it is beset by growth-limiting, delivery obstacles. The results showed that the e-commerce retail is challenging and firms' ability to deliver goods to consumers cost-effectively and timely is a major factor in their competitiveness. We recommend that retailers continually explore and exploit new ways to utilize resources and capabilities towards efficient delivery. They should enhance collaboration with existing logistics partners to improve performance. Options like in-house delivery and ties with several other logistics firms should be explored rather than relying on a single delivery arrangement. It is also vital to adopt new technologies and carry out process improvement through continuous learning and adjustment.

References

- [1] Tarhini, A., Mgbemena, C., Trab, M., & Masa'deh, R. (2017). User adoption of online banking in Nigeria: A qualitative study. *Journal of Internet Banking and Commerce*, 20(3).
- [2] Ojeka, S. & Ikpefan, A. (2011). Electronic commerce, automation and online banking in Nigeria: Challenges and benefits. *Manager*, 13(1), 141-158.
- [3] Edo, S., Okodua, H., & Odebiyi, J. (2019). Internet adoption and financial development in Sub-Saharan Africa: evidence from Nigeria and Kenya. *African Development Review*, 31(1).
- [4] Kofo, A. & Mercy, I (2018). Gender influence on undergraduates' information literacy skills in the use of Internet resources for learning in Kwara State, Nigeria. *Malaysian Online Journal of Educational Sciences*, 6(3), 12-19.
- [5] Chen, H. & Lu, J. (2016). Clarifying the impact of social escapism in users' acceptance for online entertainment services—An extension of the technology acceptance model based on online karaoke television services users. *Information Systems Management*, 33(2), 141-153.
- [6] Ayo, C., Adewoye, J. & Oni A. (2011). Business-to-consumer e-commerce in Nigeria: Prospects and challenges. *African Journal of Business Management*, 5(13), 5109-5117.
- [7] Oluwaseun, A. (2016). E-commerce adoption among civil servants of selected states in south western Nigeria. *Ife Centre for Psychological Studies/Services*, 24(2), 231- 245.
- [8] PricewaterhouseCoopers (2017). E-commerce in China—the future is already here: How retailers and brands are innovating to succeed in the most dynamic retail market in the world. *Total Retail 2017*, 1-37.
- [9] Xu, Y., Zhang, X., Cao, J., Chen, Y., & Ye, X. (2016). Collaboration and evolution of e-commerce and express delivery industry supply chain. *Discrete Dynamics in Nature and Society*, 2016 (3452037), 1-12.
- [10] Chiejina, C. (2014). Investigating the significance of the 'pay on delivery' option in the emerging prosperity of the Nigerian e-commerce sector. *Journal of Marketing and Management*, 5(1), 120-135.
- [11] Osuagwu, P. (2019). Why e-Commerce may headline Nigeria's next economic boom. *Vanguard News*, 01/2019.
- [12] Export.gov (2017). Nigeria – eCommerce. *Nigeria Country Commercial Guide*.
- [13] Kazeem, Y. (2019). E-commerce pioneers in Nigeria are struggling to prove the market's viability. *Quartz Africa*, January 17, 2019.
- [14] Kazeem, Y. (2018). A merger of two Nigerian e-commerce players is the latest bid to win Africa's largest market. *Quartz Africa*, April 16, 2018.
- [15] Gharib, M. (2016). Neither rain nor snow nor lack of address will stop these deliverymen. eTrade (2019). Logistics update Africa: Getting past the hurdles to the last mile.
- [16] Wang, G., Li, H., Zhang, C., Xie, Y., & Gao, C. (2014). Express business transformation research based on Hoare three-dimensional structure model. *Applied Mechanics and Materials*. 587-589, 2080-2083.
- [17] Eze, V. & Obono, K. (2018). The influence of Internet use on the political participation of youth in Ikeja, Lagos. *Africology: The Journal of Pan African Studies*, 11(7), 24-43.

- [19] Li, Y., Li, Y., Lei, Z., Liu, Q. (2018). Are innovation output and economic output strongly related in emerging industrial clusters? Evidence from China. *European Scientific Journal*, 14(22), 1857–7881.
- [20] IT Africa (2017), 'Nigeria leads Africa 7 highest Internet using countries.' *IT Report on Africa*.
- [21] Statista (2019). Internet user penetration in Nigeria from 2017 to 2023.
- [22] Nigerian Communications Commission (2016). Nigeria telecommunication sector attracts FDI. *NCC*.
- [23] Wang, G., Li, H., Zhang, C., Xie, Y., & Gao, C. (2014). Express business transformation research based on Hoare three-dimensional structure model. *Applied Mechanics and Materials*. 587-589, 2080-2083
- [24] Mbatha, B. & Ngwenya, B. (2018). Obstacles to the adoption of e-commerce by tourism SME service providers in South Africa: The case of selected SMEs in Pretoria. *African Journal of Business and Economic Research*, 13(3).
- [25] Jin, S. (2019) Problems in service quality management of express delivery industry and countermeasures for improvement. *Liaoyuan Vocational and Technical College*.
- [26] Kawa, A. & Maryniak, A. (2019). Lean and agile supply chains of e-commerce: Empirical research. *Journal of Information and Technology*, 769, 317-327.
- [27] Ibam, E., Boyinbode, O., & Afolabi, M. (2018). E-commerce in Africa: The case of Nigeria. *EAI Endorsed Transactions on Serious Games*, 4(15), 1-6.
- [28] Igudia, P. (2017). A qualitative evaluation of the factors influencing the adoption of electronic payment systems (SMEs) by SMEs in Nigeria. *European Scientific Journal*, 13(31).
- [29] Jin, H. (2018). Restructuring parcel delivery network by considering dynamic customer demand. *Business Administration and Management*, 21(2), 83-96.
- [30] Wang, G., Li, H., Zhang, C., Xie, Y., & Gao, C. (2014). Express business transformation research based on Hoare three-dimensional structure model. *Applied Mechanics and Materials*. 587-589, 2080-2083.
- [31] Liu, X., Gou, Q., Alwan, L., & Liang, L. (2016). Option contracts: A solution for overloading problems in the delivery service supply chain. *Journal of the Operational Research Society*, 67(2), 187-197.
- [32] Teece, D., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533.
- [33] Kriz, A, Voola, R, & Yuksel, U. (2014). The dynamic capability of ambidexterity in hypercompetition: Qualitative insights *Journal of Strategic Marketing*.
- [34] Cooper, D. & Schindler, P. (2014). *Business research methods* (12th Ed.). New York: McGraw Hill.
- [35] Ledford, J., Barton, E., Severini, K., & Zimmerman, K. (2019). A primer on single-case research designs: Contemporary use and analysis. *American Journal on Intellectual and Developmental Disabilities*, 124(1), 35–56.
- [36] Saxena, R. (2017). Muddling through the passage of qualitative research: Experiences of a novice researcher. *Vision*, 21(3), 314-322.
- [37] Xu, Y., Zhang, X., Cao, J., Chen, Y., & Ye, X. (2016). Collaboration and evolution of e-commerce and express delivery industry supply chain. *Discrete Dynamics in Nature and Society*, 2016 (3452037), 1-12.