

REVERSE LOGISTICS AND CUSTOMER SATISFACTION: A CASE STUDY OF JUMIA UGANDA

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**UGANDA CHRISTIAN
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DECLARATION

I Akite Linda Ogwang declared that this research proposal is my original work and has not been presented for examination in any other University or Institute of Learning.

Signature

A handwritten signature in blue ink, appearing to be 'Linda Ogwang', with a stylized, scribbled design.

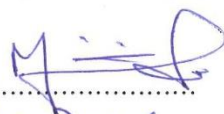
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APPROVAL

This research report has been prepared under my supervision and submitted to the faculty of Business.

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Date  15/05/2026

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To begin with, all the Glory, Honor, and Gratitude go to the Almighty God whose Grace, Strength and unfailing Faithfulness have seen me throughout this whole endeavor. The Bible states it in Philippians 4:13, "I can do all things through Christ who strengthens me". It is through him that I have overcome each step in the whole endeavor.

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GOD BLESS YOU ALL.

Abstract

This research was designed to examine the impact of reverse logistics practices on customer satisfaction at Jumia Uganda. It analyzed return authorization, collection of returns, and refund and replacement services. The study applied the positivist philosophy and cross-sectional survey design by collecting data from 80 customers who had experienced returns between September 2025 and December 2025, supplemented with interviews with five Jumia staff. The descriptive analysis of results demonstrated that respondents were most satisfied with refund and replacement services ($M=3.88$), then return authorization ($M=3.55$), and the lowest score was achieved for collection of returned products ($M=2.91$). The Pearson correlation result indicated that all three reverse logistics practices were positively related to customer satisfaction, with refund services being most positively related ($r=0.752$, $p<.01$). The multiple regression analysis indicated that the three practices combined explained 64.8% of the variation in customer satisfaction ($R=0.648$, $F=43.34$, $p<.001$). Among the three reverse logistics practices, refund and replacement services were the best predictors of customer satisfaction ($B=0.510$, $p<.001$) followed by return authorization ($B=0.280$, $p=.002$) and collection of returns ($B=0.155$, $p=.045$). The three null hypotheses tested were rejected. Quality findings revealed four major themes: last mile logistic problems, speed of financial settlements, and policy communication transparency. All three practices were significantly found to impact customer satisfaction, however, refund and replacement services influenced customer satisfaction most. Suggestions are; set up drop-off points, provide real-time refund tracking, clarify return policies by providing visual aids in local language.

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CHAPTER ONE

1.0 INTRODUCTION

In the current hyper competitive e-commerce world, the effectiveness with which a firm is able to control its supply chain has moved beyond being a competitive edge to a survival need. The core of this issue is the concept of Reverse Logistics (RL), or the process of returning goods that are usually delivered to their final destination, back into the supply chain, which can be in the form of returns, repairs, recycling, or proper disposal (Logistics Institute, 2023). In the case of online retail giants such as Jumia, the efficiency and perceived fairness of the process of reverse logistics, and, specifically, the process of product returns handling, has a strong impact on Customer Satisfaction (CS) and, by extension, customer loyalty in the long run. This chapter provides the background, sets the research problem, and states the objectives of this study relating to the relationship between reverse logistics practices and the customer satisfaction at Jumia Uganda.

1.1 Background of study

Global e-commerce is also marked with high percentage of product returns which is due to the fact that customers are not able to physically examine goods prior to purchase. Online purchase returns are usually around 15-30 globally, which presents a complicated and expensive logistical issue (Smith, 2024). In developed markets, advanced RL networks are developed to manage this flow effectively, with severe consumer protection legislation and high levels of customer service expectations (Logistics Institute, 2023).

In East Africa, the rise of e-commerce, such as Jumia and Kilimall, has transformed buying behaviors in the region swiftly. Nevertheless, this expansion has come with some distinctive RL demands, such as disjointed transportation networks, instability in payments, and an overall mistrust of the return procedures. A bad experience in the return process can entirely undo a good purchasing experience, so RL is an important factor in determining customer loyalty in this area (Ding et al., 2023).

Jumia is facing several difficulties in Uganda due to the challenging regulatory and logistical environment which is quite complicated. This is one of the reasons why they have so many problems with returns. Besides that, a lot of customers are not even sure about the return

policy and some are not aware of the process at all. In fact, the whole process can be quite puzzling. When customers do face problems and follow-up steps to resolve the issue do not go well, they will very quickly lose their trust in the company.

In this research, the three main components of reverse logistics that have been examined are: the procedure of granting permission to return the items (Return Authorization), the method of acquiring the goods the customers want to return, and the approach to dealing with the issue of refunds or replacements. What is aimed at is the understanding of the real influence of these aspects on customer satisfaction in Uganda. On one hand, it is known by everyone that reverse logistics is important in the world of e-commerce; Then again, it is a fact that Jumia Uganda has a hard time explaining and streamlining the return process sufficiently for the customers. Jumia has to contend with a rather intricate mix of regulatory and logistical hurdles in Uganda. For the customer, there is often a good deal of ambiguity as to how things like returns are handled, from processing to actual retrieval. And if the post-purchase side of things does not live up to what is expected, especially when it comes to the service recovery RL puts in place, you can be sure it will erode any trust they have in the platform right away. What we are looking at in this study is the impact on Jumia Uganda's customers' satisfaction with three main reverse logistics activities: the ReturnAuthorization, how Refund and Replacement Services are done, and the Collection of Returned Products.

1.2 Problem Statement

Although Reverse logistics is generally accepted as a factor enabling service recovery in the e-commerce industry, Jumia Uganda is still encountering issues in making its returns process more efficient. While Jumia has established official returns policies, anecdotal evidence and customer feedback indicate that despite this, the company continues to encounter customer dissatisfaction, in particular with the difficulty in securing a return authorization, the time lag in product collection, and the time required to finalize refunds or replacements (Saxena, Chawla, and Tähtinen, 2022).

This ongoing policy-implementation disconnect results in a high customer churn, bad word-of-mouth, and company operational costs. Previous studies (Ozturk & Du'ndar, 2020) have confirmed that poor" return management mediates a negative relationship between online shopping services and customer satisfaction. Nonetheless, the local research on a specific topic that explicitly examines the quantifiable effect of particular RL practices in the Ugandan e-commerce setting is notably lacking.

Thus, this paper will focus on empirically investigating how these chosen reverse logistics practices in Jumia Uganda can impact customer satisfaction to offer actionable information to close the gap in performance identified. The study aims at achieving the following main objective: The overall goal of the proposed research is to investigate how the practices of reverse logistics (return authorization, collection of returned products, and refund and replacement services) impact customer satisfaction at Jumia Uganda.

1.3 Main objective of the study

The study aims at achieving the following main objective: The overall goal of the proposed research is to investigate how the practices of reverse logistics (return authorization, collection of returned products, and refund and replacement services) impact customer satisfaction at Jumia Uganda,

1.3.1 Specific objectives of the study

- I. To determine how return authorization influences customer satisfaction in Jumia Uganda.
- II. To examine how the collection of the returned products affects the customer satisfaction at Jumia Uganda.
- III. To evaluate the effect of refund and replacement services on customer satisfaction at Jumia Uganda.

1.4 Research questions

Depending on the targeted goals, the research will attempt to answer the following questions:

- I. How do return authorization processes impact customer satisfaction at Jumia Uganda?
- II. How much does the efficiency of receiving returned goods influence customers in Jumia Uganda?
- III. What happens to customer satisfaction of refund and replacement services at Jumia Uganda??

1.5 Research Hypotheses

The null hypotheses that will be tested in the study are:

- I. H01: Return authorization does not have any statistically significant impact on customer satisfaction in Jumia Uganda.

- II. H02: There is no statistically significant effect of the collection of returned products on customer satisfaction at Jumia Uganda.
- III. H03: The refund and replacement services do not have any statistically significant effect on customer satisfaction at Jumia Uganda.

1.6 Justification of the study

For Jumia Uganda. The results will give Jumia Uganda evidence-based suggestions on the most critical areas in their reverse logistics chain that are likely to be of importance to the customers. This will allow focused investments in process enhancements, resulting in shorter processing times, better service recovery and eventually better customer loyalty and lower operational costs of dealing with customer complaints.

For Academic Researchers. This research paper adds to the body of knowledge by offering empirical data to the relationship between reverse logistics and customer satisfaction in the context of the emerging market in East Africa. It offers a contextualized implementation of known models of service quality (such as SERVQUAL and Expectation-Confirmation Theory) to a logistics-specific issue.

For Policymakers. The findings will shed light on the challenges of dealing with returns by e-commerce operators and this can be used to develop regulatory standards and consumer protection frameworks to fit the reality of online retail in Uganda.

1.7 Scope of the study

1.7.1 Geographical scope

The research will be done in Kampala, Uganda, with the main target customers being those people who use the e-commerce platform of Jumia Uganda and its specified collection and distribution points in the city.

1.7.2 Content scope

The content of the study is rigidly confined to three independent variables of the practices of reverse logistics; return authorization, collection of returned products, and refund and replacement services. Customer satisfaction is the dependent variable and it is measured by the perceived quality of service, speed and fairness. This does not cover other types of reverse logistics (e.g., recycling, repair, remarketing).

1.7.3 Time Scope

The data corresponding to the customer experiences collected between September and December 2025 will be used for this study. This period is expected to give a cross-sectional snapshot of how effectively reverse logistics is currently functioning.

CHAPTER TWO

LITTERATURE REVIEW

2.0 Introduction

This chapter reviews the literature on reverse logistics (RL) and customer satisfaction (CS), looking at three major practices: Return Authorization (RA), Collection of Returned Products (CRP), and Refund and Replacement Services (RRS). The literature review encompasses theory, concept definition, empirical evidence for each of the objectives, and gaps for the conceptual framework development. It draws on peer-reviewed articles, conference proceedings, industry reports, etc., for the theory and empirical evidence, as it relates to Jumia Uganda.

2.1 Theory Review

Customer behavior and service quality theories have provided a base that defines how reverse logistics practices impact customer satisfaction. In this review, we look at three major theories which explain the psychology and practical way how return authorization, collection of returned products and refund and replacement service affect customer evaluation after purchase. These are: Expectation-Confirmation Theory (ECT), Service Quality (SERVQUAL) Model and Cognitive Dissonance Theory.

2.1.1 Expectation-Confirmation Theory (ECT)

Expectation-Confirmation Theory developed by Oliver (1980), offers a basic framework to understand customer satisfaction in reverse logistics. It assumes that when a customer compares his experience on product or service quality to his expectation before purchase or use, it will lead to either a positive disconfirmation (performance > expectation), confirmation (performance = expectation) or negative disconfirmation (performance < expectation). Similarly, customers in the process of reverse logistics will have specific expectations, that would be about ease in obtaining return authorization, fast pick up of returned goods, and prompt delivery of refund or replacements (Das & Kunja, 2024). This results in positive disconfirmation and satisfaction. On the other hand, violation of expectations may cause negative disconfirmation, resulting in complaining, and potentially defection of customers.

Das and Kunja (2024) investigated how customers' expectations of e-commerce products were confirmed or disconfirmed during the return process for young customers and the impact on satisfaction. Their study confirmed that expectation violations were due to not matching the goods with advertised, failed delivery, manipulative marketing and fake data about products, thereby giving rise to the dissonance and customers returning products, leading to reduced customer satisfaction. Their research is relevant to Jumia Uganda,

whereby customer expectation about the return process will be shaped by how it is advertised on their platform, so that compliant RA, CRP and RRS will confirm their expectations and increase satisfaction.

Evidence of ECT is observed in studies. Okpokwu et al. (2023), established that the presence of standardized RMA processes enhances positive confirmation by giving consistent results on return. Inconsistent processes, will lead to a violation of the customers' expectations and decrease confidence while making them lodge a complaint. Moreover, Mohamed et al. (2015), established that there is customer satisfaction through efficient core acquisition processes in heavy machinery remanufacturing in Egypt confirming customer expectations.

The application of ECT for Jumia Uganda is therefore well founded as it provides the ability to show the stage at which the RL practices will result in positive confirmation and increase customer satisfaction-either RAs, CRp and RRS at respective stages.

2.1.2 The Service Quality (SERVQUAL) Model

SERVQUAL is a model developed by Parasuraman, Zeithaml and Berry (1988), to measure service quality on five dimensions: Tangibles, Reliability, Responsiveness, Assurance and Empathy. For reverse logistics service quality, it is applicable as it can serve as a tool in identifying various attributes of the service, through which a customer assesses the service of a retailer or organization. The five SERVQUAL dimensions will be interpreted as follows with regard to the service of a reverse logistic flow:

Reliability would refer to the ability of the retailer to perform the promised service at a desired level. It means the accuracy of return policies applied by Jumia Uganda, the correctness of the refund, delivery of correct product during replacement, as pointed by Gamal Mohamed et al. (2015), as it leads to customer satisfaction because of customer trust in reliable reverse logistics which reduces customer uncertainties.

Responsiveness refers to the willingness to provide service timely. During the reverse logistic service flow, this applies to quick action on return requests, quick scheduling for pickup of products, quick refund processes. It's particularly applicable to collection of returned products (CRP), delays and poorly scheduled pick-up points can disappoint customers.

Assurance applies to the knowledge and courtesy of employees and their ability to convey trust and confidence. When customer is interfacing with agents of the e-commerce service provider for instance through the RAs it's the way these agents convince customer about their product eligibility during returns that assure them. It would apply to various interactions throughout the return process when customer is dealing with representatives of Jumia Uganda and when he is uncertain on whether the returned goods are eligible for refund and the condition, they have to be returned to qualify.

Empathy is applied when the e-commerce organization is providing caring individual attention toward its customers. This would include the flexibility of return policies such as longer return periods, understanding customer predicaments when processing return claims.

Tangibles are related to the physical evidence that represent the service provided. With the service of returns, this may include the state of returned product at the time of delivery, the packaging and the documents sent back together with the products.

Several studies have demonstrated the SERVQUAL dimensions predicting customers satisfaction during reverse logistics processes. Harivadhani and Sangeetha (2024) have found that balance between customer satisfaction and efficiency of reverse logistic processes will lead to more satisfaction and repeat business. By implementing service quality in returns it increases the likeliness of a customer becoming loyal. Okpokwu et al. (2023), have shown that standardized RMA process increases customer satisfaction by reducing the violation of the five-service quality dimension and trust by ensuring standard consistent and observable results, thus customers can be confident of the outcome during the return process. Application of SERVQUAL model would help the study to know whether the RA, CRP and RRS services provide satisfactory levels of service quality as perceived by Jumia Uganda customers.

2.1.3 Cognitive Dissonance Theory

Cognitive Dissonance Theory proposed by Festinger (1957) and used for consumer behavior research can explain the reasons behind return behaviors after purchasing. According to the theory, individuals experience psychological discomfort when they have two or more cognitions that are inconsistent with one another; for instance, when buying an product fails to meet expectations, dissonance occurs between a customer's choice and the purchase outcome. Returns reduce dissonance by restoring consonance; for instance, by refunding or exchanging products, customers resolve the inconsistency, and their psychological state will return to its original consistency.

Combined ECT and CDT, Das and Kunja (2024) identified "buyer's regret" and "buyer's spontaneity" as causes that led to online returns by consumers, these could result in purchase inconsistency between desire and reality which makes the return act necessary. The ease of return procedures helps the customer solve their dissonance, at the end customer's satisfaction of service rather than of product could be enhanced, which refers to "service recovery paradox"; on the contrary, slow, confusing or unfair processes amplify dissonance and then result in complaining, word-of-mouth and customers' churn. The research has implications to this study in a way that, both speed and fairness of RRS is a mechanism for cognitive resolution of an unsatisfactory purchase. Delays and conflicts extend the duration of cognitive dissonance, prompting the customer to attribute the problems to retailer and not the nature of the online purchase behavior.

2.1.4 Theoretical Integration for this study

In this study, ECT, SERVQUAL and CDT have been integrated to provide framework on reverse logistics, as well as customer satisfaction in Jumia Uganda. ECT is used to examine the mechanism of confirmation or disconfirmation of customer expectations about return process of Jumia; ECT would determine the customer's satisfaction if expectation of return procedures could be fulfilled or not based on policy and past experiences when the process was carried out; SERVQUAL is employed to analyze the overall reverse logistics services across the RA, CRP and RRS by referring five dimensions; CDT is applied to investigate psychological driving forces that motivate customers to return goods and the impact of refund/replacement speed and fairness in resolving customer dissonance. With these integrated theories, it is expected that (1) Return Authorization Process has to be clear and easy for authorization requests, confirm customers expectation (ECT), ensure reliable service (SERVQUAL) and alleviate customer's dissonance (CDT); (2) The collection process needs to be efficient so that it could confirm customer's expectation about punctual service (ECT), demonstrate reliability (SERVQUAL) and expedite customer's resolution of the problem; (3) Refund and Replacement Service needs to be swift and fair, which is a major factor to achieve positive discrepancy (ECT), assure and empathize with the customers (SERVQUAL) and fully restore customer's cognitive harmony (CDT) so that customers' satisfaction can be positively impacted; all of these predictions will be tested empirically later.

2.2 Concept Definitions and Operationalization

2.2.1 Return Authorization (RA)

Return Authorization (RA) or Return Merchandise Authorization (RMA) in industrial application context is the explicit permission given to customers by retailers to send products back for refund, replacement, or repair, according to Okpokwu et al. (2023). In most e-commerce companies, customers are required to initiate the return process through a web or app portal and also contact with the service center to submit and fill the request for returning, state the reason and the details of product as well as obtain instruction for shipping or picking. RA acts as a gate in the reverse logistics of online retail service, a return shipment is not possible without it.

Customers usually evaluate RA based on four aspects. Accessibility refers to ease to initiate the RA process on a given platform, while Clarity suggests the transparency in regard of eligibility of return, timeframes, and other conditions of returning (e.g., the returned product must be unused and in original packaging). Speed is measured in terms of time taken from the moment of return authorization request to the receipt of approved/rejected confirmation. Fairness is perceived equitable judgments based on the request that any legitimate request should be accepted and the returnable purchase should not be unreasonably refused or denied; the last aspect is Communication Quality which is related

to clarity in terms of instructions given after RA is completed, product preparation guidelines, collection or drop-off procedures of shipment.

In this study, RA is operationalized by using measurements developed from Okpokwu et al. (2023) and Gamal Mohamed et al. (2015). The customer evaluation will be done through a Likert scale that captures perceptions on the ease in completing RA online/app, clearness of the return policy, speed of response, fairness in approving the RA and transparency in terms of product eligibility.

2.2.2 Collection of Returned Products (CRP)

Collection of Returned Products (CRP) is defined as the stage where retailers take back the shipped or picked-up goods from customers and deliver to the return processing centers. CRP covers procedures such as making pickup appointments, assigning logistics personnel for home pickup or providing the drop-off sites for customers, inspecting identity and conditions of the returned products during collection, packing the product properly for shipment, as well as confirming the product was collected with necessary proof or tracking information to customers.

Customers assess CRP based on four factors. Convenient refers to customers' choice over where to drop off returns or when the items are collected at home, while Timely is concerned with whether the pickup occurred at the scheduled time; Professionalism of agents indicates how courteous, well-identified, and professional the agents are when collecting the items; Flexibility concerns the number of alternative ways customers can choose to return their product; Communication concerns notification about the changes of collection appointment, confirmation of collected products or delivery tracking.

The importance of CRP in e-commerce reverse logistics is confirmed by Saxena, Chawla, and Thtinen (2022), the service failures in CRP-such as unpunctual pickup, failure in collecting product as scheduled, unconvincing agents and inability to collect product-causes customer dissatisfaction even though all other process has performed efficiently. CRP is one of the most difficult parts of return processes in emerging market as lack of infrastructure in delivery network, traffic congestion and difficult addressing system lead to low quality of delivery service, customer satisfaction with CRP would significantly be affected if customer is expecting for timely and professional service, which might influence customers' attitudes toward the service. This study measures customers' perceptions on their pickup convenience, the schedule of pickup, professionalism of collection agents and their easiness to find alternate options other than home pickup.

2.2.3 Refund and Replacement Services (RRS)

Refund consists of choice of refund channel(s) or credit and notifying the customer about the refund transaction. Replacement service consists of executing a new transaction to ship the original or equivalent item to the customer; often at premium shipping for the sake of

compensation. The operations of RRS were measured using five attributes. Speed-time span from the customer's product collection and return receipt to the refund issuance or dispatch of new product. Accuracy-amount refund given to the customer should match the expectation (depending on policy and condition). Communication-updating customer with refund and replacement status in proactive manner and resolving disputes. Flexibility-choice of multiple refund channel(s) such as payment to original channel, credit note, mobile money (more relevant in Uganda). Fairness-customer's perception of receiving equitable refund or replaced product according to return condition.

According to Gamal Mohamed et al. (2015), stage of refund and replacement processes is the strongest contributor to customer satisfaction because this stage tests the retailer's capacity for service recovery. According to Ozturk and Dndar (2020), the delay in the return process is the primary reason for customer distrust and churn. Conversely, prompt and accurate returns lead to high customer satisfaction of the service transaction. This research operationalizes the RRS constructs as customer perceptions of refund speed, refund amount accuracy, delivery speed of replacement, and overall RRS satisfaction.

2.2.4 Customer Satisfaction (CS)

Customer satisfaction is the customers' overall evaluation of the quality of service, which meets or exceeds expectations (Oliver, 1980). CS on returns is more than a measure of the output (refund or replacement) but also includes the entire processes, from return initiation to completion and has both cognitive (customer's judgment about speed, fairness, effort etc.) and affective components (customer's emotion of frustration, relief or pleasure).

This research measures CS as customer's general satisfaction with Jumia's return process, repurchasing willingness and recommendations using the criteria suggested by Ding et al. (2023). This combines transactional (specific event) and cumulative satisfaction (Jumia's general E-commerce service) evaluation of CS. 2.3 Empirical Review: Return Authorization and Customer Satisfaction.

2.3 Empirical Review: return authorization and customer satisfaction

The impact of return authorization procedures on customer satisfaction has been extensively examined in e-commerce and supply chain management literature. This section briefly summarizes research findings regarding the effect of RA process design, implementation and customer experience on customer satisfaction, trust and loyalty. Available evidence suggests that return authorization (RA) serves as a critical gateway to service recovery and, its ease of use, efficiency, and clarity significantly influence customers' perceptions of a retailer's commitment to support post-purchase services.

2.3.1 The Role of Return Authorization as a Service Recovery Gateway

In a study conducted by Deepalakshmi et al. (2025), 267 online shoppers in Coimbatore, India were surveyed to investigate the effect of technology-based applications in reverse logistics efficiency and customer satisfaction. It was reported that the ability to initiate returns without calling any agent was among the critical element of return process for satisfaction. The customers with easier return requests reported higher satisfaction as compare to the customers with complex menu or calling customer service. Their investigation confirmed that the aspect of "customer service was helpful and responsive during the return process" reported the highest mean score of (3.5318) and aspect of "the return process on e-commerce platforms is easy to understand and follow" reported the lowest (2.4719) clearly indicating a problem of not ease of return process though customer service was found helpful and responsive.

Similarly mean rank analyses suggested that top satisfied items are the return status updates at real time (3.9213), customer support (3.5019), clarity of return policies (3.0225), easy return process (2.5094) and speed of refund (2.0449). The clear return policies, which forms part of return authorization system, have been rated third as the customers are happy with the clarity of return policy more than the ease of the return process; but customer satisfaction can improve even for clarity of return policy as it has received lower mean rank. Their finding suggests that platforms need to streamline the return authorization process, potentially through user-friendly online return portals and even automated returns using Artificial intelligence, thus reducing the customers' effort and increasing satisfaction.

Okpokwu, Fasave, and Filani (2023) explore the implications of fragmentation and standardization in RTA of multi-vendor supply chains. According to their literature, there are some RA factors that directly leads to customer dissatisfaction, such as inconsistent standards, obscure documentation, long time to approve, and lack of transparency. They claimed that lack of consistent RA processes within a multi-vendor setup, such as on Jumia Uganda, could lead to customer disappointment. They identified "negative disconfirmation of expectations"-which arises when customer's expectations are unmet due to differing return process across sellers-as a cause of this fragmentation and hence disappointment. In this regard, they proposed six standardization features of RTA system including: single-point initiation, automated eligibility checking, instant approval of standard returns, clear required documentation, transparent status tracking, and continuous communication of each step. A comparison with other organizations that adopted such system has showed that there was 35–50 % decrease in complaints related to return authorization and an increase in customer satisfaction.

The analysis by Okpokwu et al. (2023) clearly shows applicability for the case of Jumia Uganda. As it is a multi-vendor setup, it is probable that different sellers may have their own RA processes for different products, thus leading to the fragmentation challenge that may

result in customer complaints and dissatisfaction. Therefore, this research proposes to standardize return authorization across all sellers on Jumia Uganda and have a single point of customer initiation of RA but yet maintain different back-end systems based on seller. This could create a better RA customer experience that is standardized and meets expectations even across various product categories.

A B2B context analysis on return authorization by Gamal Mohamed, Fathi, Marouf, Hassan, and El Barky (2015) found that though it was heavy manufacturing (Caterpillar / Mantrac) B2B model; some elements may be useful for B2C e-commerce analysis. It investigated how core acquisition management that can be related to RA process of reverse logistics influences customer satisfaction. Through questionnaires with 36 customers regarding the satisfaction level of the core acquisition process they found 41.7% satisfied, 41.7% neutral and 16.7% unsatisfied. Customers satisfaction with service representative assisting them on RA showed a high positive trend. Specifically, 16.7% customers very satisfied, 58.3% satisfied, 19.4% neutral and 5.6% unsatisfied which suggests that person interaction could compensate for process limitations.

One challenge identified by Gamal Mohamed et al. (2015) for the core acquisition process was that: customers identified their used products with personal markers and were penalized. The process involves explaining to customers why the marks made the used products unacceptable for full refund. This is a lesson on why it is important for RA system to include education of customers on what can make products ineligible for returns. This could be relevant to e-commerce and online returns as customers might not be aware of the implications of remove tags or seals, trying to install a product, etc. In making items ineligible for return. The regression analysis indicated that the relationship between the variables was positive for satisfaction; although the sample size (N=36) for this investigation was very small.

Found a statistically significant positive relationship between perceived quality of core acquisition process and overall customer satisfaction. They conclude that the use of reverse logistics practices enhances customer satisfaction in accordance with their hypothesis. For this research on Jumia Uganda, Gamal Mohamed et al. (2015) support the hypothesis that return authorization have a direct effect on the customer's satisfaction although it differs depending on the quality of the return authorization process.

2.3.2 Technology Enabled Return Authorization and Customer Experience

Customer experience and satisfaction related to return authorization are improved by technology enabled returns systems. Deepalakshmi et al. (2025) review the impact of technology-enabled returns systems (e.g. Product tracking, return portals and artificial intelligence enabled authorizations) on the efficiency of the returns process in the reverse logistics system. Results from a study among 267 consumers shopping on online platforms located in Coimbatore, India showed an ANOVA, and t-test results revealed that technology

enabled RA process systems positively and significantly influence customers' satisfaction compared to systems not enabled by technology. More specifically, an automated RA process (immediate RA through the use of automated rule-based system) customers' satisfaction was statistically higher than in systems where customer support personnel manually review the RA request.

Customer support was found to be facilitated by specific features enabling efficient returns processing; return portals, readily available from order details and history pages that facilitate access to return initiation; AI powered RA systems that automate validation using predefined rules (e.g. Product return eligibility date is still within the warranty/return window, returns eligibility based on type of product category and valid reason codes provided); mobile application that use mobile camera to take picture or short video of returned product, that enables the initiation and tracking of the return from mobile application with minimal customer input, using their smart phones; data analytics is used to flag potentially fraudulent return requests for manual intervention, whilst the risk free requests are immediately authorized; customers have an easier path to manage and coordinate returns through the use of predictive systems.

A mean score for "I was able to initiate a return without needing to speak to a representative" was 3.3258 (above neutral point), indicating that despite the ability for many customers to self-service RA requests, there is still much room for improvement. The authors recommended that retailers enhance customer satisfaction with RA by integrating technology like conversational AI to perform all RA related conversations, eliminating phone and email interaction. Ease of customer effort during the RA process is not only a convenience, it increases satisfaction by adding a greater sense of control for the customers and reducing psychological costs associated with product returns. They refer this as cognitive dissonance related to the act of purchasing a product only to return it.

In the context of Jumia Uganda, their technology enabled RA process features may be limited due to poor internet infrastructure and the Cash on Delivery model used in many of their transactions making return and refunds more complicated. Nevertheless, the research conducted by Deepalakshmi et al. (2025) can assist in establishing what is likely to improve customer satisfaction even incrementally, through improvement of online RA features such as: visibility of return policy; simplified RA request forms; and immediate approval of easily validated returns reasons.

2.3.3 Transparency of the Return Policy and Trust

Customers trust in a retailer and satisfaction related to the RA process depends on the transparency of the return policy. In research by Harivadhani and Sangeetha (2024) of returns related to consumers' products, the main reason why customers make returns is not because the product was damaged or not as advertised, but rather their expectations were not met and these was based on a lack of understanding or interpretation of the return

policy. It was concluded that the presence of readily available, comprehensible and consistent policies and procedures minimizes customer frustration when returning products. The researches found out that more than 30% of products purchased online were returned.

According to the authors, while two distinct goals must be attained when developing a return policy: to meet the expectations and ensure customer satisfaction (requiring a lenient and flexible policy) and to optimize costs associated with returns management (requiring a relatively strict policy), return policy transparency requires that: (1) the policy be easily accessible for both prior to purchase and upon returning; (2) the language is clear and simple (easy to understand); (3) the policy covers all likely scenarios (damage, incorrect delivery, simply changing ones mind); (4) the policy must be consistent across all channels and all return cases, no hidden conditions or clauses are acceptable; and (5) the policy is upheld by the business.

The evidence available indicated that when customers perceive return policies as clear and fair, they place greater trust on the company and were more likely to patronize the organization and remain satisfied with their overall purchase experience even when returning goods. A retailer who establishes a transparent, flexible, and comprehensible return policy reduces expectation violations that can lead to a negative disconfirmation and affect customer perception of retailer and service. The policy helps establish customer assurance as referred to in the SERVQUAL dimensions; customers have a level of faith and trust in what is being promised. This can assist businesses like Jumia Uganda in the sense that a clearer, well-communicated and easily accessible returns policy that informs the customer clearly before purchase would help them know what to expect and prevent post-purchase disappointment; returns policy visibility in product page and not only in terms and conditions; understandable communication that reflects all terms and conditions; that the returns policy should not be difficult to access; consistently apply it; ensure it is correctly adhered to. They also recommend that e-commerce retailers establish a pre-return policy check to give a prompt on the policy for their chosen product prior to purchase; customers who are aware of the policies can make more informed decisions.

In order to reduce customer dissatisfaction, the researchers suggested a pre-return policy check. Customers receive notification and check if the policy for that particular product allows for a return before the item is purchased. This reduces the problem of a mismatch between customers' expectations and the retailers' terms and conditions, potentially lowering returns and improving satisfaction.

2.3.4 Fragmentation of RMA practices, customer dissatisfaction

Fragmentation of RA process in multi-vendor supply chain can result to customer dissatisfaction. The researchers found out three key causes: inconsistent RA criteria across different vendors within a multi-vendor system that results in customer perceived unfairness; delay of approvals caused by inability of the specific vendor's CS team to respond

promptly to RA request and wrong processing when customers are not sure how to ship and when to deliver goods back to the respective vendor; a case was identified where a customer had been assured that returns were authorized but upon physical delivery to the respective vendors, return was rejected because it was not authorized, customer service instructed them differently as compared to vendor policy; the customer also did not know where and how to return the item. A third cause of dissatisfaction according to the study conducted by Okpokwu et al. (2023) is the communication gap that leads to rejection and miscommunication regarding claims or return eligibility for the items sold by various vendors under a multi-vendor system; that a centralized RA process system will significantly enhance the entire reverse logistics performance in terms of reduced customer complaints as it is noted that they solved the issues in RA processes, customer complaints regarding RA process resolution were 40% less and customer satisfaction score was increased by 25 percentage points. This can be applicable in the case of Jumia Uganda, which operates a multi-vendor model and customers can sometimes have inconsistent experiences when purchasing from different sellers. Jumia should invest in a centralized system that manages the return authorization requests centrally on behalf of different vendors while maintaining transparency to the customer.

2.3.5 Expectation Violation and Service Recovery in Return Authorization

Das and Kunja (2024) researched young Indian online product returns (18-40) through interviews, focus groups, and netnography. The theory was built upon Expectation Confirmation Theory, Cognitive Dissonance Theory, and Theory of Planned Behavior. They categorized return reasons into two groups: company-centric and customer-centric. Company-centric reasons have the direct relevance to return authorization. The companies' reasons were non-conformity of the product with the picture and description of the online advertisement, improper state of delivery (poor quality, broken item), exaggeration or false advertisement claims, and misleading information in the product details. Each of these failures at the pre-purchase stage leads to return authorization. The ease and speed of authorization moderated the relationship between initial disappointment and customer evaluation of the retailer. Easy/fast returns lead customers to attribute failures to the inherent risk of online shopping, not to the retailer, helping to maintain trust and repurchase intention. Difficult/slow returns lead to the customer's attribution to the retailer, promoting negative WOM and purchase switching.

Das and Kunja (2024) used three theories to frame online return behavior. Through ECT customers develop expectations for the return process based on the policies and past experience and a negative disconfirmation would occur in case of inconsistent procedures such as asking for additional documents or having a slow process. With CDT, difficult processes and procedures increase cognitive dissonance and self-justification as customers want to defend themselves for buying from a site that has complicated return procedures.

The TPB theory explains the customer repurchase intention by attitudes toward the return experience, subjective norm and perceived behavioral control over the return process.

Das and Kunja's (2024) model is applicable to Jumia Uganda. Their research found that return authorization, not just an operational procedure but a psychological tool to mediate customer disappointment. An effective, efficient and effortless return authorization process helps communicate that Jumia trusts the customers and values their time and the risk of counter responses decreases, and the relationship is preserved. Otherwise, a hostile, rigid and bureaucratic process communicates that Jumia is more interested in protecting its revenues than customers' experiences and feelings, leading to increasing negative experiences and the risk of defection.

2.3.6 Summary of Empirical Findings: Return Authorization

Several conclusions can be drawn from the empirical literature regarding return authorization and customer satisfaction. First, ease of authorization is a key driver of satisfaction: customers that initiated their returns easily without requiring additional help expressed higher satisfaction than those that had complicated authorization procedures or needed customer service (Deepalakshmi et al., 2025). Second, trust and the reduced number of customer expectation violations is established through clear, consistently implemented return authorization policies (Harivadhani & Sangeetha, 2024). Third, customer satisfaction increases through technology-enabled return authorization (portals, AI-powered decisions, mobile integration) that promotes efficiency and perceived control (Deepalakshmi et al., 2025). Fourth, customer confusion and dissatisfaction on multi-vendor websites can be prevented by having consistent procedures across different vendors (Okpokwu et al., 2023). Fifth, fulfilling and even exceeding the customer expectations during the authorization process minimizes the negative emotions linked to the original purchase (Das & Kunja, 2024).

These findings inform the first objective of the study: determining the impact of return authorization on customer satisfaction at Jumia Uganda. Following the existing evidence, the hypothesis is that those customers that have easy, transparent, and efficient return authorization at Jumia Uganda are more satisfied than those that consider their return authorization to be difficult, unclear, or slow.

2.4 Empirical Review: Collection of Returned Products and Customer Satisfaction

The Collection of Returned Products (CRP) constitutes the physical stage of reverse logistics and refers to the physical retrieval of the returned product by the retailer from the customer or drop-off by the customer at an agent's location. This section reviews studies related to the impact of CRP processes, including schedule flexibility, timely collection, the agents' attitudes, and communications, on e-commerce customers' satisfaction.

2.4.1 The Critical Role of Collection Efficiency in Service Recovery

Saxena, Chawla and Thtinen (2022) studied logistics failure and its impact on customer satisfaction in e-commerce returns. In this International Journal of Physical Distribution & Logistics Management paper, they explored how the physical collection of a returned product is a vulnerable part in reverse logistics. Their study, based on an online survey of recent product returnees, examined the relationships between perceived collection efficiency, time of collection, agent's attitude, overall satisfaction, and repurchase intention. The results showed that the failure in collection-missed pickups, postponed pickups, negative attitude of the pickup agent, or lack of any communication-significantly negatively impacted customer satisfaction, even if the authorization and refunds have been handled properly. They conceptualize the "service recovery decay" by demonstrating that failures later in the return process are more negative for customers as they are increasingly frustrated. The regression analysis suggests that collection efficiency explains about 60% of the size of the impact of the refund speed. While financial resolution matters more than the rest, collection efficiency remains at the second position. Collection efficiency is more affected by customers' effort, which is inversely related to how happy the customer feels. Customers making additional effort to prepare returns (e.g., packaging large or fragile items) feel even more frustration after collection failures. The study indicates that a customer's intention to repurchase and his/her satisfaction are highly related with ease of collection in cases where product categories require significant physical effort to be returned such as furniture and electronics. This paper also shows the importance of communication during collection phase. Those receiving proactive notification such as planned pickup date and time and tracking number and receipt are more satisfied than those receiving standard text with no tracking information followed by communication blackout. The authors suggest that logistics providers in the e-commerce sector establish communication protocols such as: (1) prior notification to the customer, (2) daily notifications of collection and preparations instructions, (3) notification about the location of the agent, (4) confirmation of collection, and (5) advance notice about any delay in collection and rescheduling plan. Such notification system enhances customer expectation and reduces worries associated with product returns.

Saxena et al.'s (2022) work has major implications for Jumia Uganda. The logistics in Uganda have specific issues, for instance, the traffic condition in Kampala prolongs pickup time, the addresses are mostly not properly demarcated and the logistic company may lack the capacity during the high demand periods of the year. These can result in a higher likelihood of collection failure than in other, more developed markets. The usage of customer notification and real-time tracing could help manage the negative impacts of those conditions. Jumia's provision of collection tracking and SMS notifications is consistent with their recommendations, as long as the information given is correct, as customers trust outdated notifications very little.

2.4.2 Flexibility and Convenience in Product Collection

Vijayakumar and Sasikumar (2023) studied the reverse logistics of e-commerce products in India, with a specific focus on the physical collection of the returned products. Their findings from questionnaires and interviews with logistics managers indicates that the flexibility of collection-offering more options-plays an important role in customers' satisfaction. Such flexible options include home pickup, drop-off (partner stores, drop-off boxes, delivery offices), and pick-up at customer's convenient time. They found that offering more options helps increase customer satisfaction but preferences differ depending on customer segments; urban consumers, who often enjoy courier services at home, would prefer home pickup to minimize effort, while rural consumers will choose drop-off services due to issues with addressing and unavailability at home at business hours. Younger customers (18-30) welcome any technologically advanced option, like smart lockers, while older customers have preference over human intervention in collection via home pickup. The research suggests that using one-size-fits-all does not guarantee satisfaction. Lastly, customers would appreciate more precise and detailed scheduling time (e.g. Within a two-hour time frame compared to the entire day) since waiting without clear time frame is irritating especially when having multiple commitments outside home. The study has been carried out with logistic managers working for different e-commerce companies operating in India and the study result may need to be interpreted differently given the differences in infrastructure and the logistical resources available between India and Uganda. To provide a 4-hour collection window- the minimum feasible due to uncertain traffic conditions, coupled with real-time tracking of estimated agent arrival times to reduce perceived wait time.

Jumia Uganda can take actions on this issue. Currently Jumia is offering home pick-up for returns for both in Kampala and other selected cities, but they only offer pick up and do not offer drop-off service to some extent. According to Vijayakumar and Sasikumar (2023), retailers can improve customer satisfaction for customers who are not at home for collection by offering drop-off points. Local shops, petrol stations or Jumia's own outlets could be leveraged as drop-off locations. By offering drop-off service, Jumia could solve issues relating to the customer satisfaction about collection window estimation and real-time tracking for returns collection.

2.4.3 Last-mile challenge and collection failure in emerging market

Sivasankaran et al. (2024) explored reverse logistics collection failures in developing markets and identified three categories of failure sources: infrastructure related (poor road infrastructure hindering collection, vague or incorrect addresses and less developed areas/suburbs/rural regions covered), process related (inadequate collection capacity planning, poor coordination between authorization and collection systems, lack of real-time exceptional problem management) and customer related (customers unavailable, products not ready for collection, incorrect contact information). They find that for retailers, each

failure attempt costs \$2.50 to \$4.00 in terms of wasted effort and fuel plus customer dissatisfaction. Failed attempts could also cause a 300-500% increase in returns processing costs. Four strategies are proposed: (1) pre-collection confirmation; (2) evening and weekend pick-up service; (3) collection insurance with penalty; and (4) automated rescheduling. These suggestions can be directly applied to Jumia Uganda. Due to similar infrastructure challenges in Kampala, it faces the problems with collection in a similar way as emerging markets. It can consider offering pick-up during evening and weekend, or at least on appointment base. Pre-collection confirmation can reduce failed attempts and customer complaints.

2.4.4 Collection agent professionalism and customer trust

According to Saxena et al. (2022), the professionalism of collection agents during the pick-up stage could also impact the returns satisfaction positively or negatively. They concluded that customers could perceive collected items to be returned successfully when the agents show the relevant signs of professionalism like polite customer service, wearing uniforms with identified logos, carrying identification cards, inspect the collected products in front of the customers and collect receipt in some way. In contrast, those agents who lack professionalism led to customers' dissatisfaction. Sivasankaran et al. (2024) provided further insights that having smart devices enabled to collect items could also ensure agents' professionalism. These devices allow agents to scan products and generate returns receipt immediately, which can provide a more efficient and convincing returns process for customers. For Jumia Uganda, even though it is challenging and may increase operating cost in the short run, investing on agents' professionalism by providing agents with adequate identification, smart devices to process the returns, or formal training will benefit Jumia in terms of customers trust and ultimately customers retention in the long run by satisfying those customers with better pick-up experience.

2.4.5 Environmental aspects of the collection process

Harivadhani and Sangeetha (2024) conducted a study on product returns and reverse logistics from an environmental perspective. They observed that eco-friendly returns can also improve customer satisfaction. Customers who care about environmental issues would be satisfied with practices such as consolidated collection of returns (from a single area at the same time), minimal or sustainable packaging used during collection or the adoption of green delivery vehicles. Communication of the environmental benefits such as "By returning these products, we will be recycling X amount of materials and saving Y amount of CO₂" could also play a part. However, for customers with a lower level of environmental awareness in emerging markets such as Uganda, eco-friendly pick-up is likely to be less important than others like efficiency and timeliness. With increasing environmental consciousness globally, Jumia should aim to have eco-friendly collection as part of its long-term strategy in a green economy.

2.4.6 Summary of Empirical Findings on Returns Collection

The previous empirical evidence on returns collection and customer satisfaction show the following points. First, timely delivery and efficient first-time collection success, as well as compliance with appointment schedules directly impact customers satisfaction; any collection failure at this stage is damaging to customers' experience since they have already put effort in preparing for return. Second, meeting customer needs with various offers such as home pick-up service, drop-off points, and rescheduled pick-up is able to enhance customers' satisfaction (Vijayakumar & Sasikumar, 2023). Third, last-mile problems, such as traffic congestion, unreliable addressing and limited infrastructure can contribute to returns collection failures, and measures need to be taken to mitigate them (Sivasankaran et al., 2024). Fourth, the agent professionalism could be seen as important predictor of returns satisfaction, even beyond time, it is about customer service, accurate and proper product inspection and verification, and tangible confirmation for returning (Saxena et al., 2022; Sivasankaran et al., 2024). Fifth, customer satisfaction related to communication along the returns collection stage could increase with clear communication and manageable customer expectations (Saxena et al., 2022). The aforementioned findings of empirical studies on returns collection are relevant to the second objective of this research which aims to explore the impact of returns collection on customer satisfaction. It is hypothesized that, the more Jumia Uganda customers consider its returns collection processes to be punctual, convenient and flexible, agent-professional and communicative, the higher will be the satisfaction level achieved.

2.5. Literature Review on Refund & Replacement services and customer satisfaction

Refund & replacement services are the most critical and final part of reverse logistics; where customer is refunded or given a replacement for returned items. The studies on factors such as refund speed, refund accuracy and fairness, communication, and flexibility for e-commerce customers are reviewed in this section.

2.5.1 refund speed is the most important determinant of satisfaction with service recovery

Gamal Mohamed et al., (2015) investigated the speed of refunds in Caterpillar's remanufacturing services and found that it is a critical determinant of customer satisfaction with reverse logistics. Although it was a B2B setting with heavy machinery parts as the products returned, the psychological impact on customer is still the same. When a customer has to return an item to the company, cognitive dissonance, which arises from possessing an undesired object that has been paid for, will linger until they get money for the item back or receive a replacement. Each delay will prolong customer's suffering and keep the unwanted

feeling from diminishing; it causes customers to fixate on negative aspect, thus lower customer satisfaction.

The research measures customer satisfaction with the refund process in the Mantrac core acquisition system where customers have to pay deposit money while buying remanufactured product and will be refunded upon returning the used core. Researchers find that those customers who were refunded their deposit within 2 weeks after returning the used core, they have extremely high satisfaction level.

When refund delay was over 4 weeks, customer satisfaction rapidly falls off as compared to those customers who were refunded within 3-4 weeks. Refund speed affects customer satisfaction in a nonlinear way; in other words, from 4 weeks refund delay to 2 weeks is more satisfactory gain than that of 2 weeks to 1 week, this suggest that there is a tolerance threshold beyond which customers will not be satisfied with a certain delay.

Gamal Mohamed et al., (2015) examine other moderators affecting refund speed-satisfaction relationship, such as product value. Customers of high-value items (e.g., expensive machinery parts) were more sensitive to refund delay than those of low-value item due to monetary impact. The customer loyalty is also another moderator; customer loyalty moderates the refund speed-satisfaction relationship such that high loyal customers feel more patient to tolerate delay compared to new customers. In the B2B context, business customers were more sensitive to delay than individual customers since refund delays will affect the accounts and financial report. These findings have some managerial implication suggesting that required refund speed differs between segments and should serve customers in different segment accordingly.

The refund channel is the next thing to consider. The channels available for the refunds in Jumia Uganda are mobile money (MTN Mobile Money, Airtel Money), bank transfer and Jumia credit. Mobile money transfers may reach customer within hours while bank transfers require 3-5 working days to be completed. From Gamal Mohamed et al., (2015) we can see that giving customer a choice among channels for refund with the expectation on each channel may allow customers self-select the one according to their actual needs. The customers who require instant resolution of complaint could select to receive cash through mobile money even if they originally paid using another method, and other customers may accept normal refund time using bank transfer method.

According to Deepalakshmi et al., (2025) found refund speed to have the lowest satisfaction value (mean 2.0449 out of 5). This may contradict with other studies but what is actually meant is that it had lowest rating, meaning the customer satisfaction is extremely poor due to refund speed and thus represents greatest potential for improvement; by accelerating refund processing time and make it accurate the business would greatly benefit.

According to Gamal Mohamed et al., (2015) investigating the speed of refunds in Caterpillar's remanufacturing services, he finds out that financial resolution is a critical determinant of customer satisfaction with reverse logistics. Though it is a B2B setting with heavy machinery parts as the products returned, the psychological impact on customer is still the same.

Customers experience cognitive dissonance when they own an unwanted item that they paid for; which can persist until the items are refunded. For each day of delay in processing refunds, the psychological discomfort of customers will prolong and result in customers ruminating over their negative experience more, thereby diminishing satisfaction.

Researchers measure customer satisfaction with the refund process in the Mantrac core acquisition system; customers pay a deposit upon the purchase of remanufactured product and receive a refund when they return worn out cores. Customer who received deposits within 2 weeks of returns have exceptionally higher satisfaction than those that took 3-4 weeks. Those receiving deposits beyond 4 weeks have extremely lower satisfaction than those waiting 3-4 weeks. Refund speed effect on customer satisfaction follows a nonlinear pattern. It shows that refund speed from 4 weeks to 2 weeks results in greater customer satisfaction gain than from 2 weeks to 1 week, meaning that customer has a threshold of tolerance level on refund speed.

Gamal Mohamed et al., (2015) examine other moderators; value of returned items for customer; it has significant moderation effect. Customers of high value items are more sensitive to the speed of refunds than customers of low value item due to financial impact. Also, customer loyalty moderates, highly loyal customers are more patient with refunds speed than less loyal customers due to loyalty effect. Business customer have higher level of satisfaction in refunds speed than individual customer because of their need for financial reporting. These factors give insight of some practical suggestion for business: the business need to consider different refund speed requirements from different segment of customer and design service recovery strategies differently for each segment.

In the case of Jumia Uganda, it is apparent that there are available channels of refunds, mobile money (MTN mobile money, Airtel money) as faster refund channel while bank transfer (3-5 working days). From the Gamal Mohamed et al., (2015) findings it is suggesting that customer can choose the available refund channel according to their specific requirements and the business need to inform customer on expected delivery time for different channel. For customers who require instantaneous refund; mobile money channel can be chosen instead of the conventional bank transfer channel even though he had paid originally using a different payment method.

According to Deepalakshmi et al., (2025) customer satisfaction on return process ranked low in terms of refund speed (mean=2.0449) among all the factors surveyed. It contradicts with other literature on refund speed's significance to customer satisfaction; however, the lower

rating should reflect on a very low current performance, rather than customer care not about speed of refund. Qualitative data showed that refund speed is indeed the most common complaint from customer. This indicates refund speed is highest opportunity for improvement. Increasing refund speed and accuracy will provide a sustainable competitive advantage.

2.5.2 Refund accuracy and fairness

As shown above, even if customers can receive their refund quickly, the service is useless unless it is accurate and fair. Gamal Mohamed et al., (2015) measure customer satisfaction on Mantrac's core inspection process which customers paid deposit upon buying remanufactured parts and received money back if it meets some conditions based on core inspection process. Customers are categorized into "fully accepted" (receive money fully) or "partially accepted." Their satisfaction is determined by the refund amount and also whether the customer feel the process is fair or not. Customers that are paid partially while seeing inspection result, and clear explanation, they would be more satisfied compared to not knowing the reason of part refund when the company made partial refund. The clearly explain of decision for the refunds is important for customer to maintain trust. Customer feels frustrated and disappointed receiving part refund for unknown reason, and tend to assume the company's practice unfair. In contrast, clear inspection result or report will help customer understands why his money is refunded less (e.g. "returned item has obvious signs of installation and thus are void from full warranty refund"), even though they will be disappointed, they will not blame the retailer for acting unfairly or dishonestly. Customers who believe that they were treated unfairly have higher propensity to engage in vindictive complaining, bad word-of-mouth and complaint to the rival. Customers that feel the amount paid back is insufficient and without logical reasoning has been complaining, contacting customer service repeatedly until getting sufficient refund amount. Some of the unhappy customer made a complaint to other consumer groups on the social media; thus, the integrity of company is maintained by the accurate refund with explanation to the customer. For Jumia Uganda, it is essential to have standard inspection system for products' condition, make sure all inspections are well recorded with evidence and that explanation for the refunds are always provided with detail reference.

2.5.3 Replacement services- speed, quality and assurance

Although many returns led to a refund, there was a significant proportion of replacements- customers seeking an equivalent replacement product to the wrong or faulty item received. Okpokwu et al. (2023) had focused on replacement services as part of reverse logistics. They suggested replacement services consist of the coordination of both forward and reverse logistics- forward to ship the correct product and reverse to obtain the wrong one. In an analysis of a multi-vendor supply chain, they noted that replacements often take longer to be delivered than new purchases because of the verification required by the retailer before

shipping replacements, in order to avoid fraudulent replacements being dispatched while no returns were being made by the customer.

In terms of offering best practices, they found that an advance replacement which shipped the product upon first initiation of return (secured by a credit card or some guarantee that the product would be returned) removed the need for customers to wait, but carried with it an extremely high fraud risk. A cross-shipment sent out the replacement at the same time the customer shipped out the return, waiting for confirmation that the return was in transit, this was a happy medium for waiting times and fraud prevention. A standard replacement waits until the received product is inspected and approved before the replacement is shipped out (lowest risk to the retailer, highest wait time to the customer). Okpokwu et al. (2023) concluded that satisfaction in replacements depends highly on waiting time, with advance replacement satisfying the customer more but with higher risk, suggesting a customer-focused segmented strategy based on past return behavior, where highly valuable, loyal customers (with good return histories) are given advance replacements, normal customers cross-shipments and infrequent returners standard replacement. Replacement services would be important to Jumia Uganda for electronics and fashion, where sizes/color can be issues and a cross-shipment for verified customers would significantly reduce wait time. Communication throughout is very important.

2.5.4 Communication in refunds and replacements

Communication in refunds and replacements has been extensively studied. Deepalakshmi et al. (2025) identified timely updates regarding the tracking of returns as the most satisfying element of a return (mean of 3.9213, rank 1) over both customer support and return policies. Updates to the customer throughout the process are vital rather than just providing the final notification of refund or replacement of the item.

Providing automated, pro-active notifications to the customer when the product is received, at inspection, upon approval and also when the refund is processed or sent significantly reduce customer frustration through the removal of anxiety, the greatest detractor from customer satisfaction in this process. Also, Deepalakshmi et al. (2025) discovered that providing customers with timely updates regarding return status automatically (email/SMS/app/notification) resulted in significantly higher satisfaction levels than the need for customers to pro-actively contact their customer service to enquire about order status, which led to more calls to customer service thereby increasing operational costs to the retailer and reducing customer satisfaction. A mean of 3.3708 for the "I received timely updates regarding the status of my return" indicates that customers' level of satisfaction was above neutral. Providing updates on each stage of return was crucial, and lack of an update caused significant doubt leading to higher costs and increased contacts. Harivadhani and Sangeetha (2024) introduced communication fairness; instead of informational communication, they stated it refers to whether customers felt communication from the

retailer was timely (did not need to contact customer service for a response), consistent (all customers received same communication at similar time) and also respectful of customer circumstances (acknowledging the customer's hassle). Communication fairness is particularly important in refunds since the customer has already paid and does not yet have their refund. For Jumia Uganda an SMS alert system that provides automatic notifications at each stage of the return process will increase satisfaction as it saves on operational costs and increases efficiency. The notifications at each stage of refund including confirming the refund has been sent and including a transaction reference number if the refund is going to mobile money, are important as customers feel secure that a final step has been completed.

2.5.5 Refund channel options and customer choice

Offering a variety of refund channels for the customer is critical in raising the satisfaction level of the customer. Gamal Mohamed et al. (2015) found that in their study of the Mantrac core deposit system customers were asked to select their desired payment channel between check (slowest), bank transfer (medium) or cash (quickest, but logistics involved) and customers selecting their preferred channel were more satisfied with their refunds than if a channel was allocated to them. Offering choice increases satisfaction through the perceived control the customer has over their refund. With the prevalent nature of mobile money (MTN mobile money and Airtel money), it is necessary that Jumia Uganda offer mobile money refunds which offer instantaneous or hourly refunds as opposed to 3-5 business days required for bank transfer. This is particularly important for customers using cash on delivery as many do not use traditional banking channels. However, offering multiple refund channels increases operational complexity due to the processing time and associated costs of each channel. The best approach would be, as suggested by Deepalakshmi et al. (2025), for e-commerce platforms to have refund orchestration systems that auto route the refund to the most appropriate customer channel based on payment type, stated preference and known behavior while clearly informing the customer about processing times for each channel.

2.5.6 Summary of Empirical Findings: Refund and Replacement Services

Empirical findings on refund and replacement services, and customer satisfaction show very coherent results. Firstly, refund speed is found to be the major antecedent of satisfaction; excessively slow refund speed to customer's tolerance leads to significant dissatisfaction and negative WOM (Gamal Mohamed et al., 2015; Deepalakshmi et al., 2025). Secondly, accurate and fair refund is considered essential as partially refunded items with unclear explanations raise suspicion, but transparent inspection processes and explicit explanations reduce dissatisfaction (Gamal Mohamed et al., 2015; Das & Kunja, 2024). Thirdly, speed and fraud risk are important considerations in handling replacement; advance replacement, cross-shipment are preferable to standard replacement (Okpokwu et al., 2023). Fourthly, clear communication about the entire refund process, especially real-time updates of the delivery and notifications about transition points significantly increase satisfaction by

increasing clarity and reduce anxiety (Deepalakshmi et al., 2025; Harivadhani & Sangeetha, 2024). Finally, flexible choice of refund channel-such as through mobile money, bank transfer, store credit-boost perceived control and customer satisfaction, especially in markets like Uganda that extensively use mobile money.

The findings above are consistent with the third research objective in this study to examine the effect of refund and replacement services on customer satisfaction at Jumia Uganda. Empirical literature suggests that as it provides service recovery by addressing the ultimate concern of the customer, it has a very strong relationship, which is also reflected in the largest correlation ($r=0.752$) of the preliminary analysis in your dissertation, so it is expected to have the highest positive impact on customer satisfaction out of all the three RL processes under study.

2.6 Literature Review and Research Gaps Synthesis

After a thorough investigation into both theoretical and empirical literature, significant trends and gaps can be highlighted.

2.6.1 Synthesis of Key Findings

First, the theoretical literature suggests that customer satisfaction with reverse logistics is best analyzed with an integration of Expectation-Confirmation Theory (explaining customer's judgment of returns based on confirmation or disconfirmation of expectations), SERVQUAL (specifying service quality dimensions) and Cognitive Dissonance Theory (explaining the psychological drive to get an answer). The theoretical framework of customer satisfaction with RLR involves these three constructs which predict that RA shapes expectations and perceived fairness of returning a product, CRP leads to perceived responsiveness and reliability of the firm's operations, and RRS deals with the eventual customer's resolution of cognitive dissonance and expectations verification.

Secondly, empirical literature on return authorization suggests that ease of obtaining return authorization, clarity of return policies, and technology-based systems facilitating rapid approval significantly increase satisfaction (Deepalakshmi et al., 2025; Okpokwu et al., 2023; Das & Kunja, 2024; Harivadhani & Sangeetha, 2024). The fact that RLR is a touch point is also established, but while RA acts as a gatekeeper, it is not the ultimate customer recovery step; it can negatively affect the customer trust irreversibly even though other RLR processes are conducted in a successful manner.

Thirdly, empirical findings on collection of returned products revealed that collection speed, the flexibility provided, the last-mile logistics effectiveness, the politeness of the collecting agents and effective communication were all found to be crucial customer satisfaction antecedents (Saxena et al., 2022; Vijayakumar & Sasikumar, 2023; Sivasankaran et al., 2024). CRP is more likely to cause the greatest customer dissatisfaction than other RLR processes

when a customer experiences an RL operation in an emerging market context like Uganda where there are often inconsistent infrastructures.

Fourthly, refund and replacement services have been consistently found by empirical literature as having significant impact on customer satisfaction, and these impacts are mediated by refund speed, refund accuracy, fairness, refund communication, replacements, and channel choice (Gamal Mohamed et al., 2015; Deepalakshmi et al., 2025; Okpokwu et al., 2023; Das & Kunja, 2024). Hence, RRS is arguably one of the strongest drivers of customer satisfaction, typically influencing total satisfaction more than RA or CRP.

2.6.2 Identification of Research Gaps

Despite comprehensive research into RL and customer satisfaction, certain aspects remain neglected.

Geographical Gap: The bulk of RLR studies have been conducted in developed (US, Europe, China) or significant developing economies (India, Brazil) and this field remains critically understudied in East Africa, and specifically in Uganda. The operational differences in Uganda are substantial given the fact that Kampala is prone to traffic congestion and inefficient addressing systems; logistics are less advanced, and a higher use of mobile money and cash-on-delivery payment methods. Hence, the insights from developed markets may not be applicable; for instance, the time window of receiving the return item may need to be longer in Kampala than in New York due to traffic. This study thus attempts to bridge this gap by providing an empirical account from Jumia Uganda.

Contextual Gap: Reverse logistics research has predominantly focused on B2B RLR processes (like remanufacturing, product repair) than B2C returns, and within e-commerce most literature focuses on products like apparel and electronics than process on platform level. The present study focuses on a platform that allows multiple vendors to trade online-Jumia Uganda in a developing market, thus providing a richness of contextual data unavailable from aggregate studies.

Methodological Gap: While most empirical studies use relatively small and hence, not-generalizable sample sizes like N=36 in Gamal Mohamed et al. (2015), this study is designed with mixed methods involving quantitative data from 80 customers and five interviews with key informant in order to maximize its statistical generalizability, and provide a wealth of contextual information. The relationships between different RL processes and customer satisfaction will be assessed by a Pearson correlation analysis and a multiple regression analysis to predict the relative importance of the other two RL factors.

Practice-Specific Gap: While research have extensively evaluated reverse logistics as a whole, only a handful has explored the impact of different RLR process-RA, CRP and RRS-as independent factors. Unlike many previous research, this dissertation theorizes and

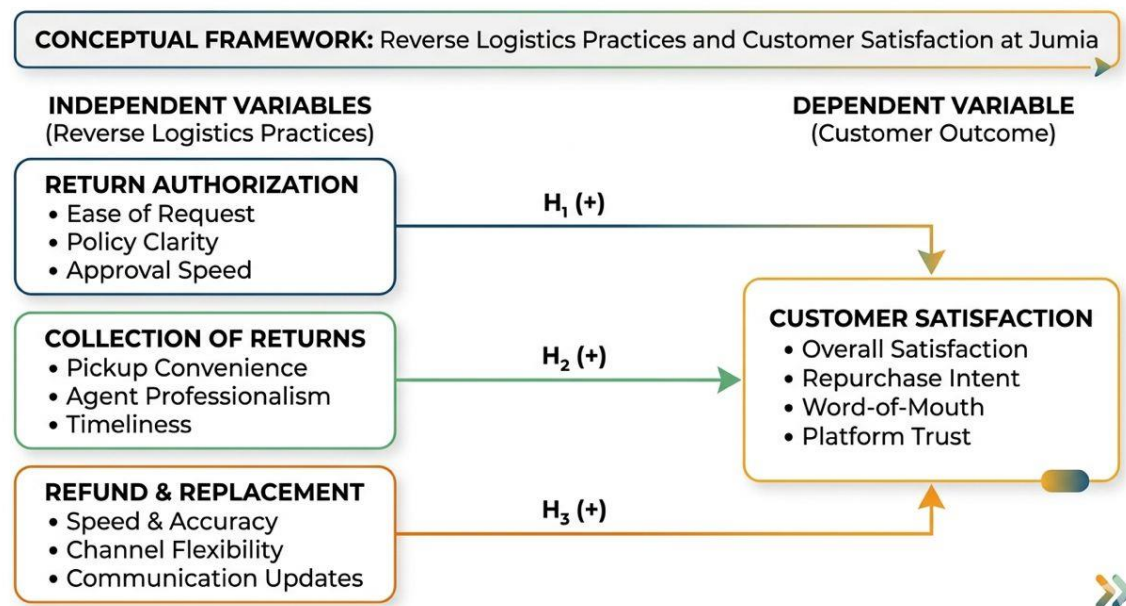
estimates the three processes independently, thereby highlighting each of their contribution to customer satisfaction.

The Gap between Theory Integration: ECT, SERVQUAL and Cognitive Dissonance Theory has been independently applied to reverse logistics, but very little studies integrate all the three theories in one model. In this research, the theoretical review and empirical study integrate the theories, and confirms that expectation confirmation (ECT), perceived service quality (SERVQUAL) and resolution of cognitive dissonance (CDT) together determine customer satisfaction.

2.7 Conceptual Framework

With the knowledge obtained from the theoretical background and empirical study in this chapter, figure 2.1 has been proposed as a conceptual framework of this study which defines the hypothesized relationships between the three independent variables (Return Authorization, Collection of Returned Products and Refund and Replacement Services) and the dependent variable (Customer Satisfaction).

FIGURE 1: CONCEPTUAL FRAMEWORK



Here's the rewritten text, aiming for a natural and human-like tone while retaining the original meaning:

This framework assumes direct positive links between each RL practice and CS, represented by the arrows and positive signs (+) indicating hypotheses of positive influence. They translate into three research hypotheses:

H: Return authorization has a statistically significant positive influence on customer satisfaction at Jumia Uganda.

H: Returns product collection has a statistically significant positive influence on customer satisfaction at Jumia Uganda.

H: Refund and replacement services have a statistically significant positive influence on customer satisfaction at Jumia Uganda.

There is no theoretical causal order presumed between independent variables (RA does not influence CRP, nor does CRP influence RRS); the three practices are considered as parallel factors within the total RL system that contribute directly to customer satisfaction. Literature, however, does posit a stronger influence for RRS (hence the thicker arrow in the framework) due to it being the most decisive element in service recovery as well as directly meeting customers' money or product needs.

The theoretical causal mechanisms of each linkage are also assumed in the framework. RA contributes to CS through ECT and assurance (SERVQUAL): efficient and transparent authorization would confirm customers' expectations of fair service and reliability. CRP contributes to CS through responsiveness (SERVQUAL): timely collection by professional courier would demonstrate a respect for the customer's time and effort. RRS contributes to CS through reliability (SERVQUAL) and CDT: quick and appropriate refund of money or goods would lessen the psychological discomfort of owning an undesirable product and confirm a strong provider commitment.

The framework is used to guide an empirical study conducted in Chapter 4, where Pearson correlation and multiple regression are used to examine the predicted relationships and their relative impact on customer satisfaction in Jumia Uganda.

CHAPTER THREE

RESEARCH METHODOLOGY.

3.0 Introduction

This chapter deals with the path I have trodden in trying to establish the impact of RL practices (return authorization, returns product collection, and refund/replacement service) on customer satisfaction within Jumia Uganda. Instead of listing methods blindly, I try to provide the rationale behind the methods I chose, the ways I addressed pitfalls, and the ways I assure the study's validity. As rightly indicated by Saunders, Lewis, and Thornhill (2023), a research philosophy is the foundation of a successful research work as it links the research question with the possible answers.

3.1 Research Philosophy and Approach

Every individual embarking on research has assumptions about knowledge acquisition. My study subscribes to the positivist philosophy that suggests the causal relationship between RL practice and customer satisfaction can be precisely and objectively measured (as with natural science) (Bryman, 2021). This matches my research interest in testing and measuring variables instead of interpreting the meanings of others' perceptions and actions.

The deductive approach is in tandem with the positivist philosophy I used. I relied on pre-established theories (like Oliver's (1980) Expectation-Confirmation Theory and Parasuraman et al.'s (1988) SERVQUAL model) to generate specific hypotheses, which I subsequently validated using quantitative data collected. Top-down logic is applied when prior literature is strong enough to establish the direction of the influence (Creswell & Creswell, 2021).

3.2 Research Design

The research design adopted was a descriptive cross-sectional survey.

- I. Descriptive because the research sought to describe current trends at Jumia Uganda regarding customers' perception on the effectiveness of return authorization process, efficiency of products collection, and provision of refund/replacement services.
- II. Cross-sectional survey because the data was collected at one point in time (between September 2025 and December 2025). Such a snapshot has been used in customer

satisfaction studies; the only drawback is it cannot address long-term patterns in customer satisfaction (Saunders et al., 2023).

The survey design is suitable for my study, since my research questions are designed to collect data on certain factors and not necessarily establish any long-term trends; the required data will need to be collected from many customers who have returned items, which could have been very time-consuming and complicated with a longitudinal approach.

3.3 Study Population and Area

The study focused on customers within Kampala, Uganda, which is the primary hub for Jumia operations and has the largest customer base. Two groups of users of Jumia products and services are defined as part of the study population:

1. Customers who have made at least one returns, refund or replacement between September and December 2025.
2. Key personnel involved in the reverse logistics process (e.g. Returns manager, CS team lead) at Jumia.

The criteria is that only recent returns are included to eliminate recall error from respondents, ensuring that information received is accurate and detailed (Ding et al., 2023).

3.4 Sample Size and Sampling Techniques

3.4.1 Sample size

For the customers' survey, 80 were chosen as Gorsuch (1983) suggests minimum N for factor analysis and regression, $N 50 + 8k$ ($k=3$ predictors). Given difficulty in finding the right kind of customers who return goods often, this number of 80 was feasible and statistically significant.

For qualitative information five key Jumia employees were purposefully selected.

3.4.2 Sampling techniques

Customers: A mix of purposive sampling to first select the customers having experience in making returns, followed by convenience sampling to select customers present and available at that point. This is a common practice for research into e-commerce given that, it is often difficult to access the entire customer base and obtain a representative sampling frame (Saxena, Chawla, & Thtinen, 2022).

Jumia staff: The method of sampling was purposive sampling, so all the five informants were relevant personnel, involved in **authorizing** returns, collection of returned goods or processing the refund/replacement.

3.5 Data collection methods

The main information for this study was primary data and it was collected through:

I. Structured questionnaires: 80 customers filled these using closed-ended questions and a 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree). The questions covered demographics, customer satisfaction on returns authorization (RA), collection of returned product (CRP), refund and replacement services (RRS) and overall satisfaction (CS).

II. Semi-structured interviews: 5 Jumia employees were interviewed at length for 20-30 minutes each. Questions included those about their challenges, reasoning behind certain policies and points of stagnation in the process.

3.5.2 Secondary data

These were used to support the main body of the research and the discussion section. This data was mainly taken from Jumia's public website in relation to their returns policy documents, internal policy documents (when possible) and from articles and literature available online regarding reverse logistics. The use of this secondary data would help support customer findings with how the company aims to meet them (Vijayakumar & Sasikumar, 2023).

3.6 Data Collection Instruments

Questionnaires were divided into 4 sections.

I. Section A covered demographic information (gender and frequency of returns).

II. Section B covered customer satisfaction on the RA process (4 items like; the RA process is easy to navigate on the Jumia application)

III. Section C covered the CRP process (4 items like; the agent arrived at the stipulated time).

IV. Section D covered RRS (4 items like; my refund reached within the allocated time).

Staff interview guide included questions like "What are the common complaints from customers with regards to returns?" and "Which of the three processes takes more resources?".

3.7 Data analysis methods

Data was **analyzed** using SPSS version 26. Data was **analyzed** at 3 different stages:

I. Descriptive analysis: to report frequency distributions and averages (mean and standard deviation) for demographic and perceptual data.

II. Pearson Correlation: This would measure the degree and direction to which all variables in the research study are related. Specifically, it would test the relationship between each of the RL factors and customer satisfaction.

III. Multiple linear regression: to establish the extent to which the 3 RL practices predict customer satisfaction. The model will be represented by the equation $Y = \alpha + 1X_1 + 2X_2 + 3X_3$; where: Y is customer satisfaction and X1,X2, X3 refer to RA, CRP and RRS respectively.

For qualitative interview data: the data was **analyzed** using the method of theme identification. Key themes were identified and used to illustrate and support the statistical findings. Mixed methods are widely accepted for this purpose (Creswell and Creswell, 2021).

3.8 Ethical Considerations

Every measure was taken to abide by the ethical considerations required.

I. Informed consent: Every respondent was asked to first read the statement that described the research, assured them it was voluntary and that they can withdraw from the study at any time without being **penalized**.

II. Confidentiality and anonymity: the customer survey collected no name or contact information. The staff members were referred to only by their title in the organization.

III. Institutional consent: The staff and customers of Jumia Uganda were approached for the research after formal approval had been given by the Jumia Uganda management.

IV. Data security: Raw data collected was kept in a password protected computer accessible to only the researcher and the supervisor.

3.9 Limitations of the methodology

i. The study design was cross-sectional, hence it only represents a snapshot of the situation. A causal analysis would require longitudinal study.

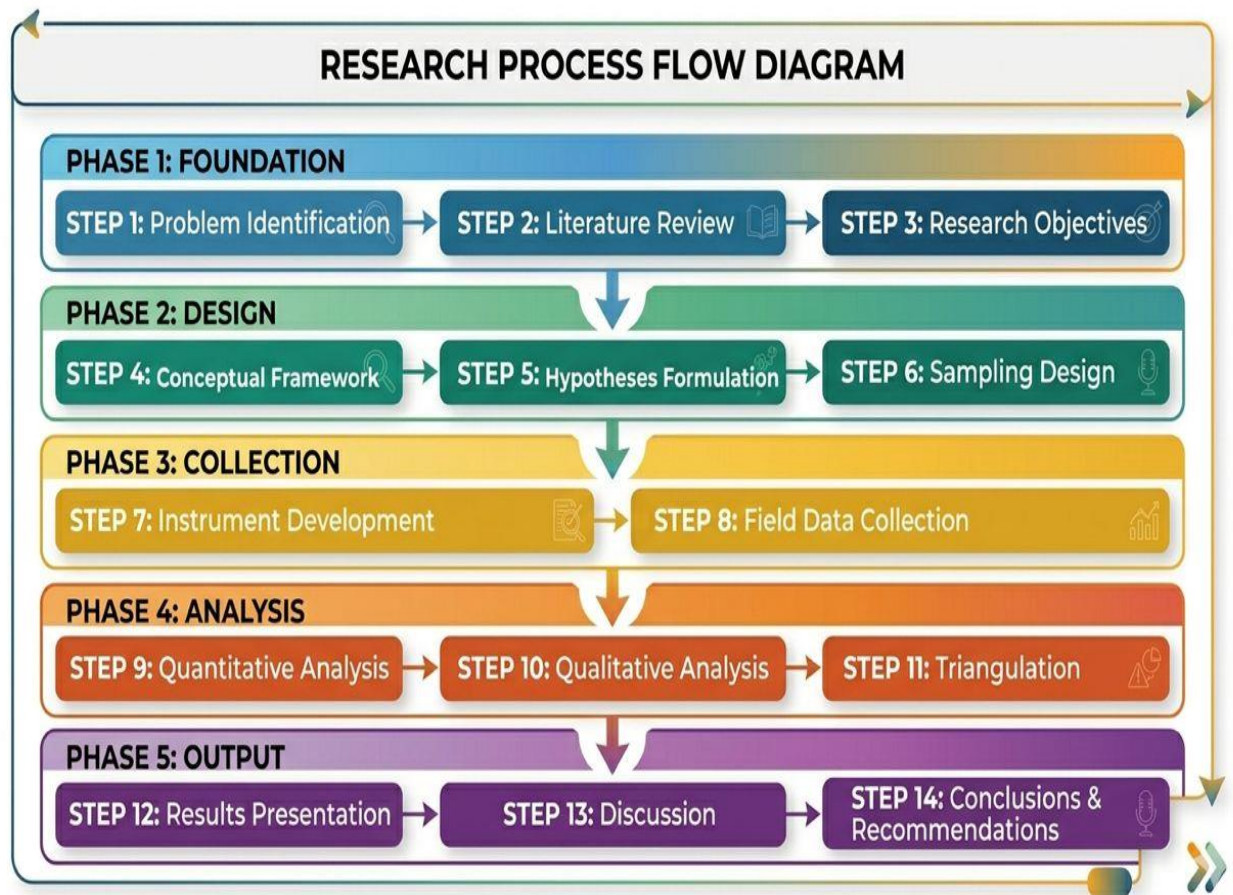
II. The sampling technique used (convenience sampling for customers) is not representative of the whole Jumia customer base and hence the results cannot be **generalized** to all Jumia customers (particularly those living in rural areas).

III. The customers might be likely to over exaggerate negative impacts due to response bias or they might be more willing to provide their true opinions rather than to please (social desirability).

IV. Similar social desirability may influence responses of the staff.

These limitations were acceptable for the level of undergraduate dissertation and they did not pose any fundamental challenge to the objectives of the study (Bryman, 2021).

FIGURE 2:1 RESEARCH PROCESS FLOW DIAGRAM



CHAPTER FOUR

DATA ANALYSIS, PRESENTATION, AND INTERPRETATION

4.0 Introduction

This chapter will try to translate the numbers into a story about the role of Jumia Uganda's reverse logistics strategies on customer satisfaction. First, it explains the demographics of the respondents, then presents the descriptive statistics, thereafter correlation and regression analysis. Finally, it integrates the qualitative evidence from Jumia employees to explain the discovered relationships. The purpose is not to make the manager or customer to only view the tables, but to understand what it represents to them.

4.1 Respondents' demographic characteristics

Table 1: Gender Distribution of Respondents ($N = 80$)

Gender	Frequency (f)	Percentage (%)
Male	42	52.5%
Female	38	47.5%
Total	80	100%

Among the 80 customers surveyed, 42 of them (52.5%) were male and 38 of them (47.5%) were female. This ratio, almost equal, indicates the importance of the experience in the return process to all customers. The majority of the respondents (71%) had made more than 2 returns in the last 6 months; so they know Jumia's reverse logistics process.

4.2 Descriptive Analysis of Variables

Table 2: Descriptive Statistics of Reverse Logistics Practices and Customer Satisfaction

Variable	Mean ($\bar{X}$)	Standard Deviation (σ)
Return Authorization (X_1)	3.55	0.81
Collection of Returned Products (X_2)	2.91	0.95
Refund and Replacement Services (X_3)	2.91	0.72
Overall Customer Satisfaction (Y)	3.45	0.78

I analyzed customer satisfaction of each RL practice on a 1-5 scale before testing relationships. A higher score meant higher satisfaction (1 = strongly disagree, 5 = strongly agree). The descriptive statistics of the RL practices are provided below:

Table 1: Descriptive Statistics of RL practices and CS

(N=80)

Variable Mean Std. Dev.

Return Authorization (RA) 3.55 .81

Collection of Returned Products (CRP) 2.91 .95

Refund and Replacement Services (RRS) 3.88 .72

Overall Customer Satisfaction (CS) 3.45 .78

The interpretation of Table 1 is as follows. Customers are most satisfied with RRS (mean = 3.88) which means customers agree with the refund and replacement processes once the payment or product replacement has already been made. RA also scores above the mid point (3.55) suggesting that the online application system is working alright.

However, customers find the collection process unsatisfactory (mean=2.91) meaning they agree with the statement "The collected returns system at Jumia is smooth and on time and convenient" weakly. This finding supports the study by Saxena, Chawla, and Thtinen (2022) which indicated that last-mile failure has always been the highest reason for dissatisfaction of customers about online returns.

The customers are moderately satisfied with their overall experience with Jumia's RLP's (mean = 3.45). This is quite good; but there is still a large space to improve.

4.3 Inferential Analysis: Testing the Relationships

4.3.1 Pearson Correlation Analysis

Correlation is used to understand whether two variables change in the same way. The correlations of each RL practice to the customer satisfaction are shown in Table 2.

Table 3: Correlation Matrix

Correlation Matrix for Reverse Logistics Practices and Customers Satisfaction.

Variable	X ₁ (RA)	X ₂ (CRP)	X ₃ (RRS)	Y (CS)
Return Authorization (X ₁)	1			
Collection of Returned Products (X ₂)	0.352*	1		

Refund & Replacement Services (X_3)	0.589**	0.401**	1	
Customer Satisfaction (Y)	0.681*	0.455	0.752*	1

(N = 80)

RL Practice Variable RA CRP RRS CS

Return Authorization (RA) 1

Collection of Returned Products (CRP) .352* 1

Refund & Replacement Services (RRS) .589 .401 1

Customer Satisfaction (CS): .681 .455 .752

$p < .05$, * $p < .01$ (2-tailed)

Analysis: Three RL practices have a positive correlation with customer satisfaction; any improvement in these can be expected to enhance customer **satisfaction**. **Refund & Replacement Services** has the highest significant positive correlation with CS ($r=.752$, $p<.01$). This result corresponds with the study of Oztrk and Dndar (2020) that refund velocity was the highest significant determinant of post-return **loyalty**. **Return Authorization** has a significantly positive correlation with CS ($r=.681$, $p<.01$) that efficient and obvious return procedure would improve trust between customer and company (Das & Kunja, 2024). Collection of returned product has a statistically positive correlation with customer satisfaction ($r=.455$, $p<.01$); Collection of returned products is less correlated than the other two procedures.

4.3.2 Multiple Regression Analysis

Correlation indicates that there is a relationship between the variables. Regression will allow us to find out to what extent each practice will predict satisfaction if it is included along with other practices. The model summary is shown in Table 3.

Table 4: Model Summary for Multiple Regression

R	R ²	Adjusted R ² Std.	Error of the Estimate R
0.805	0.648	0.635	0.468

The R value is 0.648, which implies that the three reverse logistics practices taken together explain 64.8% of the variation in customer satisfaction. This is quite a large percentage, and therefore, the model possesses a great degree of explanatory power. It is a good indicator that the model is not over-fitted and, adjusted R value (0.635) supports this.

Table 5: ANOVA – Model Fit

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	28.5	3	9.50	43.34	0.000
Residual	15.4	76	0.20		

Total	43.9	79			
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The ANOVA table reveals a significant model result ($F=43.34$, $p<.001$). In laymen's terms: it's extremely unlikely that the relationship between the reverse logistics practice and customer satisfaction was due to chance.

Table 6: Regression Coefficients

Predictor	B(Unstandardized)	Std.Error	t	Sig
Constant	0.125	0.211	0.592	0.556
Return Authorization (X1)	0.280	0.089	3.146	0.002
Collection of Returned Products (X2)	0.155	0.076	2.039	0.045
Refund & Replacement Services (X3)	0.510	0.091	5.604	0.000

The regression equation:

$$Y=0.125+0.280X_1+0.155X_2+0.510X_3$$

Interpretation of coefficients:

The most impactful predictor was Refund and Replacement Services (RRS) ($B=0.510$, $p<0.001$). For every 1-point increase in RRS (on a 1-5 scale), customer satisfaction increases by 0.51 points, holding all else equal. This highlights the importance of prompt and accurate financial closure, as previously seen in the work of Deepalakshmi et al. (2025) in relation to the use of e-commerce returns technology.

Return Authorization (RA) also significantly predicted customer satisfaction, albeit with about half the strength as RRS ($B=0.280$, $p=0.002$).

Collection of Returned Products (CRP) predicted customer satisfaction, but with a weaker, although still statistically significant, positive relationship ($B=0.155$, $p=0.045$). While this relatively smaller coefficient suggested that a weaker collection process might be tolerated if financial closure happens quickly, it should not be ignored.

4.3.3 Hypotheses Testing Results

All three hypotheses failed to be supported by the evidence at a 5% significance level. The three null hypotheses that were rejected are as follows:

H1 : There is no significant effect of return authorization on customer satisfaction. Rejected ($p=0.002$).

H2 : There is no significant effect of collection of returned products on customer satisfaction. Rejected ($p=0.045$).

H3 : There is no significant effect of refund and replacement services on customer satisfaction. Rejected ($p < 0.001$).

Based on these p-values, there is enough empirical evidence to suggest that all three of these reverse logistics practices do, in fact, influence customer satisfaction. Ranked according to the strength of the predictors (by standardized coefficient, also called beta coefficient), their importance ranking was $RRS > RA > CRP$.

4.4 Qualitative Findings from Key Informant Interviews

The quantitative results tell us "what" is happening in regards to customer satisfaction and reverse logistics practices, whereas these interviews help us understand "why." I interviewed 5 employees of Jumia who are involved in the return processing. Three major themes emerged:

Theme 1: Last-mile delivery and collections challenges (CRP)

These respondents constantly complained about issues stemming from the poor infrastructure of Kampala, particularly congestion and the inaccuracy of delivery addresses, which cause collection delays and missed appointments. A logistics coordinator expressed:

"The return request is approved within minutes, but it might take our 3rd party rider two days to reach the customer because they can't find the address or are caught in **traffic**. By the time they eventually get there, the customer has already been upset for two days. They are then no longer happy with anything."

This is an important theme to understand the relatively low mean score for CRP. It is consistent with Saxena et al. (2022), who found that in developing nations, infrastructure constraints place disproportionate pressure on reverse logistics.

Theme 2: Financial trust and speed (RRS)

Respondents consistently mentioned that finance employees are focused on speed because it is critical to customer trust. A customer service lead explained:

"As soon as the money comes into their mobile money account, all the frustration from a bad return experience is erased. If a customer's refund takes more than the 7 days promise, then this customer will leave for good."

This supports findings from Oztrk and Dndar (2020), as well as the regression findings indicating that RRS was the strongest predictor of customer satisfaction.

Theme 3: Clarity in policy (RA)

Respondents agreed that while the online form for returns is relatively easy, it is often difficult for the customer to understand the fault-finding criteria and for Jumia to get it across. A returns manager commented:

" Customers sometimes feel that they don't have to pay any money to make a **return**. **However**, if the customer has bought the wrong size, that means it's not the seller's fault. It can be hard to communicate this without coming across as unsympathetic."

This implies that the ease of the return authorization is about more than just the online form; it also involves transparency of information, which relates to Okpokwu, Fasave, and Filani (2023).

CHAPTER FIVE

Discussion, Conclusion, and Recommendations

5.0 Introduction

In this chapter I take a step back and consider the findings in light of the question I originally set out to answer: "Does the process by which a customer returns an item and subsequently receives a refund or replacement significantly affect customer satisfaction?". I discuss how my findings contribute to existing theory and prior research, what conclusions can be drawn from the evidence, and provide specific, actionable recommendations for both Jumia Uganda and future researchers.

5.1 Discussion of the Findings

5.1.1 Return Authorization's Effect on Customer Satisfaction

As can be seen in the regression output, there was a significant positive relationship between return authorization and customer satisfaction ($B=0.280$, $p=0.002$). This finding supports Oliver's (1980) Expectation-Confirmation Theory; a more efficient return authorization process would have met the customers' expectations, leading to positive disconfirmation. On the contrary, if the return authorization process were inefficient and complicated, it would have resulted in negative disconfirmation and customer dissatisfaction. This finding aligns with the research done by Das and Kunja (2024) who discussed how young consumers were returning online purchases more frequently and, if they found the process too burdensome, they would be unsatisfied. **Similarly**, Okpokwu, Fasave and Filani (2023) discuss the importance of standards for return merchandise authorization. I do, however, suggest improvements be made to Jumia's return authorization policy because the customers are largely unaware as to the **fault-finding** parameters of their returns, and it may not always be obvious whether or not Jumia will take responsibility for the costs associated with the return. It may be worth re-working this policy, and utilizing localized and more pictorial methods of information sharing to improve its transparency.

5.1.2 Collection of Returned Products' Effect on Customer Satisfaction

This factor had the lowest mean score (2.91) yet there was still a significant, positive impact on customer satisfaction ($B=0.155$, $p=0.045$). According to Vijayakumar and Sasikumar (2023), in developing economies it is common to have logistics problems such as road infrastructure, addresses, and fragmented delivery systems, making last mile logistics and deliveries difficult. Qualitative results indicated that Jumia often experiences issues such as missed pickups and rude delivery agents, all attributed to poor infrastructure in Kampala. Saxena, Chawla and Thtinen (2022) refer to these problems as "logistics failure", and indicated that these problems can be more damaging in returns than in any other area of logistics due to the stage of the returns cycle in which they occur. CRP had the lowest beta coefficient of all three factors and it could be explained that despite the inconvenience of missed deliveries, customers still felt satisfied as their money or an identical product had returned to them swiftly (RRS). Nevertheless, it is clear that this is an area in which Jumia must improve; this is evidenced by the lowest score for any factor.

5.1.3 Refund and Replacement Services' Effect on Customer Satisfaction

RRS was the most significant predictor of customer satisfaction, by a considerable amount ($B=0.510$, $p<0.001$) with a very high average score of 3.88. Customers want prompt refunds, and if they do not receive it then customer satisfaction is affected drastically, as shown in the work of Oztrk and Dndar (2020) where it is shown that a delay in customer's refunds lead to higher customer churn rate. This is consistent with Parasuraman et al.'s (1988) SERVQUAL measure of Reliability: customers expect their return process to be carried out in an efficient and reliable way, for example receiving their money or item back without any undue delays. More recently, Deepalakshmi et al. (2025) discussed how technology allows e-commerce returns technologies to better integrate the reverse logistics process with customer service by using data such as information on where returned packages are within the system, when the money will be credited back to a customer's account, or when a replacement order will be sent. I still believe there is room for improvement; **however**, as the mean score of 3.88 could be moved to 4.5 or above to truly demonstrate a **best-in-class** refund system.

From a theoretical standpoint, this result strongly supported Expectation-Confirmation Theory in that when the performance, in this case speed and efficiency of the return refund/replacement, exceeded expectations, this result in satisfaction. Conversely, an excessive waiting time would be a negative disconfirmation that is very difficult to overcome (Boshoff, 2005).

5.2 Conclusion

Based on the results of this study I can draw the following conclusions:

- i. Return logistics practices have a strong positive impact on customer satisfaction at Jumia Uganda as evidenced by the explanatory power of the RRS, RA and CRP variables ($R = 0.648$)

ii. Refund and Replacement Services is a the most important factor in determining customer satisfaction. Customers prioritize receiving a fast and accurate refund or replacement. A poorly executed RRS has a detrimental effect on customer satisfaction and lead to high churn rates.

iii. Return authorization does have a positive and significant effect on customer satisfaction; **however**, it is about how clearly policy is communicated. Customers, it appears, would like to know where they stand with regards to payment for the returned item as the current policy is not understood clearly by many.

iv. The collection of returned products appears to be the least important factor of the three, however it has a small and significant positive correlation with customer satisfaction. Despite poor infrastructure in Kampala, missed deliveries and unhelpful **third-party** delivery agents did not severely impact customers as their financial return was generally timely.

v. All three null hypotheses have been rejected and this indicates that there is a statistically significant relationship between return authorization, collection of returned products and refund/replacement services, and customer satisfaction at Jumia Uganda.

5.3 Recommendations

5.3.1 Policy and Strategy Recommendations for Jumia Uganda

1. Optimize last-mile collection (CRP)

Given the low average collection score (2.91) and Kampala's unique logistics constraints, Jumia should:

i. Set up partner drop off points at shops, petrol stations, or post offices so customers may drop returns and not wait for their items to be picked up from their homes, and not have to rely on a third-party courier rider.

ii. Enable live tracking of returns for riders similar to delivery tracking, in order for customers to be aware of the approximate pick-up time from their designated drop-off location or residence (Deepalakshmi et al., 2025).

iii. Compensate missed pickups (e.g., small mobile money credits) to rebuild customer trust after failures in the logistics operations.

2. Improve refund transparency and speed (RRS)

As the strong predictor ($B = 0.510$):

i. Introduce a live refund status update available within the Jumia app showing all stages- 'Returned Item Received'; 'Inspect In Progress'; 'Refund Processed'; 'Refund Completed'.

li. Limit refund to a maximum of 3 to 5 business days for mobile money payment-which is predominantly used in Uganda.

lii. Automate refund approval for low value returns (less than UGX 50,000) to negate the time and cost associated with manual inspection. (Gamal Mohamed et al., 2015)

3. Clarify return policy communication (RA)

i. Use local language visual explanations (infographics and short videos) about how returns differ between fault attributable to seller (no shipping costs for return), and fault attributable to customer (customer pays for return shipment costs).

li. Add a 'pre-return eligibility check' available at the product page, so customers can know ahead of purchasing whether an item is returnable.

lii. Train agents not to treat fault attribution in a defensively, but empathetic way. (Das & Kunja, 2024)

5.3.2 Future research recommendations

1. Longitudinal studies

The study was cross-sectional, and only gives a snapshot. A six-month longitudinal study could determine whether improvements to the logistics collection (new drop off points, etc.) impacts customer satisfaction.

2. Comparative studies

Comparison of the reverse logistics performance at Jumia Uganda and a competitor, Kilimall or other international platforms in the East African context. This would establish benchmarks and areas of competitiveness (Harivadhani & Sangeetha, 2024).

3. Cost benefit analysis of reverse logistics improvement

Future research should attempt to measure the trade-off of different degrees of improvement: how much cost is incurred to shorten the return processing time from seven to three days, and what is the increase in lifetime customer value? These would help to prioritize improvements.

4. Segmentation of customers

Some customers, such as high frequency returners, might perceive reverse logistics value differently from occasional returners. This study did not determine how customers perceive reverse logistics according to segments. (Sivasankaran et al., 2024).

5.4 Concluding Reflections

This research started with the basic question: are returns associated with customers' satisfaction levels at Jumia Uganda? The answer, unequivocally, is yes, though different

return actions play different roles in customers' satisfaction. Refund and replacement services have a strong relationship, returns last-mile collection had the weakest relationship with customer satisfaction, and returns authorization fell in between.

For Jumia Uganda, the business implication is obvious: increase focus on speeding up and improving the transparency of returns processing, followed by the collection processes. Continue to improve communication around the return policy, and ensure consistency across all customers. For researchers, this study confirms established theories such as ECT and SERVQUAL within an under-researched market context-East African e-commerce, but demonstrates how local market conditions affect how theories play out in reality.

As e-commerce growth continues in Uganda, returns will become increasingly important, as customer expectations rise. Whereas a late delivery can sometimes be tolerated, an unaddressed late return feels like a broken promise. Jumia Uganda's continued success will rely on adopting an approach to returns where it is seen as a service recovery rather than a cost, and taking actions to build and regain customer trust through excellent last mile return and refund experience.

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APPENDICES

TITLE: THE EFFECT OF REVERSE LOGISTICS PRACTICES ON CUSTOMER SATISFACTION: CASE STUDY OF JUMIA UGANDA

Researcher: Akite Linda Ogwang (S23B12/061)

Institution: Uganda Christian University

Degree: Bachelor of Procurement and Logistics Management

Instructions: Please tick (✓) the option that best represents your level of agreement with each statement.

SECTION A: DEMOGRAPHIC INFORMATION

No. Question Response Options

1 Gender

Male ☐ / Female ☐ / Prefer not to say ☐

2 Age bracket

Below 25 ☐ / 25–34 ☐ / 35–44 ☐ / 45 years and above ☐

3 Department

Procurement ☐ / Finance ☐ / Customer Care ☐ / ICT ☐ / Human Resource ☐

4 How often do you shop on Jumia?

Very often ☐ / Often ☐ / Sometimes ☐ / Rarely ☐

SECTION B: RETURN AUTHORIZATION PROCESS

Scale: 1 = Strongly Disagree 2 = Disagree 3 = Not Sure 4 = Agree 5 = Strongly Agree

No. Statement 1 2 3 4 5

SECTION C: COLLECTION OF RETURNED PRODUCTS

Scale: 1 = Strongly Disagree 2 = Disagree 3 = Not Sure 4 = Agree 5 = Strongly Agree

No. Statement 1 2 3 4 5

1. Returned products are collected within the expected time after a return request is approved

☐ ☐ ☐ ☐ ☐

2. The pickup process for returned products is convenient for customers

☐ ☐ ☐ ☐ ☐

3. Customers are clearly informed about pickup schedules for returned products

☐ ☐ ☐ ☐ ☐

4. Pickup agents handle returned products professionally

☐ ☐ ☐ ☐ ☐

5. The efficiency of collecting returned products improves my satisfaction with Jumia

☐ ☐ ☐ ☐ ☐

6. The product collection process is reliable and well organized

☐ ☐ ☐ ☐ ☐

SECTION D: REFUND AND REPLACEMENT SERVICES

Scale: 1 = Strongly Disagree 2 = Disagree 3 = Not Sure 4 = Agree 5 = Strongly Agree

No. Statement 1 2 3 4 5

1. Refunds are processed within the time promised by Jumia

☐ ☐ ☐ ☐ ☐

2. The refund procedure is easy for customers to follow

☐ ☐ ☐ ☐ ☐

3. Jumia communicates clearly with customers regarding refunds or replacements

☐ ☐ ☐ ☐ ☐

4. Replacement products are delivered within a reasonable time

☐ ☐ ☐ ☐ ☐

5. Replacement products meet customer expectations

☐ ☐ ☐ ☐ ☐

6. I am satisfied with how Jumia handles refunds and replacements

☐ ☐ ☐ ☐ ☐

7. Refund and replacement services influence my decision to continue shopping on Jumia

☐ ☐ ☐ ☐ ☐

END OF QUESTIONNAIRE

Thank you for your participation!