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FACULTY OF COMMERCE

THE IMPACT OF REVERSE LOGISTICS ON CUSTOMER SATISFACTION. A CASE OF DCK BAKERY BINDURA.

RESEARCH PROJECT

BY

MAKUDZA STEADY VARAIDZO

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A DISSERTATION SUBMITTED TO BINDURA UNIVERSITY OF SCIENCE EDUCATION IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE MASTER OF SCIENCE IN PURCHASING AND SUPPLY CHAIN MANAGEMENT DEGREE OF BINDURA UNIVERSITY OF SCIENCE EDUCATION.

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AUTHOR MAKUDZA STEADY VARAIDZO

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DEDICATION

The research project is dedicated to my loving and caring family for their unconditional love and support throughout my studies.

To my friends who have been with me through thick and thin, I dedicate this research project to them for their unwavering support as well as understanding.

ABSTRACT

The aim of the study was to analyze the impact of reverse logistics on customer satisfaction from the customers themselves and some organization top management. The problem of the study is exacerbated by the dearth of empirical studies in Zimbabwe, and even in the bakery industry, which the study seeks to address. A descriptive and explanatory research design was used in this research. A sample of 100 respondents was used and they are DCK retailers. The researcher used mixed method which is both quantitative and qualitative data analysis techniques. Data was presented in form of tables, graphs and pie charts. The study shows that there are positive and negative impacts of reverse logistics. The positive impacts being happier and satisfied customers, improved brand reputation, increased product life cycle, environmental sustainability and lower cost. The negative impact being inefficiency, complex process, time consuming and high reverse logistics cost. The study also showed that reverse logistics can actually impact customer satisfaction ($P < 0.05$). The study also measured the satisfaction of DCK retailers and noticed that they are being satisfied. The study also noticed that there is a positive relationship between reverse logistics and customer satisfaction ($P < 0.05$). The researcher concluded that reverse logistics can lead to customer satisfaction and can bring many benefits to the organization than challenges if implemented correctly.

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INTRODUCTION AND BACKGROUND

1.0 Introduction

Reverse logistics is a critical aspect of customer satisfaction as it directly impacts on customer experience with a brand. This chapter outlines the background of the study, highlights the problem statement and states the research objectives, assumptions and questions. In addition, the significance of the study, delimitations, and limitations, definition of terms and organization of the study; are also highlighted in this chapter.

1.1 Background of the Study

Well to do customers value customer satisfaction (Ginting et al, 2023). There are many ways which companies can use to implement customer satisfaction, but some scholars recommend reverse logistics (Jalil, 2019). Reverse logistics is defined by Mohamed et al (2017) as the process of returning goods from the purchaser to the manufacturer or supplier in a bid to enhance product value. According to Zhou and Wang (2018) reverse logistics is an efficient planning, implementation and control process with the effective cost of raw materials flow, ongoing assets, final products and related information from destination point to point of origin point with the aim of recovering for the purpose of capturing value or proper disposal. Pohlen and Farris (2019) guided by marketing principles define reverse logistics as the movement of goods from the consumer towards a producer in a channel of distribution. The definition of Lysons and Farrington (2018) seems to be the unifying angle where they related that reverse logistics is the collection of goods from the end user to the original manufacturer for inspection, sorting, disposal and recycling.

Components of reverse logistics includes end of service life. Sustainability being encouraged, suppliers collect the end products when their lifecycle have reached for proper disposal (Lysons and Farrington, 2018). The other components are return of damaged goods, recycling of Packaging and Returns of unsold goods. Well to do companies engage in reverse logistics so as to allow and carter for damaged goods, broken goods, recycling, disposal and value addition (Monczka et al,

2020). In addition companies engage in reverse logistics to protect the environment. Monczka et al (2020) also added that companies engage in reverse logistics so as to cater for customer complaints up until they are satisfied and loyal to the company due to such after sale services. Also, some goods are returned back to the manufacturer for resale.

Customer satisfaction is a person's feelings of pleasure or disappointment resulting from comparing a product's preconceived performance (or outcome) in relation to his or her expectations (Kotler, 2022). Jahazi et al (2023) states that customer satisfaction is the extent to which the benefits of a product are perceived in accordance to what customers expect. According to Sandada et al (2021) customer satisfaction is the degree of fulfillment that customers experience when interacting with a company products. Parker and Matthew (2021) define customer satisfaction as meeting or exceeding customers' expectations. Jahazi et al (2023) is of opinion that customer satisfaction is the degree to which customers believe they have received good value for the price paid. (Ginting et al, 2023) seems to be the amalgamate angle were he stated that customer satisfaction can be noticed by expectations, emotions, value, repeat purchase and feedback.

There are different ways of measuring customer satisfaction. According to Hayes (2022) customer satisfaction score is a tool used to assess how products and services supplied by a company meet or surpass customer expectations. Customer expectation =expectation –perception. Secondly the customer effort scores (CES).It is the extent to which a customer has to put in effort when interacting with a company, it can either increase or decrease their satisfaction level (Hayes, 2022).The customer effort scale is the one which customers are asked the amount of effort they put and the other one is how the organization made it easy to handle the customer issue (Hayes, 2022).The customer rates the efforts they put at a point scale of 5 from very low effort to very high. Customer satisfaction index was scripted by Bruhn and Grund (2020) as conducting a survey and using research methods such as questionnaires or interviews to measure how many the customers are satisfied with a product. The company can then use the collected data to analyze weather the customers are satisfied or not and then find ways to rectify where there is dissatisfaction. Another way is to use the Net Promoter Scale. The NPS focuses on measuring customer satisfaction in terms of long term happiness and customer loyalty (Hayes, 2022). It is used to measure the extent to which one customer would advocate and refer the brand to the next

person (Hayes, 2022). This is because usually when a person is satisfied with something would love to share the experience with others.

Reverse logistics goes as far back as the American Civil War (Walden, 2023).Walden (2023) added that General William T. Sherman was faced with the challenge of supplying his armies during movement through hostile territory and had to make use of everything available to him. He reused as much as possible, and very little of what had discarded. During the world war two, shortage of materials made it necessary to rebuild automobile parts from what would typically be considered waste officially creating what would became known as reverse logistics. (Stock, 1992). Thus nowadays industries such as in bakeries are making efforts to recycle their bread plastics, re-using bread scraps and properly dispose stale bread.

Material shortages during the world war two created a need to rebuild automobile parts and started a trend that continues until today. (Lembke, 2019). This reverse logistic method has since been used up to now. The automobile industry today engages in reverse logistics of failed parts instead of disposing they reuse.

In 1991 The Federal Republic of Germany government passed recycling ordinances in the environmental reverse flow and deployed mandatory recycling programs. Included in those ordinances were provisions for fines and prosecution for violators of the ordinance and stricter guidelines for the handling and transportation of hazardous materials and responsibilities for recovering hazardous waste (Revlong, 2019). Thereafter many states adapted the framework such that environmental sustainability is mandatory and legal. Trading blocs like European Union took this step further from 2001 by establishing a goal of 50%-65 recovery of recycling of waste (Tsagarikis, 2022). Even here in Zimbabwe we witness water being recycled again. In most industries recycling is also being done at a greater scale.

To emphasize on the need for reverse logistics, Stock (1992), wrote his book with the guidance and the importance of reverse logistics. He also added the types of reverse logistics and how it can be implemented. From that time to date, reverse logistics has been used as a way to encourage sustainability and value addition to satisfy customers.

At global scale, many bakeries were facing customer dissatisfaction up until they introduce reverse logistics (Aljohani, 2023). In Czech Republic, bakery firms worked on making reverse logistics

essential for firms to remain competitive in the market (Rajnoha and Dobrovic, 2017). This was before these retailers were complaining about not having suitable shelves to hold the excess bread till the next morning whilst still fresh.

With the increase in awareness in protecting the environment in Africa, reverse logistics became as essential as it includes reusable packaging and returning of damaged bread for reuse by the original manufacturer. In Nigeria, UAC food limited was losing the market share as customers preferred other bakeries that were sustainable (Babalola et al, 2022). But, from the time UAC Foods Limited started sustainable practices including reverse logistics, their customer base increased. Pioneer foods in South Africa was also losing customer loyalty up until they engaged in reverse logistics by collecting and recycling packaging materials and donating excess baked goods to local charities (Stock Exchange News, 2019).

Zimbabwean bakery industry was not left out. There is stiff competition among bakeries like Bakers' Inn, Lobels, Proton, TN and DCK among others. To attract customer loyalty DCK has been introducing different schemes, reverse logistics included. Reverse logistics put customer's needs first as well as responds to the emerging environmental awareness's. DCK is focusing on collecting and recycling their packaging material and reuse breakages and donating excess bread to charities and local residence as corporate social responsibility.

According to Dube (2020), DCK is a bakery company specializing in baking of bread, buns and doughnuts. It was established in 2019 in Gweru their headquarters. The bakery has been expanding since then increasing five more branches in 2020. Even though it was fighting severe competition from the three dominating bakeries which are Lobels, Proton and Baker's inn it still withstood the competition. DCK bakery market share index has been growing ever since its establishment in 2019. According to DCK 2022, the market share index rise from 4% in 2019 to 7% in 2020 and to 10% in 2021. Its branches were also multiplying such that in 2020 it opened five branches in Masvingo, Kwekwe, Chitungwiza, Bulawayo and Chinhoyi. However from 2021 the market share depletes to 9% and 7% in 2022. Even the growth was very low as it only managed to add two more branches in Bindura and Domboshava from 2021. In such instance, scholars encourages customer satisfaction boosting schemes like reverse logistics (Russo et al, 2019).The reverse logistics at DCK consist of returning breakages, returning unsold products, returning empty crates for reuse,

recycling and disposal of plastic papers. However the effects of reverse logistics have never been analyzed on customer satisfaction, which this study seeks to address.

1.2 Statement of the problem

According to Dube (2020), DCK stated operation in 2019 by opening one branch in Gweru. According to DCK (2022), the market share index was rising from 4% in 2019 to 7% in 2020 and to 10% in 2021. Its branches were also multiplying such that in 2020 it opened five branches in Masvingo, Kwekwe, Chitungwiza, Bulawayo and Chinhoyi. However from 2021 the market share depletes to 9% and 7% in 2022.Even the growth was very low as it only managed to add two more branches in Bindura and Domboshava from 2021. In addition, according to Dube2020), the company has been facing some customer portfolio challenges whereby customers were not loyal but kept changing the brands. According to DCK (2022) the bakery then started engaging in different marketing schemes to boost customer satisfaction to the brand and this includes reverse logistics in 2022. DCK implemented Reverse Logistics by having a system whereby retailers and customers can return breakages, return empty crates for reuse, return other material for recycling and disposal of plastic papers. Although Reverse Logistics is a noble strategy in a volatile business environment, the efficacy of Reverse Logistics has never been tested on customer satisfaction using an empirical study. Further, the problem of the study is exacerbated by the dearth of empirical studies in Zimbabwe, and even in the bakery industry, which the study seeks to address.

1.3 Objectives

1.3.1. Major objectives

To analyze the impact of reverse logistics on customer satisfaction.

1.3.2. Sub objectives

- To analyze the impact of reverse logistics of DCK bakery.
- To measure customer satisfaction for DCK customers and define them.
- To analyze the relationship between reverse logistics and customer satisfaction at DCK bakery

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1.4 Research Questions

1. What is the impact of reverse logistics on customer satisfaction?
2. How does reverse logistics impact customer satisfaction at DCK bakery?
3. How can customer satisfaction of DCK bakery be measured?
4. What is the relationship between reverse logistics and customer satisfaction at DCK Bakery?

1.5 Significance of the study

The study or research assist DCK bakery to understand the effects of reverse logistics on customer satisfaction and the effects with it. This enables the bakery to make future decisions and strategies. The information in the research can also be used by any other bakery in the industry that wishes to understand more about reverse logistics and customer satisfaction.

This study will also inform policy on Reverse logistics on bakery industries. This is fundamental as the nation seeks to archive sustainability in procurement.

The research will also be beneficial to Bindura University as the copy will be used for later references by other students to supplement current limited literature on the employee`s view of the relationship between outsourcing and organizational performance.

1.6 Assumptions

- Customer satisfaction is measurable.
- The relationship between customer satisfaction and reverse logistics is understandable using e mpirical research.
- Sample chosen will represent the views of the whole population.

1.7 Delimitations

The research was geographically delimited to DCK Bindura only due to lack of funds to travel si nce the researcher is still a student. Thus, data was collected from customers in Bindura that is ret ailers in Bindura. Apart from that the researcher used information from the year 2019 up to 2022. This is because the bakery was launched in 2019 and the prevailing information so far ranges to 2

022. The study was also limited to theoretical studies of reverse logistics and customer satisfactio n.

1.8 Limitations

The researcher was limited by lack of resources like financial resources. The researcher mitigated this by limiting the research to Bindura where the researcher lives and studies. The other limitation was time since the researcher had other school staff that needs attention. The researcher mitigated this by using lunch time to conduct the research. In addition when conducting the research some of the questionnaires were not returned back to the researcher. To mitigate this, the researcher sent constant reminders to the respondents. Furthermore some of the information on the questionnaires was company sensitive information that respondents hesitated to answer therefore the researcher attached a cover letter assuring the privacy and confidentiality that their names were not be disclosed to the public.

1.9 Definition of terms

Reverse logistics- is the inbound activity of taking in goods from the retailers, distributors or end users to the original manufacturer for value addition.

Customer satisfaction – it is the total utility gained by the end user from using a certain product.

1.10 Summary

This chapter pays attention on the background of the study, statement of the problem, research objectives, research questions, importance of the study, assumptions of study, delimitations, and limitations of the research and definition of key terms. The chapter also gave a brief about the company in Study DCK. The chapter was briefing on what to look forward to in the remaining chapters.

CHAPTER II

LITERATURE REVIEW

2.0. Introduction

The previous chapter covered the background of the study, statement of the problem, research objectives, research questions and importance of the study among others. This chapter focuses on the literature review and empirical ideas concerning the impact of reverse logistics on customer satisfaction. This chapter will also look at theoretical aspects of reverse logistics and customer satisfaction as well as the gap analysis.

2.1 Theoretical framework

2.1.1 The contrast theory

As cited by Oliver and DerSarbo (1988) the theory first introduced by Holland and Sheriff and provided another way to the assessment of post usage process in that post usage evaluations leads to results in opposite predictions for the effect of expectations on satisfaction. The theory stipulates that when actual product performance falls short of the consumer's expectations about the product, the contrast between the expectation and outcome will cause the consumer to exaggerate the disparity. It implies that the negative impact of actual product performance on customer satisfaction is greater than the positive impact of higher performance over lower performance. The contrast theory states that when the expectation of a product is high and the actual product performance is perceived to be low, the consumer will exaggerate the difference between the expectation and the outcome. Contrast theory proposes that we do not judge qualities on the basis of how they compare with other qualities. (Huscroft et al 2019).

2.1.2. The dissonance theory

The theory suggest that a person who received less than expected would notice the difference but have the contradictory views about the product such that they try to hide that there were not satisfied (Yi, 1990). Dissonance theory is a term used in psychology that refers to the mental stress experienced by someone who simultaneously holds two or more contradictory beliefs, ideas, or values (Yi, 1990). In fact they found themselves in conflicts. It also suggests that a person who

expected a high value product and received a low value product would recognize the disparity and experience cognitive dissonance. That is the disconfirmed expectations create a state of dissonance or psychological discomfort (Oliver and DerSarbo, 1988). Dissonance theory can explain experience of cognitive dissonance when a customer experience the physical manifestation of a company's brand promise but does not receive the level of customer service expected. Huscroft et al (2019) is of opinion that reverse logistics can be used to raise customer expectations above the product performance to satisfy the customer.

2.1.3. Assimilation contrast theory

This theory was introduced by Anderson (1967). The theory states that the customers have a tendency to compare the anticipation pertaining to the product and the perceived performance. The existence of the inconsistency between consumer expectations and the perceived performance allows the difference to appear (Anderson, 1967). The notion of post usage was discussed and analyzed on satisfaction concept under the form of the assimilation theory (Anderson, 1967). Scholars such as Yi (1990) also added that most consumers aim on curbing difference by adjusting their perception on certain product and perhaps trying to match it with the expectations. Yi (1990) attributed that in response to the pressure stemming from the difference or variations using two aspects of distorting their expectations so that they match with the perceived performance of a product. These variations can be reduced by improving the satisfaction level through perhaps not considering the paramount important of experimental disconfirmation. .

Figure2.1below shows the summary of the three theories.

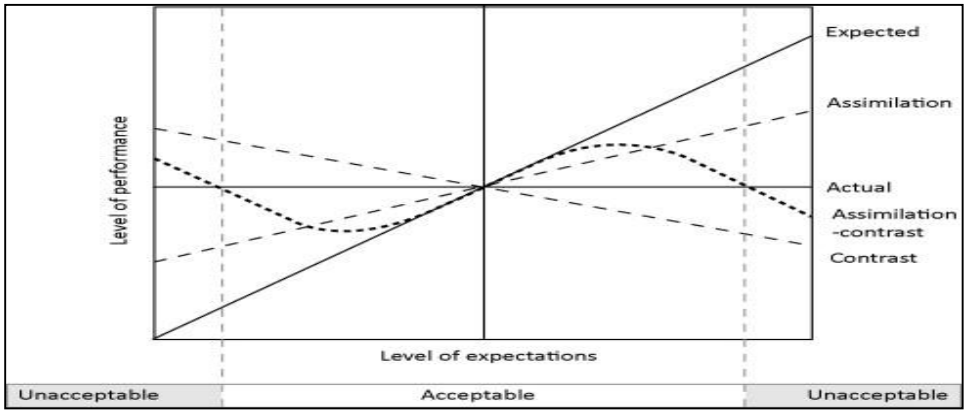


Figure2. 1: Summary of the theories

Extracted from Spence et al (2015), page 169.

As shown on the diagram, product evaluation seems to shift according to customer expectations. Contrast turns to be seen when the customer exaggerate the product negatively as per the diagram when their perceptions are not met. Assimilation occurred there due to a smaller discrepancy of actual and expected. But when the discrepancy is higher a contrast occurs

2.2 Reasons for measuring customer satisfaction

Businesses that take time to measure customer satisfaction are likely to notice problem before they escalate and solve them (Kotler, 2022). Bruhn and Grund (2020) scripted that measuring customer satisfaction shows the customers that the company cares and allow a room for good relationships which then lead to brand loyalty, gain a better understanding of customers' needs and expectations and reduce direct and indirect costs related to customer dissatisfaction. Jahazi et al (2023) also agrees that measuring customer satisfaction is vital as it reduce the likelihood of customers' complaints when they notice the firm cares for them through measuring customer satisfaction, respond to the challenges of customer acquisition and improve the effectiveness of steps for contact improvement. They also added that measuring customer satisfaction helps to solve problems, prevent churn, and identify happy customers that can become advocates and evangelists. It is an essential step in the process of building customer loyalty, creating customer delight, and generating positive word-of-mouth. A company meeting the customer expectations thereby increasing business growth and revenue.

2.3. The concept of reverse logistics

According to Zhou and Wang (2018) reverse logistics is an efficient planning, implementation and control process with the effective cost of raw materials flow, ongoing assets, final products and related information from destination point to point of origin point with the aim of recovering for the purpose of capturing value or proper disposal. Reverse logistics is defined by Mohamed et al (2021), as the process of returning goods from the purchaser to the manufacturer or supplier. Pohlen and Farris (2019) guided by marketing principles define reverse logistics as the movement of goods from the consumer towards a producer in a channel of distribution. The definition of (Lysons and Farrington, 2018) seems to be the unifying angle where they related that reverse logistics is the collection of goods from the end user to the original manufacturer for inspection, sorting, disposal and recycling.

2.4 Merits of reverse logistics

According to Butcher et al (2020) if reverse logistics is engaged efficiently it brings a lot of advantages to the firm engaging in it. These merits that come with it are some of the things that lead to customer satisfaction. Customers are satisfied when they get exactly what they expected from a good or service. Merits of reverse logistics are:

2.4.1 Happier and satisfied customers

It's much more difficult to attract new customers than to keep the one you already have (Sandada et al 2021). Reverse logistics is a vital tool to maintain customer loyalty. Reverse logistics directly keep customers happy and satisfied by allowing them to return goods which they are not satisfied with until they get what they actually expect (Monczka et al, 2020). Customers are much happier when they are not obliged to any disposal means but just sending it back to the manufacturer. This gives them more time to focus more to their core business.

2.4.2 Improved brand reputation

With the stiff competition in most industries, improving brand reputation has become more vital. Reverse logistics has made it easier. When a company engages in reverse logistics, it's making the customer king (Stimpson and Farquharson, 2017). This means it makes their returns. Customers usually stick to brands that have good customer care. The brand will also be well known for being sustainable .Sustainability takes into account the society, environment and the economy (Sheard et al 2020).Most companies prefer to buy from sustainable manufactures due to their good reputation.

2.4.3 Increased product life cycle

Reverse logistics leads to increased product life cycle (Monczka et al, 2020). Reverse logistics for perishable foods such as bread increase their life cycle. This is because the product would be returned to the manufacturer after an appropriate stipulated time for correct storage. The product being kept in its correct temperature storages will deprive deteriorating very fast than the normal. By so doing wastage due to food decay is reduced.

2.4.4. Environmental sustainability

According to Ruparathna et al (2020), reverse logistics allows for reuse and recycling of materials, reducing waste and conserving natural resource. Reverse logistics allow companies to comply with environmental, health and safety regulations at the same time maintaining value for money in relation to the disposal of goods (Sheard et al 2020). Retailers, distributors and end users prefer to work with manufacturers who comply with sustainability as this lead to a chain of sustainability within the supply chain.

2.4.5 Lower cost

Reverse logistics leads to lowered cost due to value addition to the goods instead of throwing them or disposing them away. In addition recycling material is much cheaper than starting manufacturing afresh (Revlong, 2019). Ghosh and Eriksson (2019), agrees that recycling bread crates is much cheaper for bakeries than starting to manufacture the crates afresh. Legal costs due to sustainability compliance are also reduced due to reverse logistics. Reducing cost improves business cash flow and increase profitability for companies engaging in reverse logistic.

2.5. Demerits of reverse logistics

2.5.1 High reverse logistics cost

Reverse logistics also incur cost (Rushton et al 2020). These costs include transport cost to collect the goods from the retailer to the manufacturer. It also includes cost of disposing. Ghosh and Eriksson (2019), also agrees that reverse logistics add to cost, such as cost of a dumping site to the municipality where bakeries dispose stale bread, buns and doughnuts in a compost pit. In addition being sustainable incurs cost of noise proofs when baking .After the bread has been added value, cost of returning it to the retailer is also added expense(Rushton et al 2020). Returns due to reverse logistics also need attention, meaning there is need for extra labor which also adds to cost. Technology is also needed for faster communication and customer queries from returning the product which then add up the expenses (Sandada et al 2021). All these cost may reduce the profits of the bakery.

2.5.2 Inefficiency

According to Mohamed et al (2021), reverse logistics can be inefficient. Stanlake (2017) explains inefficiency as not achieving maximum productivity, wasting or failing to make the best use of time and resources. Reverse logistics involves working with different external firms in the

distribution channel (Rushton et al 2020). These include manufacturers, retailers and end consumers. Stanlake (2017) added that inefficiency can be created due to poor communication, distance and different organizational goals. So this may lead to waste of time and energy when the distribution channel is not on the same page.

2.5.3 Complex process

Reverse logistics can be complex to tackle as it includes many different connected firms who will need to return the product for value addition (Rushton et al 2020). If these distributors are not responsible they add to the complexity of the whole process. The process is also complex because it involves different products such as doughnuts, buns and bread being returned back to the bakery each of which have its own special handling ways. For example the handling way of doughnuts is completely different with that of bread.

2.5.4 Time consuming

Various activities involved in reverse logistics eat a lot of time. Misunderstandings in communication in the process between the manufacturer and the distribution channel can consume a lot of time (Rushton et al 2020). In addition time is also consumed whilst travelling to collect goods for returning them for value addition as many industries are not in town where the distributors operate in. Time is also consumed whilst correcting the returned products.

2.6 Reasons for engaging in reverse logistics

Well to do companies engage in reverse logistics so as to allow and carter for damaged goods, broken goods, recycling, disposal and value addition (Monczka et al, 2020). In addition companies engage in reverse logistics to protect the environment. Monczka et al (2020) also added that companies engage in reverse logistics so as to cater for customer complaints up until they are satisfied and loyal to the company due to such after sale services. Also, some goods are returned back to the manufacturer for resale

2.7 The relationship between customer satisfaction and reverse logistics

Scholars such as (Huscroft et al 2019) and (BearingPoint, 2018), agrees that there is a positive relationship between reverse logistics and customer satisfaction. According to Huscroft et al (2019) as the company engages more in customer satisfaction the more the customers are satisfied. Reverse logistics is one way of making the customer the king (Sandada et al, 2021). Reverse logistics is associated with an activity that directly enhances customer satisfaction. These include

ensuring sustainability, returning goods on time for value addition, warehousing and stocking services (Kotler, 2019).

2.8 Empirical literature review

This section will look at the past studies by others on the impact of reverse logistics on customer satisfaction. Ghazali et al (2016) carried out a study on reverse logistics on food industries. The research was conducted in Malaysia in southern Asia. The case emphasized more on the impact of reverse logistics on food and beverage industries. The aim of the study was to analyze the challenge that comes with implementing reverse logistics from macro and micro factors.

The study was conducted using primary data collected through questionnaires. The research methods were quantitative. The researchers used two different questionnaires. The first 60 were directed to the retailers and consumers. They mainly asked the manufacturers who were fast and professional in implementing the return of goods policy, how they did it, the kind of products the customers return and how the customers fell about it. The second 30 questionnaires were directed to the manufacturers in food and beverages industries. The questionnaire asked them how they implement reverse logistics, the type of food and drinks that is most returned, the macro and micro factors that gave them challenges and how they overcome them.

Ghazali et al (2016) mentioned that the limitations to the study were that the study focused on hypermarkets in Johor Bahru in Malaysia. He added that this was because almost three quarters of Malaysian grocery retails sales take place in the modern retail segment in Johor Bahru whilst the rest through traditional retailers.

Through their research Ghazali et al (2016) noticed that there are so many factors that influence the successful implementation of reverse logistics in food and beverages industries. The research methodology showed that 47% were macro factors that hinder the successful implementation of reverse logistics and 53% were macro factors. The micro factors include employees, company policy and organizational goals. The external factors included the retailers, customers and the government. These factors caused challenges such as uncertainty in return policy, uncertainty in return forecasting and complexity of the process caused by having to deal with many external retailers and customers. The researchers also find out that the kind of products that have a higher return were breads and bakery as well as carbonated soft drinks.

Therefore in their research Ghazali et al (2016) recommended that the manufacturers in the food and retail industry trains their workers on how to efficiently implement reverse logistics regardless of barriers from external factors. They also recommended the manufacturers in food and beverages industries to spread awareness to their retailers and customers on the efficient implementation of reverse logistics. This is as essential as scholars such as Rushton et al (2020) also agree that awareness is a powerful tool in the successful implementation of reverse logistics.

This research was limited as it only focuses on hypermarkets in Johor Bahru in Malaysia. Therefore, it is essential to have home research about the same subject which this study seeks to address. In addition, the use of quantitative data collection method only may lead to bias therefore the current research used triangular mixed method where both qualitative and quantitative methods supports each other.

Another research on customer satisfaction and reverse logistics in e-commerce was conducted by Ezura in 2019 in his research titled customer satisfaction and reverse logistics in e-commerce a case of Klang valley, Malaysia. The main aim of the research was to determine the relationship between the variables of situational factors (advertising and accessibility) and customer satisfaction towards reverse logistics in e-commerce in the surrounding areas of Klang valley.

The study was conducted using primary data collected through questionnaires .Ezura (2019) used quantitative research methods to conduct the research Online surveys were conducted to collect data using questionnaires. The sample population was 400 online retailers with online shopping experience. The relationship between reverse logistics and customer satisfaction was analyzed using Regression analysis through the use of SPSS software.

The results showed that there is positive relationship between reverse logistics and customer satisfaction (Ezura, 2019). Most online retailers responded that the more they are allowed to return defective goods to the suppliers the more they become satisfied with the value for money towards those purchases. They also added that there are loyal to those suppliers that allow them to return goods that they are not satisfied with for exchange.

Ezura (2019) research aimed at determining the relationship between the variables of situational factors (advertising and accessibility) and customer satisfaction towards reverse logistics in e-commerce in the surrounding areas of Klang valley. The research is limited mainly to the

relationship between reverse logistics and customer satisfaction. Therefore there is a gap for the impact of reverse logistics on customer satisfaction to be addressed with this current study.

Tiwari (2013) also conducted a research on reverse logistics as a strategy to archive total customer satisfaction and competitive performance. The research was conducted in India. The research was conducted on automotive industry. The objective of the research was to see whether reverse logistics performance is instrumental in achieving total customer satisfaction or not.

According to Tiwari (2013) the research was limited to members of Automotive after Market Industry Association of India, third party reverse logistics users and the end users of the product. This was due to time constraints to consider a bigger industry picture. It was also due to resource constraints such as money to consider a wider range.

Tiwari (2013) used quantitative research methods to conduct the research. This consisted of probability sampling and non-probability sampling on members of the automotive industry and their end users. The sample size was 100. The researchers make use of primary data to collect data. They sent simple English questionnaires to all the respondents chosen from the sample selected.

The researcher used factor analysis on the results to reduce the variables to four. The four variables are standardization of reverse logistics, customer involvement, service quality and recovery and reverse logistics strategy. According to Tiwari (2013), the regression analysis that was taken evident that service quality and recovery are the most important factors in explaining overall customer satisfaction, hence the proposed hypothesis reverse logistics leads to total customer satisfaction.

However the research focused more on reverse logistics for members of Automotive after Market Industry Association of India, third party reverse logistics users and the end users of the product only. Therefore, it is essential to have the same study but on food suppliers and bakeries in specific which this study seeks to address.

Mario et al (2013) conducted a study in Italy on the effects of reverse logistics on supply chain performance. The performance included customer satisfaction. The study concentrated on the effect of reverse logistics on the items ordered and the inventory variance considering a single supply chain. The researcher utilized mixed methods of collecting data. It was realized that closing loopholes in supply chain can increase organizational performance such as customer satisfaction.

However, the study was mainly directed towards electronic manufacturers in Europe. This gives variant with the current study which is focusing on manufacturing of bread industry in Zimbabwe.

Similar research was also conducted in Kenya, Africa by Omorenda (2012). The research was on the benefits and drawback of reverse logistics on Kenya Power Limited. The objective of the study was to notice whether reverse logistics brings any negative or positive impact on the overall profits of the organization. The study emphasized more on organizational profit.

The researcher used primary data collection method. Primary data was used as the researcher believed that firsthand information is better than second hand information. Thus questionnaires were distributed to 156 supply chain team to fill in .Questionnaires were distributed randomly to 156 supply chain officers. Interviews were also conducted on the chief supply chain officer, logistic manager and supply chain manager.

The results were analyzed using the correlation method to analyze the relationship between organizational profit and reverse logistics. The results were of opinion that there higher the logistics activities the higher the profitability. Omarenda (2012) concluded that there is a positive relationship between reverse logistics and profitability and reverse logistics brings benefits to the organization. From this study the recommendations are that there is a positive relationship between reverse logistics and profitability and reverse logistics is capable of adding business profits.

The study varies with the current research because it emphasized more on organizational profit as a result of reverse logistics and not customer satisfaction. The current study looks at the impact of reverse logistics on customer satisfaction and not on organizational profit. In addition the Contrast theory proposes that we do not judge qualities on the basis of how they compare with other qualities.

Mohamed (2017) also conducted a similar research on the Impact of reverse logistics applications on customer satisfaction. The research was conducted here in Africa in Egypt. The research was a case of Mantrac a caterpillar manufacturing firm in Egypt. The research objectives was to investigate reverse logistics practices in Egypt, measure the level of customers' satisfaction against return policies and measure the level of customer satisfaction against remanufactured product (Mohamed, 2017).

The research was conducted using different type of primary data collection methods. The data was collected using interviews, questionnaires and direct observation. The interviews included 14 open ended questions which in generally asked about the operations of reverse logistics. Questioners were used to measure the level of customer satisfaction on the customers. In addition to that the researcher used to observe the way Mantrac operates the reverse logistics process whenever the researcher visits their sites.

In analyzing the results the researcher used the Statistical Package for the social Science Software (SPSS) to analyze the data. The main findings were that the most important parameters to customers is product price that comes with value for money, which is the quality and value of the product which all customers focus on. Therefore Mohamed, (2017) concluded that reverse logistics is of paramount importance to the customers. The recommendation supports and justify that the current study is essential to the respondents under study as it shows the company maintain their sustainability and value addition.

The research was limited as it was conducted in Egypt .There is a dearth in scholarly contributions on the association between customer satisfaction and reverse logistics in countries like Zimbabwe. The same notion was also indicated by Omarenda (2012).The scantly available sources do not reflect the macro environmental conditions that the Zimbabwean business prevails in. According to Mwenje and Mwinga (2022), the business environment in Zimbabwe is volatile, ambiguous, complex and uncertain (VUCA), which warrants the need for a country-specific study on the association between reverse logistics and Customer satisfaction.

Recently in 2021, Toyin Adebayo also conducted a research titled an evaluation of reverse logistics responsiveness and customer satisfaction in retailing in Nigeria. The research objective was to see the most returned products and the responsiveness on customer satisfaction for products that are bought online.

Surveys were conducted using questionnaires to collect data .Toyin gathered data from 223 online shoppers and analyzed it using descriptive analysis to see the products that are usually returned and to find out the reason for their returns. The effect of reverse logistics equipped responsiveness on customer satisfaction was analyzed using regression analysis on the SPSS.

The results showed that operational responsiveness in the reverse logistics processes win over customer satisfaction to a greater extent. The recommendation is that retailers and other distributors should normalize return policies for products that did not satisfy customers (Toyin, 2021). This is especially those for those that sell online. He added that there should be clear communication between the suppliers and the customers on the reasons for products returns.

However, the research mainly focused on the effect of reverse logistics on customer satisfaction for buyers and sellers who conduct their businesses online whilst this research emphasizes on the impact of reverse logistic on customer satisfaction for food manufacturing industries and bakeries to be specific that sells physically. Therefore this justifies the need for this current study.

Here in Zimbabwe a similar research was also conducted by Muchena (2018) and in bakery industry to be specific with the title an investigation on the impact of reverse logistics on customer satisfaction a case of Proton bakery. The objective was to determine the effects of reverse logistics on manufacturer-retailer relationships and the challenges of reverse logistics.

Primary and secondary data collection methods were used. Both qualitative and quantitative data was used for collecting data using interviews and questionnaires respectively. 60 respondents were chosen which 30% of target population. Data was presented using tables, graphs, and pie charts.

The results of the study showed that reverse logistics enhance positive relationship between manufacturers and retailers meaning the customers are satisfied. The same notion means that there is positive relationship between reverse logistics and customer satisfaction. This will mean there will be good reputation which strengthens relationships.

However this study of Muchena varies with the current study which is focusing on a smaller bakery in Bindura which recently emerge. In addition the current study also seeks to measure customer satisfaction for DCK and to analyze the impact of reverse logistics on customer satisfaction. The current study also has a much bigger sampling size hoping to get more reliable results.

2.9 Summary

In literature review chapter, theoretical literature and empirical literature was used. The chapter focused on literature reviews on reverse logistics and customer satisfactions. It also looks in detail the impacts of reverse logistics on customer satisfaction. The chapter also enlightens the meaning and concepts of reverse logistics. To add on that the chapter also looked at the empirical evidence

of the impact of reverse logistics on customer satisfaction. Finally, the gap analysis addresses the gap that exists between this research and the other researches carried out within the same area. The next chapter presents the methodology employed in this study.

CHAPTER III

RESEARCH METHODOLOGY

3.0 Introduction

The preceding chapter examined literature from various source documents on reverse logistics and customer satisfaction. This chapter discusses about the methodology that is the steps that the researcher took to collect data. Some of the key issues of this chapter include research design, target population, sampling, and data collection procedure and data analysis.

3.1 Research Approach: Mixed methods

The research used mixed methods that are qualitative and quantitative methods altogether. According to Saunders et al (2019) research approach is the method used to understand data collected. Three approaches are commonly discussed in research; these are quantitative, qualitative and mixed methods. Saunders et al (2019) go on to say mixed methods consist of both quantitative and qualitative methods in the same study. This study used a mixed methods approach called triangulation; in which the study was primarily quantitative yet quantitative results are compared to qualitative findings.

3.1.1 Quantitative approach

Quantitative approach was the main mole for this study. According to Bell et al (2022) a quantitative approach is more objective and realistic. Quantitative approach was defined by Saunders et al (2019) as collecting and analyzing numerical data.

The researcher used quantitative methods to measure the connectedness between reverse logistics and customer satisfaction. Quantification was done through the use of a structured questionnaire which was then post coded to develop numerical values and responses on a 5-point Likert scale. The identified numeric data was then quantitatively analyzed using the IBM SPSS application; in which descriptive quantitative test statistics were used. The study further applied inferential statistics in line with the dictates of a quantitative study. Causality between reverse logistics and customer satisfaction was thus analyzed quantitatively at 95% confidence level and 5% margin of

error. A large sample size was also extracted and used in line with the confines of quantitative study. Further to that, there was objectivity in data collection in which there was independence between the researcher and the research subjects.

The justification of using a quantitative study was that the study aimed to be objective in results analysis and discussion. That helps the study in developing results that can be generalized to the entire population of DCK customers. Thus, a quantitative approach gives the study eminence and representation.

3.1.2 Qualitative approach

Qualitative approach was used as the abettor of quantitative research. According to Saunders et al (2019) qualitative approach is subjective in nature and is primarily used to add insight about certain phenomena. Qualitative approach is a method used to understand people's beliefs, experience attitude behavior and interactions (Saunders et al, 2019). Quantitative methods include interviews, In-depth focus group discussions and observation (Bell et al 2022).

This study used qualitative data to support quantitative findings through triangulation. In so doing, the researcher used in-depth interviews. In-depth interviews on key informants were conducted on DCK top management In sync with the needs of a qualitative approach, the sample size for interviews was very small, and that allowed the interviewer to explore more aspects of reverse logistics and customer satisfaction from few individuals. Data collected was then analyzed using thematic content analysis; in which different themes were developed from the data obtained. The themes were then compared to the quantitative findings as part of discussion.

A mixed method approach was justified in this study because the researcher could not conclude with qualitative approach methods only because the data was subjective that is why the researcher also considers using it in combination with quantitative approach.

3.2 Research design

In the views of Bell et al (2022), a research design as a simple outline, framework or plan for the research project that is used to guide the collection and analysis of data. There are various types of research designs; however, for this research, the researcher used descriptive research and explanatory research designs only so as to appreciate the effect of reverse logistics on customer satisfaction.

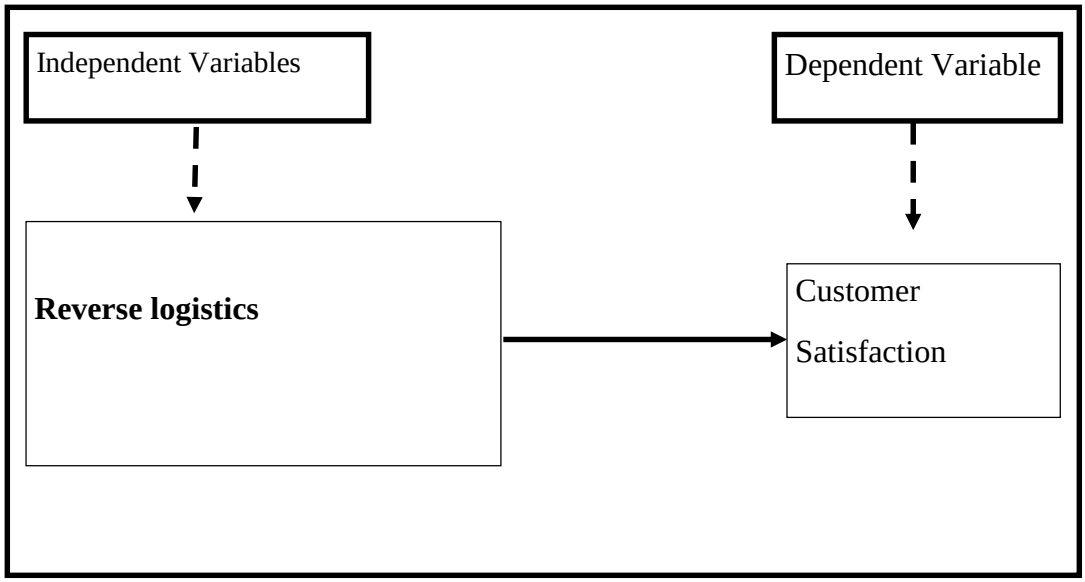
3.2.1 Descriptive Research Design

Descriptive research design is a scientific method which involves observing and describing the behavior of the target group without the researcher's influence (Greener, 2022). Description in this research study was essential to find out the extent to which DCK reverse logistics impact customer satisfaction, using the description of customer discernment. By using the descriptive research design, the study benefited greatly by avoiding researcher bias and type 1 and type 2 errors since data was collected objectively in a natural and unchanged environment. However, descriptive research has been criticized for its inability to demonstrate the effect of the described phenomena on the dependent variable. It only presents an overview but does not explain what may happen if the case is what it is (Greener, 2022). Therefore, to have more robust and valid research, the researcher combined it with explanatory research design. This research design is useful and valid to the study because it is based on previous understanding of the nature of the research problem. To add on that less expensive and less time consuming taking into consideration were the researcher used his own funds to collect data during a busy semester which required him to focus on other courses and research at once.

3.2.3 Explanatory Research Design

Explanatory research design is an exploration into variables with the thought of looking at the effect of independent variable on the dependent variable (Bell et al 2022). Explanatory research design shows the origin and outcome of interaction between study variables (Greener, 2022). It can also be used to foretell the scores of the outcome variables if used in line with regression and correlation tests statistics. Bell et al 2022 further restate that explanatory research design can be used well with descriptive research design. As descriptive research describes the phenomena, explanatory research then identifies the cause and effect relationship that exist between or among the described variables.

Figure 3.1shows the diagrammatic representation of the explanatory variables of the study.



Source: Researcher's own

Figure3.1 1: Explanatory effect of the study

With reference to figure 3.1, explanatory research design was used to explain the cause and effect of relationship between DCK reverse logistics and customer satisfaction. The cause and effect associations were developed from the conceptual model and they follow that Customer Satisfaction (CS) is predicted to be a function of Reverse logistics (RL).

That is: $CS = fn \sum [RL]$

Where: ***CS*** is customer satisfaction,

RL is reverse logistics

3.3 Target Population

Saunders et al (2019) define target population as the group of individuals that the intervention intends to conduct research in and draw conclusions from. Greener, (2022) is also of opinion that target population shows the whole group of people who affect the research variables and are affected by the research results.

The target population of the study was made up of DCK retailers in Bindura such as supermarkets, small tuck shops and roadside vendors as they are the one who have direct link with the consumers. According to DCK (2022), there were a total of 128 registered intermediaries in Bindura. Therefore, the study accepted that the target population for the study was made up of 128 registered retailers of DCK products. The study also targeted the management of DCK in Bindura which only had 3 members by virtue of it being an outskirt branch.

Retailers of DCK were targeted, and their selection was justified, because the study wanted to measure satisfaction of customers. Thus it was prudent to target DCK's customers. At the same time, retailers are the ones who are involved in reverse logistics with DCK; hence they better understand the dynamics of DCK's reverse logistics better than anyone else. Key informants from DCK management were equally justified for targeting because they are the ones who manage reverse logistics from the inside; hence they offered a valuable contribution to the study.

3.4 Sampling Techniques

Sampling is a statistical technique of selecting individual members or a subset of the population to make statistical inferences from them and estimate the characteristics of the whole population. (Gray, 2017). The process involves random selection of a sample of individuals from a larger population and analysing their behaviour to make conclusions about the population as a whole. The researcher used sampling because it reduces time and cost of fetching data from the whole population, it also reduce the amount of collected data therefore making it easier to have accurate results. There are two broad sampling techniques, namely probability and non-probability sampling (Gray, 2017).

3.4.1 Probability Sampling: Stratified Random Sampling

Stratified random is a method of random sampling where the researchers first divide the population into subgroups or strata based on shared characteristics of the members and then randomly select among these groups to form the final sample (Saunders et al 2019). Stratified random sampling ensures equal representation among subjects. Thus, the researcher divided the retailers into these stratums: northern Bindura, southern Bindura, eastern Bindura and Western Bindura. The researcher then used simple random to select retailers in each of those stratums propositionally using the DCK customer database. Manual randomization was done, in which all the names of the

retailers were put in a box and the researcher picked a name tag at random from the box repeatedly until the required sample size was obtained.

3.4.2 Non- Probability Sampling: Judgmental Sampling

According to Bell et al (2022), non-probability sampling is a sampling method that uses non-random criteria like the availability, geographical proximity, or expert knowledge of the individuals you want to research in order to answer a research question. The researcher used non probability sampling when selecting DCK management for interviews. The researcher makes use of Judgemental sampling technique when selecting DCK management. Judgemental Sampling refers to a sampling technique where the researcher personally draws the respondents who the researcher views are relevant to the research (Greener, 2022). In this instance 3 DCK top management in Bindura were selected because they are the ones who know the ways they use to know if the customers are satisfied.These interviewees were conducted to have a better view of the impact of reverse logistics on customer satisfaction.

3.4.3 Sample Size

To determine a representative sample for the current study, the researcher adopted a sample size model developed by Morgan (1993) shown in table 3.1.

Table3. 1: Morgan Sample Sizes Extract

Population	**Sample size**
120	92
130	**97**
140	103
150	108

Source: Krejcie and Morgan (1970)

The target population had a sample size of 128 retailers. Using the Morgan extract above, the sample size for consumers was selected to be 100 (rounded off 97).

3.5 Sources of Data

To collect data for analysis, the researcher used both primary and secondary data sources.

3.5.1 Secondary Data

To avoid duplication of work, the researcher used secondary data where applicable and when the data aligns with the researchers goals. Secondary data refers to data that is collected by someone other than the primary user (Greener, 2022). In this research, the researcher used secondary data that was obtained from scholars, academic journals (for literature analysis) and DCK in-house publications and other Internet sources.

3.5.2 Primary Data

In line with the views of Saunders et al (2019), primary data is data obtained by the researcher personally for use in a specific investigation using different data collection methods. In this research, the researcher collected data specifically for this research using structured questionnaires and interviews. Primary data was used because it is more accurate and reliable (Gray, 2017).

3.6 Data collection methods

The data was collected using surveys. Both quantitative and qualitative data was collected using surveys. According to Saunders et al (2019) a survey is a data collection method that includes the structured collection of data from a sizeable population. Saunders et al (2019) further clarify that surveys can be used to collect data using various techniques such as questionnaires, observations and interviews. Therefore, a survey supports mixed methods of collecting data using interviews and questionnaires.

The researcher is the one who collected both the qualitative and quantitative data. The data was collected in a space period of two weeks in Bindura. The researcher used structured questionnaires on retailers and interviews on DCK top management to obtain primary data. This enabled the researcher to collect accurate data and that is not subjective since both sides were given a chance.

3.7 Research Instruments

The research collected data using questionnaires and interviews. Questionnaires were used because they allowed the retailers to answer the questions on their free time that does not disturb their business functionality. On the other hand interviews were engaged with DCK top management to get their views on logistics on their free time or lunch hour.

3.7.1 Questionnaire

According to Bell et al (2022), questionnaire is a set of printed or written questions with a choice of answers, devised for the purposes of a survey or statistical study. Bell et al (2022) also added that the questionnaire needs to be instrumental to give structure to the research. So, in this particular research the questionnaires were instrumental to permit the researcher to obtain more information about DCK reverse logistics and customer satisfaction at once. The questionnaire instrument was tested on few retailers before moving into the survey.

The questionnaire was developed using the research questions and objectives. The questionnaire covered both reverse logistics and customer satisfaction aspects. The questionnaire was quantitatively structured since it had only closed ended questions. That made it easier to post code data for statistical quantitative analysis. Another advantage of closed ended questions was they made it easy for respondents to respond since they just had to choose from a list of answers.

The flow of the questionnaire was such that the first part of the questions asked demographic attributes such as gender and age. The second part of the instrument asked preliminary profiling questions which relates to customers use of DCK's products. The second section of the questionnaire had questions for key attributes of the study such as customer satisfaction and DCK's reverse logistics. In its entirety, a respondent would spend only about 3 minutes to respond, which made the instrument very ethical in terms of time.

Questionnaires are advantageous as they give the respondent freedom especially when the questions are open ended. The respondent is free to answer to all they know about the subject matter. This is usually facilitated by the absence of the researcher and the environment created by the researcher. However, questionnaires may not be properly understood by the respondent and this will not yield best results. Also, they may be completed in a hurry because the respondent may not give to them ample time to concentrate.

3.7.2 Interviews

Interviews were conducted with top management of DCK Bindura because they are the decision makers who have answers to why the developed reverse logistics and its benefits towards customer satisfaction. The purpose of these interviews was to have an in-depth understanding of how DCK does its reverse logistics, the benefits and drawbacks of the scheme and the benefits of it towards customer satisfaction and the ways in which they use to know whether customers are satisfied.

Interviews allowed the researcher to ask clarity questions but maintaining no attempts to manipulate the respondents' responses.

During the interview session, the researcher had a notepad where she recorded all the responses obtained. The interview sessions were guided by an interview guide. Before the interview day, the researcher made formal appointments with the interviewees. Interviews were conducted with the branch manager; logistics supply chain manager and marketing manager. All planned interviews were done successfully owing to the maximum cooperation from the DCK management; they were keen to also understand the dynamics around customer satisfaction and reverse logistics.

Advantages of interviews are that they allow a good co-operation between the respondent and the interviewer. In normal circumstances the interviewer is free to ask burning questions that he or she have. Also being free in an interview will help in yielding the best because the respondents will be free to exhaust what they know, hence yielding best results as the respondent will be giving it out all. The researcher can also ask further questions on the opinion of the respondent. The researcher may ask questions that require opinions and this is much easier in face to face interviews.

However, during an interview some respondents may be reluctant to release some information as it will be confidential, resulting in the researcher having the framework of the research. To avoid this researcher guaranteed the security and privacy of the information. It is usually difficult to find respondents in a free space so that they can really concentrate on your research study. Especially top management, they are always busy in a way that they will not give the interviewer time to really exhaust the questions and obtain the information wanted.

3.8 Data Collection Procedure

Data collection procedure relate to the way in which data was gathered and collected (Saunders et al, 2019). To conduct interviews, the researcher visited DCK Bindura with a school letter that addressed and sought permission for using their company for research and formally requested to conduct an interview with three of their top management. This consisted of the branch manager; logistics supply chain manager and marketing manager. This was done so as to understand more about the way they conduct reverse logistics and its contribution towards customer satisfaction. Also these people are the ones with more information and influence over decision making of the company in Bindura. It took a period of 3 days to conduct these interviews since the respondents

were sometimes busy and postponed the interview. Each session of interviews lasted about 10 to 15 minutes.

The other instrument used to collect data was the questionnaire. The questionnaires were distributed using the sample size per stratum discussed under section **3.4.1** of this chapter. Questionnaires were distributed to retailers in Bindura town and urban on bigger supermarkets, tuck shops and roadside vendors. The researcher personally initiated the research to all stratums.

3.9 Data presentation and Analysis

Data was presented using tables, bar charts and pie charts to present a clear picture of information collected.

3.10 Reliability and Validity

Validity refers to the scope to which a measurement instrument measures what it is anticipated to measure (Greener, 2022). To ensure validity of data the researcher used various techniques including using SPSS. Firstly the researcher made sure that the questioners and interviews covers key issues of reverse logistics and customer satisfaction. In addition data was collected from a bigger sample of up to 100 sample size. The survey also catered both the company and retailers views. To ensure that the instrument was valid, the researcher pilot tested the research instrument first before moving into the majority sample size. Research objectives informed the development of the research instrument, and that was in line with the requirements of internal validity.

3.11 Ethical considerations

According to Saunders et al (2019) ethical considerations in research relates to questions about how researchers formulate and clarify research topics, design, collect and analyze data and the general write up. The study was conducted in an ethically and morally upright manner. Respondents were asked formally and voluntarily to participate and were told the purpose of the research was for educational purpose only. The cover page of the questionnaire informed the respondents of the nature and reasons for the study. Respondents had the right to withdraw from the survey at any given time and to conduct at their free time. Interview respondents were given labels from A to D that substituted their names. That also ensured anonymity of respondents. No sensitive information was questioned by the questionnaire or during interview sessions.

3.12 Chapter Summary

The chapter covers the research methodology which consists of data collection methods, target population and sampling techniques. The study adopted a mixed method approach of combining quantifiable data collected using questionnaires and qualitative data collected using interviews. The chapter has discussed how surveys were conducted and how data reliability and validity was secured. The next chapter analyses and interprets data collected.

CHAPTER IV

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.0 Introduction

The previous chapter explored the methodology used in measuring the impact of reverse logistics on customer satisfaction. This chapter analyzes the data that was collected in the previous chapter. For easy understanding the data is presented in charts, bar graphs and tables and accompanied by a synopsis explanation. Data for the study was examined and qualitative data from interviews was thematically examined to give in-depth understanding of the impact of reverse logistics on customer satisfaction. Current research findings were also compared against previous literature so as to align results to scholarship.

4.1 Response rate

The questionnaire was the main research tool for the study. Using a stratified random sampling technique, 100 questionnaires were issued out and the response rate is shown in Table 4.1 below

Table4.1 Response rate

Sales Region	**distributed questionnaires**	**Returned and Validated**	**Response Rate**
Sample size	100	77	77 %

Source: Primary Data (SPSS Output)

Table 4.1 shows that of the 100 questionnaires issued, only 77 were returned and validated. Of the invalidated questionnaires, 7 were spoiled and 5 had a lot of missing responses. The questionnaire had two screening questions which asked about the respondents' knowledge about DCK products. So 5 respondents were screened out because they confirmed that they do not know anything about the brands under study, hence their responses would be biased. 6 questionnaires were not returned

completely. Three interviews were conducted with DCK top management that gave rise to a 100% interview response rate.

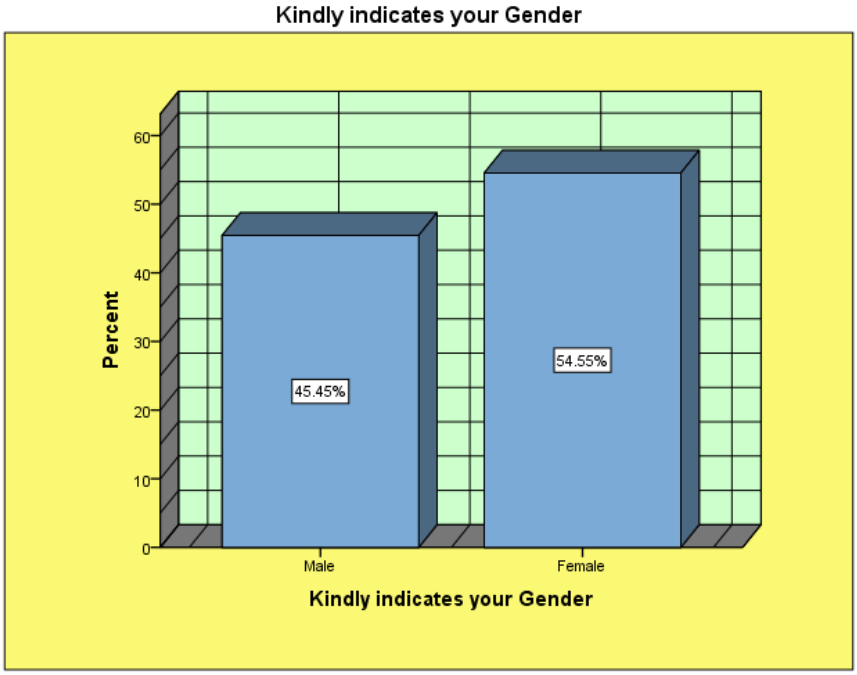
Cooper and Schinder (2014) scripted that a response rate of more than 70% is acceptable enough to give reliability and validity to a study. Researching to identify the alternatives in reverse logistics for end of life computers Tiwari et al (2013) had a response rate of 70% and their study was validated. Thus, with a response rate of 77% the researcher proceeded to data analysis.

4.2 Demographic Profiling

This section analyses the demographic nature of the data and respondents.

4.2.1 Gender of Respondents

Both males and females were considered in this study. Figure 4.1 below depicts the frequency statistics.



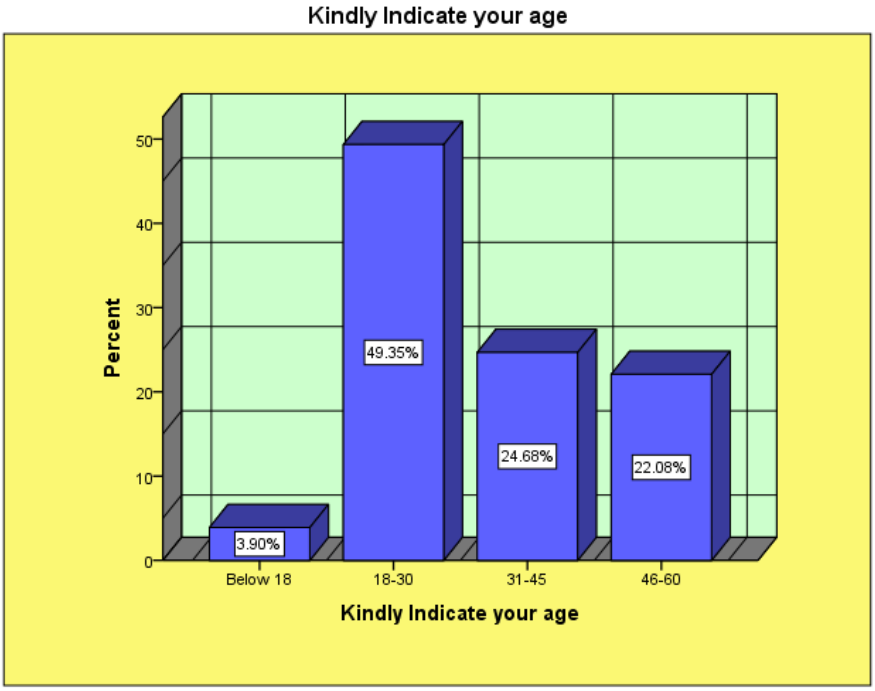
Source: Primary Data (SPSS Output)

Figure4. 1Gender of questionnaire Respondents

Figure 4.1 show that the study attracted more female respondents than males. Of all questionnaire respondents 42(54.55%) were females as compared to 35 (45.45%) males. For the interviews conducted, males dominated the survey as 2 out of 3 (75%) were males whilst one interviewee was a lady (25%). The findings mean that DCK customers are female dominated whilst DCK top management are males. Taherdoost (2016) was of the opinion that a research can be deemed valid provided that there is no gender discrimination on surveys.

4.2. 3Age of Respondents

The study also collected data about age ranges of respondents. Such information was important to ascertain whether customers of various ages are satisfied by reverse logistics schemes across various age ranges. The age frequencies are thus presented in figure 4.2



Source: Primary Data (SPSS Output)

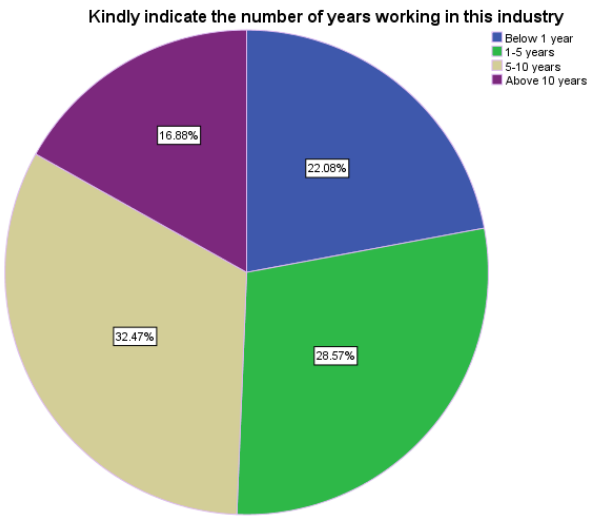
Figure4. 2Age of respondents

Figure 4.2 shows that the age range from 18 years to 30 years dominated the study as it had the majority of 38 respondents (49.4%). It was followed by age category 31 to 45 years which had a valid percentage of 24.7% (19 respondents). The least number of respondents came from the age

category which was below 18 years of age with 3 respondents (3.9%) whilst the age category of 46 to 60 only had 17 respondents (22.1%). worth mentioning is the last category on the questionnaire of those aged above 60, which had no respondents. According to Taherdoost (2016), data is validated when it consist of people from all age groups because it contains preference of people from all age groups. Thus, Ghazali et al (2016), in his study on reverse logistics on food industries also conducted a survey on different age groups.

4.3. Age of retailers in industry

The study also collected data about age ranges of respondents' experience in industry. Such information was important to ascertain that the research contains retailers in different levels of experience. The age in industry frequencies are thus presented in figure 4.3



Source: Primary Data (SPSS Output)

Figure4.3Age of retailers in industry

The majority of respondents 25 (32.47%) have industry experience of between 6 to 10 years which is fair enough to know more about the organization in study (Cooper and Schinder, 2014). There are followed by 22 (28.5%) retailers with between 1 to 5 years in industry which is also fair age to have experience with DCK. The subsequently are those 17 (22.08%) retailers with 1 year and

below, the new comers. The least one are those with 10 or more years in industry 13 which is 16.8%.According to Cooper and Schinder, (2014), the study with various customers at different experience is fair enough to provide reliable results. On a similar research conducted in Kenya by Omorenda (2012) on the benefits and drawback of reverse logistics on Kenya Power Limited, retailers to the company in different levels of experience were surveyed. From the ages of retailers shown, it is noted that DCK has loyal customers since its longed in Bindura and its customer satisfaction strategies are attracting a fair number of new comers.

4.4 Experience of customers with DCK products

Respondents were asked about their working experience with DCK products. The results are as follows

Kindly indicate how long have you been purchasing DCK products?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 year and below	13	16.9	16.9	16.9
	2 years	30	39.0	39.0	55.8
	3 years	34	44.2	44.2	100.0
	Total	77	100.0	100.0	

Source: Primary Data (SPSS Output)

Table4. 2Experience of customers with DCK products

Source: Primary data

As shown on table 4.2 most of the retailers amounting to 34 (42.2%) have an experience of working with the bakery since its opening for almost 3years. 30 (39%) retailers has purchased DCK products for 2 years now. There are 13 retailers (16.9%) who have been purchasing DCK products for 1 year and below. According to (Saunders et al, 2019), surveying respondents with different experience of working with a company allows a well-rounded perspective on the performance and improvement opportunities of a company. Ghazali et al (2016) also agrees that long term customers

typically have better understanding of the company and how the company evolved over time since they also included customers at different experience of working with an organization in their research. So by asking them the researcher identified enhancements that would be meaningful to customers and why the long term customers continue purchasing from DCK. Asking retailers who recently started to purchase assist the researcher gain knowledge why they choose to purchase at DCK whilst they are many alternatives.

4.5Products usually purchased

Respondents were asked about what products they usually purchased. The results were obtained and are presented in table 4.3below

Products	**Frequency**	**Percent**
Bread	77	100%
Buns	75	97.4%
Doughnuts	35	45.4%

Source: Primary Data (SPSS Output)

Table4. 3Products usually purchased

The table 4.3above shows that, all the customers who responded to the questionnaires purchase bread from DCK. They amounted to 100%. There are 75 retailers which are 97.4% of the retailers who responded who purchase buns. Doughnuts are the ones with few retailers who purchase them amounting to 35 of the retailers who responded. Bread is the most purchased product at DCK followed by buns and lastly doughnuts. According to Bell at al (2022), it was necessary to know the products that are usually purchased so as to know which products DCK can put more emphasis on their reverse logistics and customer satisfaction schemes. In 2021, Toyin Adebayo also conducted a research titled an evaluation of reverse logistics responsiveness and customer satisfaction in retailing in Nigeria. The research objective was to see the most returned products and the responsiveness on customer satisfaction for products that are bought online. The respondents were also asked the same question of products they usually purchase. Their responds are relevant in the study as it allows the researcher to know where to put more emphasis.

4.6 Frequency of retailers returning DCK products for value addition

In order to know whether the retailers are aware and engaging in reverse logistics, the researcher asked them how often they return to DCK for value addition. Their responses are shown on fig 4.4.

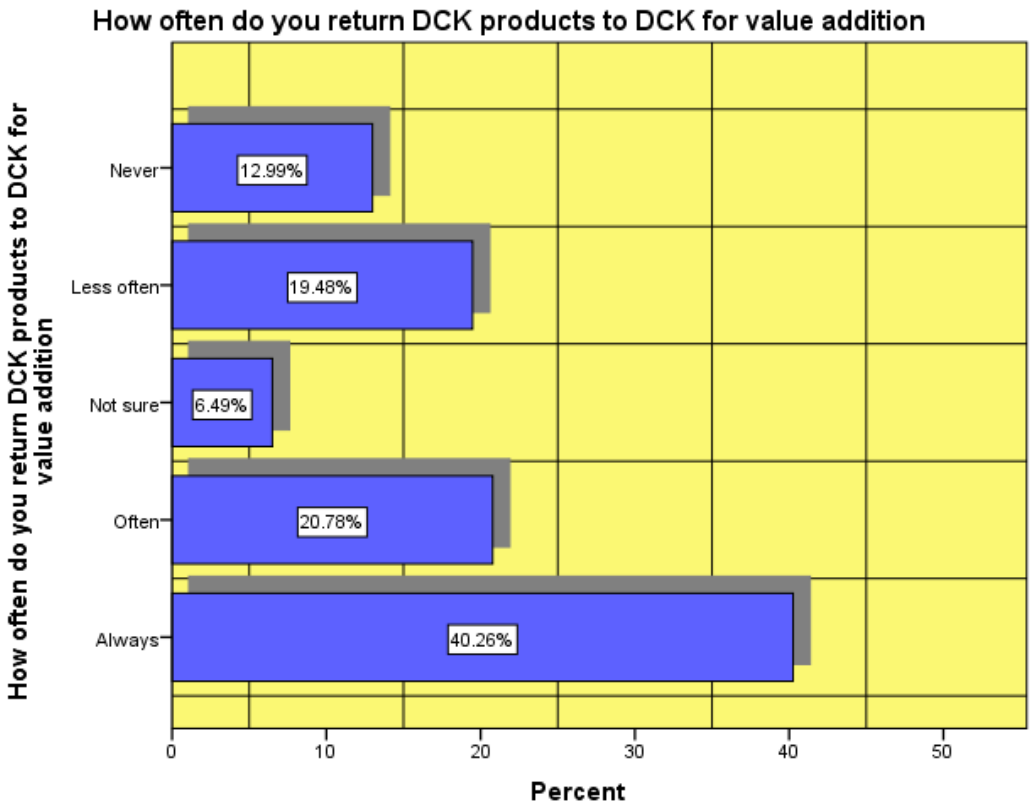


Figure4. 4 Frequency of retailers returning DCK products for value addition

Source: Primary Data (SPSS Output)

Fig 4.4 above shows that most retailers amounting to 31 (40.26%) engages in reverse logistics always. They always return goods for value addition wherever they need value addition for goods. 16(20.78%) retailers return goods for value addition often only when necessary to do so. There are 5 retailers who were not sure of how often they return goods and 15 (19.48%) return goods for value addition less often. A smaller number of 10(12.99%) retailers do not return goods at all for value addition. Ghazali et al (2016) who conducted a study of reverse logistics in food and beverages industries, noted that large supermarkets often never engage in reverse logistics because they often sell all the perishable products delivered in a short period of a day or two before they

break or decay. He also added that they even have correct temperature ranges to store the goods in their correct temperature ranges. That is why the researcher was not so concerned of why some few retailers never engage in reverse logistics. From the respondents retailers are actually engaging in reverse logistics more often meaning it's a scheme they are appreciating.

4.7 How often do you purchase from DCK

The researcher was concerned with the level of DCK customer loyalty as it is one of the things that show customer satisfaction**.** Therefore asked the respondent show often they purchase from DCK. Their responses are summarized in the figure 4.5below:

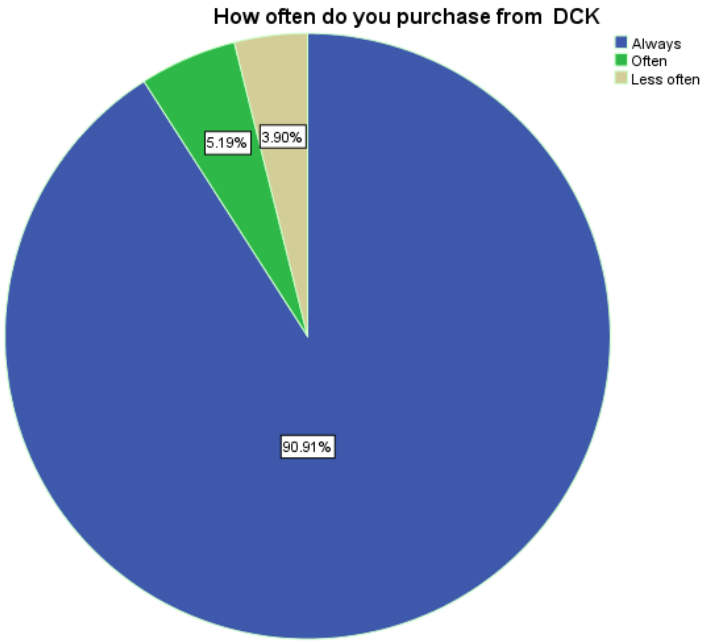


Figure4.5 How often do you purchase from DCK

Source: Primary Data (SPSS Output)

Figure 4.5 above clearly shows that the majority of respondent purchase DCK products. The number of respondents who purchase always from DCK amounts to 70 out of 77 which consist of 90.91%. Only 4 (5.19%) of them often purchase from DCK. 3 which is 3.90% purchase less often from DCK. There were no respondents who never purchased from DCK. There were also no respondents who were not sure about their purchase at DCK. A huge number of respondents being

DCK customers always lead to a meaningful research since there are loyal customers. Bell et al (2022) also appreciates that if a larger responses comes from the affected population it adds more meaning to the research since they are the targeted ones. Omorenda (2012) who conducted a research on the benefits and drawback of reverse logistics on Kenya Power Limited targeted a larger response rate of up to 156 from the supply chain team itself as there are the affected populations. The response having a larger percentage of 90.90% retailers purchasing from DCK shows that it has loyal customer which is a major sign of satisfaction.

4.8 The extent to which customers satisfied with reverse logistics

The researcher was also concerned with knowing whether the reverse logistics scheme implemented by DCK is actually successful in satisfying the customers and to what extent. Therefore asked the respondents the extent to which they are satisfied given that they are allowed to return unsold goods or spoiled goods foe value addition. Their response was summarized below on figure4.6.

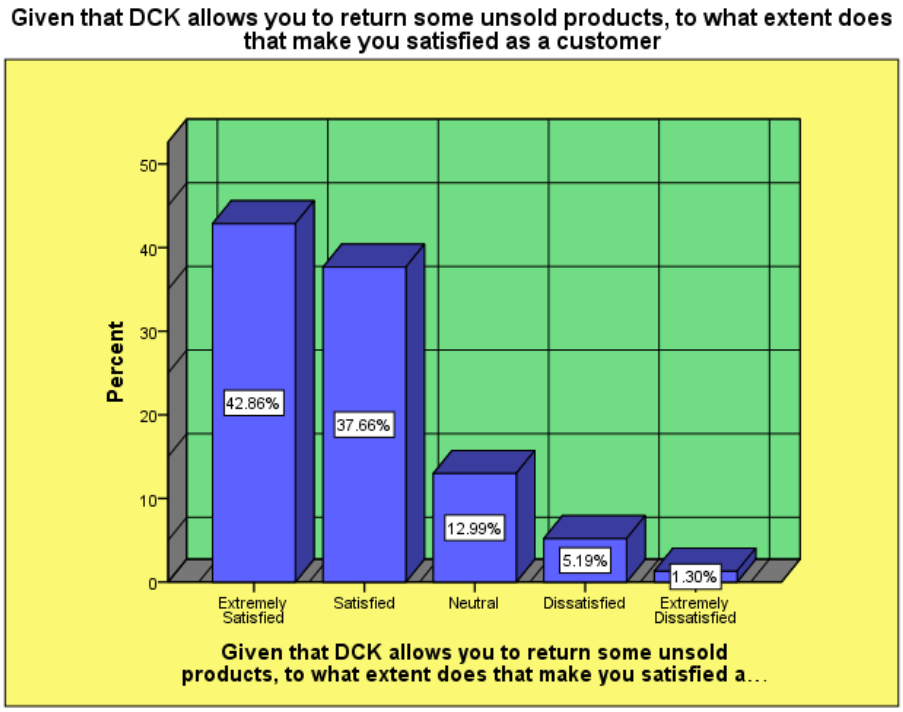


Figure4. 6 the extent to which customers satisfied with reverse logistics

Source: Primary Data (SPSS Output)

From figure 4.6 above, a huge number of respondents amounting to 33 (42.86%)responded that there are extremely satisfied due to reverse logistics introduced by DCK. 29 (37.66%) of respondents would be satisfied to a greater extent by returning goods unsold and spoiled goods for value addition. There are 4(5.19%) neutral respondents on this issue. Dissatisfied respondents amounted to 10 (12.9%). The total number of responses shows that reverse logistics is capable of making them satisfied since they will be allowed to return unsold and spoiled DCK products back for value addition. Recently in 2021, Toyin Adebayo also conducted a research titled an evaluation of reverse logistics responsiveness and customer satisfaction in retailing in Nigeria. The research objective was to see the most returned products and the responsiveness on customer satisfaction for products that are bought online. The researcher also finds out that customers are satisfied with reverse logistics to a greater extent.

4.8 The relationship between reverse logistics and customer satisfaction

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.621[a]	.503	.491	.37739

a. Predictors: (Constant), RL

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.226	1	1.226	8.607	.004[b]
	Residual	10.682	75	.142		
	Total	11.908	76			

a. Dependent Variable: CS2

b. Predictors: (Constant), RL

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.263	.541		4.185	.000
	RL	.336	.115	.321	2.934	.004
a. Dependent Variable: CS2						

Table4.4Regression analysis results

One of the main objectives of the study was *to analyze the relationship between reverse logistics and customer satisfaction at DCK bakery.* That association was tested using the following research question:

> What is the relationship between reverse logistics and customer satisfaction at DCK bakery?

The model summary, on Table 4.4, shows that the Customer Relationship Management and customer retention model presented in this study best explains 49% of the variance (adjusted R^2 = 0.491). This indicates that the model of the study has moderate predictive strength. The predictive strength was even higher than the previous model by Mohamed (2015) with predictive strengths of 42% and 31% by Ghazali et al (2016). The correlation statistic of the model was 0.621, which proves that there is a strong positive association between reverse logistics and customer satisfaction. On the other hand, the analysis of variance (ANOVA) table, Table 4.4, shows that the tested model was statistically significant (P = 0.04). According to Turner (2016), the p value should be less than 0.005 to be significant. Therefore, the following conclusion was made:

Decision: There is a positive relationship between Reverse logistics and Customer Satisfaction.

The interpretation of the results is that reverse logistics has a strong positive impact and association with customer satisfaction. This enlightens DCK the need to continue using reverse logistics or even increase the way it engages in it, because the higher the reverse logistics practices the more the customers are satisfied.

Similar results were also found by Ghazali et al (2016). Through their research Ghazali et al (2016) noticed that there are so many factors that influence the successful implementation of reverse logistics.

Ezura (2019) also conducted a similar research. The relationship between reverse logistics and customer satisfaction was analyzed using Regression analysis through the use of SPSS software. The results showed that there is positive relationship between reverse logistics and customer satisfaction (Ezura, 2019). Most online retailers responded that the more they are allowed to return defective goods to the suppliers the more they become satisfied with the value for money towards those purchases. They also added that there are loyal to those suppliers that allow them to return goods that they are not satisfied with for exchange.

4.9 Benefits of DCK's reverse logistics

To know the impact of reverse logistics on customer satisfaction the researcher asked the respondents to rate the benefits of DCK's reverse logistics. The results are as shown below table 4.5

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Happier and satisfied customers	77	3	5	4.84	.488
Improved brand reputation	77	2	5	4.84	.586
Increased product life cycle	77	1	5	4.75	.728

Environmental sustainability	77	1	5	4.45	1.033
Total average				4.72	
Valid N (list wise)	77				

Table4. 5Benefits of DCK's reverse logistics.

Source: Primary Data (SPSS Output)

Fig 4.5 above shows that the first benefit of reverse logistics which is happier and satisfied customer has a mean or average of 4.84. This shows that the majority of retailers see that benefit has best effect. The same with the other three benefits mentioned in the questionnaire which are improved brand reputation, increased product life cycle and environmental sustainability. All of them have got a mean that shows that those benefits are of best effect. The total average mean is 4.72 which summarize that the above mentioned benefits of reverse logistics are of best effect.
In addition, the standard deviations there are very small numbers which shows that the best results that is best effect on the above mentioned benefits. This is according to Hair (2016), who scripted that a standard deviation of less than 2 is acceptable. All the benefits above got a standard deviation of less than 2 by far which shows that the responses were not deviated. Therefore means the respondents agrees that the above are benefits of reverse logistics.

Omarenda (2012) who also had a similar research concluded that there is a positive relationship between reverse logistics and profitability and reverse logistics brings benefits to the organization. From his study the recommendations are that there is a positive relationship between reverse logistics and profitability and reverse logistics is capable of adding business profits.

In addition, the results of the study by Muchena (2018) showed that reverse logistics enhance positive relationship between manufacturers and retailers meaning the customers are satisfied which is another benefit of reverse logistics. All these past studies and the current study shows that reverse logistics bring about a lot of benefits.

4.10 Drawbacks of DCK's reverse logistics

To know the impact of reverse logistics on customer satisfaction the researcher asked the respondents to rate the drawbacks of DCK's reverse logistics .Where 1 was the least effect and 5 the most effect the results are as shown on fig 4.6 below

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
High reverse logistics cost	77	1	5	3.09	1.015
Inefficiency	77	1	5	3.22	1.096
Time consuming	77	2	5	3.31	.654
Complex process	77	1	5	4.56	1.019
Valid N (list wise)	77			3.5	

Table4.6 Drawbacks of DCK's reverse logistics

Source: Primary Data (SPSS Output)

From fig 4.6 above it is shown that, most respondents rated that the above reverse logistics have the most effect. Therefore in compilation it is noted that the respondents agrees that the above are drawbacks of reverse logistics since the total mean is 3.5 which shows that the above drawbacks are of effect. It is noted that complex process have a higher mean of 4.56 and a higher standard deviation of 1.019 which shows that most respondents agreed that reverse logistics is a complex process. Mohamed (2015) also conducted a similar research on the Impact of reverse logistics applications on customer satisfaction and find similar reverse logistics drawbacks such as the complexity of the process.

4.11 Measuring customer satisfaction

To measure customer satisfaction, customer satisfaction index was used. Respondents were asked to rate out of 10 customer satisfaction attributes that were given. Where 1 represent 10% and 10

represent 100%. The results were compiled and analyzed using SPSS and the results are shown on the table 4.7 below

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Do DCK products help you achieve your goals?	77	4	10	7.53	1.752
Would you recommend DCK products to your family and friends?	77	4	10	7.84	1.548
Are you a loyal customer to DCK?	77	5	10	8.21	1.370
Do you agree that reverse logistics enhances your satisfaction?	77	3	10	7.86	1.722
Do you sometimes choose DCK products	77	4	10	7.79	1.567

over other brands?					
Do you sometimes wish to change from DCK products to other brands?	77	4	10	8.03	1.395
Do you enjoy value for money from purchasing DCK products?	77	6	10	7.90	1.176
Do DCK products meet your expectations?	77	5	10	8.06	1.481
Valid N (list wise)	77			**7.90**	

Table4. 7. Customer satisfaction

Source: Primary Data (SPSS Output)

Table4.7above shows the customer satisfaction score the sample**.** An overall satisfaction of 7.90 was achieved, which equates to a satisfaction score of 79%. This means that customers of DCK are very satisfied with the services which are rendered by DCK. According to Mynah (2019),

satisfaction score of above 50% is positive, yet the higher the score the better the satisfaction level of customers. Recently in 2021, Toyin Adebayo also conducted customer satisfaction index and find out that 77% of online customers in Nigeria are satisfied with retailers services. Therefore, a larger number of 79% of the current study is even more relevant.

4.12 Interview response

4.12.1. What do you understand about Reverse Logistics?

To notice whether the interviewees understand the concept of reverse logistics, the researcher asked them their understanding about reverse logistics. One of them pointed that reverse logistics encompasses all operations related to the upstream movement of products and materials. He added that it is the process of moving goods from their typical final destination for the purpose of capturing value, or proper disposal. He also added that remanufacturing and refurbishing activities also may be included in the definition of reverse logistics have to do with returning goods to the manufacturer for value addition. The second one pin pointed that reverse logistics comprises of the sector of supply chains that process anything returning inwards through the supply chain or traveling backward through the supply chain. The third interviewee stated that reverse logistics is the planning and control process for the return of products from consumption or end user points to the manufacturer or distributor for their recovery, repair, recycling or disposal. The researcher was satisfied that there were on the same page with the interviewees since they have the same views of reverse logistics this is because Mohamed et al (2017) unified their understanding when reverse logistics was defined as the set of activities that is conducted after the sale of a product to recapture value and end the product's lifecycle.

4.12.2 How are you practicing reverse logistics as DCK?

The three interviewees pointed that they are practicing reverse logistics by collecting from customers' unsold products to keep in correct temperature ranges, collecting spoiled doughnuts, collecting breakages of bread and buns and also collecting stale DCK products for proper disposal. One of the interviewees actually pin pointed that they do have a dumping site they bought from Bindura Municipality where they dump the unsold bread. Two of the interviewees also pointed that they practice recycling as part of reverse logistics such that they also collect plastic papers and crates for reuse again in order to protect the environment.

Monczka et al, (2020) also pinpointed that well to do company engage in reverse logistics so as to allow and carter for damaged goods, broken goods, recycling, disposal and value addition. Mohamed (2015) also conducted a similar research on the Impact of reverse logistics applications on customer satisfaction, and found out that Mantrac the caterpillar manufacturing firm under investigation operate reverse logistics by collecting back parts for recycling and faulty caterpillars for value addition. With the similarities of current and past studies reverse logistics practices the researcher was satisfied that DCK is practicing reverse logistics and was impressed with the way they conduct it.

4.12.3. What do you understand about customer satisfaction?

All of the three interviewees stated that customer satisfaction is a very vital element in their business sector with one interviewee actually further saying it is one of the things that can cripple the business overnight if not tackled for. One of them pointed his views on customer satisfaction as a measurement that determines how happy customers are with a company's products, services, and capabilities. The second interviewee had the similar opinion that customer satisfaction is a measure of how well a company's products, services, and overall customer experience meet customer expectations. The other interviewee stated that a customer is satisfied when company's actual products, services, and capabilities are better than expectation.

The researcher understood that they were on the same page with the interviewees as their understanding are almost similar to Kotler, (2022) who defined Customer satisfaction as a metric used to quantify the degree to which a customer is happy with a product, service, or experience related to a business.. The respondents show that they understand customer satisfaction and ways to implement it.

4.12.4 What do you think is the impact of reverse logistics on customer satisfaction?

The three interviewees pin pointed the positive impacts that they are gaining as DCK from implementing reverse logistics. In one of the responses an interviewee said they are overwhelmed with the way customer loyalty increased at DCK giving them plenty of sales and profits, that respondents further said customers are even referring each other to the Bakery such that they have new comers. All of the three interviews acknowledge the lowering of cost. Recycling of plastics and crates is much cheaper for them as well resorting breakages hinders the loss of actually losing them. One of the respondents also believed that reverse logistics is the main key in increasing their

brand reputation such that they are managing in the giants' stiff competition. All of them keenly agrees that reverse logistics increase product life cycle with one actually saying he don't remember them disposing any products in a while because of their capacity to collect back products to keep in correct temperature storage for the next day. Ghazali et al (2016) also conducted a survey on the same; although the target population was different the impacts are the same that reverse logistics actually lead to customer satisfaction and longer product life cycle. The respondent showed that they are actually benefiting from reverse logistics to a larger extent. The impacts outlined by the interviewees are almost the same with what the researcher had also studied in past literatures, which therefore made the researcher understand more about the impact of reverse logistics on customer satisfaction.

4.12.5. In any case, how do you measure customer satisfaction at DCK?

There are various ways of measuring customer satisfaction that the respondents uttered. These include the customer satisfaction index, the customer effort score, customer satisfaction score and the net promoter scale. They however use the net promoter scale the most**.** It is used to measure the extent to which one customer would advocate and refer the brand to the next person (Hayes, 2022). They usually conduct surveys in the streets and entrance to larger supermarkets asking their customers the extent to which they may refer and share with others DCK brand. The same tools to measure customer satisfaction were also used by automotive industries in a research conducted by Tiwari (2013).

4.12.6 What recommendation would you offer to improve customer satisfaction at DCK?

All of the three interviewees recommended reverse logistics as a powerful tool to improve customer satisfaction as they have seen some great changes since they started the scheme. They also agreed that their market share is promising to rise again as it has been depleting over the past years. In the studies of Tiwari (2013) and Ghazali et al (2016) the respondents also recommended the use of reverse logistics in order to improve customer satisfaction. The researcher was convinced enough that reverse logistics brings positive impacts to customer satisfaction.

4.13 Chapter Summary

The study has analyzed the impact of reverse logistics on customer satisfaction. The chapter mainly analyzed the results of the methodologies that were used. This chapter focused on presenting information on the data gathered by the researcher. It revealed quantitative, qualitative and analysis of the collected data, which was presented in form of tables, pie charts ad bar graphs. The next chapter is going to cover results of the study, major conclusions and recommendations of the study.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

So far, the research has outlined the research objectives, defined research instruments and methods of research as well as analyzing the data collected. This chapter will look at the conclusions or summaries of the entire research as well as recommendations to DCK on the impact of reverse logistics on customer satisfaction. It shall examine the answers to the research goals and fulfill the objectives of the research.

5.1 Summary of major findings

The research was: the impact of reverse logistics on customer satisfaction; case of DCK bakery. The study was exacerbated by the dearth of empirical studies in Zimbabwe, and even in the bakery industry. The problem was brooch to have been caused by not having Reverse Logistics tested on customer satisfaction using an empirical study which the current study addressed.

To have an in depth way to eradicate the research problem, the study deeply scrutinized different literatures of similar studies done before and even new primary data. The study collected data from various primary and secondary sources which include DCK retailers, top management, internet, in -house publications and various literatures. The study collected data from DCK retailers in Bindura and on DCK top management. Data was collected using structured questionnaires and in-depth interviews. The methodology was governed by a combination of descriptive and explanatory research designs and data was collected using interviews and questionnaires.

Quantitative data was analysed using Statistical Package for Social Scientist (SPSS) and qualitative data was analysed using thematic analysis. The results were analysed using Pearson Correlation analysis and regression analysis to test the relationship between the dependant variable and independent variable. Research results were thus analysed using test statistics for association, direction and strength of variables. These included the Pearson Correlation tests and regression analysis.

The study examined the impact of reverse logistics on customer satisfaction, benefits of implementing reverse logistics on customer satisfaction, the relationship between reverse logistics and customer satisfaction and also measured the customer satisfaction of DCK Bindura. It was find out that reverse logistics actually lead to customer satisfaction and brings other benefits such as improving brand reputation. The study noticed a positive relationship between reverse logistics and customer satisfaction. This shows that as reverse logistics practices increase, customer satisfaction also increase. It was also noticed that reverse logistics practices challenges include being time consuming, inefficiency and complex. Customer satisfaction for DCK was measured using Customer satisfaction index whereby customers were asked about their satisfaction and it was noticed that customers are actually satisfied.

5.2 Conclusions

The research had four objectives and these were realised through hypotheses testing. These are:

5.2.1 to analyse the impact of reverse logistics on customer satisfaction

The first objective aimed to analyze the impact of reverse logistics on customer satisfaction. The study looked at the impact of reverse logistics on customer satisfaction and it was concluded that increasing reverse logistics practices increase customer satisfaction for DCK customers. This was noticed based on the response from the questioners by various retailers within Bindura.

5.2.2 To analyse the impact of reverse logistics of DCK bakery.

From the retailers response through the questionnaires and the top management response through interviews it was then concluded that reverse logistics brings various benefits to DCK Bakery. These include happier and satisfied customers, improved brand reputation, increased product life cycle, environmental sustainability and lower cost. Negative impacts of reverse logistics which were noticed in the study includes Inefficiency, Complex process, Time consuming and High reverse logistics cost.

5.2.3 To measure customer satisfaction for DCK customers and define them.

The third objective was to measure customer satisfaction for DCK customers and defines them. DCK customers were defined as all those retailers in Bindura who are registered customers of DCK. This includes large supermarkets, small tuck-shop and roadside vendors. Their satisfaction was measured through customer satisfaction index. From the retailers responses on figure 4.8 it can be notices that DCK customers are satisfied and according to the regression analysis of 0.32 it

can be concluded that 32% of that satisfaction is through reverse logistics. When customers were asked to rate customer satisfaction attributes out of 100, 79% of them showed that there are being satisfied. The customer satisfaction index was 79% which shows satisfaction.

5.2.4. To analyse the relationship between reverse logistics and customer satisfaction at DCK bakery

The final objective of the study was to analyze the relationship between reverse logistics and customer satisfaction at DCK bakery. That association was tested using the following research question: What is the relationship between reverse logistics and customer satisfaction at DCK bakery? The correlation statistic of the model on table 4.4 was 0.621, which proves that there is a strong positive association between reverse logistics and customer satisfaction. In addition the significance from the ANOVA of (P = 0.04) can lead to the conclusion that there is a positive relationship between reverse logistics and customer satisfaction.

5.3 Recommendations

Using the research results, the following recommendations were made;

5.3.1 Enhance the supporting of reverse logistics activities

The research results showed that there is a positive relationship between reverse logistics and customer satisfaction. This means that as reverse logistics practices increases, customer satisfaction also increases. Therefore it is recommended that organizations enhance their support towards reverse logistics. The study also find out various reverse logistics benefits such as happier and satisfied customers, improved brand reputation, increased product life cycle, environmental sustainability and lower cost. Such benefits can only be derived from reverse logistics activities; therefore it can be recommended that organizations supports reverse logistics practices.

5.3.2 Contemplate over negative impacts of reverse logistics and find solutions towards them

The study noticed that reverse logistics have got challenges. Theses includes Inefficiency, Complex process, Time consuming and High reverse logistics cost. These challenges can harm the organization if not attended to. Therefore it is recommended that organizations contemplate not only the positive impact of reverse logistics but also the negative impacts so as to correct them before they cause harm to the organization and dissatisfaction to the customers.

5.3.3 Conduct regular trainings

The study showed that there is complexity in implementing some reverse logistics practices. Therefore it is recommended to train the staff very well so as to handle the complexity and the pressure professionally. Employee development is the continuous effort to strengthen work performance through approaches like coaching, training sessions, and leadership mentoring. Training is a specific event that teaches new information or skills, often provided to new or newly promoted employees. Organizations can offer time to time training to their supply chain logistics team so that they catch up with industry trends of reverse logistics. The efforts are worthy it as this will lead to customer satisfaction.

5.4.4 Engage in regular satisfaction surveys with customers

The customer is the king. Therefore the customer thoughts are essential for the business to continue boosting. To know where they need to improve, organizations can engage surveys with the customers so as to know and carter for customer needs. Organizations can also regularly measure customer satisfaction. Organizations make these surveys meaningful by taking into consideration the customer feedbacks and improve where there is need to do so. This will ensure customer loyalty and satisfaction.

5.4 Areas for further study

The study researched the impact of reverse logistics on customer satisfaction only and used one company only. Future studies may want to examine the impact of reverse logistics across an industry. Other atypical industries to consider include the car industry and electrical sundries. There is also need to consider other factors which affect customer satisfaction, other than reverse logistics alone. By so doing future researches will fuse well with this study in developing a total satisfaction model for customer.

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Research Questionnaire

APPENDIX A: QUESTIONNAIRE

Dear Respondent:

My name is STEADY MAKUDZA, a Purchasing and Supply Chain student at Bindura University of Science Education. I am conducting a study entitled:

The impact of reverse logistics on customer satisfaction. A case of DCK.

This study seeks to analyze the impact of reverse logistics on customer satisfaction so as to enhance reverse logistics.

The questionnaire was developed such that it does not take much of your time to complete. You do not have to write statements, just tick in the most appropriate box.

Your privacy and anonymity is guaranteed and your contribution will **ONLY** be used for academic purposes. Your participation is highly valued and appreciated.

For any concerns associated with this study contact me on makudzasteady01@gmail.com

SECTION A: PRELIMINARY INFORMATION.

1 Kindly indicates your Gender (✓)

Male	
Female	

2. Kindly Indicate your age (✓)

Below 18	10
18 to 30	142
31-45	102
46 - 60	84
Above 60	4

3. Kindly indicate the number of years working in this industry

Below 1 year	
1-5 years	
5-10 years	
Above 10 years	

4. Kindly indicate how long have you been purchasing DCK products?

1 year and below	
2 years	
3 years	

5. What products do you usually purchase from DCK?

Product	Tick
Bread	
Buns	
Doughnuts	

SECTION B:

*NB **Reverse logistics-** is the inbound activity of taking in goods from the retailers, distributors or end users to the original manufacturer for value addition.*

***Customer satisfaction** – it is the total utility gained by the end user from using a certain product*

6. How often do you return DCK products to DCK for Value addition? (✓)

Always	
Often	
Not sure	
Less often	
Never	

7. How often do you purchase from DCK (✓)

Always	
Often	
Not Sure	
Less Often	
Never	

8. On a scale which runs from 1 to 5, kindly rate the following benefits of DCK's reverse logistics. *Where 1 is the least effect and 5 is the best effect.*

Question		**5**	**4**	**3**	**2**	**1**
a. Happier and satisfied customers						
b. Improved brand reputation						
c. Increased product life cycle						
d. Environmental sustainability						
e. Lower cost						

9. On a scale which runs from 1 to 5, kindly rate the following drawbacks of reverse logistics. *Where 1 is the least effect and 5 is the best effect*

Question		5	4	3	2	1
a. **I**nefficiency						
b. Complex process						
c. Time consuming						
d. High reverse logistics cost						

10. *On a scale which runs from 1-10, where 1 is 10% and 10 is 100%* kindly indicate your level of satisfaction as a customer of the products you buy from DCK

	1	2	3	4	5	6	7	8	9	10
a.) Do DCK products help you achieve your goals?										
b.) Would you recommend DCK products to your family and friends?										
c.) Do you agree that reverse logistics enhances your satisfaction?										
d.) Are you a loyal customer to DCK?										
e.) Do you sometimes choose										

DCK products over other brands?										
f.) Do you sometimes wish to change from DCK products to other brands?										
g.) Do you enjoy value for money from purchasing DCK products?										
h.) Do DCK products meet your expectations?										

11. Given that DCK allows you to return some unsold products, to what extent does that make you satisfied as a customer?

Rating	Extremely Satisfied	Satisfied	Neutral	Dissatisfied	Extremely Dissatisfied
Tick					

*****Thank you very much for your time and cooperation*****

APPENDIX B: INTERVIEW GUIDE FOR DCK TOP MANAGEMENT

1. What do you understand about Reverse Logistics?

2. How are you practicing reverse logistics as DCK?

3. What do you understand about customer satisfaction?

4. What do you think is the impact of reverse logistics on customer satisfaction?

5. In any case, how do you measure customer satisfaction at DCK?

6. What recommendation would you offer to improve customer satisfaction at DCK?