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## **ORDER FULFILLMENT AND CUSTOMER RETENTION OF E-TAIL OUTLETS IN YENAGOA, BAYELSA STATE, NIGERIA**

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### **Abstract**

The growth of electronic retailing has intensified competition among online retailers, making effective order fulfillment an essential factor for sustaining customer relationships. This study examined the relationship between order fulfillment and customer retention among e-tail outlets in Yenagoa, Bayelsa State, Nigeria. Specifically, the study investigated how order accuracy and delivery timeliness influence customer satisfaction and repeat purchase behavior. The study adopted a cross-sectional research design and utilized a structured questionnaire to collect primary data from customers of selected e-tail outlets. Using the Taro Yamane formula, a sample size of 400 respondents was determined, while 110 valid responses were used for the final analysis. Data were analyzed using descriptive statistics and Spearman's rank-order correlation coefficient with the aid of SPSS version 25. The findings revealed that order accuracy has a strong and significant relationship with customer satisfaction ( $r = 0.814$ ,  $p < 0.01$ ) and a significant relationship with repeat purchase ( $r = 0.574$ ,  $p < 0.01$ ). The results also showed that delivery timeliness has a very strong and significant relationship with customer satisfaction ( $r = 0.961$ ,  $p < 0.01$ ) and repeat purchase behavior ( $r = 0.931$ ,  $p < 0.01$ ). These findings indicate that efficient order fulfillment practices play a critical role in enhancing customer satisfaction and encouraging repeat patronage among e-tail customers. The study concludes that order fulfillment dimensions, particularly order accuracy and delivery timeliness, significantly influence customer retention in e-tail operations. It therefore recommends that e-tail outlets invest in improved inventory management systems, reliable delivery networks, and effective logistics coordination to enhance service efficiency and customer loyalty.

### **Keywords:**

*Order fulfillment, order accuracy, delivery timeliness, customer satisfaction, repeat purchase, e-tail outlets, customer retention*

### **INTRODUCTION**

The rapid advancement of digital technologies and internet connectivity has significantly transformed consumer shopping behavior globally. Consumers are increasingly shifting from

traditional brick-and-mortar retail channels to digital platforms that offer convenience, accessibility, and a wide range of product options. This shift has accelerated the growth of electronic retailing, commonly referred to as e-tailing. E-tail outlets are online retail platforms that facilitate the sale of goods and services through digital channels such as websites and mobile applications (Turban, Pollard, & Wood, 2021). In Nigeria, the expansion of digital infrastructure and the increasing use of smartphones have stimulated the growth of e-commerce activities. Yenagoa, the capital city of Bayelsa State, has experienced a gradual but significant emergence of e-tail outlets serving different consumer needs across sectors such as fashion, electronics, groceries, cosmetics, and household items. These platforms allow consumers to shop conveniently from their homes or offices at any time without the limitations associated with traditional retail stores (Bashir & Alvi, 2019; Laudon & Traver, 2022).

One of the major advantages of e-tailing is its ability to provide customers with a broad assortment of products through extensive digital inventories. Unlike conventional retail stores that are constrained by physical shelf space, online retailers can offer a wider range of products and competitive prices due to relatively lower operational costs (Huang & Benyoucef, 2020). Consequently, consumers are increasingly attracted to online retail platforms that provide convenience, flexibility, and improved purchasing experiences. Despite these advantages, the long-term success of e-tail outlets depends largely on their ability to retain customers. Customer retention refers to the strategic efforts undertaken by organizations to maintain long-term relationships with existing customers and encourage repeat patronage (Kotler, Keller, & Chernev, 2022). Retaining customers is particularly important because loyal customers are more likely to make repeat purchases, recommend the brand to others, and contribute to sustainable organizational growth (Buttle & Maklan, 2019).

In the digital marketplace, order fulfillment plays a critical role in shaping customer experiences and influencing retention behavior. Order fulfillment involves the processes associated with receiving, processing, packaging, and delivering customer orders efficiently and accurately (Wisner, Tan, & Leong, 2022). Effective order fulfillment ensures that customers receive the correct products in the expected condition and within the promised delivery timeframe. Scholars have identified several key indicators of order fulfillment performance, including order accuracy, order cycle time, delivery reliability, and inventory management efficiency (Ramanathan, Subramanian, & Parrott, 2019). Among these indicators, order accuracy and delivery timeliness are particularly important because they directly influence customer satisfaction and purchasing behavior in online retail environments. Although numerous studies have examined customer retention strategies and supply chain performance, limited empirical research has explored the relationship between order fulfillment practices and customer retention within the e-tail sector in Nigeria. This study therefore investigates how order fulfillment practices influence customer retention among e-tail outlets in Yenagoa, Bayelsa State.

### **Statement of the Problem**

E-tail outlets perform various operational activities to facilitate online transactions and deliver value to customers. These activities include sourcing products, managing inventory, designing

product listings, implementing pricing strategies, and coordinating delivery logistics. Effective management of these activities is essential for ensuring positive customer experiences and sustaining competitive advantage in the digital marketplace (Cachon & Terwiesch, 2019). Despite the growing adoption of e-commerce platforms, many e-tail outlets still face challenges in retaining customers. Issues such as delayed deliveries, inaccurate orders, poor packaging, and inadequate customer service often negatively affect customer satisfaction and reduce the likelihood of repeat purchases (Ramanathan et al., 2019; Hübner, Holzapfel, & Kuhn, 2020). Customer retention is particularly critical in the e-commerce industry because online consumers can easily switch between competing platforms. Consequently, inefficient order fulfillment processes may lead to customer dissatisfaction, reduced loyalty, and declining business performance.

Although previous studies have examined customer retention and supply chain efficiency separately, limited research has investigated how specific order fulfillment dimensions influence customer retention within the context of e-tail outlets in Yenagoa, Bayelsa State. This gap in the literature highlights the need to examine the influence of order accuracy and delivery timeliness on customer satisfaction and repeat purchase behavior.

### **Objectives of the Study**

The main objective of this study is to examine the relationship between order fulfillment and customer retention of e-tail outlets in Yenagoa, Bayelsa State. The specific objectives are to:

1. Examine the relationship between order accuracy and customer satisfaction.
2. Determine the relationship between order accuracy and repeat purchase behavior.
3. Evaluate the relationship between delivery timeliness and customer satisfaction.
4. Ascertain the relationship between delivery timeliness and repeat purchase behavior.

### **Research Questions**

The study seeks to answer the following research questions:

1. What is the relationship between order accuracy and customer satisfaction?
2. What is the relationship between order accuracy and repeat purchase behavior?
3. What is the relationship between delivery timeliness and repeat purchase behavior?
4. What is the relationship between delivery timeliness and customer satisfaction?

### **Research Hypotheses**

H<sub>01</sub>: There is no significant relationship between order accuracy and customer satisfaction.

H<sub>02</sub>: There is no significant relationship between order accuracy and repeat purchase.

H<sub>03</sub>: There is no significant relationship between delivery timeliness and repeat purchase.

H<sub>04</sub>: There is no significant relationship between delivery timeliness and customer satisfaction.

### Significance of the Study

This study provides useful insights for e-commerce managers, entrepreneurs, and policymakers in Bayelsa State and Nigeria at large. The findings will help e-tail outlet operators understand how efficient order fulfillment practices influence customer satisfaction and retention. The study also contributes to academic literature by expanding knowledge on the relationship between logistics performance and customer retention within the context of emerging digital markets.

### Scope of the Study

The study focuses on e-tail outlets operating within Yenagoa, Bayelsa State, Nigeria. It examines the relationship between order fulfillment practices and customer retention indicators among customers who have made at least one purchase from these e-tail outlets within the past year. Data are collected from both customers and managers to provide a comprehensive understanding of how order fulfillment influences customer retention.

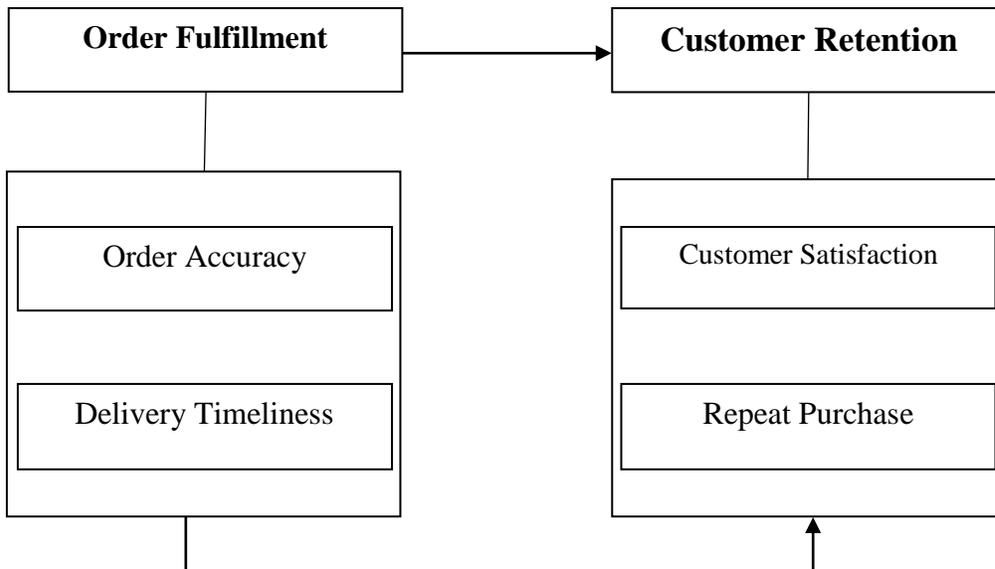
### Conceptual Framework

**Independent Variable:** Order Fulfillment

- Order Accuracy
- Delivery Timeliness

**Dependent Variable:** Customer Retention

- Customer Satisfaction
- Repeat Purchase



**Source:** Wisner et al., 2022; Centobelli et al., 2022; Kawa & Maryniak, 2024; Li et al., 2023; Ahmad et al., 2023; Zeithaml et al., 2020

The framework suggests that effective order fulfillment processes improve customer satisfaction and encourage repeat purchase behavior, which ultimately strengthens customer retention among e-tail outlets.

## **THEORETICAL FRAMEWORK AND LITERATURE REVIEW**

The study is anchored on the **Expectation Confirmation Theory (ECT)** developed by **Richard L. Oliver (1980)**. The theory explains how customers evaluate products or services by comparing their prior expectations with the actual performance experienced after consumption. When the perceived performance meets or exceeds expectations, customers experience satisfaction, which increases their likelihood of repeat patronage.

### **Concept of Order Fulfillment**

Order fulfillment is a critical operational function in electronic retailing that involves receiving, processing, packaging, and delivering customer orders through coordinated supply chain activities. In the context of e-commerce, order fulfillment determines how efficiently customer expectations regarding delivery time, product accuracy, and service quality are met. Efficient fulfillment processes enable firms to deliver the right products in the right quantity and condition within the promised timeframe, thereby improving service reliability and operational performance (Wisner et al., 2022). According to Hübner et al. (2021), effective order fulfillment systems are essential for maintaining customer trust and ensuring a positive online shopping experience. Recent studies emphasize that order fulfillment has become a central determinant of competitiveness in the e-commerce environment. As online retail continues to expand globally, customers increasingly expect faster delivery options, accurate order processing, and flexible return policies (Vakulenko et al., 2021; Li et al., 2023). These expectations have compelled e-commerce firms to optimize logistics operations and adopt advanced technologies such as automated warehouses, real-time tracking systems, and predictive analytics to improve order processing and delivery efficiency (Centobelli et al., 2022). Similarly, Dubey et al. (2021) argue that digital technologies and data-driven logistics systems have significantly improved supply chain coordination and operational efficiency in modern e-commerce environments.

Furthermore, advancements in data-driven logistics and inventory allocation systems have significantly improved fulfillment efficiency in modern e-commerce supply chains. Studies show that optimizing inventory placement and fulfillment networks enhances order satisfaction rates and reduces delivery delays, thereby improving overall customer experience (Kawa & Maryniak, 2024; Li et al., 2023). In addition, contemporary fulfillment systems are increasingly integrated with digital technologies to support faster processing and improved accuracy. Automation and digital tracking systems allow retailers to monitor order status in real time, improve coordination between warehouses and delivery channels, and reduce operational errors (Centobelli et al., 2022). Research by Ahmad et al. (2023) further indicates that faster fulfillment processes, improved tracking capabilities, and efficient communication systems significantly enhance customer satisfaction with online purchases. These developments highlight the importance of

efficient order fulfillment in ensuring reliable service delivery and sustaining long-term relationships with online customers.

## **Dimensions of Order Fulfillment**

### **Order Accuracy**

Order accuracy refers to the ability of an e-commerce retailer to deliver the correct product, quantity, and specifications that match the customer's order. Accurate order processing is essential because mistakes in product selection, packaging, or delivery can negatively affect customer satisfaction and increase product return rates (Ramanathan et al., 2019). Scholars have identified order accuracy as one of the most critical determinants of logistics performance in online retail operations (Li et al., 2023). When customers receive the exact products they ordered without errors, their confidence in the retailer increases, which strengthens their willingness to continue purchasing from the platform (Vakulenko et al., 2021). Conversely, inaccurate orders often lead to complaints, product returns, and negative word-of-mouth communication, which can damage the reputation of the retailer and reduce customer loyalty (Ahmad et al., 2023). Empirical studies on online retail logistics further demonstrate that high order accuracy improves service reliability and reduces operational costs associated with reverse logistics (Hübner et al., 2020).

Efficient order processing systems that minimize human errors through automation and inventory management technologies significantly improve order fulfillment performance and enhance customer trust in online retailers (Centobelli et al., 2022). Similarly, Kawa and Maryniak (2024) argue that improved order accuracy not only enhances operational efficiency but also strengthens customer satisfaction and repeat purchase intentions.

### **Delivery Timeliness**

Delivery timeliness refers to the extent to which products are delivered within the promised timeframe. Timely delivery is an essential element of logistics service quality because it directly affects customer perceptions of reliability and efficiency (Vakulenko et al., 2021). In the highly competitive e-commerce environment, consumers increasingly expect fast and reliable delivery services that meet their expectations. Studies reveal that many online shoppers consider delivery speed to be one of the most important factors influencing their purchase decisions (Ahmad et al., 2023). When deliveries are delayed or inconsistent, customers are less likely to make repeat purchases from the same retailer. According to Li et al. (2023), delivery delays negatively affect customer satisfaction and reduce customers' willingness to maintain long-term relationships with online retailers. Recent research on e-commerce logistics indicates that timely delivery enhances customer satisfaction and strengthens long-term relationships between retailers and customers (Kawa & Maryniak, 2024). Efficient coordination between warehouses, fulfillment centers, and logistics providers enables retailers to meet delivery deadlines and improve service quality (Hübner et al., 2021). Moreover, advanced logistics optimization models have been developed to address delivery uncertainty by improving courier selection and shipment routing. These systems

help retailers reduce delivery delays and improve the accuracy of promised delivery dates, thereby enhancing customer trust and satisfaction (Dubey et al., 2021).

## **Concept of Customer Retention**

Customer retention refers to the ability of a firm to maintain long-term relationships with its existing customers by encouraging repeat purchases and continuous engagement with the brand. In the e-commerce environment, customer retention is particularly important because customers can easily switch between competing online platforms (Li et al., 2023). According to Zeithaml et al. (2020), retaining existing customers is often more cost-effective than acquiring new ones, making customer retention a key strategic objective for many organizations. Customer retention is often influenced by the quality of service delivered throughout the customer journey, including order processing, delivery, and after-sales service. When customers experience efficient service delivery and consistent product quality, they are more likely to develop trust and loyalty toward the retailer (Ahmad et al., 2023). Research on online shopping behavior indicates that customer satisfaction with e-service quality significantly influences repeat purchasing intentions and customer loyalty (Ramanathan et al., 2019).

Customers who are satisfied with their shopping experiences are more likely to continue patronizing the same online store and recommend it to others (Li et al., 2023). Furthermore, reliable fulfillment services play a major role in strengthening customer retention in e-commerce (Vakulenko et al., 2021). Efficient logistics operations ensure that customers receive their orders without delays or errors, which increases their confidence in the retailer and encourages repeat transactions (Kawa & Maryniak, 2024).

## **Measures of Customer Retention**

### **Customer Satisfaction**

Customer satisfaction refers to the extent to which customers perceive that a product or service meets or exceeds their expectations. In e-commerce, satisfaction is influenced by several factors including website usability, product quality, order fulfillment efficiency, and delivery reliability (Zeithaml et al., 2020). When these elements are effectively managed, customers tend to perceive higher service value and overall shopping satisfaction. Studies show that logistics service quality is a major determinant of customer satisfaction in online retailing (Ramanathan et al., 2019). When delivery services are reliable, products arrive on time, and order processing is accurate, customers tend to report higher levels of satisfaction with the online shopping experience (Ahmad et al., 2023). Customer satisfaction also plays a mediating role between service quality and customer loyalty. Satisfied customers are more likely to recommend the retailer to others and maintain long-term relationships with the brand (Li et al., 2023).

## Repeat Purchase

Repeat purchase refers to the tendency of customers to buy from the same retailer multiple times over a period of time. In the e-commerce environment, repeat purchase behavior is considered one of the most important indicators of customer retention (Ahmad et al., 2023). Customers who repeatedly purchase from the same retailer demonstrate a higher level of loyalty and trust in the brand. Research shows that delivery problems significantly reduce the likelihood of repeat purchases. Surveys indicate that a large proportion of online shoppers experience delivery challenges such as late shipments or missing items, which discourages them from buying again from the same retailer (Kawa & Maryniak, 2024). Conversely, when order fulfillment processes are reliable and efficient, customers are more likely to return to the same platform for future purchases (Vakulenko et al., 2021). Reliable delivery performance therefore plays a crucial role in developing long-term customer loyalty in online retail markets (Li et al., 2023).

## Empirical Review

Several empirical studies have examined the influence of logistics performance and order fulfillment processes on customer satisfaction and retention in e-commerce environments. These studies consistently demonstrate that efficient order fulfillment practices play a significant role in shaping customer perceptions and loyalty toward online retailers.

For instance, Ramanathan, Subramanian, and Parrott (2019) investigated the impact of logistics service quality on online customer satisfaction and found that delivery reliability and order accuracy significantly influence consumers' evaluation of e-commerce services. Their findings indicate that customers are more likely to develop trust and loyalty toward online retailers when orders are delivered accurately and within the promised timeframe.

Similarly, Hübner, Holzapfel, and Kuhn (2020) examined last-mile logistics in e-commerce operations and found that delivery speed and reliability are critical determinants of customer satisfaction and repeat purchase intentions. The study emphasized that efficient last-mile delivery systems enable online retailers to meet customer expectations and maintain competitive advantage in the digital marketplace.

In another related study, Vakulenko, Hellström, and Hjort (2021) explored the role of delivery service innovations in online retailing and found that flexible delivery options, accurate order processing, and timely delivery significantly enhance customer experience and increase the likelihood of repeat purchases. Their study suggests that improvements in logistics service quality contribute positively to long-term customer retention.

Furthermore, Hübner, Kuhn, and Wollenburg (2021) examined logistics service quality in omni-channel retailing and reported that order fulfillment efficiency, particularly delivery reliability and product availability, has a significant positive effect on customer satisfaction and loyalty. Their findings highlight the importance of integrating efficient logistics systems with digital retail platforms to improve overall service performance.

Laudon and Traver (2022) also observed that customer retention in e-commerce is highly dependent on the reliability of order fulfillment systems. According to their findings, customers who experience delayed deliveries or incorrect orders often switch to competing online platforms, whereas consistent fulfillment performance strengthens customer trust and long-term engagement with online retailers.

Similarly, Wisner, Tan, and Leong (2022) emphasized that effective supply chain coordination and order fulfillment management significantly improve customer service outcomes. Their research shows that organizations that implement efficient order processing and delivery systems are better positioned to achieve higher levels of customer satisfaction and repeat patronage.

More recent studies have continued to confirm the strong relationship between logistics performance and customer retention. For example, Ahmad, Nawi, and Rahman (2023) examined e-service quality and customer loyalty in online retailing and found that delivery reliability, order accuracy, and service responsiveness significantly influence customer satisfaction and repeat purchase behavior.

In another empirical investigation, Li, Wang, and Liu (2023) analyzed logistics service quality in online retail platforms and found that timely delivery and accurate order fulfillment significantly increase customer trust and satisfaction. Their study concluded that efficient logistics performance is a critical factor influencing customer retention in digital marketplaces.

Additionally, Kawa and Maryniak (2024) studied e-commerce logistics performance and reported that firms that invest in advanced fulfillment technologies and efficient delivery systems achieve higher customer satisfaction and loyalty. Their findings suggest that improvements in order fulfillment processes can significantly enhance customer retention and business sustainability.

Collectively, these empirical studies demonstrate that order fulfillment practices such as order accuracy and delivery timeliness play a crucial role in shaping customer experiences in online retail environments. Efficient fulfillment systems reduce service failures, improve customer satisfaction, and encourage repeat purchase behavior. However, most of these studies have been conducted in developed economies or large global e-commerce markets. Limited empirical research has examined the relationship between order fulfillment and customer retention within the context of emerging markets such as Nigeria. Therefore, this study seeks to fill this gap by investigating the relationship between order fulfillment and customer retention among e-tail outlets in Yenagoa, Bayelsa State.

## **Hypotheses Development**

### **Order Accuracy and Customer Satisfaction**

Order accuracy refers to the extent to which customers receive the exact products they ordered in terms of specifications, quantity, and quality. In e-commerce environments, accurate order processing is essential for maintaining customer confidence and satisfaction because customers

rely heavily on digital information when making purchasing decisions. When customers receive the correct products as ordered, their expectations are fulfilled, thereby improving their overall shopping experience. Recent empirical studies emphasize that order accuracy is a major determinant of logistics service quality in online retailing. Ramanathan, Subramanian, and Parrott (2019) found that accurate order processing significantly improves customer satisfaction because it reduces complaints and product return rates. Similarly, Hübner, Holzapfel, and Kuhn (2020) reported that order accuracy enhances service reliability and strengthens customers' perceptions of operational efficiency in e-commerce businesses. Furthermore, studies by Ahmad, Nawi, and Rahman (2023) show that accurate order fulfillment contributes positively to customer satisfaction because customers value reliability and consistency in online transactions. When e-tailers consistently deliver the correct products, customers develop trust in the retailer's service capabilities, which leads to higher satisfaction levels. Based on the foregoing empirical evidence, the following hypothesis is proposed:

$H_{01}$ : Order accuracy has a significant relationship with customer satisfaction among e-tail outlets in Yenagoa, Bayelsa State.

### **Order Accuracy and Repeat Purchase**

Repeat purchase behavior represents the willingness of customers to continue buying from the same retailer after previous purchase experiences. In online retail environments, customers often evaluate their previous transactions before deciding whether to patronize the same retailer again.

Order accuracy plays a significant role in shaping repeat purchase behavior because inaccurate deliveries often result in dissatisfaction and inconvenience for customers. When customers consistently receive the correct products without errors, their trust in the retailer increases and they are more likely to engage in future transactions. Empirical research supports this relationship. Vakulenko, Hellström, and Hjort (2021) found that accurate order processing significantly increases customer loyalty and repeat purchase intentions in online retail platforms. Similarly, Li, Wang, and Liu (2023) observed that order accuracy improves customer trust and encourages repeated patronage of online stores. In addition, studies on e-commerce logistics performance indicate that customers who experience reliable order fulfillment are more likely to remain loyal to the retailer and continue purchasing from the same platform (Kawa & Maryniak, 2024). Therefore, order accuracy is expected to positively influence repeat purchase behavior among online shoppers. Based on these empirical findings, the following hypothesis is formulated:

$H_{02}$ : Order accuracy has a significant relationship with repeat purchase among e-tail outlets in Yenagoa, Bayelsa State.

### **Delivery Timeliness and Customer Satisfaction**

Delivery timeliness refers to the ability of an e-commerce retailer to deliver customer orders within the promised timeframe. Timely delivery is a critical component of logistics service

quality because it reflects the reliability and efficiency of the retailer's fulfillment system. In the digital retail environment, customers often expect faster and predictable delivery services. When deliveries arrive as scheduled, customers are more likely to perceive the service as reliable and satisfactory. Conversely, delayed deliveries often result in frustration and dissatisfaction among customers. Several empirical studies have established the importance of timely delivery in enhancing customer satisfaction. Hübner, Kuhn, and Wollenburg (2021) found that delivery reliability and speed significantly improve customer satisfaction in online retail operations. Similarly, Wisner, Tan, and Leong (2022) emphasized that timely delivery enhances service quality perceptions and strengthens customer relationships. More recent research by Ahmad et al. (2023) further confirms that delivery timeliness is a significant predictor of customer satisfaction in e-commerce transactions. Their findings show that customers are more satisfied when retailers consistently meet delivery expectations. Based on the above evidence, the following hypothesis is proposed:

$H_{03}$ : Delivery timeliness has a significant relationship with customer satisfaction among e-tail outlets in Yenagoa, Bayelsa State.

### **Delivery Timeliness and Repeat Purchase**

Delivery timeliness also plays a crucial role in influencing repeat purchase behavior. When customers receive their orders within the expected timeframe, they are more likely to develop confidence in the retailer's service reliability and continue patronizing the platform. Timely delivery enhances customer trust and strengthens long-term relationships between retailers and customers. Conversely, frequent delivery delays may cause customers to seek alternative platforms that provide more reliable services. Empirical studies support this relationship. Vakulenko et al. (2021) found that delivery reliability and speed significantly influence customer loyalty and repeat purchase intentions in e-commerce platforms. Similarly, Li et al. (2023) reported that customers who experience reliable and timely deliveries are more likely to continue purchasing from the same retailer. Furthermore, research on e-commerce logistics performance by Kawa and Maryniak (2024) indicates that delivery timeliness is one of the strongest predictors of customer loyalty in online retail environments. Their study concluded that improving delivery efficiency significantly increases the probability of repeat purchase behavior. Based on these empirical findings, the following hypothesis is formulated:

$H_{04}$ : Delivery timeliness has a significant relationship with repeat purchase among e-tail outlets in Yenagoa, Bayelsa State.

### **Gap in Literature**

Although several studies have examined logistics service quality and customer satisfaction in e-commerce, most of these studies were conducted in developed economies with advanced logistics infrastructure. Consequently, there is limited empirical evidence on how order fulfillment practices influence customer retention within emerging markets such as Nigeria. In addition, many previous studies focus broadly on logistics service quality without specifically examining

the individual effects of order accuracy and delivery timeliness on customer retention indicators such as customer satisfaction and repeat purchase behavior. Furthermore, limited research has focused on smaller urban markets like Yenagoa, Bayelsa State, where the e-commerce environment is still developing. Therefore, this study addresses this gap by examining the relationship between order fulfillment dimensions and customer retention among e-tail outlets in Yenagoa, Bayelsa State, Nigeria.

## Research Methodology

### Research Design

This study adopted a cross-sectional research design, which is appropriate for examining the relationship between order fulfillment and customer retention among e-tail outlets in Yenagoa, Bayelsa State, Nigeria. Cross-sectional studies allow researchers to collect data at a single point in time, providing a snapshot of existing relationships between variables. This design is particularly suitable for exploring naturally occurring phenomena, such as customer perceptions of order accuracy and delivery timeliness, without manipulating the environment or experimental conditions. The study specifically investigates how order accuracy and delivery timeliness influence customer satisfaction and repeat purchase behavior, which are key indicators of customer retention. The design aligns with the conceptual framework, enabling empirical testing of the proposed hypotheses.

### Population of the Study

The target population consists of customers of four selected e-tail outlets in Yenagoa: Pick More Supermarket, Easy Shopping, Hubmmmerce, and Findam. These outlets were chosen due to their popularity and extensive customer base within the city. The population of Yenagoa was estimated at 352,285 according to the National Bureau of Statistics (2022). The study focuses on customers who have made at least one purchase from these outlets in the past year, as they can provide informed responses regarding order fulfillment and retention experiences.

### Sampling Procedure and Sample Size Determination

The study employed a purposive (judgmental) sampling technique to select respondents who have purchased from the selected e-tail outlets. This approach ensures that participants have relevant experience to provide meaningful insights into the research variables. The sample size was determined using Taro Yamane's formula:

$$n = \frac{N}{N + 1(e^2)}$$

Where:

- n= sample size

- N = population (352,285)
- e = level of precision (0.05)

$$n = \frac{352,285}{352,285 + 1(0.05^2)}$$

$$n = \frac{352,285}{352,286(0.0025)}$$

$$n = \frac{352,285}{880.715}$$

399.9≈400

Thus, 400 respondents were targeted across the selected e-tail outlets.

### Sample Distribution Table

S/No	Selected E-Tail Outlet	Sample Size
1	Pick More Supermarket	130
2	Easy Shopping	70
3	Findam	120
4	Hubmmerce	80
<b>Total</b>		<b>400</b>

### Data Collection Techniques

Data were collected using **primary and secondary sources**:

- Primary Data: Structured questionnaires were administered to customers of the selected outlets. The questionnaire consisted of two sections:
  - Section A: Demographic information (age, gender, marital status, education, etc.)
  - Section B: Items measuring study variables - order accuracy, delivery timeliness, customer satisfaction, and repeat purchase - using a five-point Likert scale:
    - 5 = Strongly Agree (SA)
    - 4 = Agree (A)
    - 3 = Neutral (N)
    - 2 = Disagree (D)
    - 1 = Strongly Disagree (SD)

The questionnaire was designed to align with the formulated hypotheses and the conceptual framework. A cover letter explaining the study's purpose and ensuring confidentiality was attached.

- **Secondary Data:** Relevant scholarly journals, books, and online databases were reviewed to support the theoretical and empirical framework of the study.

### **Validity and Reliability**

- **Validity:** Ensures that the instrument accurately measures what it is intended to measure. Face and content validity were confirmed through expert review and a pilot test with 20 respondents. This ensures the questions adequately reflect the constructs of order accuracy, delivery timeliness, customer satisfaction, and repeat purchase (Cooper & Schindler, 2001).
- **Reliability:** Refers to the consistency and stability of the instrument. The reliability of the questionnaire was tested using Cronbach's alpha, with a coefficient of 0.7 or higher considered acceptable, confirming that the instrument yields consistent results (Cooper & Schindler, 2001).

### **Data Analysis Techniques**

The data were analyzed using descriptive and inferential statistics:

- **Descriptive Analysis:** Data were summarized using tables, percentages, and charts to describe respondent demographics and general responses on the variables of the study.
- **Inferential Analysis:** The hypotheses were tested using Spearman's rank-order correlation coefficient in SPSS version 23. This non-parametric method is appropriate for ordinal Likert scale data and examines the strength and direction of relationships between variables.

The decision rule for hypothesis testing is:

- $p\text{-value} < 0.05 \rightarrow$  reject the null hypothesis (significant relationship exists)
- $p\text{-value} > 0.05 \rightarrow$  accept the null hypothesis (no significant relationship)

This analytical approach allows for testing the hypothesized relationships between order accuracy, delivery timeliness, and customer retention indicators (customer satisfaction and repeat purchase), as depicted in the conceptual framework.

## DATA ANALYSIS AND INTERPRETATION

### Questionnaire Distributed

S/N	Description	Frequency	%
1	Distributed	400	100%
2	Returned	239	59.75%
3	Not Returned	161	40.25%
4	Usable	110	27.5%
5	Not Usable	129	32.25%
	<b>Total</b>	<b>400</b>	<b>100%</b>

Survey Data, 2024

The table above has shown that 400 copies of questionnaire were distributed, 239 (59.72%) were returned, 161 (40.25%) copies were not returned. Out of the 239, 110 (27.5%) were usable for the analysis after data clean up, 129 (32.25%) were no usable for the analysis.

**H<sub>01</sub>:** There is no significant Relationship between Order accuracy and customer satisfaction of e-tail outlets in Port Harcourt.

Correlations				
			Order accuracy	Customer satisfaction
Spearman's rho	Order accuracy	Correlation Coefficient	1.000	.814**
		Sig. (2-tailed)	.	.000
		N	110	110
	Customer satisfaction	Correlation Coefficient	.814**	1.000
		Sig. (2-tailed)	.000	.
		N	110	110

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Source: Field Survey Data, 2024, SPSS 25 Output

The outcome of hypothesis one has revealed that there is a significant and strong relationship between Order accuracy and customer satisfaction of e-tail outlets in Port Harcourt, with an outcome of 0.814 which is greater than the probability value of (0.01). By so doing, the null hypothesis is rejected while the alternate is accepted.

**H<sub>02</sub>:** There is no significant Relationship between Order accuracy and repeat purchase of e-tail outlets in Port Harcourt.

<b>Correlations</b>				
			Order accuracy	Repeat purchase
Spearman's rho	Order accuracy	Correlation Coefficient	1.000	.574
		Sig. (2-tailed)	.	.000
		N	110	110
	Repeat purchase	Correlation Coefficient	.574	1.000
		Sig. (2-tailed)	.000	.
		N	110	110

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Source: Field Survey Data, 2024, SPSS 25 Output

Hypothesis two analysis has revealed that the derived value 0.574, is greater than the probability value of (0.01). Thus it is obvious that order accuracy of customer wants and needs has the capacity to enhance the level with which customers will want to tell others about a particular e-tail store to carry out transaction activities. Therefore, the null hypothesis is rejected, and the alternate is accepted, which states that there is a significant and strong link between order accuracy and repeat purchase.

**H<sub>03</sub>:** There is no significant Relationship between Delivery timeliness and Customer satisfaction

		Delivery timeliness	Customer satisfaction
Spearman's rho	Delivery timeliness	Correlation Coefficient	1.000
		Sig. (2-tailed)	.
		N	110
	Customer satisfaction	Correlation Coefficient	.961**
		Sig. (2-tailed)	.000
		N	110

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Source: Field Survey Data, 2024, SPSS 25 Output

The analysis above found an outcome of 0.961, greater than the probability value. It implies that reduced cost of switching to different channels and ease of channel use is a good avenue through which e-tail outlets can encourage customers to customer satisfaction or patronage in the course of online transactions. Hence, we reject the null hypothesis, and accept the alternate hypothesis, by stating that there is a significant and very strong relationship that exist between delivery timeliness and customer satisfaction of e-tail outlets in Port Harcourt.

**H<sub>04</sub>:** There is no significant relationship between delivery timeliness and repeat purchase

**Correlations**

			Delivery timeliness	Repeat purchase
Spearman's rho	Delivery timeliness	Correlation Coefficient	1.000	.931**
		Sig. (2-tailed)	.	.000
		N	110	110
	Repeat purchase	Correlation Coefficient	.931**	1.000
		Sig. (2-tailed)	.000	.
		N	110	110

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Source: Field Survey Data, 2024, SPSS 25 Output

Hypothesis four found a result of 0.931, and it is far above the probability value of (0.01). In essence, creating variety of convenient platforms or channels for customers to choose among channels is another powerful strategy e-tail outlets can employ to enhance the level which customers spread word-of-mouth communication for the outlet. Thus, the null hypothesis is totally rejected, while we accept the alternate, by stating that there is a significant relationship between delivery timeliness and repeat purchase of e-tail outlets that uses in Port Harcourt.

**Discussion of Findings**

This section discusses the results obtained from the hypothesis testing in relation to existing literature and the objectives of the study. The discussion focuses on the relationship between order fulfillment dimensions (order accuracy and delivery timeliness) and customer retention indicators (customer satisfaction and repeat purchase) among e-tail outlets in Yenagoa, Bayelsa State.

**Order Accuracy and Customer Satisfaction**

The result of the first hypothesis revealed a strong and significant relationship between order accuracy and customer satisfaction among customers of e-tail outlets. The Spearman correlation coefficient ( $r = 0.814$ ) indicates a strong positive association between the two variables. Since the significance value ( $p = 0.000$ ) is less than the 0.01 level of significance, the null hypothesis was rejected and the alternative hypothesis accepted. This implies that accurate order processing significantly enhances customer satisfaction in e-tail outlets. This finding suggests that when customers receive the correct products in the right quantity and specifications, their expectations are fulfilled, leading to higher levels of satisfaction. Accurate order fulfillment reduces complaints, product returns, and service failures, thereby improving the overall shopping experience of customers.

The result supports the Expectation Confirmation Theory, which posits that customers evaluate service performance based on how well it meets their expectations. When the actual performance meets or exceeds expectations, satisfaction is achieved. This finding is consistent with the study of Ramanathan, Subramanian, and Parrott (2019), who found that logistics service reliability

significantly influences customer satisfaction in online retail environments. Similarly, Hübner, Holzapfel, and Kuhn (2020) reported that accurate order fulfillment improves customer perceptions of service quality and enhances satisfaction.

### **Order Accuracy and Repeat Purchase**

The second hypothesis tested the relationship between order accuracy and repeat purchase. The result showed a moderate but significant positive relationship between the variables, with a correlation coefficient of  $r = 0.574$  and a significance level of  $p = 0.000$ , which is less than the threshold value of 0.01. Consequently, the null hypothesis was rejected, indicating that order accuracy significantly influences repeat purchase behavior among customers of e-tail outlets. This result implies that customers are more likely to continue patronizing e-tail outlets when they consistently receive the correct products as ordered. Order accuracy builds trust and confidence in the retailer's service delivery system, thereby encouraging customers to make future purchases from the same platform.

The finding aligns with previous empirical studies that highlight the importance of reliable order fulfillment in influencing customer loyalty and repeat patronage. Vakulenko, Hellström, and Hjort (2021) found that accurate order processing significantly increases customers' intention to repurchase from online retail platforms. Similarly, Li, Wang, and Liu (2023) reported that customers who consistently receive accurate orders develop trust in the retailer and are more likely to engage in repeat transactions.

### **Delivery Timeliness and Customer Satisfaction**

The third hypothesis examined the relationship between delivery timeliness and customer satisfaction. The result indicated a very strong and significant relationship, with a correlation coefficient of  $r = 0.961$  and a significance level of  $p = 0.000$ , which is less than the 0.01 level of significance. Therefore, the null hypothesis was rejected, and the alternative hypothesis accepted. This finding implies that timely delivery plays a crucial role in enhancing customer satisfaction among e-tail outlet customers. Customers tend to evaluate their online shopping experience based on whether their orders are delivered within the expected timeframe. When deliveries are timely and reliable, customers perceive the service as efficient and dependable.

This result is consistent with prior studies on e-commerce logistics performance. Hübner, Kuhn, and Wollenburg (2021) found that delivery speed and reliability significantly influence customer satisfaction in online retail operations. Similarly, Wisner, Tan, and Leong (2022) emphasized that timely delivery improves service quality perceptions and strengthens customer relationships in supply chain operations. The finding also reinforces the argument that delivery timeliness is one of the most important determinants of customer experience in digital retail environments.

## **Delivery Timeliness and Repeat Purchase**

The fourth hypothesis examined the relationship between delivery timeliness and repeat purchase behavior. The result revealed a very strong and significant positive relationship, with a correlation coefficient of  $r = 0.931$  and a significance level of  $p = 0.000$ , which is less than the 0.01 significance level. Consequently, the null hypothesis was rejected. This result indicates that customers are more likely to make repeat purchases from e-tail outlets that consistently deliver orders on time. Timely delivery increases customer confidence in the reliability of the retailer and encourages continued patronage. The finding supports the view that efficient logistics performance is a critical factor influencing customer loyalty in e-commerce environments. Studies by Kawa and Maryniak (2024) revealed that delivery efficiency significantly improves customer loyalty and repeat purchase intentions in online retail platforms. Similarly, Ahmad, Nawi, and Rahman (2023) found that reliable delivery services positively influence customer retention and long-term engagement with e-commerce retailers.

The findings of this study demonstrate that effective order fulfillment practices particularly order accuracy and delivery timeliness play a significant role in enhancing customer satisfaction and encouraging repeat purchase behavior among e-tail outlet customers in Yenagoa, Bayelsa State

## **CONCLUSION**

This study examined the relationship between order fulfillment practices and customer retention among e-tail outlets in Yenagoa, Bayelsa State, Nigeria. Specifically, the study investigated how order accuracy and delivery timeliness influence customer satisfaction and repeat purchase behavior. The findings revealed that order accuracy has a strong and significant relationship with customer satisfaction and a moderate but significant relationship with repeat purchase behavior. This suggests that when customers consistently receive the exact products they ordered, their level of satisfaction increases and they are more likely to continue patronizing the e-tail outlet. Furthermore, the study found that delivery timeliness has a very strong and significant relationship with both customer satisfaction and repeat purchase behavior. This indicates that timely delivery of online purchases is a critical determinant of customer experience in e-commerce operations. Customers who receive their orders within the expected timeframe tend to perceive the service as reliable and efficient, which increases their likelihood of making repeat purchases.

The results demonstrate that effective order fulfillment practices play a crucial role in enhancing customer retention among e-tail outlets. By ensuring accurate order processing and timely delivery, e-tail businesses can significantly improve customer satisfaction levels and strengthen long-term customer relationships. Therefore, order fulfillment should be considered a strategic operational function for improving competitiveness in the rapidly growing e-commerce sector in Nigeria.

## **Recommendations**

Based on the findings of the study, several recommendations are proposed to improve customer retention among e-tail outlets.

First, e-tail outlets should prioritize improving order accuracy by implementing advanced inventory management systems and automated order processing technologies. These systems can help reduce errors in product selection, packaging, and dispatching, thereby ensuring that customers receive exactly what they ordered.

Second, management of e-tail outlets should invest in efficient logistics and delivery systems to enhance delivery timeliness. This may include partnering with reliable courier services, optimizing delivery routes, and adopting real-time order tracking systems that enable customers to monitor the status of their deliveries.

Third, e-tail businesses should regularly monitor customer feedback and complaints related to order fulfillment. This will allow them to quickly identify operational weaknesses and implement corrective measures that improve service delivery and customer satisfaction.

Finally, e-tail outlets should focus on building long-term customer relationships through consistent service reliability. Providing accurate orders and timely deliveries will help build trust and confidence among customers, ultimately encouraging repeat purchase behavior and positive word-of-mouth communication.

## **Managerial and Practical Implications**

The findings of this study have important managerial implications for operators of e-tail outlets. The results emphasize that order fulfillment efficiency is a key driver of customer retention in the e-commerce industry. Managers must therefore treat logistics performance as a strategic component of customer relationship management.

For instance, improving order accuracy requires managers to ensure proper coordination between inventory systems, order processing platforms, and warehouse operations. Managers should also train staff involved in order handling and packaging to minimize operational errors that may negatively affect customer satisfaction.

Additionally, delivery timeliness should be considered a core service quality indicator in e-tail operations. Managers should design delivery systems that are responsive, flexible, and capable of meeting customer expectations. By reducing delivery delays and ensuring dependable logistics operations, e-tail firms can enhance their competitive advantage in the digital retail marketplace.

From a practical standpoint, the findings suggest that e-tail outlets operating in emerging markets such as Yenagoa can significantly improve their customer retention rates by strengthening order fulfillment processes.

## Limitations of the Study

Despite the contributions of this study, certain limitations should be acknowledged. First, the study focused only on selected e-tail outlets in Yenagoa, Bayelsa State, which may limit the generalizability of the findings to other geographical regions in Nigeria. Second, the study relied primarily on self-reported questionnaire data, which may be subject to response bias. Third, the study examined only two dimensions of order fulfillment - order accuracy and delivery timeliness - while other factors such as delivery cost, service responsiveness, and customer support may also influence customer retention.

## Suggestions for Further Research

Future studies should expand the scope of research by examining additional logistics service quality dimensions, such as delivery reliability, return management, and customer service responsiveness. Researchers may also conduct similar studies across multiple cities or states in Nigeria to enhance the generalizability of the findings. Furthermore, future research could adopt longitudinal research designs to examine how order fulfillment practices influence customer retention over time. Incorporating mediating or moderating variables, such as customer trust or perceived service quality, may also provide deeper insights into the relationship between order fulfillment and customer retention in e-commerce environments.

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