
**ST.MARY'S UNIVERSITY**

**SCHOOL OF GRADUATE STUDIES**

# THE EFFECT OF SUPPLY CHAIN MANAGEMENT ON CUSTOMER SATISFACTION: THE CASE OF HEINEKEN BREWERY S.C

**BY**

**TAGES GIDI**

**JANUARY, 2025**

**ADDIS ABABA, ETHIOPIA**

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**ADVISOR :ALAZAR AMARE (Ph.D)**

**A THESIS SUBMITTED TO ST. MARY'S UNIVERSITY SCHOOL OF GRADUATE STUDIES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF GENERAL MBA.**

**JANUARY, 2025**

**ADDIS ABABA ETHIOPIA**

## DECLARATION

I declare that this thesis, entitled "The Effect of Supply Chain Management on Customer Satisfaction: The Case of Heineken Brewery S.C" is my original work prepared under the follow-up and guidance of my Advisor. All sources of materials used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution to earn any degree.

Name: Tages Gidi _____

Signature/date

## ENDORSEMENT

This thesis has been submitted to St. Mary's University, School of Graduate Studies for examination with my approval as a university advisor.

Alazar Amare (Ph.D) _____ Jan ,2025

Advisor Signature/Date

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**TAGES GIDI**

**APPROVED BY BOARD OF EXAMINERS**

| | |
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| Dean, Graduate studies | Signature & date |
| _____ | _____ |
| Advisor | Signature & date |
| Alazar Amare(PhD) |  Jan ,2025 |
| Internal Examiner | Signature & date |
| Tewodros Mekonnen (PhD) |  Jan,2025 |
| External Examiner | Signature &date |
| Berihun Muche(PhD |  Jan ,2025 |

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## ABBREVIATIONS AND ACRONYM

SCM – Supply Chain Management

FMCG- Fast Moving Commodity Goods

CRM – Customers Relationship Management

RM – Relationship Management

# Abstract

*The primary objective of this study was to analyze the effect of supply chain management on customer satisfaction, focusing on Heineken Brewery S.C. The research examined the extent to which supply chain management aligns with customer satisfaction. An explanatory research design and a quantitative approach were employed. Data were collected through questionnaires, and findings were presented using descriptive and inferential analyses. The results indicate that supplier integration, customer integration, internal integration, information sharing, and logistics have a positive impact on customer satisfaction. The study highlights that improvements in these supply chain dimensions contribute significantly to enhancing customer experience. Based on the findings, the researcher suggests that Heineken Brewery should emphasize supply chain management strategies to further enhance customer satisfaction.*



***Keyword:Supply Chain Management ,Customer Satisfaction,Comapny supplier integration,company customer intagration,internal integrationa ,information sharing and Logistice.***

# CHAPTER ONE

# INTRODUCTION

## 1.1 Background of the Study

The history of the Ethiopian brewery industry dates back to 1922. Under Emperor Zewditu Menelik's rule, Ethiopia was undergoing significant modernization. Roads were being paved, buses were arriving, modern houses were being constructed, and railroads were operational. One notable development was the opening of the first brewery. Today, the Ethiopian brewery sector is in a growth phase, attracting international business companies through various entry modes due to the increasing demand for beer. Consequently, beer manufacturing companies are rising, intensifying competition and leading to aggressive promotional and marketing efforts. Reports from international organizations like the IMF and the World Bank highlight Ethiopia's rapid economic growth, which, combined with the government's openness to foreign investment, has encouraged leading international companies to invest in the Ethiopian brewery industry. This sector, currently focused on meeting domestic demand, has the potential for export expansion. (Source: http://www.addismap.com/bgi-ethiopia.)

The significance of SCM began after the scientific revolution, which greatly influenced management practices. SCM processes have become essential for company effectiveness, dealing with critical stages within the organization that directly impact production, sales, profitability, and continuity through customer service. Today, a company's competitive edge depends heavily on its ability to manage multiple challenges, reduce costs, enhance product quality, and offer superior customer service (Lei, 2017). With rapid changes in the business environment, companies must adopt agile practices to benefit from what Sull (2019) calls "the downside of turbulence." Competition now occurs across supply chains rather than between individual companies (Seth 2006; Fynes 2015; Vickery, 2013).

Supply chain management (SCM) plays a pivotal role in enhancing customer satisfaction in the brewery industry by optimizing the flow of materials, information, and products from suppliers

to consumers. Efficient SCM practices, such as inventory management, supplier relationship management, and logistics optimization, ensure that breweries can consistently deliver high-quality products promptly. According to Goh (2020), effective supply chain strategies not only reduce operational costs but also improve product availability and response times, which are crucial for meeting customer demands in the highly competitive beverage market. By streamlining their supply chain processes, breweries can enhance their ability to satisfy customer preferences, ultimately fostering brand loyalty.

Moreover, the integration of technology in supply chain management significantly impacts customer satisfaction. Advanced data analytics and real-time tracking systems enable breweries to monitor their inventory levels and sales trends more effectively, ensuring they produce the right amounts of beer to meet consumer demand without overproducing. As noted by Gupta & Singh (2021), breweries that employ technological solutions to manage their supply chains can offer fresher products and adapt more swiftly to market changes. This responsiveness not only boosts customer satisfaction but also positions breweries as reliable suppliers in the eyes of consumers, creating a competitive advantage in an industry where product quality and availability are paramount.

Collaboration within the supply chain network can further enhance customer satisfaction in the brewery industry. By fostering strong relationships with suppliers and distributors, breweries can improve communication and streamline operations, which is essential for achieving a seamless flow of products. According to Zhang (2022), collaborative supply chain practices not only improve efficiency but also enable breweries to innovate more readily and respond to consumer preferences, such as developing new flavors or sustainable packaging solutions. This adaptability not only satisfies existing customers but also attracts new ones, as breweries that are seen as responsive and innovative are more likely to thrive in today's dynamic market.

This research aimed to examine the effect of supply chain management on customer satisfaction specifically within Heineken Brewery S.C. since supply chain management practices are critical for optimizing operational efficiency, reducing costs, and enhancing product quality, all of which directly influence customer perceptions and satisfaction.

## 1.2 Statement of the Problem

The issue of supply chain management (SCM) has garnered significant attention in the global business environment, especially concerning its impact on customer satisfaction. SCM encompasses the planning and execution processes related to sourcing, procurement, production, and logistics, aiming to enhance the efficiency of product delivery and service provision (Chopra & Meindl, 2016; Christopher, 2016). In a highly competitive market, organizations increasingly recognize that effective SCM directly influences their ability to meet customer expectations and foster loyalty, ultimately affecting overall performance (Stone, 2018; Lambert, 2014).

Moreover, the significance of cultural factors and consumer behavior in Ethiopia must be taken into account when analyzing the effect of SCM on customer satisfaction. Ethiopian consumers exhibit unique preferences and expectations shaped by cultural values and socioeconomic conditions, which may influence their responses to SCM practices (Mashala & Tsegaye, 2019; Doe & Smith, 2018). Although several studies have explored SCM in various industries, there is limited empirical evidence on its effectiveness within the Ethiopian context.

The brewery industry has experienced significant transformations over the past decades, with SCM becoming a critical component influencing operational efficiency and customer satisfaction. Effective SCM practices enable breweries to optimize inventory management, reduce production costs, and enhance product availability, ultimately affecting brand perception (Mentzer, 2011; additional citation needed). Despite these recognized benefits, research focusing on the impact of SCM within the brewery sector—particularly in emerging markets like Ethiopia—remains scarce.

Existing studies predominantly focus on developed markets, where infrastructure, consumer behavior, and supply chain practices differ substantially from those in Ethiopia (Kumar & Singh, 2020; Doe & Smith, 2018). This discrepancy highlights a critical knowledge and empirical gap. While global research underscores the benefits of SCM on customer satisfaction, it fails to address the unique challenges faced by Ethiopian breweries, such as inadequate infrastructure, limited resource allocation, and inconsistent supply chain processes.

This research addresses the identified gap by investigating how various SCM practices—including supplier-customer integration, internal integration, information sharing, and logistics design—affect customer satisfaction in the Ethiopian brewery sector, with a focus on Heineken. By applying established frameworks (Webster & Watson, 2002; Cooper, 2016), this study aims to extend the theoretical understanding of SCM in emerging markets and provide actionable insights for practitioners operating under similar socio-economic conditions. Ultimately, the findings are expected to contribute both to academic literature and to the strategic development of SCM practices within the Ethiopian context.

## 1.3 Research Questions

To address the statements outlined in the problem, the researcher wwas formulate the following research questions.

1. How does the Campany-customer integration affect customer satisfaction at Heineken Brewery SC?

2. In what ways does production efficiency influence customer satisfaction levels at Heineken Brewery SC?

3. What is the Effect of information sharing on customer satisfaction at Heineken Brewery SC?

4. How does distribution effectiveness contribute to enhancing customer satisfaction at Heineken Brewery SC?

5. How do supplier relationships influence customer satisfaction at Heineken Brewery SC?

## 1.4 Objective of the Study

### 1.4.1 General Objective

The general objective of the study was to analyze the effect of Supply Chain Management on Customer Satisfaction: The Case of Heineken Brewery S.C.

### 1.4.2 Specific Objective

The specific objectives of the study were

1. To evaluate the effect of Company-customer integration on customer satisfaction at Heineken Brewery S.C.
2. To assess how production efficiency influences customer satisfaction levels at Heineken Brewery S.C.
3. To analyze the effect of information sharing on customer satisfaction at Heineken Brewery S.C.
4. To investigate the contribution of distribution effectiveness to enhancing customer satisfaction at Heineken Brewery S.C.
5. To examine how supplier relationships influence customer satisfaction at Heineken Brewery S.C.

## 1.5 Significance of the study

In the dynamic landscape of Ethiopia's Fast-Moving Consumer Goods (FMCG) industry, the significance of Supply Chain Management (SCM) practices cannot be overstated. This study endeavors to delve into the intricacies of SCM within the specific context of Heineken Brewery SC Ethiopia, a key player in the Ethiopian beer market. By narrowing the focus to Heineken Brewery SC Ethiopia, situated within the broader FMCG sector, the research aims to uncover the nuanced relationship between SCM strategies and customer satisfaction levels. The purpose of this study is twofold. Firstly, it seeks to identify the influencing dimensions of SCM practices employed by Heineken Brewery SC and their effect on customer satisfaction. This entails a comprehensive analysis of various facets of SCM, including procurement, production, distribution, and logistics, to ascertain their role in shaping customer perceptions and preferences within the Ethiopian beer market.

Secondly, this research endeavors to empirically examine the proposed conceptual framework outlining the relationships between SCM dimensions and customer satisfaction. Through rigorous data collection and analysis methodologies, including interviews, surveys, and internal records review, the study aims to provide empirical evidence supporting the hypothesized linkages between SCM practices and customer satisfaction outcomes.

Furthermore, this study holds particular relevance within the Ethiopian FMCG landscape, given the rapid growth and evolving consumer preferences observed in the beer industry. By focusing on Heineken Brewery SC as a case study, the research aims to uncover insights that are not only

pertinent to the brewery itself but also to other stakeholders operating within the FMCG sector in Ethiopia. In summary, this research seeks to contribute to both academic discourse and practical implications by shedding light on the critical role of SCM in driving customer satisfaction within the specific context of Heineken Brewery SC. By offering a nuanced understanding of the interplay between SCM practices and customer satisfaction outcomes, the study aims to provide actionable insights for enhancing organizational performance and customer experiences in the Ethiopian beer market."

## 1.6 Scope of the Study

This study is confined to an empirical investigation of the supply chain management (SCM) practices at Heineken Brewery S.C. in Addis Ababa, Ethiopia, during the period from March to December 2024. The geographical boundary is defined by the brewery's operational base in Addis Ababa, which serves as a representative urban setting for examining the dynamics of SCM in the Ethiopian context.. By examining five pivotal dimensions of Supply Chain Management Company-supplier integration, Company-customer integration, internal integration, information sharing, and logistics design the research aims to provide a comprehensive understanding of how these elements collectively influence customer satisfaction. Each dimension will be operationalized using measurement scales and validated instruments derived from established literature (e.g., Chopra & Meindl, 2016; Stone, 2018). These variables will be quantitatively measured to evaluate their respective contributions to customer satisfaction.

Methodologically, the study adopts descriptive and explanatory research design within a quantitative framework. This design facilitates a systematic investigation of the relationships between the identified SCM dimensions and customer satisfaction. A random sampling technique will be employed to select a statistically representative subset of Heineken's customer base. Data collection will be conducted through structured questionnaires, and the resulting data will be analyzed using statistical methods such as regression analysis and structural equation modeling to test the hypothesized relationships.

## 1.7 Limitations

The study is limited by several factors, including the geographical constraint of focusing solely on Addis Ababa, which may affect the generalizability of the findings to other regions of Ethiopia. Additionally, the lack of organized data and information on SCM practices in Ethiopian organizations, time constraints, and financial limitations may pose challenges to the research. Despite these limitations, the study aims to provide valuable insights into the relationship between SCM practices and customer satisfaction in the Ethiopian brewery industry.

## 1.8 Organization of the Study

The structure of this study comprises five chapters. Chapter one encompasses the introduction, background of the study, statement of the problem, objectives, research questions, hypotheses, significance, and scope of the study. Chapter two offers an extensive review of the literature, covering definitions, theoretical frameworks, empirical studies, and the conceptual framework. In chapter three, the methodology is detailed, including the research approach and descriptions of data collection and analysis methods. The fourth chapter presents the study's findings and discusses them within the context of previous research and relevant theories. Finally, the fifth chapter summarizes the findings, draws conclusions, and provides recommendations. References and appendices, containing survey questionnaires and supplementary documents, are included at the end of the thesis.

# CHAPTER TWO

# RELATED LITERATURE REVIEW

The literature review provides a theoretical foundation for understanding the relationship between supply chain management (SCM) practices and customer satisfaction. It begins by exploring the evolution of SCM from its inception in logistics literature to its current status as a strategic imperative for organizations. Key definitions and conceptualizations of SCM are examined, highlighting its role in integrating business processes, optimizing operational efficiency, and adding value for customers and stakeholders.

## 2.1 Theoretical Review

### 2.1.1 Concept of Supply Chain Management

The members of the Global Supply Chain Forum (2019) have developed the following definition which neatly encapsulates the aspects of SCM: Supply chain management is the integration of key business processes from end-user through original suppliers that provides products, services, and information that add value for customers and other stakeholders. The term "supply chain management" (SCM), according to Van der Vorst (2014) is relatively new. It first appeared in logistics literature in 1982 as an inventory management approach with an emphasis on the supply of raw materials (Oliver and Webber 1982). By 1990, academics first described SCM from a theoretical standpoint to clarify how it differed from more traditional approaches to managing the flow of materials and the associated flow of information (Cooper and Ellram 1993).

The growing interest in SCM, according to Lummus and Vokurka (1999) is attributable to three (3) basic factors, thus, growing specialization or focus on core activities by many firms, intense competition from both local and international sources, and the realization by firms that maximizing performance of one department or function may lead to less than optimal performance for the whole company. Agreeing with this assertion, Cooper et al. (1997) in their research concluded that, the concept of SCM arose from the recognition that sub-optimization occurs if each organization in a supply chain attempts to optimize its results rather than integrate its goals and activities with other organizations to optimize the results of the chain.

The concept of SCM has received increasing attention from academicians, consultants, and business managers alike (Feldmann& Müller, 2003, Tan, Lyman & Wisner, 2002, Van Hoek, 1998). Many organizations have begun to recognize that SCM is the key to building a sustainable competitive edge for their products and/or services in an increasingly crowded marketplace (Jones, 1998). The concept of SCM has been considered from different points of view in different bodies of literature (Croom, 2000) such as purchasing and supply management, logistics and transportation, operations management, marketing, organizational theory, and management information systems.

The main objective of every supply chain is to maximize the overall generated value or in other words profitability. The profit a supply chain generates can be presented as a simple mathematical operation: the difference between the prices that the customer pays for the product and all the efforts (time, money, and labor force) needed for its production. Supply chain profitability means the total profit accumulated across all supply chain stages. The higher the supply chain profitability, the more successful the supply chain is. It should not be forgotten that the success of the supply chain is measured in terms of profitability of the whole integrated logistics activities included in the supply chain, but on no account in terms of profits at an individual stage. (Lambert& Stock, 2001) The appropriate management of cost generating flows in the supply chain, information, product and funds, has a key importance for its success. The term supply chain management involves the integration of the above-mentioned flows, their management, and their coordination and supervision between and among every stage of the supply chain and between all the parties that affect it. Only thus the supply chain's profitability can be maximized, (Chopra &Meindl, 2004).

In order to be a prosperous supply chain, many important decisions are required to be undertaken by its management. These decisions concern the flow of information, product and funds, as well as the time and labor needed to keep this flow going. The decisions also can be categorized according to the company's A supply chain consists of the whole flow of goods, raw materials, capital and information from manufacturer to end user and it also includes all parties involved in the process, such as manufacturers, suppliers, transporters, warehouses, retailers and customers. Customer service, marketing, operations, new product development, distribution and finance are also included in the concept of supply chain, (Lambert & Stock &Ellram, 1998)

In case of product defect or malfunction the same sequence of activities is starting but in the opposite direction, known as reverse logistics, (Chopra&Meindl, 2004). Tan, Kannan, Handfield Ghosh (1999) attempted to link certain supply chain management practices with firm performance. In particular, they examined the effects of quality management, supply base management and customer relations practices on firm financial performance. They found that some aspects of quality management use of performance data in quality management, management commitment to quality, involvement of quality department, and social responsibility of management all were positively related to firm performance (Gillyard, 2003). Managing the supply base was found to have a significant impact on firm growth but not on overall performance.

The significance of supply chain management highlights the need for companies to actively manage their supply chain to maximize their performance. As Mentzer et al. (2001) said, a supply chain will exist whether a firm actively manages it or not. Boddy, Cahill, Charles, Fraser-Kraus, and Macbeth (1998) found that more than half of the respondents to their survey considered that their organizations had not been successful in implementing supply chain partnering; Spekman, Kamauff, and Myhr (1998), noted that 60% of supply chain alliances tended to fail. Deloitte Consulting survey reported that only 2% of North American manufacturers ranked their supply chains as world class although 91% of them ranked SCM as important to their firm's success (Thomas, 1999). It appears that while SCM is important to organizations; effective management of the supply chain does not yet appear to have been realized. All of the scholars want to show the level of effort, commitment, and integration of the processes starting from the source of the materials up to the delivery of goods and services to the customers in such a way that it adds more value in the whole process and meet the level of consumers' satisfaction.

### 2.1.2 Relationship with Customers

As a result of global competitive pressures, modern businesses looked for new ways to generate value for customers and to establish a positive relationship with them, as modern companies started to look at the customer as a true partner and work to develop long-term relationships with him, which will assist the company in achieving a competitive advantage that cannot be imitated by competitors, we emphasize the importance of attracting and retaining customers, focus on

developing close and long-term relationships with existing customers, and to provide high class and deluxe products and services to satisfy customers' needs and desires, to reach their level of satisfaction. Juscius V.1 Grigaite V.1 (2011), the company relies on formulating or building a relationship with the customer on the Simple and smart rationale at the same time, if you know anything about customers you will be able to sell and meet their needs efficiently.

This knowledge focuses on the fact that customer service is a key element of customer relationship management (Tanoury M. D. 2000), and the knowledge is used in identifying the required needs and requirements for the change in products and services to suit the demands of customers and their expectations. To achieve a competitive advantage, the company must be able to add continuous value to its customers, and the researchers "Carr & Pearson" defined market orientation as the organization's state that helps in creating needed behaviors to generate and deliver superior value to customers, and thus achieve the superior investor performance of the company, (Carr A.S.1 Pearson J.N.1 2009).

### 2.1.3 Customer Service

The company's expertise plays an important role in the correct identification of the quality of the client. It is not expected from others to tell the company about the type of client you are dealing with, the above does not mean the inevitable failure of the new institution due to lack of experience; in this situation it can develop the skills to deal with different types of customers through training. (Customer service, 2014) Success in dealing with customers requires the following:

- Identify the client.
- Study each client's personality individually.
- Deal with high-profile clients for some categories.
- Face difficulties in understanding the client's personality.
- Identify the customers' incentive. (Marketing Forum, 2014)

When we take a look at some broader perspectives as given below, we can easily determine why a Customer Relationship Management (CRM) system is always important for an organization.

First, a CRM system consists of a historical view and an analysis of all the acquired customers or potential customers. This helps in reducing the time of searching for new customers, correlating customers, and foreseeing the customer's needs effectively as well as increasing business.

Second, a CRM contains each customer's details, hence it is very easy to track a customer accordingly it can be used to determine which customer is profitable or not.

Third, in a CRM system, customers are grouped according to different aspects such as their type of business or their physical location, and are allocated to different customer managers often called account managers. This helps in focusing and concentrating on each customer separately.

Fourth, CRM system is not only used to deal with the existing customers but is also useful in acquiring new customers. The process starts with identifying a customer and maintaining all the corresponding details into the CRM system, which is also called an 'Opportunity of Business'. Then the Sales and Field representatives try to get the business out of these customers by sophistically following up with them and converting them into a winning deal. This is efficient and easy to be applied. Fifth, the most important factor is that the CRM is a low-cost system. The advantage of decently implementing a CRM system is that it doesn't need a lot of paper and manual work. Thus, it requires less staff to manage and less resource to deal with. The technologies used in implementing a CRM system are also very cheap comparing to the traditional way of business.

Finally, all the details in the CRM system are kept centralized and will be available anytime at your fingertips, which reduces the process time and increases productivity. In today's commercial world, the process of dealing with existing customers and trying to get more customers is predominant and considered a dilemma. Installing a CRM system can improve the situation and help in challenging the new ways of marketing and business efficiently. Hence, in the era of business, every organization should have a perfect CRM system to cope with all the business needs, (Vijayarn, 2014). This year, as well as last year, two major trends are benefiting from Supply Chain Management operations. The Customer Service Focus & Information Technology Successful organizations must be effective in both of these areas, so the importance of Supply Chain Management and the tools available to do the right job will continue to expand, (Zig, 2000)

### 2.1.4 Customer Satisfaction

Customer satisfaction refers to a complete evaluation of accumulated purchase and consumption experience which reflects a comparison between the sacrifice experienced and perceived reward (Iglesias &Guillen, 2006). Sacrifice includes the monetary cost of purchasing as well as intangible costs such as waiting. In response to changing market conditions, manufacturing enterprises are becoming customer-centric and innovative in a way customers receive products that better fit their needs (Johnson &Selnes, 2004). A common rationale involves using service differentiation to take advantage of strategic, financial, and marketing opportunities. Research works have shown the importance and the link of internal (employee) satisfaction to external (customer) satisfaction.

Hill and Alexander (2000), stated that there is a positive relationship between employee satisfaction and customer satisfaction and this is achieved in companies that practice employee motivation and loyalty. They reported that "employees that are more motivated to achieve customer satisfaction tend to be more flexible in their approach to their work, make fewer mistakes and use more initiative". Fecikova (2004) conducted studies on the index method for customer satisfaction measurement and reported that the satisfaction of internal customers is one of the basic factors to satisfy the external customer since they will be in a position to deliver superior products or services when they are motivated internally

## 2.2 Empirical Review

### 2.2.1 The Relationship between Customer and Supply Chain Management

The need for long-term relationships between customers and suppliers has been suggested by the literature. According to Burlington (2005), the literature on supply chain management suggests the marriage with customer-supplier relationships. They aim to apply the results of research on successful families to supply chain management to improve critical business relationships. Their research, based on surveys and interviews with more than 6,000 successful families over 20 years, summarized six characteristics of successful families to construct the basis of a model of a successful supply chain relationship. They compared the proposed model of successful supply chain relationships with the existing literature and identified the support.

The authors suggested the SCR model that provides three potential contributions to the literature on supply chain relationships including a detailed conceptual framework (a successful family) for customer-supplier relationships, the additional element of a principles-centered relationship, and emphasizing appreciation or positive feedback more than the previous research. Engel Seth and Felzensztein (2012), explore how responsiveness in a supply network may be approached from a combined relationship management (RM) and supply chain management (SCM) perspectives by employing a case study of the upstream part of an integrated supply network. They suggested developing responsiveness to generate technically value through the supply network by product transformations and to know what the end-user perceives as value. As they define, SCM is useful to generate value through technical product-transforming processes and RM helps customer perceive value in the context of business relationships. They propose intertwining SCM and RM competencies to achieve responsive product supply from both end-user and multi-tier supply network perspectives. They suggest this approach as useful in both strategic planning of a company's role in a wider supply chain setting and planning of cross-functional teamwork in operations, (Ozlen, 2013).

### 2.2.2 Customer Satisfaction and Supply Chain Management

Many world-class firms have adopted a supply chain perspective in recent years. Such a business philosophy requires that trading partners "jointly plan, execute, and coordinate logistical performance" (Bowersox, 1991). Sharing of information and plans provides the potential to make channels more efficient and competitive (Closs et al., 1997; Daugherty et al., 1996; Ellram and Cooper, 1990; Gopal and Cypress, 1993). Thus, in recent years, many sellers have placed increased emphasis on listening to their customers to tailor their products and service offerings to the customers' needs. Within the customer satisfaction literature, this is referred to as the "voice of the customer". Listening to customers (and, subsequently, responding to their desires/ requests) should have a "payoff" in terms of more satisfied and more loyal customers. Customer satisfaction involves keeping customers happy both in day-to-day interactions and from a more global, long-term perspective (Hunt, 1977; Johnson and Forkel, 1991).

Competitive pressures mandate that misidentify customer requirements and develop strategies that allow them to meet or beat the service levels provided by other vendors (Verwijmeren et al., 1996). Such customer-oriented contacts typically focus on determining relevant dimensions of

service and/or products as well as an assessment of the customers' perceptions of how well the selling firm is doing in meeting those expectations (Sterling and Lambert, 1987). Excessive problems frequently translate to customer defections. However, it is less clear if the reverse is true. Is greater customer contact related to customer loyalty? Loyalty has been defined as a long-term commitment to repurchase involving both repeated patronage and a favorable attitude (Dick and Basu, 1994). The development, maintenance, and enhancement of customer loyalty represents a fundamental marketing strategy for attaining competitive advantage (Gould, 1995; Kotler, 1988; Reichheld, 1993).

Repurchase intentions encompass the customer's perceptions of continuity expectations such as relationship renewal (Kumar et al., 1995) and the customer's willingness to recommend the supplier to a successor (Cronin and Morris, 1992). Commitment exists only when the relationship is considered important, when a committed partner wants the relationship to continue indefinitely and when the partner is prepared to work at preserving it (Morgan and Hunt, 1994).Collaboration and Information Sharing in Supply Chain on Customer Satisfaction involves Supply chain integration which comprises a set of firm's activities tailored to fostering its relationships with suppliers and customers; these are designed to harmonize supply chain activities with suppliers on the upstream side and enhance customer satisfaction on the downstream side through offering superior products (Petrovic-Lazarevic et al., 2007).

Managing the supply chain calls for a need on the part of a firm to engage with its suppliers and customers in a productive relationship that will add value to the firm objectives (Tan, 2001). According to Stank (2001), firms increasingly seek to create competencies by entering and cementing their relationships with suppliers and customers as these result in supply chain excellence. Such long-term relationships as observed by Tompkins (2000) are to be grounded on trust and desire on their part to work cohesively so that no obstacles stand in the way of mutual transaction. This is echoed by Oliver and Delbridge (2002), who contend that this would lead to a win-win situation, through which entities in a supply chain can derive a host of benefits managerial, technological as well as financial. In this regard, it is pertinent to observe the effect among the supply chain parties of information sharing that would greatly strengthen both intra and inter-organizational integration (Narasimhan and Nair, 2005) and be the key to a seamless supply chain (Lee, 2000); this would be reflected in various ways, such as, diminished bull-whip

effect as well as lower production and inventory costs, etc. (Lee, 2002; Huang and Gongopadhay, 2004; Raghunathan, 2003).

The relevant and timely information sharing would entail aspects of various dimensions – from strategic to tactical (Huang et al. 2003) with the benefit ultimately accruing from the parties' ability in transforming that information into a supply chain strategy and superior performance (Ramayah and Omar, 2010; Moberg et al., 2002), which would be reflected through enhanced customer satisfaction. Therefore, it can be hypothesized as Collaboration and information sharing have a positive effect on customer satisfaction.

### 2.2.3 Research Gap

Despite the growing interest in SCM and customer satisfaction, several gaps exist in the current literature:

1. Lack of studies on SCM and customer satisfaction in Ethiopia's brewery industry: While extensive research has been conducted in developed markets, studies focusing on Ethiopia's unique supply chain challenges (e.g., infrastructure, supplier relationships) remain scarce.

2. Limited integration of theoretical perspectives: Many existing studies analyze either SCM or customer satisfaction independently. Few studies incorporate a comprehensive framework that integrates SCM Theory, Expectancy-Disconfirmation Theory, SERVQUAL, and RBV to analyze their combined effects.

3. Empirical gap in Heineken Brewery's supply chain impact: No prior research has specifically assessed how SCM practices influence customer satisfaction within Heineken Brewery.
Addressing this gap will provide valuable insights for both academia and industry stakeholders.

## 2.3 Conceptual Framework of the Study

### 2.3.1 Introduction to the Conceptual Framework

The conceptual framework of this study serves as a theoretical foundation that guides the exploration of the relationship between supply chain management practices and customer satisfaction in the context of Heineken brewery sc. It delineates the key constructs, variables, and their hypothesized relationships, aiming to provide a comprehensive understanding of the factors influencing customer satisfaction within the supply chain context.

### 2.3.2 Theoretical Basis

This study draws on several theoretical perspectives, including supply chain management theory, relationship marketing theory, and customer satisfaction literature. Supply chain management theory emphasizes the importance of integrating key business processes across the supply chain to enhance overall performance and customer value. Relationship marketing theory highlights the significance of building strong, long-term relationships with customers to achieve competitive advantage and customer loyalty.

### 2.3.3 Conceptual Model

The conceptual model (figure 2.1) depicts the relationship between supply chain management and customer satisfaction. According to the framework, SCM practices will affect customer satisfaction both directly and indirectly.

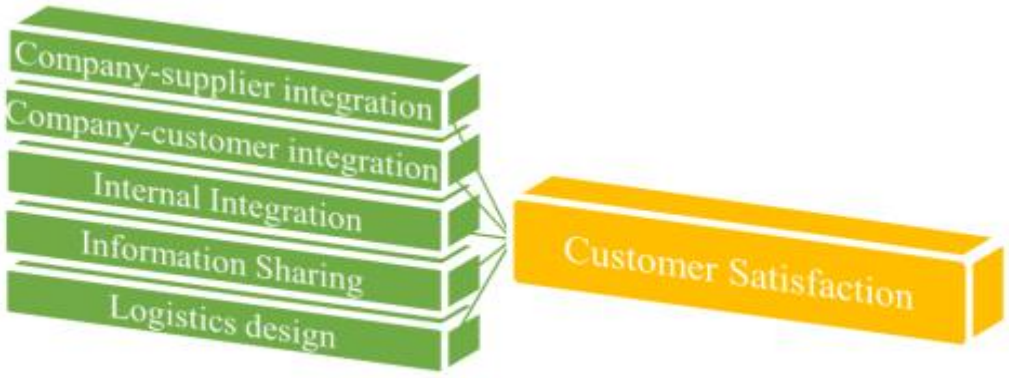


Figure 2.1 Conceptual Framework

## 2.4 Hypothesis

Based in the above theortical and emprical research the resercher was developed the following hypothesis :

H1: Supplier integration positively impacts customer satisfaction (Mentzer et al., 2001; Chopra & Meindl, 2016).

H2: Customer integration enhances customer satisfaction (Christopher, 2000; Parasuraman et al., 1988).

H3: Internal integration improves customer service quality (Womack & Jones, 1996; Barney, 1991).

H4: Information sharing strengthens supply chain responsiveness and customer satisfaction (Oliver, 1980; Lee, 2002).

H5: Effective logistics lead to better customer experiences (Chopra & Meindl, 2016; Christopher, 2000).

# CHAPTER THREE

# RESEARCH METHODOLOGY

This section discusses the instruments, sample population, research approach, sampling technique, and data analysis methods employed in this study. The ensuing sections detail the research design, data collection procedures, and analytical techniques employed to investigate the effect of supply chain management on customer satisfaction, specifically in the context of Heineken Brewery.

## 3.1 Research Approach

The chosen research approach for this study is quantitative. This approach involves the systematic collection and analysis of numerical data to investigate the relationship between supply chain management practices and customer satisfaction at Heineken Brewery. The quantitative approach allows for precise measurement and statistical analysis of variables, enabling the researcher to draw objective conclusions about the extent and nature of the relationship between the variables under study. Moreover, the quantitative approach facilitates the generalization of findings to a broader population, enhancing the study's external validity.

## 3.2 Research Design

The research design for this study is both descriptive and explanatory, and this dual approach is chosen based on its capacity to comprehensively address the research objectives. Scientifically, the descriptive design is justified as it allows for an accurate portrayal of the current state of supply chain management (SCM) practices and customer satisfaction levels at Heineken Brewery. By systematically gathering data on respondents' perceptions and experiences, the descriptive design provides a detailed snapshot of the variables of interest, thereby establishing a robust foundation for further analysis (Creswell, 2014).

The explanatory design, on the other hand, is implemented to investigate the causal relationships between the identified dimensions of SCM—such as company-supplier integration, company-customer integration, internal integration, information sharing, and logistics design—and customer satisfaction. This design is scientifically supported by its ability to test hypotheses regarding the influence of these SCM practices on customer outcomes. By employing statistical

techniques such as regression analysis or structural equation modeling, the study can determine the strength and significance of the relationships between variables, providing objective and quantifiable insights (Yin, 2018; Sekaran & Bougie, 2019)

The integration of both descriptive and explanatory elements in the research design is particularly suitable for this study because it not only captures the current state of SCM practices and customer satisfaction (descriptive) but also elucidates the underlying dynamics and potential causal links between these constructs (explanatory). This comprehensive approach ensures that the research findings are both contextually rich and empirically rigorous, thereby enhancing the internal and external validity of the study.

By aligning the chosen research design with established methodological frameworks and scholarly recommendations, the study is well-positioned to contribute meaningful insights to the literature on supply chain management and customer satisfaction in the context of emerging markets.

## 3.3 Data Collection Method

In this study, the researcher used primary data collection procedures. Primary data was directly collected from employees and potiontial customers of Heineken Brewery in Addis Ababa through questionnaires.

### 3.3.1 Questionnaire

Primary data for the study was collected using questionnaires directed at the intended respondents. The questionnaire would be prepared in a standardized and simple format arranged in a valid sequence, starting from simple to complex. To get appropriate answers, the respondents would talk about their contribution to the study. To allow consistency and ease of answering, the study questionnaire uses a 5-point Likert scale: 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5= strongly agree.

## 3.4 Population, Sample Size, and Sampling Techniques

Population is defined as the entire collection of study elements for which references must be made (Cooper and Schindler, 2008). The total population of this study was professional employees of Heineken Berewey currently 118 working at the warehouse, sales and marketing,

logistics and production, and also 120 potational customers that are currently available at Addis Ababa. (source: Henicken Company HRD, 2023).

## 3.5 Sampling Techniques

Sampling is defined as the process of choosing responders to represent the entire population (Mugenda & Munged, 2013). Since it is impossible to collect data from the entire population due to time constraints, budgetary constraints, and mistakes that could demotivate the researcher, there used simple random sampling techniques in this study.

### 3.5.1 Sample Size

A reduced subset of the overall population is referred to as the sample size, according to Cooper and Schindler (2008). According to Mugenda (2003), your degree of certainty, accuracy, and degree of confidence in your data determined the sample size that is best for you. Any estimates included in your sample, the kind of analysis you plan to do, and the size of the entire population from which your sample is taken are all necessary. Our suggestion is to apply Krejcie and Morgan (1970) to ascertain the sample size that can effectively capture objective issues. A readable representative population sample size was established. Using Yamane's (1967) formulas, the sample computation will be done as follows.

Where, N= Total number of the study population =238

n= Total sample size and

e=Margin of error /95% confidence level (0.05)

Then the total sample size of the study population is as follows

$$n = \frac{238}{1+238(e)^2} = 149.21 = 150$$

There the researcher distributed the questionnaire to 150 employees and customers of Heineken Brewery.

## 3.6 Methods of Data Analysis

Descriptive statistics was used to measure (mean, median, and mode) and measure variation (variance, standard deviation, standard error, and percent).On the other hand, inferential statistics

was used for correlation, linear and multiple regressions. Linear regression was used from the factors showing a positive relationship. The multiple regression models used are:

$$Yi = \beta + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + +e$$

Where Y=Customer Satisfaction

X1= Comapny supplier Integration

X2= Company Customer Integration

X3= Internal Integration

X4= Logistics

e=error

When items are mixed, regression is performed to determine the level of significance. The analysis process involves converting the raw data into tables and graphs containing frequency distributions and percentages that answer the research questions. The research data was analyzed using the Statistical Package for the Social Sciences (SPSS) V-27.

## 3.7 Validity and Reliability

### 3.7.1.Validity

Adams (2007), state that the question of validity concerns whether the items capture the intended data. A group of colleagues or experts will be invited to evaluate the instrument to confirm its validity. Consequently, experts and the research advisor validated the survey's content validity. All the required adjustments were made in light of the feedback from these specialists and colleagues. In addition, the study's content validity will be guaranteed by the alignment of the research question, conceptual framework, and data instrument.

To improve the validity of the instruments the researcher used first pre-tested the questionnaire in a pilot study. The responses from the pilot study were used to guide the researcher in making necessary changes and corrections in the questionnaire to enhance its validity. The validity of the data was checked by the correlation analysis of exact items with total correlation coefficients,

with a significance level of 5%. The Pearson Correlation(r) of each question with a total value at the sample size, for all cases the value of r was greater than the Critical Values of the Product Moment Correlation Coefficient Pearson (2017). Therefore the data was valid

### 3.7.2 Reliability

According to Carmines and Zeller, (1979), Reliability is concerned with the degree to which the measurement of a phenomenon produces stable and consistent results. Reliability is also related to repeatability. Reliability testing is important because it indicates the uniformity of measuring equipment components (Huck, 2007). A scale is said to have high internal consistency reliability if the scale items are related to each other and measure the same construct (Huck, 2007, Robinson, 2009). The most commonly used method to measure internal consistency is Cronbach's Alpha. This is considered the most appropriate measure of reliability when using a Likert scale (Whitley, 2002, Robinson, 2009). Although there are no absolute rules regarding internal consistency, most agree on a minimum internal consistency coefficient of 0.70 (Whitley, 2002, Robinson, 2009). Hinton (2004) proposed four reliability thresholds, including excellent reliability (above 0.90), high reliability (0.70–0.90), moderate reliability (0.50–0.70), and low reliability (below 0.50). There the reliability of the data was check by Cronbach Alpha.

Table 3.1 Reliability Test

| Description | Cronbach's Alpha | N of Items |
|---|---|---|
| Supplier Integration | 0.834 | 3 |
| Integration of Customer | 0.741 | 3 |
| Internal Integration | 0.740 | 3 |
| Logistics | 0.740 | 3 |
| Information Sharing | 0.836 | 7 |
| Customer Satisfaction | 0.841 | 6 |

Source researcher survey,2024

As shown in table 3.1 the Chronbach alpha confidence for each statement, the result indicates that for Supplier Integration, Integration of Customer, Internal Integration, Logistics Information Sharing and Customer Satisfaction Cronbach alpha coffice were 0.834, 0.741, 0.740, 0.740,

0.836 and 0.841 respectively. It implies that the data was highly reliable according to Hinton (2004)

## 3.8 Ethical Consideration

Before conducting the study to the respondents, the researcher informed the respondents about the objectives of the research and consciously considered ethical issues in obtaining consent, avoiding deception, maintaining confidentiality, respecting the privacy of all respondents, and protecting their anonymity.

# CHAPTER FOUR

# DATA ANALYSIS AND INTERPRETATION

This chapter focuses on the presentation, analysis, and interpretation of questionnaire data. To effectively address the research questions, the collected data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 27.

## 4.1 Response Rate of Respondents

Table 4.1 Response Rate of Respondents

| Questionnaire | Frequency | Percentage |
|---|---|---|
| Total number of questionnaires distributed | 150 | 100% |
| Total number of questionnaires returned | 140 | 93.3% |
| Total number of questionnaires unreturned | 10 | 6.7% |
| The total number of questionnaires rejected | --- | --- |

Source: researcher own survey (2024)

The response rate, which indicates the proportion of participants in the sample who completed and returned the survey, plays a significant role in evaluating survey effectiveness. In the scope of this study, precisely 150 questionnaires were distributed to respondents which were employee work in brewing, packaging, distributing, marketing, sales, and major customers of Heineken Brewery. Out of the total distribution, 140 questionnaires were completed, reflecting a remarkable response rate of 93.3%. It is worth noting that 10 individuals did not return the questionnaire, and their responses are not included in the final analysis.

## 4.2 Demographic Characteristics of the Respondents

Table 4.2 Demographic Characteristics of the Respondents

| Gender of the respondent | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Male | 78 | 55.7 | 55.7 | 55.7 |
| | Female | 62 | 44.3 | 44.3 | 100.0 |
| | Total | 140 | 100.0 | 100.0 | |
| Age of the respondent | | | | | |
| Valid | Less than 25 | 15 | 10.7 | 10.7 | 10.7 |
| | 26 – 35 years | 66 | 47.1 | 47.1 | 57.9 |
| | 36- 45 Years | 46 | 32.9 | 32.9 | 90.7 |
| | Above 46 Years | 13 | 9.3 | 9.3 | 100.0 |
| | Total | 140 | 100.0 | 100.0 | |
| Educational Background of the Respondent | | | | | |
| Valid | High school Completed | 19 | 13.6 | 13.6 | 13.6 |
| | certificate College diploma | 35 | 25 | 25 | 38.6 |
| | First Degree | 72 | 51.4 | 51.4 | 90 |
| | Second Degree and above | 14 | 10 | 10 | 100.0 |
| | Total | 140 | 100.0 | 100.0 | |
| Work experience of the Respondent | | | | | |
| Valid | Less than 5 years | 39 | 27.9 | 27.9 | 27.9 |
| | 6-10years | 74 | 52.9 | 52.9 | 80.7 |
| | Above 11 years | 27 | 19.3 | 19.3 | 100 |
| | Total | 140 | 100 | 100 | |

Source: researcher own survey (2024)

As shown in Table 4.2 the study's findings on the gender of respondents provide valuable

insights into the demographic characteristics of the employees and customers of Heineken Brewery. The fact that most respondents (78 or 55.7%) were male suggests, amonge respondents who are participated in the study the Heineken Brewery's customer base and employees were dominated by male.

The age distribution of the respondents indicates that most of the respondents were within the range of 26 – 35 years which was 66(47.1%), Followed by 36- 45 years 46(32.9%). Fifty of the respondents were the age of less than 25 Years and the age of respondents above 46 Years were 13(9.3%). The age distribution of the respondents suggests that the majority of Heineken Brewery's customers and employees who are particiate in the study were younger/adult individuals. This is significant for the Heineken Brewery's as younger customers and employees are more likely to be a productive age, which can communicate easily and openly what they needs.

As shown the above table 4.2 educational level of the respondent, the result show that out of 140 the respondents that met the minimum requirement of educational levels High school Completed were 19(13.6%), and of the respondent that met first degree were 35(25%), those who met BA/BSC with number 72(51.4%) and those who met master with number 14(10%). This shows that majority of respondents have first degree which implies that Heineken Brewery's customers and employees has relatively qualified in their academic status.

Regarding work experience in the study area, the survey results revealed that the majority of respondents, comprising 74 individuals (52.9%), had six up to ten years of experience within the organization. Following closely behind, 39 respondents (27.9%) had worked in the organization for a period of less than 5 years. Additionally, 27 respondents (19.3%) reported having above eleven years of experience. The finding indicates that since the respondents was experienced, they could understand the questionnaire and give appropriate answer,that is nesessery for the validity and reiliability of the research.

## 4.3 Descriptive Analysis

Descriptive analysis is a type of statistical analysis that aims to summarize and describe the main features of a dataset, typically visually and quantitatively. It is the first step in data analysis, and

it provides a foundation for further analysis, such as inferential statistics. For this study, Quantitative data obtained from the questionnaires were analyzed descriptively in terms of mean, overall mean, and standard deviation. All analyses were performed using the Statistical Package for the Social Sciences (SPSS) software version 27. Interpretations were made for all dimensions on a 5-point Likert scale based on: Scale: 5 =Strongly Agree; 4=Agree; 3=Medium; 2=Disagree; 1 = Strongly Disagree. Thus, the scales were averaged and neutral posture "3" was taken as the reference point. That is, the average you get the same score as above 3 (neutral) if the opinion favors the given view, and below 3 (Neutral) when opinions tend to be unfavorable to a particular point of view. Moidunny (2009) describes the interpretation of Likert scales. Accordingly, in this study, the essence of the interpreted data is as follows: 1.0–1.8 = Strongly Disagree, 1.81–2.6 =Disagree, 2.61–3.20 =Medium, 3.21–4.20 = Agree, 4.21–5.00 = Strongly Agree.

### 4.3.1 Integration of Customer

Table 4.3 Integration of Customer

| Description | N | Mean | Std. Deviation |
|---|---|---|---|
| The company integrates customer feedback into its operations. | 140 | 3.62 | 0.89 |
| Customer feedback is considered when making product or service improvements. | 140 | 3.51 | 0.89 |
| Customer feedback mechanisms at Heineken enhance customer satisfaction. | 140 | 3.61 | 0.92 |
| Grand mean | 140 | 3.58 | 0.90 |

Source: researchers own survey (2024)

As shown in table 4.3 descriptive statistics of statements related to the Integration of Customer of in Heineken Brewery. In analyzing the responses from employees and major customers of Heineken Brewery regarding their integration of customer feedback into operations, the results

present a generally positive sentiment. The company integrates customer feedback into its operations. The respondent agrees with this statement with a mean of 3.62 and st. deviation of 0.89.This implies that respondents tend to agree with the value placed on customer feedback in shaping the company's offerings. Also suggest that the majority of respondents believe Heineken actively incorporates customer insights into their operational processes.

Customer feedback is considered when making product or service improvements. The respondent agrees with this statement with a mean of 3.51 and st. deviation of 0.89. This indicates an acknowledgment of the company's commitment to using customer input as a critical resource for enhancing their products and services. It implies that Heineken's strategy effectively involves stakeholders, aligning product development and service improvements with customer expectations. This positive reception highpoints the importance of customer feedback in influencing business decisions within the organization.

Regarding to the statement, Customer feedback mechanisms at Heineken enhances customer satisfaction, the respondent agrees with this statement with a mean of 3.61 and st. deviation of 0.92. This finding suggests that respondents recognize the effectiveness of the feedback mechanisms in place and believe they contribute substantially to overall customer satisfaction. The alignment between customer feedback and satisfaction presents a strong case for Heineken's operational strategy aimed at fostering a responsive and customer-centric business model.

The grand mean of 3.58 signals a favorable perception regarding how Heineken Brewery incorporates customer feedback into its operations, highlighting the company's dedication to engaging with its stakeholders and making adaptations based on their insights. By integrating customer perspectives into its operational framework, Heineken not only enhances customer satisfaction but also strengthens its competitive position within the market. This finding aligns with research by Sweeney (2021), which emphasizes that companies that actively incorporate customer feedback into their processes tend to foster greater customer loyalty and satisfaction, leading to improved overall performance. Such insights are crucial for ongoing efforts to refine business processes and elevate customer experiences, reaffirming the essential role of customer feedback in shaping effective operational strategies.

### 4.3.2 Internal Integration

Table 4.4 Internal Integration

| Description | N | Mean | Std. Deviation |
|---|---|---|---|
| Company's production processes are efficient and meet customer demand. | 140 | 3.65 | 0.81 |
| Production efficiency has a direct impact on customer satisfaction at Heineken Brewery. | 140 | 3.63 | 0.89 |
| Improvements in production efficiency lead to higher levels of customer satisfaction. | 140 | 3.64 | 0.97 |
| Grand mean | 140 | 3.64 | 0.89 |

Source: researcher own survey (2024)

As shown in table 4.4 descriptive statistics of statements related to the Internal Integration of in Heineken Brewery. Company's production processes are efficient and meet customer demand. The respondents agree with this statement with a mean of 3.64 and st. deviation of 0.81.

This implies that favorable view of the operational mechanisms in place at the brewery. This aligns with a perspective of strong agreement among the respondents that the effectiveness of these processes plays a crucial role in meeting customer expectations. Such a viewpoint not only emphasizes the operational success of Heineken Brewery in terms of efficiency but also indicates a well-structured alignment between production capabilities and market needs, suggesting that the company is poised to retain competitive advantage in its industry.

Production efficiency significantly influences customer satisfaction at Heineken Brewery, as indicated by a mean of 3.63 and a standard deviation of 0.89 among respondents. This finding suggests that respondents strongly acknowledge a connection between the brewery's operational efficiency and customer satisfaction levels. It highlights that production efficiency is viewed as a crucial factor in driving customer satisfaction, underscoring the need for continuous enhancements in production processes to maintain and boost customer loyalty.

The respondents expressed strong agreement with the statement that improvements in production efficiency lead to higher levels of customer satisfaction, with a mean of 3.64 and a standard deviation of 0.97. This result underscores the consensus among participants that enhancing production efficiency is likely to have a positive impact on customer satisfaction levels.

The grand mean of 3.64 signifies a strong overall agreement across the three statements related to Internal Integration, reflecting a collective confidence among respondents in Heineken Brewery's production efficiency and its beneficial effects on customer satisfaction. This aligns with literature that suggests operational efficiency is a critical determinant of customer satisfaction (Zhang, 2019). For both researchers and management, these findings hold substantial practical implications. By prioritizing continuous improvements in production processes, the brewery can not only maintain high levels of customer satisfaction but also foster enhanced customer loyalty and attract new clientele, thereby significantly contributing to the company's business sustainability and profitability (Kumar & Reinartz, 2016).

### 4.3.3 Information Sharing

Table 4.5 Information Sharing

| Description | N | Mean | Std. Deviation |
|---|---|---|---|
| The company effectively shares information with supply chain partners. | 140 | 3.39 | 0.94 |
| The company trading partners share Proprietary information with the company. | 140 | 3.28 | 1.00 |
| The company trading partners keep the Enterprise fully informed about issues that affect our business. | 140 | 3.48 | 0.86 |
| Exchange of information with the Company partners (formal or informally) is frequent. | 140 | 3.51 | 0.77 |
| Information exchange between the trading Partners and the company is timely. | 140 | 3.50 | 0.80 |
| Information exchange between the trading partners and the enterprise is accurate, complete, adequate and reliable | 140 | 3.48 | 0.80 |
| Effective information sharing enhances customer satisfaction at Heineken Brewery SC. | 140 | 3.41 | 0.84 |
| Grand mean | 140 | 3.44 | 0.86 |

Source: researcher own survey (2024)

As shown in table 4.5 descriptive statistics of statements related to the Information Sharing of in Heineken Brewery. The company effectively shares information with supply chain partners. The respondents agree with this statement with a mean of 3.39 and st. deviation of 0.94. This indicates the organization's recognition of the critical role that harmonious information exchange plays in ensuring seamless operations within the supply chain. While the respondents generally express positivity regarding this aspect, it also highlights the potential for enhancement, suggesting that there is still room for improvement to achieve even higher satisfaction levels. Regarding, the company trading partners share Proprietary information with the company. The respondents agree with this statement with a mean of 3.28 and st. deviation of 1.00. This

indicates that there is potential hesitation or concern among respondents about the transparency and security of proprietary information

Exchange of information with the Company partners (formal or informally) is frequent. The respondents agree with this statement with a mean of 3.51 and st. deviation of 0.77. This shows a strong consensus on the positive nature of inter-partner communication. So this finding suggests that employees and customers perceive a continuous flow of information, which is crucial for adaptive strategy formulation and operational efficiency. These findings advocate for the organization's direction toward more agile and responsive supply chain management practices.

Regarding to other statement, Information exchange between the trading Partners and the company is timely. The respondents agree with this statement with a mean of 3.50 and st. deviation of 0.80. This implies that respondents feel positively about the timeliness of information exchange between the trading partners and the company. Timely communication is essential in responding to operational challenges and market changes.

Information exchange between the trading partners and the enterprise is accurate, complete, adequate and reliable. The respondents agree with this statement with a mean of 3.48 and st. deviation of 0.80. This implies that respondents indicate a high level of confidence in the accuracy, completeness, adequacy, and reliability of information exchanged between trading partners and the company. This reflects positively on the quality of communication and operational transparency within the supply chain. However, to reach higher satisfaction levels, the organization may consider implementing measures to verify and enhance the quality of shared information consistently, which could further solidify trust among partners.

Effective information sharing enhances customer satisfaction at Heineken Brewery SC. The respondents agree with this statement with a mean of 3.41 and st. deviation of 0.84. This finding shows a notable connection between effective information transfer and customer satisfaction at Heineken Brewery. By concentrating on this aspect, the organization has the opportunity to capitalize on its strong information-sharing practices, potentially allowing it to differentiate its service offerings further and ultimately boost customer loyalty and satisfaction

In general, the grand mean of 3.44 indicates an overall positive sentiment about information

exchange processes within the supply chain. It reflects a collective agreement among respondents that while there are generally effective practices in place, there remain opportunities for improvement. Focused efforts to elevate the sharing of proprietary information, enhance accuracy and timeliness, and strengthen relationships with trading partners could lead to significant advancements in operational efficiency and customer satisfaction at Heineken Brewery.

### 4.3.4 Logistics

Table 4.6 Logistics

| Description | N | Mean | Std. Deviation |
|---|---|---|---|
| Our distribution processes are effective and timely | 140 | 3.61 | 0.82 |
| Distribution effectiveness significantly enhances customer satisfaction. | 140 | 3.66 | 0.85 |
| Improvements in distribution processes lead to higher levels of customer satisfaction. | 140 | 3.69 | 0.81 |
| Grand mean | 140 | 3.65 | 0.83 |

Source: researcher own survey (2024)

Table 4.6 presents response of employees and major customers of Heineken Brewery that indicates a generally positive perception of the Logistics. The first statement, our distribution processes are effective and timely. The respondents agree with this statement with a mean of 3.61 and st. deviation of 0.82. This indicates that respondents recognize the effectiveness and timeliness of these processes, indicating a strong agreement with this assertion.

Regarding to the statement, Distribution effectiveness significantly enhances customer satisfaction, in this statement the respondents agree with this statement with a mean of 3.66 and st. deviation of 0.85. This implies that a consensus among respondents that effective distribution does indeed foster greater satisfaction among customers. This finding is critical, as it highlights the vital link between efficient distribution practices and perceived customer value, reinforcing the notion that operational excellence in distribution can be a competitive advantage for

Heineken Brewery. The results imply that employees and major customers recognize the importance of these processes in shaping overall satisfaction levels.

Improvements in distribution processes lead to higher levels of customer satisfaction. In this statement the respondents agree with this statement with a mean of 3.69 and st. deviation of 0.81. This emphasize that the idea that ongoing enhancements in distribution are necessary to elevate customer experiences. This finding underscores a proactive attitude toward refining distribution practices. Respondents appear to be not only experiencing current satisfaction but are also acknowledging the potential for future improvements. This perspective signals a positive outlook toward the brewery's willingness to innovate and adapt in response to customer needs.

Finally, the grand mean of 3.65 corroborates the overall positive sentiment expressed by the respondents regarding the logistics of Heineken Brewery. It indicates a well-founded level of approval regarding the effectiveness of the distribution strategies employed. This collective feedback serves as an important metric for Heineken's management, emphasizing the areas where current practices are appreciated while also signaling opportunities for advancements. Enhancing distribution effectiveness could not only sustain but potentially elevate customer satisfaction further, thereby supporting long-term customer loyalty and competitive differentiation in the market.

### 4.3.5 Supplier Integration

Table 4.7 Supplier Integration

| Description | N | Mean | Std. Deviation |
|---|---|---|---|
| The company has strong relationships with its suppliers. | 140 | 3.56 | 0.84 |
| The Company collaborates closely with our suppliers to improve products/services. | 140 | 3.56 | 0.85 |
| Strong supplier relationships positively influence customer satisfaction. | 140 | 3.59 | 0.86 |
| Grand mean | 140 | 3.57 | 0.85 |

Source: researcher own survey (2024)

Table 4.6 presents response of employees and major customers of Heineken Brewery that indicates a generally positive perception of the Supplier Integration. The first statement, The Company has strong relationships with its suppliers. The respondents agree with this statement with a mean of 3.56 and st. deviation of 0.84. This implies that employees and customers perceive Heineken's supplier relationships as reliable and effective. This statement reinforces the notion that these relationships are valued and seen as a cornerstone of the company's operational success. Such strong ties often translate into more favorable terms, increased collaboration, and ultimately, a more seamless supply chain, which is critical in the competitive beverage industry.

The second statement, The Company collaborates closely with our suppliers to improve products/services, with mean of 3.56 and a standard deviation of 0.85 from respondents. This indicates that such partnerships are integral to the company's operational strategy. Collaborative efforts can lead to innovative solutions, increased efficiency, and a shared commitment to quality, indicating that the company values input from its suppliers. This perspective underscores the importance of teamwork in the supply chain, ultimately benefiting both parties through continuous improvement and adaptation to customer needs.

Lastly, the statement, Strong supplier relationships positively influence customer satisfaction, the respondents agree with this statement with a mean of 3.59 and st. deviation of 0.86. This statement suggests that respondents feel confident in the assertion that strong relationships with suppliers can enhance customer satisfaction. This positive correlation points to the understanding that effective communication, reliability, and quality assurance from suppliers directly contribute to a better customer experience. By prioritizing robust supplier partnerships, the company can ensure timely delivery of high-quality products, which is essential in maintaining customer loyalty and satisfaction. This insight highlights the strategic benefit of nurturing supplier relationships, as it can lead to improved service delivery and ultimately a competitive edge in the market.

In general, the grand mean of 3.57 across all three statements indicates an overall favorable sentiment regarding the company's supplier relationships and collaboration efforts. This result reflects a collective alignment among respondents that strong supplier partnerships are crucial for enhancing product and service quality, which, in turn, positively impacts customer satisfaction.

Research shows that effective supplier collaboration can lead to improved innovation, reduced costs, and enhanced responsiveness to market demands (Kähkönen & Lintukangas, 2019). Such insights suggest that the company is on the right track in fostering these relationships; however, there remains room for further enhancement in these areas to achieve even greater operational success and market responsiveness.

### 4.3.6 Customer Satisfaction

Table 4.8 Customer Satisfaction

| Description | N | Mean | Std. Deviation |
|---|---|---|---|
| Integrating customer feedback into company supply chain processes significantly enhances customer satisfaction. | 140 | 3.64 | 0.88 |
| Strong relationships with suppliers positively affect the quality and timeliness of company products, increasing customer satisfaction. | 140 | 3.55 | 0.86 |
| Improvements in production efficiency directly lead to higher levels of customer satisfaction by ensuring timely delivery and product availability. | 140 | 3.63 | 0.87 |
| The level of information sharing among supply chain partners is crucial for meeting customer satisfaction. | 140 | 3.67 | 0.81 |
| Effective distribution strategies in the company supply chain are essential for delivering products reliably, which is vital for maintaining high customer satisfaction. | 140 | 3.64 | 0.89 |
| Integrating customer feedback into company supply chain processes significantly enhances customer satisfaction. | 140 | 3.69 | 0.78 |
| Grand mean | 140 | 3.64 | 0.85 |

Source: researcher own survey (2024)

Integrating customer feedback into company supply chain processes significantly enhances customer satisfaction. The respondents agree with this statement with a mean of 3.64 and st. deviation of 0.88. This result shows respondents agree that the integration of customer feedback

into supply chain processes plays a critical role in enhancing customer satisfaction. This underscores the importance of actively listening to customer needs and preferences, which can lead to more informed decision-making and adjustments to products and services. By effectively incorporating this feedback, companies can ensure they are meeting customer expectations, ultimately fostering loyalty and driving long-term success.

Strong relationships with suppliers positively affect the quality and timeliness of company products, increasing customer satisfaction. The respondents agree with this statement with a mean of 3.55 and st. deviation of 0.86. This suggests that collaborative partnerships with suppliers are essential for operational excellence. When companies maintain strong relationships with their suppliers, they are more likely to benefit from reliable delivery timelines and higher-quality materials, resulting in a positive experience for customers. As such, nurturing these supplier relationships can enhance overall customer satisfaction by ensuring consistent and high-quality product offerings.

Improvements in production efficiency directly lead to higher levels of customer satisfaction by ensuring timely delivery and product availability. The respondents agree with this statement with a mean of 3.63 and st. deviation of 0.87. This shows respondents recognize that improvements in production efficiency are closely linked to customer satisfaction. Efficient production processes can lead to timely product delivery and better availability, which are critical factors in meeting customer demands. By streamlining operations, companies can not only reduce lead times but also minimize stockouts, ultimately providing a more reliable service. This focus on efficiency translates into a better overall experience for customers, who value prompt access to the products they seek.

The level of information sharing among supply chain partners is crucial for meeting customer satisfaction. The respondents agree with this statement with a mean of 3.67 and st. deviation of 0.81. Indicates respondents agree that the level of information sharing among supply chain partners is vital for achieving high customer satisfaction. Effective information exchange fosters transparency and coordination, enabling partners to respond swiftly to changes in demand or disruptions. When supply chain entities share relevant data, such as inventory levels or sales forecasts, they can collectively make informed decisions that enhance service reliability and

responsiveness. Consequently, this collaboration contributes to a seamless supply chain that ultimately benefits the customer.

Effective distribution strategies in the company supply chain are essential for delivering products reliably, which is vital for maintaining high customer satisfaction. The respondents agree with this statement with a mean of 3.64 and st. deviation of 0.89. This result shows respondents' recognize of their significance in customer satisfaction. Efficient distribution ensures that products reach customers in a timely manner, which is crucial for meeting expectations in today's competitive market. Companies that invest in reliable distribution systems are better equipped to deliver on promises made to customers, thus maintaining trust and satisfaction in their brand. This focus on strategic distribution is essential for sustaining a positive customer experience.

Integrating customer feedback into company supply chain processes significantly enhances customer satisfaction. The respondents agree with this statement with a mean of 3.69 and st. deviation of 0.78.

It implies that businesses recognize the value of actively seeking and utilizing customer insights. By making ongoing adjustments based on feedback, companies are better positioned to align their products and services with customer needs, ultimately nurturing loyalty and encouraging repeat business. This commitment to considering customer perspectives can distinguish a business in a competitive landscape.

The overall grand mean of 3.64 signifies a generally positive sentiment concerning the various factors that contribute to customer satisfaction within the supply chain. This collective score reflects respondents' consensus on the significance of integrating customer feedback, nurturing strong supplier relationships, enhancing production efficiency, facilitating information sharing, and developing effective distribution strategies. Prior research has indicated that these elements are essential for improving customer satisfaction and achieving competitive advantage in supply chain management (Chopra & Meindl, 2016). Thus, these insights provide a comprehensive perspective on the critical aspects that businesses should focus on to not only enhance customer satisfaction but also ensure long-term success in their supply chain operations.

## 4.4 Inferential Analysis

Inferential analysis in research refers to the process of making predictions, generalizations, or concluding a larger population based on findings from a sample or subset of that population. This type of analysis involves using statistical techniques to infer or deduce patterns, trends, or relationships that may exist in the data

### 4.4.1 Correlation

The degree to which two variables have a linear relationship is determined by correlation. To determine whether there are relationships between the variables as well as to characterize the direction and strength of those relationships, Pearson's correlation is utilized. As per Berndt (2005), the degree of correlation between the two variables, as determined by Pearson's coefficient, ranges from -1 to +1 points, signifying the degree and direction of the association. The correlation results can be interpreted as follows: a correlation between 0 and 1 suggests a positive relationship, 0 (zero) indicates no relationship, 1 indicates a perfect positive relationship, -1 indicates a perfect negative relationship and -1 to 0 indicates the presence of a negative relationship. While the results below ±0.61 indicate the presence of a positive or negative relationship, their strength is not high (Ogarah; 2011)

Table 4.9 Correlation

| | | Customer Satisfaction | Integration of Customer | Internal Integration | Information Sharing | Logistics | Supplier Integration |
|---|---|---|---|---|---|---|---|
| Customer Satisfaction | r | 1 | | | | | |
| Integration of Customer | r | .774** | 1 | | | | |
| Internal Integration | r | .633** | .523** | 1 | | | |
| Information Sharing | r | .642** | .546** | .558** | 1 | | |
| Logistics | r | .539** | .384** | .486** | .444** | 1 | |
| Supplier Integration | r | .507** | .441** | .434** | .481** | .217** | 1 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | | | | | |

Source: SPSS output (2024)

Table 4.9 presents the results of the correlation analysis conducted between the independent and dependent variables. The analysis reveals that all independent variables exhibit a positive correlation with the dependent variable. The Pearson correlation coefficients for the independent variables are as follows: Integration of Customer (.774), Internal Integration (.633), Information Sharing (.642), Logistics (.539), and Supplier Integration (.507).

These correlation coefficients indicate varying degrees of association between the independent variables and the dependent variable. Notably, Integration of Customer demonstrates the strongest positive correlation, suggesting that it has the most significant association with customer satisfaction, while Supplier Integration shows the weakest positive correlation among the independent variables. Overall, these findings underscore the positive relationships between supply chain management factors and customer satisfaction.

### 4.4.2 Regression Analysis

Regression analysis utilizes one or more independent variables to assess their impact on a dependent variable (Albaum, 1997). This statistical tool is instrumental in examining the relationships between different variables, allowing researchers to explore causal relationships among them. By collecting data on the variables of interest, researchers can employ regression analysis to quantify the influence of the independent variables on the dependent variable, thereby addressing specific research questions related to causation.

Additionally, researchers often evaluate the "statistical significance" of the estimated relationships, which indicates how closely the true relationship between the variables aligns with the estimated values (Malhotra, 2007). Prior to conducting the regression analysis, the researcher in this study made an effort to test the underlying assumptions to ensure that the analysis would yield valid and reliable results. This preliminary assessment is crucial for the integrity of the regression findings.

### 4.4.3 Assumption Testing

To ensure the validity and robustness of the regression results obtained from multiple regression models, it is essential to meet certain fundamental assumptions. Therefore, this study has

conducted assumption tests for multicollinearity, linearity, normality, and heteroscedasticity. These tests help verify that the underlying conditions required for reliable regression analysis are satisfied, thereby enhancing the credibility of the findings.

### 4.4.3.1 Linearity

According to Hayes (2012), a key requirement for performing linear regression analysis is that the relationship between independent and dependent variables must be linear. In this context, Figure 4.1 displays scatter plots that illustrate the relationship between these two types of variables, referred to as the independent variable (IV) and the dependent variable (DV).

To test for linearity in the relationship between the independent and dependent variables, SPSS version 27 software was utilized. The resulting residuals scatter plot revealed that the data points were arranged from the bottom left to the top right in a nearly straight line, indicating a linear pattern. This alignment supports the fundamental premise of regression analysis, which posits that the relationship between variables can be effectively represented by a straight line, allowing for reliable analysis of the data.


Figure 4.1 Linearity test

*Figure 1Figure 4.1 Linearity test*

Source: SPSS output (2024)

### 4.4.3.2 Normality Test

The assumption of normality pertains to whether the error terms in a regression analysis are distributed normally. Normality of errors is typically assessed by examining the standardized residuals, which should ideally display a bell-shaped distribution (Gujarati, 2004). This characteristic is crucial for validating the results of regression analyses, as it influences the reliability of statistical inferences drawn from the model.

As illustrated in Figure 4.2 below, the histogram of the residuals demonstrates a bell-shaped distribution, indicating that the errors are approximately normally distributed. This finding supports the assumption of normality, suggesting that the regression analysis can be considered valid and reliable for making inferences about the relationships under investigation.

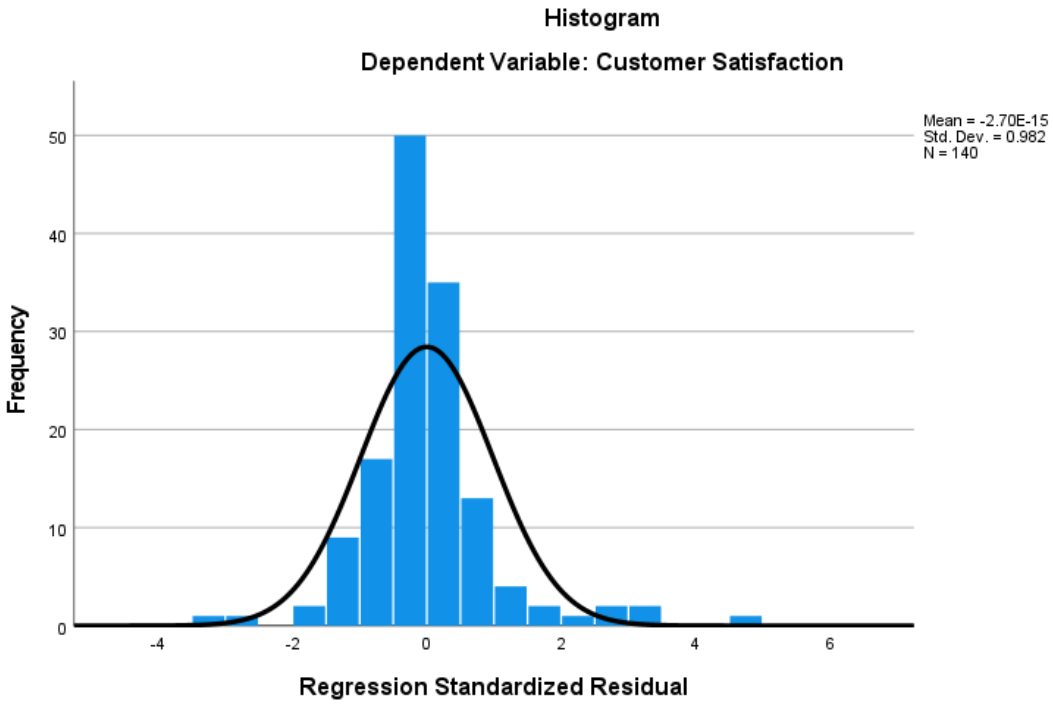


Figure 4.2 Normality test

*Figure 2Figure 4.2 Normality test*

Source: SPSS output (2024)

### 4.4.3.3 Multi-Co linearity

The multi-collinearity test is a statistical method used to evaluate the extent of correlation between two or more independent variables in a regression analysis. Presence of multi-collinearity can lead to several issues, including inflated standard errors and unstable coefficients, which can distort the results of the regression analysis. According to McClelland (2017), most regression software tools can compute the variance inflation factor (VIF) for each variable. A VIF value exceeding 10 typically indicates potential multi-collinearity problems, while Erik (2014) notes that tolerance values below 0.1 signal significant concerns.

The Variance Inflation Factor (VIF) quantifies how much the variance of an estimated regression coefficient is increased due to collinearity among the independent variables. Specifically, a VIF greater than 10 is often deemed indicative of multi-collinearity, suggesting that the independent variables are not independent enough. Conversely, tolerance, which is the inverse of VIF, measures the proportion of variance in an independent variable that remains unexplained by other independent variables. A tolerance value below 0.1 is considered a strong indicator of multi-collinearity, reinforcing the need for careful evaluation when interpreting regression results.

Table 4.10 Multi-collinearity Test

| Model | | Collinearity Statistics | |
|---|---|---|---|
| | | Tolerance | VIF |
| 1 | (Constant) | | |
| | Integration of Customer | 0.603 | 1.657 |
| | Internal Integration | 0.553 | 1.810 |
| | Information Sharing | 0.539 | 1.855 |
| | Logistics | 0.707 | 1.414 |
| | Supplier Integration | 0.698 | 1.433 |
| a. Dependent Variable: Customer Satisfaction | | | |

Source: SPSS output (2024)

As shown in Table 4.10 the multi-collinearity test for all independent variables the tolerance is greater than 0.1 and the VIF is less than 10, therefore there is no multi-collinearity.

### 4.4.3.4 Heteroscedasticity

The heteroscedasticity test is a statistical test used to check for the presence of heteroscedasticity, which is a violation of the assumption of homoscedasticity in regression analysis. Homoscedasticity means that the variance of the errors is constant across all levels of the independent variables. Heteroscedasticity, on the other hand, occurs when the variance of the errors is not constant.

Error terms don't have a continuing variance, according to this assumption. Hypothesis testing is no longer valid or reliable if heteroscedasticity occurs because the standard least square method's estimators become inefficient and underestimate variances and standard errors. The variance of the error term that is constant across all model measures is used to test heteroscedasticity graphically or visually. This implies that, in the absence of heteroscedasticity, the data is not heteroscedastic.

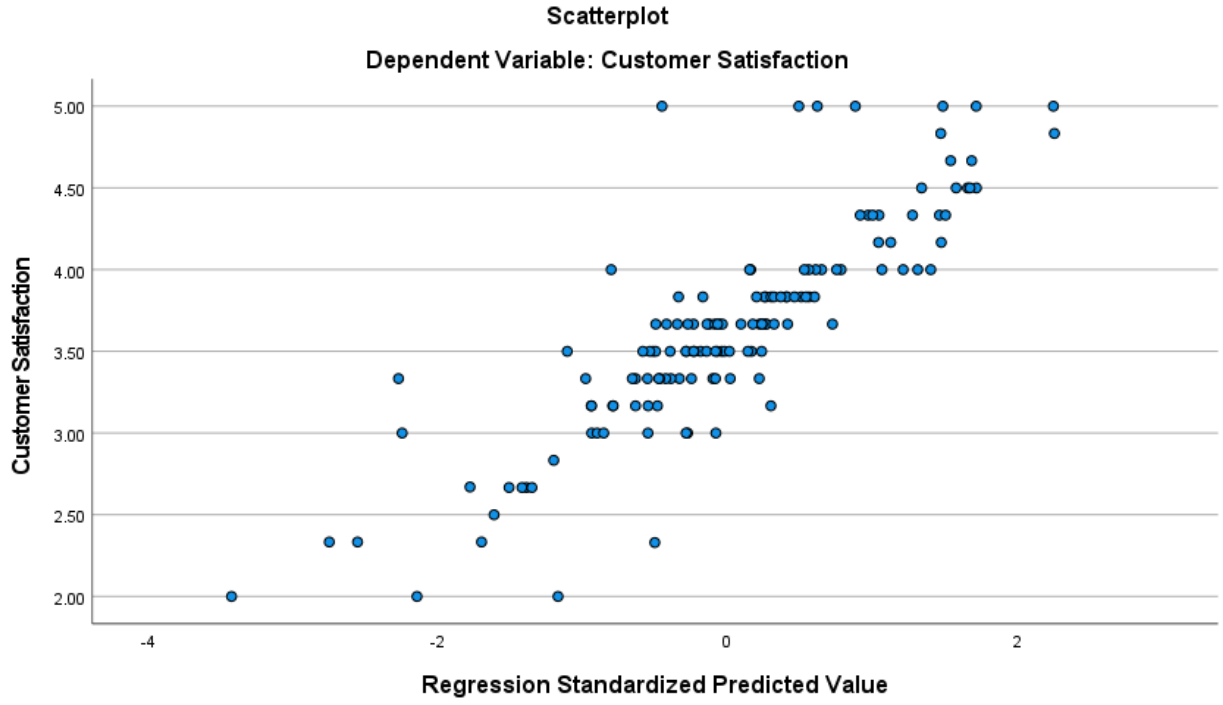


Figure 4.2 heteroscedasticity test

*Figure 3Figure 4.2 heteroscedasticity test*

Source: SPSS output (2024)

### 4.4.4 Multiple Linear Regression Analysis

Multiple linear regression analysis is a statistical technique employed to explore the relationship between two or more independent variables and a single dependent variable. In this research, the focus is on examining how various aspects of supply chain management serve as independent variables that influence customer satisfaction, the dependent variable. This method allows for a comprehensive evaluation of the connections between these supply chain management factors and customer satisfaction.

Through the application of regression analyses, the researcher gains insights into the extent to which different supply chain management components impact customer satisfaction. By analyzing the data and calculating regression coefficients, the researcher can determine both the strength and direction of these relationships, providing a clearer understanding of how these factors interact and contribute to overall customer satisfaction.

Table 4.11 Multiple Linear Regression Analysis

| **Model Summary** | | | | | |
|---|---|---|---|---|---|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
| 1 | .855[a] | 0.731 | 0.721 | 0.33710 | 1.899 |
| a. Predictors: (Constant), Supplier Integration, Logistics, Integration of Customer, Internal Integration, Information Sharing | | | | | |
| b. Dependent Variable: Customer Satisfaction | | | | | |

Source: SPSS output (2024)

R: Indicates the value of the multiple correlation coefficients between the predictors and the result, with a range from 0 to 1, a larger value indicating a larger correlation, and 1 representing an equation that completely predicts the observed value (Pedhazur, 1982). The model summary (R=.855) indicated that the linear combination of the five independent variables (Supplier Integration, Logistics, Integration of Customer, Internal Integration, Information Sharing)

strongly predicted the dependent variable (Customer Satisfaction).

R Square ($R^2$): Indicates the proportion of variance that can be explained in the dependent variable by the linear combination of the independent variables. In other words, $R^2$ evaluates how much of the variability in the outcome is accounted for by the predictors. The values of $R^2$ also range from 0 to 1 (Pedhazur, 1982). The linear combination of supply chain management variables or predictors" explains 73.1% of the variance in Customer Satisfaction and the remaining 26.9% is explained by extraneous variables, which have not been included in this regression model.

Adjusted R Square ($R^2$): The adjusted $R^2$ gives some suggestion of how well the model generalizes and its value to be the same, or extremely close to the value of $R^2$. That means it adjusts the value of $R^2$ to more correctly represent the population under study (Pedhazur, 1982). The difference for the final model is small (the difference between $R^2$ and Adjusted $R^2$ is (0.731 – 0.721 = 0.010) which is about 0.1%. This reduction means that if the model were derived from the population rather than a sample it would account for approximately 0.1% less variance in the conclusion

Durbin-Watson: The Durbin–Watson statistic expresses whether the supposition of independent errors is acceptable or not. As the conservative rule suggested, values less than 1 or greater than 3 should raise alarm bells (Field, 2005). So that the desired result is when the value is closer to 2, and for this data, the value is 1.899, which is so moderate to 2 that the assumption has almost certainly been met.

In general, Table 4.10 indicates that the independent variables collectively account for 73.1% of the variance in Customer Satisfaction. This means that Supplier Integration, Logistics, Integration of Customer, Internal Integration, and Information Sharing explain 73.1% of the factors influencing Customer Satisfaction. The remaining 26.9% is attributed to other factors that also impact Customer Satisfaction.

Table 4.12 Anova Results

| **ANOVA[a]** | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Sum of Squares | df | Mean Square | F | Sig. |
| 1 | Regression | 41.290 | 5 | 8.258 | 72.668 | .000[b] |
| | Residual | 15.228 | 134 | 0.114 | | |
| | Total | 56.517 | 139 | | | |
| a. Dependent Variable: Customer Satisfaction | | | | | | |
| b. Predictors: (Constant), Supplier Integration, Logistics, Integration of Customer, Internal Integration, Information Sharing | | | | | | |

Source: SPSS output (2024)

According to the above Table 4.12 the Anova Result analysis, the F-statistics that is considered as a measure of goodness of fit with the specified model, showed that it is significant at 1% level of significance and the model formulated in the study is best fitted

Table 4.13 Coefficients analysis

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 0.110 | 0.200 | | 0.547 | 0.585 |
| | Integration of Customer | 0.429 | 0.050 | 0.491 | 8.501 | 0.000 |
| | Internal Integration | 0.136 | 0.053 | 0.154 | 2.558 | 0.012 |
| | Information Sharing | 0.161 | 0.064 | 0.154 | 2.514 | 0.013 |
| | Logistics | 0.171 | 0.050 | 0.184 | 3.444 | 0.001 |
| | Supplier Integration | 0.093 | 0.046 | 0.110 | 2.042 | 0.043 |
| a. Dependent Variable: Customer Satisfaction | | | | | | |

Source: SPSS output (2024)

In the multiple regressions, the standardized regression coefficient Beta (β) is useful, because it

permits us to contrast the relative strength of each independent variable's effect on the dependent variable (Pedhazur, 1982).

As shown above table 12, the result of regression analysis is based on supply chain management factors as an independent variable and Customer Satisfaction measures as dependent variable. According to the regression analysis shown in the above table, Integration of Customer affects Customer Satisfaction with a beta weight of 0.491, which means that independent variables greatly affect the dependent variable which is the Integration of Customer. Internal Integration, Information Sharing, Logistics and Supplier Integration affect Customer Satisfaction at 0.154, 0.154, 0.184 and 0.110 respectively.

Based on these results, the regression equation that predicts the effect of supply chain management on Customer Satisfaction was:

$$Yi = \beta 0 + \beta 1X1 + \beta 2\ X2 + \beta\ 3X3 + \beta\ 4X4 + \beta\ 5X5 + E$$

Where Y= Customer Satisfaction

X1= Integration of Customer

X2= Internal Integration

X3= Information Sharing

X4= Logistics

X5= Supplier Integration

$$Y = 0.110 + 0.491X1 + 0.154X2 + 0.154X3 + 0.184X4 + 0.110X5$$

As indicated in table 4.12 the standardized coefficient beta and P-value table result, the integration of customer is 0.491 and a significant level of 0.05. The P-value is 0.000, which is less than 0.05. According to the analysis integration of customer has a strong positive influence on customer satisfaction. This finding similar to exist research that enhancing customer integration strategies significantly boosts customer satisfaction levels (Narasimhan & Jayaram, 2020). Such evidence reinforces the idea that companies actively engaging with their customers

can create stronger bonds and higher satisfaction levels, thereby leading to improved business outcomes (Breidbach 2018).

The standardized coefficient beta and P-value table result, the internal integration is 0.154 and a significant level of 0.05. The P-value is 0.012, which is less than 0.05. This analysis suggests that internal integration positively affects customer satisfaction, reinforcing the notion that streamlined internal processes contribute to customer experiences (Davis & Harrison, 2021). Companies that successfully align their internal operations with customer expectations can provide more consistent and responsive service, ultimately leading to enhanced satisfaction (Ribeiro-Navarrete, 2019).

As indicated in table 4.12 the standardized coefficient beta and P-value table result, the information sharing is 0.154 and a significant level of 0.05. The P-value is 0.013, which is less than 0.05. According to the analysis information sharing has a positive influence on customer satisfaction. This underscores the importance of effective communication and data exchange within organizations as a critical factor for boosting customer satisfaction (Gammelgaard & Larson, 2022). When companies facilitate comprehensive information sharing mechanisms, they not only create transparency but also empower both employees and customers, leading to more informed decision-making and ultimately a better customer experience (Duncan & Moriarty, 2020).

The standardized coefficient beta and P-value table result, the logistics is 0.184 and a significant level of 0.05. The P-value is 0.001, which is less than 0.05. According to the analysis Logistics has a positive effect on customer satisfaction. These results suggest that effective logistics strategies have a positive impact on customer satisfaction (Harrison & Van Hoek, 2019). Efficient logistics not only ensures timely deliveries and product availability but also enhances the overall accessibility of services, thereby fostering a positive perception among customers (Bowersox, 2013). Companies that excel in logistical operations are likely to see substantial returns in terms of customer loyalty and satisfaction.

Finally**,** the standardized coefficient beta and P-value table result, the Supplier Integration is 0.110 and a significant level of 0.05. The P-value is 0.043, which is less than 0.05. According to the analysis Supplier Integration has a positive effect on customer satisfaction. This result

inconsistent with strong supplier integration allows companies to ensure quality and reliability in their offerings, which directly translates into improved customer satisfaction (Kumar , 2020). By fostering strong partnerships with suppliers, organizations can better meet customer needs and enhance their overall service delivery.

## 4.6 Hypothesis Testing

The researcher stated four hypotheses in this study that were obtained from independent variables or predictors (Integration of Customer, Internal Integration, Information Sharing, Logistics and Supplier Integration) that had significant associations with customer satisfaction. The researcher compared these assumptions to the p-values determined by the regression approach. As a result, the hypotheses that were tested are given below:

H1: Integration of customer has positive and significant on customer satisfaction.

The unstandardized beta coefficient with ($\beta_1 = 0.429$, $p=0.000 < 0.05$) indicated that Integration of customer has a positive and significant effect on customer satisfaction. This result not supports the null hypothesis, instead forcing researcher to accept alternative hypothesis. This suggests that Integration of customer have a significant impact on the customer satisfaction.

H2: Internal Integration has positive and significant on customer satisfaction

The unstandardized beta coefficient with ($\beta_1 = 0.136$, $p=0.012 < 0.05$) indicated that Internal Integration has a positive and significant effect on customer satisfaction. This result not supports the null hypothesis, instead forcing researcher to accept alternative hypothesis. This suggests that Internal Integration have a significant influence on the customer satisfaction.

H3: Effective information sharing has positively affects customer satisfaction.

The unstandardized beta coefficient with ($\beta_1 = 0.161$, $p=0.013< 0.05$) indicated that information sharing has a positive and significant effect on customer satisfaction. This result not supports the null hypothesis, instead forcing researcher to accept alternative hypothesis. This suggests that information sharing have a significant effect on the customer satisfaction.

H4: Logistics significantly has positive and significant on customer satisfaction.

The unstandardized beta coefficient with ($\beta_1 = 0.171$, $p=0.001< 0.05$) indicated that Logistics has a positive and significant effect on customer satisfaction. This result not supports the null hypothesis, instead forcing researcher to accept alternative hypothesis. This suggests that Logistics have a significant influence on the customer satisfaction.

H5: Supplier Integration has positive influence on customer satisfaction.

The unstandardized beta coefficient with ($\beta_1 = 0.093$, $p=0.045< 0.05$) indicated that Supplier Integration has a positive and significant effect on customer satisfaction. This result not supports the null hypothesis, instead forcing researcher to accept alternative hypothesis. This suggests that Supplier Integration have a significant effect on the customer satisfaction.

Table 4.14 Hypothesis Test

| S/no | Hypothesis | βi-value | P-value | Expected value | Finding result | Decision |
|---|---|---|---|---|---|---|
| 1 | H1: Integration of customer has positive and significant on customer satisfaction. | 0.429 | 0.000 | Positive | Positive | Accepted |
| 2 | H2: Internal Integration has positive and significant on customer satisfaction | 0.136 | 0.012 | Positive | Positive | Accepted |
| 3 | H3: Effective information sharing has positively affects customer satisfaction. | 0.161 | 0.013 | Positive | Positive | Accepted |
| 4 | H4: Logistics significantly has positive and significant on customer satisfaction. | 0.171 | 0.001 | Positive | Positive | Accepted |
| 5 | H5: Supplier Integration has positive influence on customer satisfaction. | 0.093 | 0.045 | Positive | Positive | Accepted |

Source: SPSS output (2024)

# CHAPTER FIVE

# FINDING SUMMARY, CONCLUSION, AND RECOMMENDATION

This chapter provides a summary of the study findings and results. Based on the key findings conclusions, and recommendations are drawn and future studies are indicated.

## 5.1 Summary of Major Finding

The descriptive analysis revealed a generally positive feedback from respondents on the Integration of customer -related questions, with average mean of 3.58 and standard deviations between 0.90. Employees agreed with the Internal Integration -related questions, with average mean of 3.64 and standard deviations between 0.89, and the Information Sharing related questions, with average mean of 3.44 and standard deviations between 0.86. Additionally, respondents expressed agreement with the Logistics, related questions, with average scores ranging from 3.65 and standard deviations between 0.83. And Supplier Integration, and Customer Satisfaction, related questions, with average mean of 3.57 and 3.64 respectively.

Overall, the results indicate that respondents have a favorable perception of Heineken Brewery's current practices in supply chain management and customer satisfaction, as evidenced by an average grand mean of 3.58. Findings suggest that Heineken Brewery is successfully aligning its processes with the expectations of its stakeholders, positioning itself for continued success within the industry.

Correlation analysis demonstrates that all independent variables show a positive correlation with the dependent variable. Specifically, the Pearson correlation coefficients for the independent variables are as follows: Customer Integration (0.774), Internal Integration (0.633), Information Sharing (0.642), Logistics (0.539), and Supplier Integration (0.507). This indicates there were strong and positive relationships between these variables and customer satisifaction at a 1% level of significance

The regression analysis indicates that the independent variables collectively explain 73.1% of the variance in Customer Satisfaction. This suggests that Supplier Integration, Logistics, Customer Integration, Internal Integration, and Information Sharing significantly influence the factors

affecting Customer Satisfaction. Conversely, the remaining 26.9% of the variance is attributed to other factors that also play a role in shaping Customer Satisfaction. As a result of the multiple linear regression analysis, the supply chain management dimension factors have affected on customer satisfaction with varying degrees of effect, such that one-unit increase in Customer Integration, Internal Integration, Information Sharing, Logistics, and Supplier Integration dimension lead to an increase in customer satisfaction of 42.9%, 13.6%, 16.1%, 17.1% and 9.3% respectively. This study's hypothesis statement is accepted, and the results are significant at a 5% level of precision.

## 5.2 Conclusions

This study underscores the pivotal role that supply chain management plays in fostering customer satisfaction within Heineken Brewery SC. The analysis, which involved 140 respondents, reveals a significant positive relationship between five key supply chain factors—Customer Integration, Internal Integration, Information Sharing, Logistics, and Supplier Integration—and overall customer satisfaction. These dimensions collectively explain 73.1% of the variation in customer satisfaction, with Customer Integration emerging as the most influential, contributing to a remarkable 42.9% increase in satisfaction.

The regression analysis affirms the robustness of these findings, illustrating the substantial impact of each factor on customer satisfaction. The acceptance of all hypotheses, with high statistical significance, further emphasizes that an aligned and efficient supply chain is integral to meeting customer expectations and enhancing business outcomes. In a competitive marketplace, these results underscore the importance of strategic supply chain management practices in cultivating customer loyalty, satisfaction, and long-term success.

## 5.3 Recommendations

Based on the study finding and overall result, the following recommendations are forwarded to the Heineken Brewery SC.

- Customer Integration: Given its strong influence on customer satisfaction (42.9% increase), Heineken should prioritize customer integration strategies. This could involve implementing CRM technologies for real-time feedback and conducting regular customer satisfaction surveys to strengthen customer relationships and better meet their needs.

- Information Sharing: As the study highlights the importance of communication, Heineken should invest in integrated information-sharing platforms. These would enable timely, transparent exchanges between suppliers, internal teams, and customers, improving service accuracy and enhancing customer experiences.
- Logistics Optimization: Logistics emerged as a key driver of customer satisfaction. Heineken should focus on optimizing logistics operations to ensure timely deliveries and product availability. Leveraging predictive analytics for demand forecasting and partnering with reliable logistics providers will improve service reliability and foster customer loyalty.
- Supplier Integration: The findings suggest that supplier integration significantly impacts customer satisfaction. Heineken should strengthen strategic partnerships with suppliers to align objectives and improve product quality and reliability. Regular collaboration and feedback sessions will ensure that both parties meet customer expectations effectively, boosting satisfaction and loyalty.

## 5.4 Recommendation for Future Research

This study also investigates the dimension of chain management factors that has a significant effect on customer satisfaction a case study of Heineken Brewery SC. But this study may be limited in its generalizability of the findings to others similar company and others organization in the country. So, future researchers should have to draw samples of respondents from other similar company and others organization in the country for the sake of generalizing the results of the study.

And the study's variables were not complete. Other variables that are not included in this study could be incorporated into future studies. Given the foregoing, the researcher proposes that findings be made available for the study to be reproduced in other organizations. The current study's findings suggest that there are various problems as well as benefits of customer satisfaction.

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## APPENDIX

# ST.MARY'S UNIVERSITY
# GRADUATE SCHOOL OF BUSINESS
# MASTERS OF BUSINESS ADMINISTRATION (GENERAL)
# QUESTIONNAIRE

**Dear respondents**,

The purpose of this questionnaire is to gather data on the Effect of SCM on customer satisfaction in the case company. The study is purely for academic purpose and thus not affects you in any case. So, your genuine and timely response is vital for success of the study. Therefore, I kindly request you to respond to each items of the question very carefully.

**General Instructions**

There is no need of writing your name

Where answer options are available please tick (□) in the appropriate box for part I and circle for your response to each statements of part II.

**Contract Address**

If you have any query, please do not hesitate to contact me and I am available as per your convenience at (Mobile: 0913-48-68-68 or e-mai:giditages@gmail.com)

Thank you for scarifying your precious time in advance!

1. Gender Male ☐ Female ☐

2. Age

☐ Less than 25 ☐ 26-35 ☐ 36-45 ☐ above 46 years

3. Educational Qualification:

High school Completed ☐ certificate College diploma ☐

First Degree ☐ Second Degree and above ☐

4. Work Experience

☐ less than 5 year

☐ 6-10 Years ☐ above 11 years

**Part II: Instruments for Supply Chain Management Practice Challenges and Organizational Performance**

With regard to SCM practices of your enterprise, please circle the appropriate number to indicate the extent to which you agree or disagree with each statement. The item scales are five-point Likert type scales with 1=strongly disagree, 2=disagree, 3=neutral, 4= agree, and 5= strongly agree

| S/no. | Integration of Customer | SDA (5) | DA (4) | N (3) | AG (2) | SAG (1) |
|---|---|---|---|---|---|---|
| 1 | The company integrates customer feedback into its operations. | | | | | |
| 2 | Customer feedback is considered when making product or service improvements. | | | | | |
| 3 | Customer feedback mechanisms at Heineken enhance customer satisfaction. | | | | | |
| Internal Integration | | | | | | |
| 1 | Company's production processes are efficient and meet customer demand. | | | | | |
| 2 | Production efficiency has a direct impact on customer satisfaction at Heineken Brewery. | | | | | |
| 3 | Improvements in production efficiency lead to higher levels of customer satisfaction. | | | | | |
| Information Sharing | | | | | | |
| 1 | The company effectively shares information with supply chain partners. | | | | | |
| 2 | The company trading partners share Proprietary information with the company. | | | | | |
| 3 | The company trading partners keep the | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Enterprise fully informed about issues that affect our business. | | | | | |
| 4 | Exchange of information with the Company partners (formal or informally) is frequent. | | | | | |
| 5 | Information exchange between the trading Partners and the company is timely. | | | | | |
| 6 | Information exchange between the trading partners and the enterprise is accurate, complete, adequate and reliable | | | | | |
| 7 | Effective information sharing enhances customer satisfaction at Heineken Brewery SC. | | | | | |
| Logistics | | | | | | |
| 1 | Our distribution processes are effective and timely | | | | | |
| 2 | Distribution effectiveness significantly enhances customer satisfaction. | | | | | |
| 3 | Improvements in distribution processes lead to higher levels of customer satisfaction. | | | | | |
| Supplier Integration | | | | | | |
| 1 | The company has strong relationships with its suppliers. | | | | | |
| 2 | The Company collaborates closely with our suppliers to improve products/services. | | | | | |
| 3 | Strong supplier relationships positively influence customer satisfaction. | | | | | |
| Customer Satisfaction | | | | | | |
| 1 | Integrating customer feedback into company supply chain processes significantly enhances customer satisfaction. | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 2 | Strong relationships with suppliers positively affect the quality and timeliness of company products, increasing customer satisfaction. | | | | | |
| 3 | Improvements in production efficiency directly lead to higher levels of customer satisfaction by ensuring timely delivery and product availability. | | | | | |
| 4 | The level of information sharing among supply chain partners is crucial for meeting customer satisfaction. | | | | | |
| 5 | Effective distribution strategies in the company supply chain are essential for delivering products reliably, which is vital for maintaining high customer satisfaction. | | | | | |
| 6 | Integrating customer feedback into company supply chain processes significantly enhances customer satisfaction. | | | | | |

***Thank you for all!!!***