An evaluation of reverse logistics responsiveness and customer satisfaction in retailing

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ABSTRACT

The study evaluates the effect of reverse logistics operational responsiveness on customer satisfaction in retailing. Data was gathered from 223 online shoppers and the data was analyzed using descriptive analysis to analyze the type of product return and the reasons for return while the effect of reverse logistics operational responsiveness on customer satisfaction was analyzed using multiple regression in accordance with the output of SPSS 21.0 Findings indicated that operational responsiveness in the reverse logistics process significantly influences customer satisfaction.

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Introduction

Reverse logistics which involves the return movement of goods and services in the supply chain, is becoming a necessary business activity regardless of industry or product/services involved as delivering product to the customer does not always end the business cycle. Hence, products are often returned or must be reclaimed from downstream trading partners (Genchev, 2007). Due to increased levels of customization, supply chains have become more complex as customers demand more in terms of products and service offerings. E-commerce, or online buying, is but one initiative implemented by firms to respond to these demands. However, online buying has resulted in a significant increase in online returns. Online returns are costly and have posed several challenges to retailers and other upstream supply chain members (Nel & Badenhorst, 2020).

Reverse logistics refers to the process of planning, implementation and efficiently control of the flow of raw materials, in-process inventory, finished goods and related information from the point of consumption to the point of origin with the purpose of recovering the primary value or dispose of them properly (Rogers & Tibben-Lembke, 1999). Reverse logistics can offer an opportunity for companies to differentiate or distinguish themselves with customers (Daugherty et al., 2002; Tan et al., 2003) and can also be a differentiating factor affecting competitiveness; however, focused effort is needed to efficiently manage returns (Genchev, 2007) as the potential neglect of the reverse logistics process can reduce the amount of value the firm may extract from returned product, negatively impact customer relationships, and possibly increase reverse logistics costs due to inadequate management oversight of the process (Souza et al., 2006).

Studies by Jack *et al.*, (2010); Rogers and Tibben-Lembke (2001) revealed that consumers are concerned about return policy at time of purchase. For some companies, maintaining more flexible return policies for their products can provide benefits, such as customer

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retention and increased sales to new stakeholders (De Brito & Dekker, 2003). Thus, the product return policy within companies must be designed at strategic levels to strike a balance between customer satisfaction and company costs to manage this process (Bernon *et al.*, 2011). Clearly, return rates vary significantly by industry. For many industries, learning to manage the reverse flow is of prime importance (Rogers & Tibben-Lembke, 1999). Furthermore, reverse logistics practices vary based on industry and channel position. Industries where returns are a larger portion of operational cost tend to have better reverse logistics systems and processes in place.

Nevertheless, some of the characteristics of reverse logistics for the retail industry include slim profit margins that make good return management critical; the margin of reduction in profit for retailers is more compared to that of manufacturers and these returns reduce the profitability of retailers by 4.3% (Güldem & Fevzi, 2011). Despite the growing interest in reverse logistics and service quality, there is a dearth of empirical research in the Nigerian context. The study therefore investigates the influence of reverse logistics operational responsiveness on customers' satisfaction.

Literature Review

Reverse logistics process

Reverse logistics involves different operational processes. Rogers *et al.*, (2002) identified six reverse logistics processes: return initiation, determining routing, receiving returns, selecting disposition, crediting customers, and measuring performance. Because of the complexity of returns management, a process approach is necessary in order to fully understand and manage the activities and interactions involved (Cooper & Stephan, 1994).

Table 1: Reverse Logistics Related Processes

RL Processes	Definitions
<i>Return Initiation</i>	Seeking a return approval from the firm by the customer or sending the return direct to the returns center.
<i>Determine Routing</i>	Determining the mode of transportation and destination for the returned product.
<i>Receive Returns Receiving</i>	Receiving returns includes verifying, inspecting, and processing the returned product with emphasis on assigning pre-disposition codes.
<i>Select Disposition</i>	Selecting a disposition option for the returned product.
<i>Credit Customer / Supplier</i>	Charging-back the customer's/supplier's account.
<i>Analysis and Measurement</i>	Analyzing returns and measuring returns-related performance criteria aimed at improving the whole reverse logistics operation.

Source: Adapted from Rogers *et al.* (2002).

Reasons for product returns

Customers return products for a variety of reasons which includes defects, unwanted products, out of warranty, recalls, regret for purchase, lack of knowledge to operationalize the product, purchase of quantity greater than necessary, lack of quality in the purchased product, or even, for changing the concept in relation to the product for not previously knowing its characteristics (Rogers & Tibben-Lembke, 2001; De Brito & Dekker, 2003; Hsu *et al.*, 2008; Bernon *et al.*, 2011).

Customer Satisfaction

Oliver (2014) defined customer satisfaction as the consumer's fulfillment response. It is the customer's evaluation of a product or service for determining whether that product or service has met the customer's needs and expectation. If the product or service has met the customer's needs and expectation, it will be assumed to result in satisfaction with the product or service. Moreover, in the study of Ogunleye (2013), the product return experience can influence customer perception of the service they receive. Hence, when the customers are not satisfied with the purchased product due to certain reasons, the customers might decide to return such products to the seller where a returns policy exists.

Service quality measures refer to how easy it is for customers to return a product. How a firm complies with its stated returns policy and whether this policy is customized for the specific needs of customers, can determine long-term customer involvement. Service quality performance incorporates specific measures including the ease of return, how reconciliations of charge-backs are handled, and the promptness of crediting the customer (Autry *et al.*, 2001). Increased service quality performance can result in improved relationships with customers (Genchev, 2007).

Pollock (2007) stated that the usage of reverse logistics will enhance customer service and competitive performance of any company. Jack *et al* (2010) showed that reverse logistics capabilities will lead to antecedents and cost savings and it even helps in involving customers to give feedback about the way they feel about companies implementing reverse practices. Turrissi *et al* (2013) evaluated

the impact of reverse logistics on supply chain performance and how it will improve all the supply chain performance and in the end this development will lead to increase customer satisfaction and fulfilling their demands.

Reverse logistics responsiveness capabilities

Responding to customer interactions involves going beyond simply accepting orders or responding to inquiries. Many businesses today already analyze customer behavior patterns to anticipate and resolve potential problems or to exploit further opportunities. Operational responsiveness is about taking this to the next level, making it possible to adapt the entire enterprise to the specific needs and behaviors of its customers (Fulton, 2009).

However, the complexity of the returns-related processes makes it challenging for firms to quickly respond to changing market conditions and fluctuating return flows. A focused effort is necessary to keep reverse logistics programs responsive to such changes and competitive pressures. Reverse logistics responsiveness is the firm's ability to respond to changing returns-related customer requirements which has the potential to enhance the competitive positioning of the firm (Richey et al., 2004).

Since a return often signals a problem in the system, the ability of the firm to quickly address that problem can be an important differentiating factor (Malone, 2004). For example, customer service representatives may offer different options for faster return authorization dependent on different customer needs, geographic location, or volume of returns. Responsiveness can translate to higher levels of customer service and thus, it is included in the list of reverse logistics related capabilities (Genchev, 2007). Also, Somuyiwa & Adebayo (2014) suggested that for reverse logistics systems to be successful, It is crucial to integrate all the functional areas that affect, or can be affected by the returned products and creating tighter linkages between the marketing and logistics functions to ensure a smooth return process with prompt and correct credits for customers.

Return Initiation

Return initiation is the process where the customer seeks return approval (Return Material Authorization or RMA) or sends the return directly to a designated returns center (Rogers *et al.*, 2002). The ease of returning items and how quickly return authorization is received can mean the difference between satisfied customers and those who never come back. The problem, though, is the difficulty in predicting the level of returns at any given time. Uncertainty is compounded at the detail level: which customer/firm will initiate returns and how? Developing and enforcing a formal return initiation process increases returns visibility and helps companies become more responsive (Sciarrotta, 2003). The communication options available for customers initiating an RMA request are on-line, phone call, or fax (Genchev, 2007).

Credit Customer / Supplier

This process involves the charge-back to the buyer's account including credit authorization and potential claim settlements with customers. The returns policy and individual customer's service level agreements play an important role in this process because customer and/or supplier satisfaction is involved (Rogers *et al.*, 2002).

The highest priority from customers'/suppliers' perspectives is fast charge back. No matter how efficient a reverse logistics program, the relationship can be compromised if the customer does not receive his/her money back promptly. Formal rules and procedures establish expectations in terms of time and documentation requirements for the charge-back. Clear guidelines as to how long it will take for charge-backs should be developed and formally communicated to the customer. Customers should know when to expect account crediting, including possible compensation if deadlines are not met. Policies should include possible exceptions to the normal timeframe (Genchev, 2007).

Research and Methodology

The data for the study was collected using a convenience sampling of 223 customers in Nigeria that have bought and returned products to online retailers.

Frequencies and percentages were used to analyze the categories of product returns and the reasons for such returns while multiple regression was to evaluate the effect of the reverse logistics on customer satisfaction.

Two indicators of reverse logistics responsiveness from the customer perspective as found in the literature by Rogers et al. (2002) & Autry et al., (2001) were used as independent variables in the regression model. These indicators are returns authorization and length of time for credit processing.

Analysis and Findings

The result in Table 2 indicated that the shoppers' sampled mostly returned electronic items (34.53%) and mobile/computing devices (22.87%). While 17.04% returned fashion accessories, apparels (13%), 6.73% returned food and beverages. Other types of products returned included furniture and home décor accessories (5.83%).

Table 2: Categories of Products Returned

Categories	Frequency	Percentage (%)
Apparel	29	13.00
Electronics	77	34.53
Fashion Accessories	38	17.04
Food and Beverages	15	6.73
Mobile/Computing	51	22.87
Others	13	5.83
Total	223	100

In Table 3, 65.02% of the shoppers stated that product returns were as a result of product damages/defect. Products sometimes get damaged or become defective during shipping, 21.97% indicated that the product shipped significantly differed in appearance from that depicted on the retailer's website and the functionality as claimed by the retailer does not align with such claim, hence the need to return such items. While 3.59% of the shoppers returned the products as it had expired upon receipt particularly when the products are perishable/processed food items 9.42% stated that the wrong items were shipped for delivery even though the correct items were placed for order with the retailers.

Table 3: Reasons for Product Returns

Reasons	Frequency	Percentage (%)
Damaged/Defective product	145	65.02
Product not matching description on website	49	21.97
Expiry dates	8	3.59
Wrong shipment	21	9.42
Total	223	100

The result in Tables 4 and 5 indicated that the $R^2 = .301$ implying that the multiple regression model could only explain 30.1% variation in the independent variables influencing customer satisfaction with $R = .548$; $F = 47.284$; $P < .05$. This implies that reverse logistics operational responsiveness have a significant effect on customer satisfaction. Furthermore, both returns authorization and length of time for credit processing contributed significantly with Beta values of .469 and .188 respectively at $P < .05$ as shown in Table 6. Hence, the ease of returning items and how quickly the shoppers receive return authorization influences the level of customer satisfaction. Since, the retailers have different means of communication available for handling a purchase as well as any issue arising therefrom, any delays or difficulties experienced by the shopper in receiving authorization to return a product could lead to the customer becoming dissatisfied with the reverse logistics process and may eventually result into loss of future patronage. Furthermore, the average time it takes for the customer to receive a credit for the return is also an important determinant of whether the customer is satisfied or dissatisfied with the reverse logistics process. This result therefore suggests that both indicators are germane and critical elements of customers' expectations when making a return since it influences their overall satisfaction with the reverse logistics process. This result is supported by the findings of Autry et al., (2001); Daugherty et al. (2005); Somuyiwa & Adebayo (2014).

Table 4: Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.548 ^a	.301	.294	.763

a. Predictors: (Constant), return authorization, length of time for credit processing

b. Dependent Variable: customer satisfaction

Table 5: ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	55.019	2	27.510	47.284	.000 ^b
	Residual	127.994	220	.582		
	Total	183.013	222			

a. Dependent Variable: customer satisfaction

b. Predictors: (Constant), return authorization, length of time for credit processing

Table 6: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.648	.229		7.186	.000		
	Length of time for credit processing	.388	.048	.469	8.047	.000	.935	1.069
	Return authorization	.177	.055	.188	3.231	.001	.935	1.069

a. Dependent Variable: customer satisfaction

Conclusion

The importance of reverse logistics cannot be overemphasized due to the increase in online shopping coupled with liberal return policies and changing customer expectations among other factors which may necessitate the need for product returns but if well managed could customer satisfaction and may lead to customer retention and loyalty. Hence, based on the finding, the study concludes that reverse logistics operational responsiveness has a significant effect on customer satisfaction.

Based on the findings of the study, it is recommended that the retailers should ensure better operational responsiveness by establishing formal returns policies that will cover reasons for returns, request for returns and refund including how long it will take to process the return and credit the customer. Also, the retailers should ensure to maintain clear communications with the customers as these could all have even bigger implications for long term survival, sustained competitiveness and more importantly overall customer satisfaction.

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Data Availability Statement: The data presented in this study are available on request from the corresponding author. The data are not publicly available due to privacy.

Conflicts of Interest: The authors declare no conflict of interest.

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