E-Commerce, institutional voids and socio-cultural factors in online groceries shopping: Exploring the interrelationships in an African context.

Abstract:

This study explores how socio-cultural complexities, and institutional barriers affect the shopping experience of online groceries shoppers in Africa. Adopting a qualitative method with an interpretivist philosophy, 16 in-depth semi structured interviews were conducted with online groceries shoppers in Lagos, Nigeria. Findings reveal that while participants adopt online shopping due to convenience, product variety, and AI-powered decision-support devices, their engagement is constrained by digital mistrust, data insecurity, infrastructural limitations, and weak regulatory enforcement system. The theoretical contributions relate to the e-commerce and technology acceptance literature, and the managerial implications include insights for platform designers, retailers, and policymakers to enhance trust and digital inclusion. This knowledge will help to enhance the emerging markets' digital retail landscape. Our paper also extends the current theorising around institutional theory.

Keywords: e-commerce; artificial intelligence; institutional voids; consumer trust; emerging markets; online grocery shopping.

1. Introduction:

Recent innovations in technology have spurred the trading of goods and services via the internet (aka e-commerce) (Bogers et al., 2022). Through online platforms, AI-driven technology has improved retailers' capacity to attract new customers and to deliver a stellar online experience to a wide range of audiences across the globe (Pillai et al, 2022; Han & Lai, 2025). Researchers have found that consumers are switching to these online shopping platforms for convenience, accessibility, and widened product/service options (Al-Adwan et al., 2022; Hagen et al., 2024). Consequently, the global e-commerce landscape, especially the online grocery retailing, has seen a significant growth in market share, with sales surpassing $5 trillion in 2022 and expected to exceed $7 trillion by 2025 (Cramer-Flood, 2022). By offering automated discounts and obtaining customer analytics, e-commerce also facilitates a fair competitive arena, consumer decision-making, customer satisfaction, brand loyalty, market dominance, business growth, and sustained competitive advantage (Kumar & Ayodeji, 2021; Alexa, 2023). Yet, there is a lack of studies evaluating the adoption of e-commerce in food retailing, especially, in the emerging economies context (Bukhari et al., 2025). We view this

as a significant omission in the theoretical development of the e-commerce and retail literature streams. To address this imbalance, our research focuses on the unique context of the groceries e-retailing ecosystem in Nigeria.

As the decision-making, purchase behaviours, satisfaction, and brand loyalty vary between online shoppers and offline shoppers, understanding the dynamics of the lifestyles of the online shoppers, the challenges they face and the barriers to their satisfaction are crucial for business decision-making (Curle, 2022; Flaherty, 2022). Consequently, there is a renewed call for more research examining how the transition from brick-and-mortar stores to digital channels, and then to e-commerce impacts business practices, customer engagement and satisfaction across the globe (Alexa, 2023; Curle, 2022). Scholars argue the need for continuous examination of the role of artificial intelligence (AI) in retailing, specifically, in relation to improved operational efficiency and a personalized consumer experience. Accordingly, recent research examines the role of AI tools such as predictive analytics in enabling retailers to tailor their offerings to individual customers, thereby fostering consumer decision-making and satisfaction (Pantano et al., 2019; Kumar et al., 2024; Hariguna & Ruangkanjanases, 2024).

Furthermore, while studies have explored the intersection between e-commerce, AI-powered innovation and consumer behaviour in developed (Sam & Chatwin, 2015; Pantano, et al, 2018; Bilal et al., 2024) and developing context (Hariguna & Ruangkanjanases, 2024; Al Maalouf et al., 2025), there remains a theoretical gap as most studies adopt a Western-centric models to technology adoption. Yet, the few studies on the role of AI in fostering cost-effective smart delivery services in Africa (e.g., Summers, 2020; Sydow et al., 2022) have found institutional voids to pose unique challenges to business development in the region. These challenges relate to insufficient infrastructure, regulatory complexities, limited payment gateways, lack of access to capital, security concerns, lack of electricity supply, a customer trust deficit, and digital divide (Zhang, 2025; Anning-Dorson, 2025). Moreover, despite the link between digital divide and a low level of e-commerce adoption, there are lack of empirical studies examining these issues in Africa (Chokoe & Oyekale, 2022; Bukhari et al., 2025; Dwivedi et al., 2021; Hendricks & Mwapwele, 2024). To addresses this gap, our study adopts a multi-theoretical framework to help enhance our understanding of how the above issues constitute significant barriers to AI-adoption in online grocery retailing in Africa (specifically, in Nigeria) and their impact on consumer behaviour, satisfaction, and wellbeing.

In terms of the originality and contributions of our study, our paper offers distinct theoretical and managerial contributions. Firstly, by leveraging and integrating the technology-organization-environment (TOE) framework, and the expectancy-disconfirmation model (EDM), this paper offers nuanced insights into how institutional voids and cultural barriers influence the adoption of e-commerce among online shoppers. A critical review of these theories also reveals that their applications to exploring e-commerce, institutional voids and socio-cultural factors in online groceries shopping in resources constrained contexts like Africa is scarce and fragmented (Qazi et al., 2017; Malapane & Ndlovu, 2022). By addressing this gap, this research provides emerging constructs and novel insights that can shape future theorising around these models, especially in emerging economies contexts. Secondly, the paper offers comprehensive findings and suggestions to online sellers and governments on how e-commerce adoption can be progressed and strengthened in Nigeria and Africa. This is timely, as the retail industry in Africa is undergoing a significant AI-powered transformation, with the adoption of AI technologies in the continent's retail sector projected to surge by 40% by 2025 (Alimi, 2023). To achieve this purpose, this research addresses the following questions.

1. How do grocery shoppers in Africa perceive online shopping?
2. How do socio-cultural and institutional challenges impact these buyers online shopping experience?
3. How can such challenges be minimised to maximize the benefits of e-commerce in Africa?

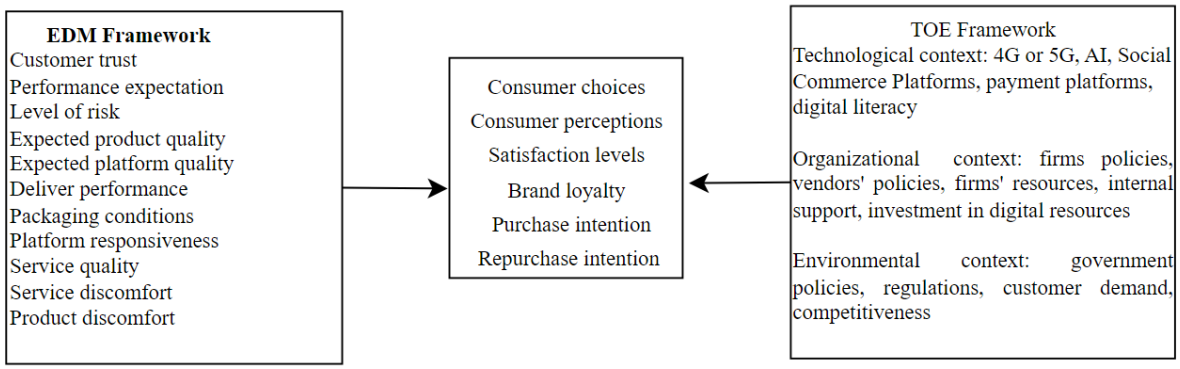
The rest of this paper is structured as follows. The next section reviews the extant literature, then the section after that justifies our methodology, followed by data analysis and presentation of the findings. Section five discusses the results, and concludes with the study's implications, limitations, and suggestions for further studies.

1.1. Theoretical Framework

This paper incorporates key theoretical ideas from business economics and strategic management literature. Specifically, this research adopts a comprehensive theoretical framework integrating TOE framework, and EDM. First, TOE framework helps us to investigate the interaction between AI, organizational capabilities, and the distinct environmental challenges posed by institutional voids in Africa (Mkansi & Nsakanda, 2023). It will help us to dissect the various stages consumers go through when making online purchase

decisions in the context of the e-commerce landscape (Bauerová, 2018). For instance, with the help of 4G and 5G infrastructure, AI, social commerce channels, e-commerce platforms, payment processing systems, and digital literacy, e-commerce facilitates connections between retailers and customers. Organizational factors – firms' or vendors' policies, internal support structures, available resources, operations, and investment in digital capabilities such as AI – facilitate government policies, regulations, customer orientation, customer demand and competitive pressure that influence consumers' adoption of e-commerce. This model will be used to gain a better understanding of the psychological and social factors that influence consumer choices, levels of satisfaction, and loyalty to a brand. Secondly, EDM is utilized in consumer satisfaction theory (Oliver, 1980; Grimmelikhuijsen & Porumbescu, 2017) to investigate the impact of AI on customer happiness and brand loyalty. The EDM argues that the level of customer satisfaction is determined by how well a product or service is seen to perform in relation to the expectations that were held before making the purchase (Qazi et al., 2017). The integration of AI into the groceries retailing environment reshapes these expectations and influences the consumers' perception, satisfaction and brand loyalty. Our theoretical model is presented in Figure 1 below, which links our key theoretical concepts.

Figure 1: Linking our key theoretical concepts



Source: Authors' own.

While the discussed theoretical perspectives offer distinct insights, a critical synthesis reveals some overlaps and potential tensions that strengthen the analytical power of the study. TOE emphasizes on organisational capabilities. Yet there are tensions in relation to institutional voids that limit the ability to leverage the resources, especially in Africa (Barney, 1991; Lawrence & Tar, 2010). Similarly, the consumer decision making model complements EDM

by mapping the stages through which expectations are formed and conformed. However, there are inconsistencies in the contexts of institutional weakness, which undermines customer's satisfaction and brand loyalty (e.g., refund failures or fraud) (Kim et al., 2008; Grimmelikhuijsen & Porumbescu, 2017). This highlights the relevance of our chosen theoretical concepts, as TOE enhances our understanding of how institutional voids are defining firm and consumer behaviours, while EDM helps us to understand how customers unmet expectations influence their trust. These theoretical insights help us to understand those resources and factors that drive e-commerce adoption along with how consumer expectations and environmental limitations shape digital retail experience in Africa. The integration of these models allows us to conceptualize e-commerce adoption as a dynamic interaction between firm resources, environmental contingencies and consumer perceptions. This integrated lens highlights how institutional voids reshape the interrelationships between organizational readiness, resource mobilization and consumer satisfaction.

2. Literature Review

2.1. The growth of e-commerce in Africa

As a vital aspect of business operations in Africa, e-commerce has attracted a growing research interest. Researchers are mostly interested in factors that influence African online shoppers' purchase decisions, their behaviour towards e-commerce website, and how the platform quality impacts online shoppers' purchase intention (Han et al., 2023). Studies have also focused on sustaining online shoppers' e-commerce adoption in Sub-Saharan Africa, including the role of trustworthy payment methods in influencing online shoppers' behaviours (Amofah & Chai, 2022; Hassan & Lee, 2021). Researchers have found that while African consumers want affordable prices, they also prioritize value and are willing to pay a little more if they can see the value. Hence, value for money is a significant factor in making their purchase decisions (Maigurira, 2023).

Driven by increasing internet penetration, a rising smartphone usage, and a burgeoning middle class with a growing disposable income (Go-Globe, 2023), the African e-commerce market size reached US$ 241.6 billion in 2022 and is expected to reach US$ 567.6 billion by 2028, exhibiting a compound annual growth rate (CAGR) of 15.3% during this period (IMARC, 2023). Yet, the revenue in the e-commerce market in Africa is forecasted to increase continuously, reaching a total of 22.5 billion U.S. dollars by 2028 (Galal, 2023). These feats are credited to local e-commerce platforms in Africa, including Jumia, Konga, Kilimall, and

Takealot, as well as foreign e-commerce platforms like Amazon, AliExpress, and eBay who also operate on the continent (Notini, 2023). With global giants like Amazon, Alibaba, and Facebook taking notice of its potential (Thiaw, 2024), the African e-commerce market is poised for immense growth.

However, the growth of e-commerce depends on the customers' satisfaction level, which in turn is influenced by several factors. These factors include technological, service, and product factors. Technological factors such as website design, security, information quality, and product factors like variety and customization play a significant role in influencing customer satisfaction (Noori, 2019; Jain & Sharma, 2020; Netshirando et al., 2021; Odusanya et al., 2022). Other factors include cybersecurity, identity theft or fraud that reduce customer confidence (Naatu et al., 2025). Technology has improved information quality and product attribute description in the Africa's e-commerce industry (Anammah, 2022; Mofokeng, 2021), especially through mobile technology. In fact, mobile technology has enhanced the e-commerce penetration rate in Africa from 13% in 2017 to 40% in 2025 (ITA, 2021). Furthermore, digital technologies have opened vast business opportunities in Africa, circumventing institutional failures and facilitating the growth of digital ecommerce interface. This is key to connecting service providers with consumers in various sectors, including banking, agriculture, and transportation (Lashitew, 2022). The increasing adoption of digital financial services in the continent, primarily mobile money, contributes to these successes (Thiaw, 2024).

Service factors, including customer service and delivery services, also contribute to customer satisfaction, although they may not have a significant effect in some cases (Wu, 2013; Cao *et al.,* 2018). Customer satisfaction is essential for customer loyalty, and strategies to improving customer satisfaction include enhancing the service approach, reducing customer effort, and linking key performance indicators (e.g., social influence and facilitating conditions) to consumer expectations (Al-Adwan & Al-Horani, 2019; Ezennia & Marimuthu, 2022). Additionally, customers satisfaction is linked to consumer decision making and factors influencing consumer decision-making for e-commerce purchases include convenience, website design, information quality, speed of transmission, and response time, which can positively influence customer satisfaction and repeat purchases (Safa & Solms, 2016; Ali & Naushad, 2021; Mofokeng, 2021). Therefore, e-commerce retailers should focus on improving these factors to enhance customer satisfaction and increase repeat purchases (Massang et al.,

2023; Mofokeng, 2023). For instance, a study of 500 online shoppers in India showed that customer satisfaction from e-grocery shopping is determined by perceived ease, quality, and time value (Ali & Naushad, 2021).

Research linking modern technology with the evolution of e-commerce also highlights new trends, such as augmented reality, voice search, AI-assisted upselling and cross-selling, and subscription models (Caldwell, 2023; Kenan, 2023). The crucial role of AI in enhancing customer satisfaction and loyalty in the e-commerce industry can be assessed in various ways. The first dimension is the personalization of customer experience, where the website's behaviour tailors its product recommendation, leading to customer retention. Second is predictive analytics, which can identify customers who are at risk, by using data analysis (Miceli, 2023). The introduction of chatbots as virtual assistants also reduces the cost of customer support departments, while resolving queries in real-time (Ajayi, 2023). Lubbe and Ngoma (2021) concluded that chatbots have a significant influence on customer satisfaction, as about 95% of South African sellers said that chatbots save time and increase productivity.

2.2 Factor influencing the purchase decision of African online groceries shoppers

Several studies have explored the key factors influencing the intention to use online grocery shopping, and key findings include anthropomorphism, convenience, companionship, literacy support, affordability, and trust (e.g., Alo et al., 2025). The availability of information, ease of buying processes, and negative shopping experience (when shopping offline) also play an essential role for South African customers (Rudansky-Kloppers, 2017). A study of 104 respondents found that perceived ease of use and usefulness are important influencing factors for online shopping in South Africa (Makhitha et al., 2019) and similar case is for Nigeria (Oloveze et al., 2022). While the South African customers look for ease, variety, security in the platform, and product quality information (Steyn & Mawela, 2016; Felix, 2025), the values of their Nigerian counterparts is an important factor in their online purchase behaviours (Adeola *et al.,* 2021). Yet, a study of 173 respondents found the ease of use of technology devices like tablets and laptops as having a key influence on customer decisions to purchase food online (Chokoe & Oyekale, 2022). Further, a 300-respondent study showed that website quality and innovativeness of the platform play a role in motivating young adults to purchase online in South Africa (Beneke et al., 2010).

Focusing on the extent to which systems and marketing elements influence young adult customers' online grocery shopping behaviours, Ligaraba et al. (2022) highlights the importance of pricing, convenience, and product quality for young African consumers. Using the PLS model, Ligaraba and colleagues indicate that perceived usefulness, peer review, and attitude positively affect the repeat purchase decisions of online adult shoppers in South Africa. Using an online questionnaire, Maja (2022) surveyed 839 respondents to examine the factors influencing South African consumers' intention to use online grocery shopping and proposed a model to investigate the underlying motivations and challenges of online grocery shopping in South Africa. Focusing on online grocery shoppers in Nigeria, our paper builds on this growing body of research.

Furthermore, focusing on factors such as prices, delivery time, flexibility, convenience, and ease of accessibility, Moodly et al. (2021) examined consumer perceptions of online shopping, and recommends that dynamic pricing that applies variable pricing could be implemented more broadly to online shoppers. Mkansi and Nsakanda (2023) also explored the challenges facing small and medium-sized (SMEs) e-grocery mobile application retailers in South Africa. Their findings emphasized the importance of specialist skills and unified team production in overcoming technological, organizational, and environmental barriers to e-grocery adoption. Other studies also supported this outcome (e.g., Naatu et al., 2024). Adopting the Unified Theory of Acceptance and Use 2 (UTAUT2) theory in assessing 4159 customer reviews on Google Play store, Musakwa and Petersen (2023) investigated the factors influencing South African consumers' acceptance and use of mobile delivery applications. Their study highlighted the importance of trust, perceived usefulness, and perceived ease of use in the adoption of mobile delivery applications.

Furthermore, Aggarwal (2023) developed a conceptual paper discussing AI's role in online grocery shopping, which theoretically emphasized how AI can help to provide enhanced personal recommendations to different customer segmentations. Pillai et al. (2020) also explore the role of AI in transforming the operations of retail stores by exploring the efficacy of AI-powered retail stores AIPARS in India. The SEM analysis on the survey of 1250 customers showed that perceived usefulness, customization, and interactivity are significant factors for shopping online. Similarly, Habib and Hamadneh (2021) investigated the factors that influence South African consumers' acceptance and use of AI in online shopping, emphasizing the importance of perceived usefulness, and perceived ease of use in the adoption of AI

applications. Their results showed that customer technology acceptance has a direct effect on the online purchase intention of groceries, and two factors mediate it. Factor one is the customer's perceived risk, and factor two is customer trust. With 443 respondents, their study confirms that both factors are significant positive mediators.

Although AI and Internet of Things (IoT) have enabled South African businesses to create value by motivating transactions (Malapane, 2019), and in the case of Egypt, AI has significantly improved consumer behaviour in the retail sector (Mussa, 2020). Yet, AI adoption is still facing complex challenges in South Africa and Namibia, which require support for government regulation (Baporikar, 2022; Malapane & Ndlovu, 2022; Odunfa et al., 2021). Also, Africa's e-commerce still strives for customer retention as a cost-effective strategy (Akolade, 2023). Thus, our study tried to address this gap with different lens suitable for African context.

3. Research Methodology

This study employs a qualitative research design to contextualise technology adoption, recognising that digital engagement is shaped by social, emotional and cultural dynamics often missed by quantitative measures (Walsham, 2006). Unlike statistical generalisation, qualitative inquiry enables a deeper examination of meanings and experiences underpinning technology use (Denzin & Lincoln, 2018). This approach aligns with qualitative research to extend theoretical frameworks and identify context-specific factors in African mobile commerce adoption (Boateng et al., 2011; Dwivedi et al., 2021; Venkatesh et al., 2012). A qualitative design for Nigerian online grocery shoppers captures rich contextual insights (Creswell & Poth, 2016) and explains user-technology interactions within socio-economic environments (Myers, 2019). Semi-structured interviews were employed to examine perceptions, socio-cultural challenges and e-commerce optimisation strategies in Africa.

3.1. Justification for the Sampling Strategy

We employed purposive sampling as an appropriate methodology given our focus on participants with specific characteristics and experiences relevant to the research phenomenon (Patton, 2015; Saunders, Lewis, & Thornhill, 2009). The purposive sampling strategy enables us to specifically target participants with online shopping experience in previous six months, across age, gender, socioeconomic background and digital literacy. Because we are interested

in variations in e-commerce experience, our sample comprised first shopper, occasional shopper, frequent shoppers, and customers purchasing across diverse platforms such as Konga, Jumia, Jiji, Kara, Shopify, Instagram stores, and WhatsApp vendors that are widely used across Nigeria and Africa. The strategy supports our investigation of e-commerce adoption in markets where digital retail remains emerging rather than established. Our sampling approach aligns with comparable technology adoption research in developing economies (Boateng *et al.,* 2011; Dwivedi *et al.,* 2021).

Lagos, Nigeria, was selected as the empirical context because it is Africa's premier economic and technological hub. With a GDP of £259.75 billion and a population exceeding 21 million, Lagos represents the intersection of rapid urbanisation and digital transformation (Mogaji, 2020; World Population Review, 2025; Business Insider Africa, 2025). As Nigeria's commercial centre contributes approximately 30% of the national GDP (World Bank, 2021), the city features a burgeoning e-commerce sector and increasing AI adoption. Lagos simultaneously presents distinctive challenges such as infrastructural deficits, inconsistent power supply, complex logistics networks, and fragmented regulatory frameworks, influencing digital platform engagement (Oladimeji & Alarape, 2022). These conditions create an optimal environment for examining socio-cultural and institutional factors shaping e-commerce adoption in emerging markets, offering insights applicable to other rapidly urbanising African contexts while acknowledging the city's unique socioeconomic characteristics.

Initially, we planned to conduct 50 interviews but concluded after 16 interviews when thematic saturation was observed (Guest et al., 2006; Saunders et al., 2009). As we continued to compare our interview data from the onset of the conversations, we noticed that the pattern remained the same after the 10th interview as no new themes/patterns emerged. However, we continued the interviews till the 16th interview which was when the recurrence (in pattern) became obvious, hence data saturation is reached (Guest et al., 2006; Saunders, et al., 2009; Saunders et al., 2018). Although our 16 interviews demonstrate methodological rigor and commitment to depth, reliability, objectivity, and novel contribution rather than numerical target (Saunders et al., 2018; Rahimi & Khatooni, 2024). More importantly, the 16 interviews conducted met our criteria for inclusion with the participants demonstrating substantial shopping experience with e-commerce across multiple platforms. In addition, majority were frequent shoppers and from diverse socioeconomic background, enabling them to delve deeper, providing rich responses with examples-driven insights, which add depth to our findings. To reduce selection

bias, our geographical spread captured the diverse and unique nature of the study area (Lagos State). For instance, participants were drawn from 8 Local Government Areas (LGAs) – Agege, Mushin, Ikeja, Oshodi Iloso, Surulere, Lagos Island, Ikorodu, and Apapa. These LGAs represent major commercial and residential centres within the State, allowing us to capture sample with variation in digital access, shopping practices, and consumer experiences. In addition, participants were recruited through professional networks and snowball sampling (Harvey, 2011; Saunders et al., 2018).

3.2 Data Collection

The interview protocol addressed three key dimensions. First, consumer perceptions and decision-making behaviours were explored, with participants describing online grocery shopping frequency, channel preferences, trust determinants, platform loyalty, convenience, and purchase challenges. Second, sociocultural and institutional adoption barriers were examined, including preferences for traditional shopping, as well as challenges with online shopping – fraud concerns, limited technological awareness, digital payment difficulties, and social influence factors. Third, strategies for maximising e-commerce and AI-enabled retail benefits were investigated, with participants detailing digital tool utilisation, vendor selection criteria, and service improvement recommendations. Based on participant preferences, interviews were conducted both face-to-face at workplaces and via Microsoft Teams between October 2024 and February 2025. Despite flexible scheduling options, connectivity issues and logistical constraints necessitated several rescheduled sessions. Sessions lasted 32-56 minutes and were audio-recorded with consent to ensure analytical rigour. Table 1 shows the participants information.

Table 1: Participants' Information

S/N	Occupation / Role	Sector	Work Experience (Years)	Interview Duration	Gender	Marital Status	Frequency of online shopping	Most Platform used
1	Teacher	Education	12+	52	F	Married	Two times a week	Instagram
2	Customer Relations Officer	Communications	1.5	53	F	Single	Once a month	Jiji/Facebook
3	Quality Assurance Officer	Commodity Trading	6	51	M	Single	Twice a month	Retailers' Platforms/Jumia
4	Pharmacist	Healthcare (Private)	8	46	M	Married	Once a month	Facebook Market
5	Teacher	Education	10	56	F	Married	Once a month	Jumia
6	Ex-Teacher (35 yrs), Now Fisherman	Education	15	55	M	Married	Once	Facebook Market
7	Civil Servant	Public Sector	15	54	F	Married	Twice a month	Konga
8	Senior Transaction officer	Banking	7	36	F	Married	Once a moth	Retailers' Platforms
9	Customer Service Rep	Banking	13+	42	F	Married	Twice a month	Facebook Market /Jiji
10	Telesales Executive	Financial Services	3	36	F	Single	Once a month	Instagram/ Konga
11	Lawyer	Legal Services	8	36	F	Single	Once a week	Jiji/Facebook
12	Undisclosed	Undisclosed	Undisclosed	32	F	Single	Once a week	Undisclosed
13	Customer care Officer	Banking	5	36	F	Single	Frequently	Jumia
14	Hotel Manager	Hospitality	10	45	M	Married	Four times a week	WhatsApp/ Retailers platforms
15	Online Vendor	Retail	5	43	F	single	Frequently	Faceboo Market
16	Customer Service Rep	Retail	2	47	F	Single	Three times a month	Instagram/ WhatsApp
	Total = 16 participants			Total= 720 mins				

Source: Authors' own work

3.3 Data Analysis

Due to the richness of our interview data, to enhance analytical rigour and achieve sophistication in our data structure, we employed the Gioia's methodology (Gioia, 2021; Gioia *et al.,* 2013). This approach enabled the systematic capture of participants lived experiences and the development of conceptual insights. Consistent with previous research with similar methodology and sample size (e.g., Agarwal *et al.,* 2010; Magnani & Gioia, 2023: Yang *et al.*, 2024), our data analysis was both thematic and iterative. We began with repeated listening to the recordings to familiarise ourselves with tone, context, and meaning, shaping early interpretations. Each interview was then transcribed verbatim to facilitate line-by-line coding.

Initial open coding yielded 24 first-order concepts (Corbin, & Strauss, 2014) capturing participants' ideas and expressions concerning online shopping, digital technologies, and retail systems in the African context. Apparent disconnections in data were resolved through this coding process, which surfaced latent meanings and recurring patterns. Axial coding followed, drawing conceptual linkages between first-order codes and organising them into broader second-order themes aligned with extant literature on e-commerce, institutional theory, and consumer behaviour (Corbin & Strauss, 2014; Corley & Gioia, 2004). To ensure analytical robustness, two researchers independently coded a subset of transcripts and compared interpretations to establish intercoder reliability. Discrepancies were discussed and resolved through consensus, strengthening coding consistency. Researcher triangulation enhanced trustworthiness, as analytical decisions were jointly reviewed to minimise bias.

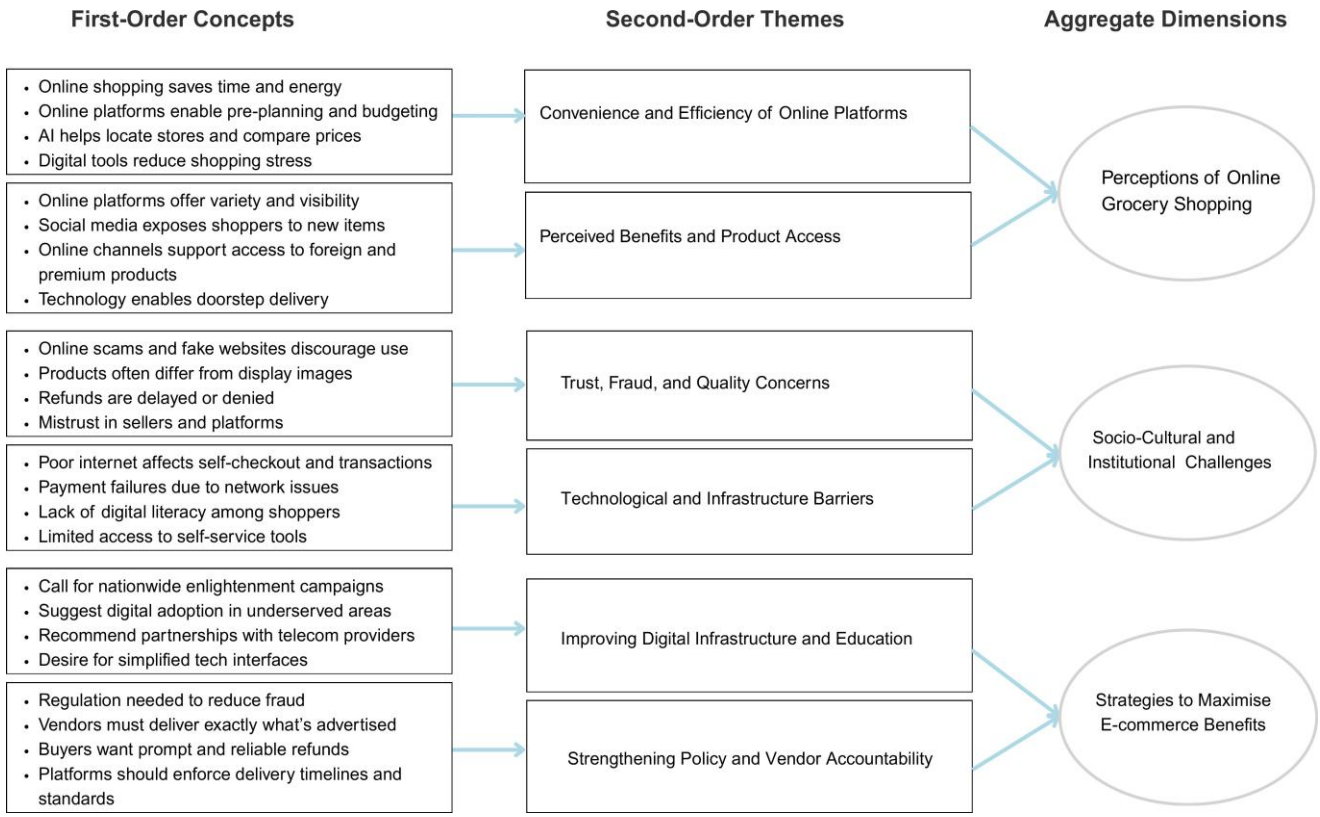
The coding process continued until theoretical saturation was reached – when no new properties emerged from additional data (Glaser & Strauss, 1998). We developed three aggregate dimensions from the second-order themes: Perceptions of Online Grocery Shopping, Socio-Cultural and Institutional Challenges, and Strategies to Maximise E-commerce Benefits. These illustrate how consumers engage with and adapt to digital retail environments. Consistent with the Gioia's approach, findings were visualised in a structured data model to trace the analytical trajectory. To enhance credibility, we conducted member checks (Tisdell et al., 2025) with selected participants, using their feedback to validate interpretive accuracy and clarify ambiguities.

3.4. Justification for Adopting the Gioia Methodology

The complexity of qualitative data necessitates methodological flexibility to support coherent theory development and alignment between data and theoretical insights (Murphy *et al.,* 2017; Reay *et al.,* 2019). We adopted the Gioia's methodology (Gioia, Corley, & Hamilton, 2013) due to its compatibility with an interpretivist epistemology and its efficacy in inductive theory building within organisational and management research. The Gioia's method was used to improve the theoretical rigour and transparency in different ways: (i) integrating and retaining participants' own language in the first-order codes helps in persevering their lived-experience and in their own words. This ensures that no important insights were excluded or lost. (ii) these first-order codes were later integrated and categorised into second-order themes to strengthen the interpretive depth and analytical rigour (Gehman et al., 2018; Langley & Abdallah, 2015).

(iii) Finally, we developed our aggregate dimensions to capture the overarching patterns which are theoretically aligned with extant literature while reflecting the unique characteristics of our empirical context. This approach is particularly suited to exploring complex, under-researched phenomena where rich data demand conceptual elaboration (Nag & Gioia, 2012). By foregrounding participants' voices in the early stages, the method ensures interpretive authenticity (Pratt, 2009), while its analytical scaffolding enables abstraction and the Source: Authors' own work

Figure 2: 1st Order Concepts, 2nd Order Themes and Aggregate Dimensions.



Source: Authors' own work

development of higher-order constructs. Its emphasis on traceability and visual data structures enhances analytical transparency and bolsters the credibility of findings (Eisenhardt, Graebner, & Sonenshein, 2016; Gehman *et al.,* 2018). Established in qualitative inquiry, the Gioia methodology is widely recognised for enabling the generation of novel, transferable insights with theoretical relevance (Corley & Gioia, 2011). This study provided a robust and conceptually coherent framework for generating empirically grounded, theoretically informed insights. Figure 2 illustrates the data structure, tracing the development of higher-order themes from emergent concepts.

4. Findings

This section presents the findings derived from the three aggregate dimensions identified in the analysis: participants' perceptions, socio-cultural and institutional challenges, and strategies for maximising e-commerce benefits in the African context. These dimensions bridge the raw interview data with relevant theoretical frameworks, illustrating how individuals respond to contextual constraints within developing digital economies (Mthembu, Kunene, & Mbhele, 2018). The findings offer insights into how local realities influence e-commerce engagement and the adaptive strategies employed to enhance its effectiveness in emerging markets.

4.1 Perceptions of Online Grocery Shopping

Participants broadly perceived online grocery shopping as an enabler of better-informed decisions, mainly due to the integration of AI tools within digital platforms. These technologies, particularly voice-activated assistants, were frequently cited as facilitators of access to real-time shopping information:

> *"Yeah, you know, Google Assistant has helped me a lot… it will just direct me to that particular store where I should purchase from and provide me with all the useful information about the item such as availability and price…" (Participant 14)*

> *"So, I asked Google for assistance… It also helped me to know much about the supermarket where I buy things, the products they are having, the prices of the products that I want to buy …" (Participant 1)*

"I'll just ask Siri… and it gives me all the necessary and vital information which help me in making purchase planning and decision." (Participant 15)

This underscores the growing adoption of AI in African's e-commerce space corroborating with the findings of Malapane and Ndlovu (2022). These reflections underscore how voice-activated AI aids in locating stores, checking product availability, and comparing prices–key functionalities that support informed and confident shopping. This idea aligns with technology affordance, wherein users leverage digital capabilities to overcome contextual limitations (Majchrzak et al., 2016). In resource-scarce environments, such tools act as navigational aids for addressing infrastructural gaps (Mou et al., 2017; Mou & Cohen, 2017).

Building on the above perception, several participants emphasised the persuasive power of digital marketing content, which they described as influential in shaping their purchasing behavior:

"Sometimes I'm attached to ads which gives me different products they have. This helps me in my decision making and encourage me to compare among various options on offer, and purchase after finding the right product …" (Participant 15)

"My very first trial was a popped-up advert… it has gone far in influencing me…" (Participant 9)

"The pictures… it's attractive, engaging and influence my decision even in some cases when I don't really want to buy something …" (Participant 11)

These comments highlight how AI-enhanced interfaces simulate in-online shopping experiences by presenting tailored, visually compelling content and advert, which aligns with previous studies (Kumar et al., 2024; Wasilewski et al., 2025). Such algorithmic curation enhances brand engagement and nudges consumers toward purchasing decisions (Overmars & Poels, 2015). In markets where tactile interaction is often essential, image-rich online presentations help mitigate the absence of physical contact, strengthening consumer confidence (Overmars & Poels, 2015).

In addition to marketing appeal, access to a wide product range was commonly perceived as a significant advantage of online shopping. Participants described digital platforms as providing both variety and access to items not typically available in their immediate environment:

"It's a good one in terms of product variety, you have a range of brands to choose from even though it's the same product, they have varieties in attributes" (Participant 8)

"You'll be able to access the exact goods… maybe cosmetics…" (Participant 14)

"You know now everything is online, both Nigeria and other countries there is new technologies. Uhm, people can buy goods from anywhere and from other countries without making physical store visits." (Participant 4)

These remarks underscore the advantages of variety and the ability to transcend geographical limitations when shopping online. E-commerce thus acts as a gateway to global products otherwise unavailable locally, enhancing user satisfaction (Mou et al., 2017).

Furthermore, convenience emerged as a central motivator for using online grocery platforms. Many participants valued the ease of shopping without physical exertion, particularly in contexts with limited transportation or demanding lifestyles:

"For my convenience, online shopping is the best… you get it delivered to your door" (Participant 10)

"It is easy and convenient…You can always be at your comfort zone and order what you want" (Participant 8)

"One positivity is that it saves me stress and it's faster like you just place your orders, they get it sorted, they deliver … You're not burning fuel…" (Participant 13)

These accounts underscore the perceived value of time and energy savings, particularly when traditional shopping demands considerable effort resonating with previous studies (e.g., Voropanova, 2015; Xu et al., 2019; Caliskan and Ergun, 2025) which demonstrate that perceived benefits such as time savings, cost efficiency, and convenience positively shape customers' attitudes toward online shopping. These findings are consistent with existing literature highlighting perceived ease of use and efficiency as key drivers of e-commerce adoption (Venkatesh et al., 2012; Hossain & Biswa; 2024; Giang et al. 2025), and these factors take on added importance in contexts with limited infrastructure.

Despite these benefits, participants' responses also revealed concerns about delivery inefficiencies. Delays in fulfilment were seen as a significant drawback that sometimes negated the perceived convenience of e-commerce:

"Timeliness of delivery and quality assurance are not guaranteed, despite the high cost of delivery. With this I sometimes wish to have just walked into the store to get my groceries" (Participant 3)

"Delivery might take a while… unlike physical shopping where I go to pick what I want and I'm done …" (Participant 8)

"Platforms that you order things from might not deliver whatever you ordered very fast. What I ordered for and to be delivered around 3 o'clock was brought the next day. So how do you expect people to be encouraged using this new technology" (Participant 1)

These quotations reflect persistent logistical bottlenecks that undermine user trust. Despite the appeal of digital convenience, such inconsistent delivery erodes confidence and highlights institutional voids in last-mile fulfilment (Mogire, Kilbourn, & Luke, 2022). Thus, while digital optimism prevails, user adoption remains contingent on reliability. For some, the immediacy and certainty of physical retail still outweigh the uncertain efficiency of online platforms.

4.2 Socio-cultural and Institutional Challenges

One of the most persistent barriers to e-commerce adoption identified by participants was a deep mistrust in the reliability of online sellers and platforms. Concerns around scams, fake websites, product misrepresentation, and refund failures were widespread and often drawn from personal or vicarious experiences:

"So some will pay online. You may not know the person that you have paid to, the money will just go like that… because of scammers and because of the fraudulent acts of people… I, as a person, cannot put my trust on such people." (Participant 6)

"The common challenge that I have encountered is having to deal with fraud… I have had to deal with many fake websites… If you're not careful enough, there is proximity to being easily defrauded online." (Participant 3)

"Yes. What I mean by what you order versus what you get mean that what you saw online is it going to be different from what they deliver, or it is going to be the same." (Participant 8)

"Sometimes… you order for a different thing… sometimes it is usually a case of what I ordered against what I got. I have trust issues ordering online… Sometimes I paid for excellent quality… they delivered low quality." (Participant 3)

> *"After buying a product… the issue of refund… in most cases, they are not so willing to make the refund immediately… they tend to delay for up to 15 days… sometimes they will tell you… you cannot get your money back." (Participant 11)*

These accounts highlight a pervasive crisis of trust in African digital retail. Emotionally charged expressions, such as "the money will just go like that", underscore participants' vulnerability to fraud, echoing research linking perceived risk and mistrust to limited e-commerce uptake (Mou, Shin, & Cohen, 2017). The widely cited phrase "what I ordered versus what I got" encapsulates recurring dissatisfaction, pointing to systemic product assurance and customer service failures which directly corroborated with the findings of Akisanmi (2025) who found the negative effect of product mismatch (what I ordered versus what I got) on customer satisfaction and repurchase intention in Nigeria. Inadequate redress mechanisms and weak regulatory oversight intensify consumer scepticism, prompting a continued reliance on traditional, face-to-face retail for perceived security.

In addition to infrastructural and platform-related enablers, a significant constraint identified across the interviews was the limited digital literacy, particularly among less technologically experienced users. Many participants reported difficulties navigating online platforms or utilising fundamental e-commerce features such as checkout and payment processes:

> *"Nigerians do not have the knowledge to use it for shopping for groceries… So, I'll say knowledge gap, knowledge gap, knowledge gap. It's one of the main challenges." (Participant 9)*

> *"Some people don't even know how to use the apps or what to press. They just feel it's easier to go to the market directly." (Participant 6)*

> *"Sometimes I have issues with the whole online thing based on checkout and payment, so it's sometimes better for me to go the physical way." (Participant 7)*

Participants consistently attributed non-adoption to a deficit in digital skills, supporting prior studies that found low digital literacy and a skill gap as major impediments to the adoption of e-commerce among African consumers (Mthembu, et al., 2018; Chiutsi & Mafukidze, 2025; Dinath, 2025). Additionally, previous research also indicates that digital skills represent a form of capital that mediates access to technology (van Dijk & van Deursen, 2014; Rodríguez-Camacho et al., 2025). Without sufficient training or intuitive design, many consumers cannot effectively engage with digital platforms and consequently prefer traditional shopping.

Furthermore, education emerged as a key determinant of digital literacy and comfort with e-commerce. Several participants observed that online grocery shopping was typically limited to more educated or technologically aware users:

> *"Well, first one is the level of education. People that are not widely educated don't really use all these artificial intelligence and social media and online platforms." (Participant 7)*

> *"So it brings me to the place where I will say only elites use it here or the knowledgeable that these things can work." (Participant 9)*

These insights suggest that education influences digital competence, confidence, and trust in online systems. The perception of e-commerce as the preserve of the elite exacerbates digital exclusion and reinforces socio-economic divides (Van Deursen & Van Dijk, 2020). This idea highlights the need for inclusive design and digital literacy campaigns to broaden participation.

Beyond individual-level challenges, institutional shortcomings–particularly weak government regulation and enforcement–were also frequently identified as barriers to e-commerce adoption. These concerns shifted attention from personal limitations to systemic failures that compromise consumer trust:

> *"I've had issues where I made payments, and they told me they have not delivered because they have not received my payment… But guess what? This is the system we are in." (Participant 9)*

> *"There are cases of cloned sites, and you would think they are original website. So you get scammed when you put your card details on the platform. It is difficult to know whether they are real or not and there is no strong regulation here to get your money back." (Participant 2)*

Such comments reflect a perceived regulatory vacuum that undermines trust in digital commerce. Without enforceable consumer protections, platform errors and vendor malpractice often go unchecked. This situation reinforces prior findings that institutional voids, such as inadequate oversight, inhibit e-commerce penetration in Sub-Saharan Africa (Hendricks & Mwapwele, 2024). Strengthening regulatory frameworks is, therefore, critical to fostering user trust and scaling digital commerce in the region.

4.3 Strategies to maximise Ecommerce Benefits

4.3.1 Improving Digital Infrastructure and Education

Participants explained that both digital infrastructure–particularly electricity and internet access–and education are critical to unlocking the potential of e-commerce in emerging markets:

> *"For my own country, this electricity should be improved. Because without electricity, there is no way we can use all these smartphones… So, the government should make things easy for the masses, so that everybody will enjoy the technological aspect that they are bringing to us." (Participant 6)*

Others stressed the need for widespread public sensitisation to encourage behavioural change:

> *"Tell people that, ah, this shopping online is very, very okay… If people can erase the culture of going to the supermarkets physically, it's very, very okay." (Participant 1)*

> *"We need more enlightenment… Lagos is exposed. What about other cities? They need to be aware of the benefits of online shopping…" (Participant 16)*

> *"Our government should sensitise the masses. When we know the importance of online shopping and how government is working very hard to reduce fraudulent acts to encourage people to shop online, then people will dance to it" (Participant 6)*

> *"I will suggest that government create awareness on the benefits of online shopping and its sustainability such as reducing emissions." (Participant 9)*

The above quotes support the findings of Chiutsi and Mafukidze (2025) which highlight low digital literacy and technical skills in the adoption of e-commerce, subsequently in the integration of AI in Africa. These insights support arguments that infrastructure development must be coupled with digital literacy to achieve meaningful adoption (Molla & Licker, 2005). They also reflect TOE and EDM theories highlighting the importance of aligning technological solutions with existing social and cultural conditions (Trist, 1981). Integrated policy efforts targeting both infrastructure and education are thus essential to scale e-commerce adoption in traditionally offline communities.

Participants also underscored the urban-rural divide in access to digital commerce, emphasizing the need for technological inclusion beyond metropolitan centers:

> *"If this modern technology can try to penetrate into such villages and trying to teach and enlighten them on how to use e-commerce… not just we in the cities that need a soft life. Those in our villages need it as well…" (Participant 10).*

This concern reflects broader issues of digital inequality and echoes research showing that e-commerce infrastructure in developing economies is disproportionately concentrated in urban areas (Hilbert, 2011). The participant's appeal reflects an implicit understanding of distributive justice in technological diffusion. As Friederici, Ojanperä, and Graham (2017) argue, addressing such spatial disparities requires deliberate policy frameworks tailored to rural communities' infrastructural and economic realities.

In addition, participants advocated for strategic collaborations between government, private businesses, and infrastructure providers to address systemic barriers to e-commerce adoption:

> *"Shops [should] partner with government and let them try to see the benefits… Government to also kind of partner with these people to let them know that yes, online grocery shopping is possible." (Participant 9).*

> *"Maybe partner with network providers… so people will not have problems using their apps… and partner with delivery companies so it can be cheaper for delivery." (Participant 7).*

These views reflect an intuitive grasp of TOE and EDM, which highlight the interdependence of actors in generating and delivering value (Adner, 2017). Such partnerships align with Granstrand and Holgersson's (2020) notion of innovation ecosystem orchestration, where coordinated stakeholder collaboration helps overcome fragmented infrastructure. Nambisan and Baron (2013) further demonstrate that e-commerce success in emerging markets often hinges on aligning complementary services across the value chain. Strategic partnerships are pivotal in building cohesive and functional digital retail ecosystems.

Participants also identified technical complexity and weak customer support as key barriers, particularly for users with limited digital literacy or education:

> *"I think my contribution would be the sites; they should make it easy for payment" (Participant 2).*

> *"They can work better on their customer service… Most are not educated. Most are not familiar with it." (participant 8).*

These reflections align with the TOE Model, which identifies perceived ease of use as a critical factor influencing adoption (Davis, 1989; Venkatesh et al., 2003). The emphasis on improved customer support also resonates with Kore (2022) work on the need for accessible help and error recovery mechanisms in user-centred design. Enhancing inclusivity in emerging markets thus requires simplified interfaces and robust support systems to bridge digital skill gaps and facilitate user onboarding.

4.3.2 Strengthening Policy and Vendor Accountability

Participants identified weak regulation as a significant constraint that fosters fraud and undermines trust in online grocery shopping:

> *"So, in terms of regulation, maybe the government should find a way to see how they can regulate… online shopping is going to make a big difference." (Participant 11).*

This perspective reflects broader concerns about regulatory gaps in African digital commerce, where consumer protection laws often lack clarity or enforcement (OECD, 2016). TOE posits that strong regulatory structures enhance system legitimacy and promote market trust (Scott, 2013). While EDM states that effective enforcement mechanisms are therefore essential for ensuring transactional transparency, deterring malpractice, and building consumer confidence. Supporting this, McCole, Ramsey, and Williams (2010) found that perceived regulatory adequacy significantly shapes consumer willingness to transact online–particularly in environments marked by high uncertainty. Strengthening policy and vendor accountability is thus pivotal to the sustainable growth of e-commerce in emerging markets.

Building on concerns about weak regulation and vendor accountability, participants expressed frustration over discrepancies between advertised products and those delivered, reflecting a persistent trust gap in online marketplaces:

> *"Online sellers… should just try to… stand by their word to always deliver good quality goods" (Participant 3).*

> *"If this is what they advertise, let it be that… If you request for A and they bring A… everybody will be happy" (Participant 5).*

> *"They should not give us fake items… They can advertise this thing now… but they can do the opposite" (Participant 6).*

These concerns underscore the importance of consistency between product representation and delivery, a critical driver of trust and satisfaction in digital commerce (Kim, Ferrin, & Rao, 2008). Trust mediates the relationship between information quality and purchase intention, particularly in contexts lacking physical product verification. Gefen, Karahanna, and Straub (2003) further highlight the role of vendor integrity in shaping consumer trust. Without mechanisms to enforce accurate product listings and fulfilment, users–especially in emerging markets–may disengage following negative early experiences, impeding long-term adoption.

In addition, participants raised concerns about inadequate or frustrating refund mechanisms, citing delays and inefficiencies as significant deterrents to continued platform use:

> *"If it's a process of getting a refund, you get a refund… it provides customer satisfaction" (Participant 10).*

> *"Try to refund me and all of that… it's very tasking and at times annoying" (Participant 15).*

These accounts reflect broader issues of post-purchase service failure. Research shows reliable refund processes are closely linked to repeat purchase behaviour and platform loyalty (Holloway & Beatty, 2003). Service recovery effectiveness–including the ease of obtaining refunds–also plays a critical role in shaping customer satisfaction and word-of-mouth behaviour (Tax, Brown, & Chandrashekaran, 1998). Refund policies remain informal and inconsistently enforced in many emerging markets, fuelling customer frustration. Collier and Bienstock (2006) further argue that recovery quality may outweigh initial service performance in influencing long-term loyalty, underscoring the need for efficient and trustworthy refund systems in digital retail.

Participants also cited poor delivery reliability, substandard product quality, and infrastructure issues as major deterrents:

> *"If they can improve on so many things… like the issue of home delivery" (Participant 1).*

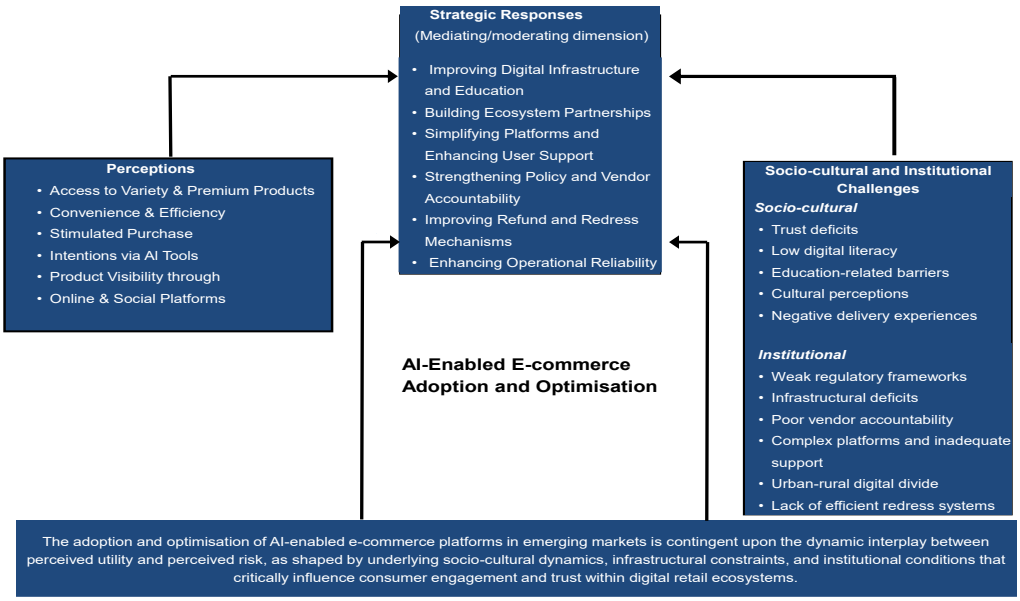
> *"Don't put expired items online or to be delivered" (Participant 10),*

> *"They should improve on their Wi-Fi services and internet connectivity" (Participant 12).*

These concerns reflect expectations for operational reliability in digital retail. Timely delivery and product integrity are essential to customer satisfaction and platform credibility. Fulfilment reliability is a core component of e-service quality that directly influences retention and loyalty (Parasuraman, Zeithaml, & Malhotra, 2005; Grewal et al., 2011). Bonifield, Cole, and Schultz (2010) further show that delivery performance affects transaction-level satisfaction and shapes broader perceptions of the digital channel. Meeting realistic delivery expectations is crucial for building lasting consumer trust in emerging markets with limited logistics infrastructure.

This section reveals the complex interplay between consumer perceptions, structural barriers, and adaptive strategies shaping online grocery shopping in Lagos, Nigeria. While participants largely viewed e-commerce positively–citing convenience, product variety, and AI-enabled informational support–trust deficits, digital illiteracy, weak regulation, and logistical shortcomings tempered these benefits. Nevertheless, participants exhibited agency by leveraging digital tools, calling for infrastructural and policy reforms, and proposing multi-stakeholder partnerships. These findings underscore the duality of e-commerce adoption in emerging markets, where optimism about digital convenience coexists with persistent systemic constraints, as illustrated in Figure 3.

Figure 3: A visual representation of the relationship between the key concepts.



Source: Authors' own work

5. Discussion and Conclusion

This study examined the adoption of online grocery platforms in Lagos, Nigeria, revealing the interplay between consumer perceptions, socio-cultural barriers, and adaptive strategies in a developing digital economy. Based on interviews with 16 participants, the findings highlight how AI tools and e-commerce platforms reshape retail experiences while institutional voids impede widespread uptake. These dynamics create a hybrid adoption landscape where digital enthusiasm coexists with strategic caution. Using the Gioia's methodology and thematic analysis, we identified three aggregate dimensions–consumer perceptions, socio-cultural and institutional challenges, and strategies for maximising e-commerce benefits–that collectively capture the complexities of technology adoption in resource-constrained contexts.

The findings further demonstrate how consumers respond to institutional shortcomings through adaptive behaviors and the creative appropriation of technology. Tools such as Google Assistant and Siri enabled participants to reduce information asymmetries by locating stores, checking product availability, and comparing prices–underscoring the relevance of technology affordance theory (Majchrzak et al., 2016). Participants also advocated for cross-sector collaboration, regulatory reforms, and inclusive infrastructure, reflecting a tacit grasp of TOE and EDM theories (Adner, 2017), where coordinated stakeholder engagement is critical to overcoming systemic fragmentation. These insights suggest that e-commerce adoption is a socio-technical process shaped as much by contextual adaptation as technological availability.

A recurring theme in the data is the tension between digital optimism and scepticism. While participants embraced AI-driven advertising and visual content, they simultaneously voiced concerns about fraud, misrepresented products, and unreliable refund mechanisms. Supporting these findings, Malapane and Ndlovu (2022) emphasised challenges such as privacy risk, fraud and lack of robust framework facing the adoption of AI in African's e-commerce environment. This duality extends existing technology acceptance models (Venkatesh et al., 2012), showing that adoption in emerging markets depends on perceived utility and socio-cultural perceptions of risk. Weak regulatory oversight contributes to a trust crisis, mirroring the institutional voids described by Khanna and Palepu (2010). Furthermore, the call to extend digital infrastructure beyond urban centres reflects concerns about distributive justice in technological diffusion (Friederici, Ojanperä, & Graham, 2017). These findings reinforce the need for context-specific frameworks that account for the institutional and socio-cultural dimensions of technology engagement in developing economies.

Our findings are applicable to other African countries, especially those within the sub-Saharan region due to similarities in their levels of e-commerce adoption, infrastructural development, customers' awareness, increasing use of mobile device, growth in internet penetration and the development of 5G (Shahid, 2023). Like Nigeria, most African countries also face similar digital challenges and institutional voids such as limited digital infrastructure, constrained consumer trust, and inadequate regulatory frameworks which hinder widespread e-commerce adoption (Shahid, 2023; Anning-Dorson, 2025). Although being the most populous country in Africa, understanding how institutional voids impact e-commerce adoption in Nigeria provides the much-needed insight into the bigger picture in the continent's wide retailing landscape (Amofah & Chai, 2022). Yet, applicability of our findings could be limited in some countries such as South Africa and Egypt which have more developed economy, effective regulatory frameworks and more structured systems compared to Nigeria, Ghana and Mozambique.

5.1. Theoretical Contributions

This study offers important theoretical contributions to the literature on e-commerce adoption in emerging markets. First, the study contributes to technology acceptance literature by situating perceived usefulness, ease of use, and trust within a socio-cultural context. In Lagos State, acceptance is influenced by factors such as preferences for tactile product assessment, fears of digital fraud, and educational disparities. While models like TAM (Davis, 1989) and UTAUT (Venkatesh et al., 2003) provide generalisable frameworks, our findings suggest that context-specific affordances and constraints shape adoption. Perceived usefulness, for instance, is tied to practical benefits such as avoiding traffic and saving time, while ease of use is constrained by unreliable infrastructure. Trust is a multidimensional construct shaped by community narratives and cultural norms around e-commerce. These insights call for a more contextually grounded and culturally attuned approach to modelling technology acceptance in emerging markets.

However, the integrated theories play a context specific role in the study. They shape our interpretation of online groceries shopping experiences of the Nigerian consumers. The TOE helps us to link the institutional environment with infrastructural gaps and regulatory weaknesses which combine to hinder e-commerce adoption (Mkansi & Nsakanda, 2025). The consumer decision making framework underscores how Nigerian online shoppers consider convenience and product variety over fraud risks and delivery failure. Yet, the EDM shows how unmet expectations lead to mistrust and dissatisfaction. The theoretical integration of these

models in the African context has shaped both our understanding of the constraints to e-commerce adoption, especially in Africa and enabled the explanatory reach of established models (Khanna & Palepu, 2010; Friederici et al., 2017).

5.2. Managerial Implications

These findings yield practical implications for e-commerce platforms, retailers, and policymakers aiming to strengthen digital retail adoption in African markets. First, platforms must prioritise trust-building measures tailored to local consumer concerns. This is linked to the frequent reference to "what I ordered versus what I got" (Participants 3, 8), which underscores the need for accuracy in product presentation and procurement. Hence, it is suggested that retailers or vendors should prioritise transparent product listings, as quality assurance protocols are critical to addressing recurring issues such as product misrepresentation and discrepancies (Helm *et al.,* 2020). Specifically, retailers can implement strategies such as verified product badges, multimedia product displays and seller reliability trust to build confidence in the system.

Second, strategies that prioritise transparent and efficient refund and return policies are crucial, due to the recurrent issues regarding "delay payment refunds and difficulty in returning substandard items highlighted by participants" (Participant 9; Participant 2; Participant 11). It is recommended that platforms or retailers implement transparent and customer-friendly return and refund policies, inclusive of a standard window, such as 7 to 14 days, for the lodging of complaints related to unsatisfactory products. Implementing practicable timelines and easy processes could assist in addressing consumer dissatisfaction and enhance trust in e-commerce platforms.

Third, given participants' reliance on AI tools (*Participant 14, 1, 15, 9*), integrating decision-support technologies, such as AI-driven voice assistants, comparison features and personalised recommendations, may further enhance user confidence. The relevance of AI innovation extends beyond Nigeria to other emerging markets, where growing adoption and acceptance of A-driven platforms by customers is gaining high momentum. In addition, participant highlights weak internet connectivity, and infrastructures as barriers to e-commerce (*Participant 12, 10*). This captures wider context extending beyond Lagos State to other African countries where fragile logistic networks, limited internet access and weak consumer protection laws can hinder e-commerce adoption (Mthembu, et al., 2018; Anya, et al., 2025). Hence, strengthening both

technological and economic infrastructures is recommended. Importantly, cross-sector collaboration is essential to address regulatory and infrastructural gaps. Participants' calls for partnerships between governments, network providers, and logistics firms highlight the importance of ecosystem coordination (see *Participant 9, 7*). Platforms should engage regulatory bodies to strengthen fraud protections and co-develop frameworks that reinforce consumer rights. Concurrently, investment in last-mile delivery and simplified user interfaces–with accessible customer support–would help mitigate digital literacy barriers that hinder broader adoption.

In addition, digital inclusion strategies should prioritise education and outreach. The perception of e-commerce as exclusive to elites suggests a need for targeted communication and enlightenment campaign that resonates across socioeconomic groups. Awareness campaigns and simplified onboarding processes can help demystify digital retail, while extending access to rural areas would address concerns about geographic inequality. These efforts, collectively, can support the development of a more inclusive, trusted, and accessible digital commerce ecosystem in Africa.

5.3 Policy Implications

Finally, for policymakers in Nigeria, and across Africa, our findings emphasise the need for supportive digital literacy programs in education institutions and equitable infrastructural development across all regions in Africa, including the rural communities (*See Participants, 16, 6, 9*). More importantly, governments and other regulatory bodies need to implement and strengthen existing institutional frameworks for protecting consumers against product discrepancy, delivery delay, expired items and refund difficulty which are highly prevalent and serve as major institutional void in Nigeria, and Africa. This is supported by extant studies that call for bridging digital literacy gaps and strengthening of regulatory framework regarding privacy, data security, and risk (Malapane & Ndlovu, 2022; Chiutsi & Mafukidze 2025).

5.4. Limitations and Future Research Directions

Although this study offers important insights into e-commerce adoption in Lagos, some limitations warrant acknowledgement. First, the sample primarily comprised educated urban users with prior experience with online grocery platforms, which may limit the applicability of findings to less digitally engaged or rural populations. Future research should include non-

users and rural consumers to capture a broader spectrum of adoption barriers. Second, while the sample size 16 met qualitative standards and achieved theoretical saturation, mixed-method studies with larger datasets could improve generalisability across African markets.

Future research could extend this work in several directions. Longitudinal studies are needed to track how perceptions and behaviours evolve in response to shifting technological and institutional conditions. Comparative research across African cities would clarify how cultural, economic, and infrastructural factors influence adoption trajectories. In-depth analyses of specific institutional voids–such as regulatory enforcement, logistics, and payment systems–could yield more targeted policy recommendations. Additionally, examining the influence of community networks and collective narratives on digital retail adoption would deepen understanding of how social context shapes technology uptake in communally oriented societies. Together, these directions would advance theory and inform practical strategies for fostering inclusive digital economies in emerging markets.

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