ADDIS ABABA UNIVERSITY SCHOOL OF COMMERCE

Evaluating Business Models of MACCFA Freight Logistics: A Case study Analysis on Value Creation

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Declaration

I hereby declare that this thesis entitled “Evaluating Business Models of MACCFA Freight Logistics: A Case Study Analysis on Value Creation”. This research work has been carried out by me under the guidance and supervision of Dr. Matiwos Ensermu. This research paper has not been presented at any college, university or institution for the completion of any degree program, and sources has been acknowledged appropriately.

Researcher’s Name	Date	Signature
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Abstract

This study aimed to evaluate the business model of MACCFA Freight Logistics using the Business Model Canvas (BMC) framework. Accordingly, data were collected from 50 employees of MACCFA Freight Logistics using a structured questionnaire based on a 5-point Liker scale which is based on their agreement level on each statement. The study followed a mixed approach, with which the collected data were analyzed using descriptive statistics such as frequency tables, means and standard deviations in order to evaluate the respondents' perceptions on each component of the business model.

The major finding of this study revealed that key resources have a significant relationship with value creation. These core competencies are the capabilities that represent the spirit of MACCFA, that competitors cannot easily imitate to create a competitive advantage, that create customer value, and that can be disseminated (Hamel & Prahalad, 1996). MACCFA seems to understand this core concept; it has been working for the past four years to strengthen and broaden its resource base by partnering with prominent global companies such as CMA CGM and CEVA Logistics PLC.

Finally, the company understands the significance of strengthening its key resources both tangible (such as LCL facilities, air-conditioned and cold-chain warehouse facilities, specialized side-loader trucks equipped with GPS) as well as intangible resources which the company has built over the past three decades and those which resulted from its partnerships (such as the company's brand, knowledge and experience, corporate image and corporate identity). As well, MACCFA's resources and capabilities, such as its sales force and marketing capabilities, best known as customer experience, form the basis of its value-creation capabilities and competitive advantage (J. B. Barney & Hesterly, 2015; Wernerfelt, 1984).

KEYWORD: Business Model Canvas (BMC), Key Resources, Value Creation, Competitive Advantage, Logistics industry, Core Competencies, Tangible and Intangible Resources.

List of definition and terms

3PL – Third-Party Logistics

AfCFTA – African Continental Free Trade Area

BMC – Business Model Canvas

GDP – Gross Domestic Product

ICT – Information and Communication Technology

LLDC – Landlocked Developing Country

LPI – Logistics Performance Index

MACCFA – Mulugeta Assefa Clearing and Forwarding Agency

MoFED – Ministry of Finance and Economic Development (Ethiopia)

NGO – Non-Governmental Organization

UNCTAD – United Nations Conference on Trade and Development

UNECA – United Nations Economic Commission for Africa

UNDP – United Nations Development Program

B2B – Business to Business

B2C – Business to Consumer

CRM – Customer Relationship Management

CHAPTER ONE

Introduction

1.1 Background of the Study

In recent years the strategy field has become increasingly interested in studying business models (Humberto B. et al., 2012). According to Eric Chambers and Manuel Patrocínio (2011), the historical development of business model research and literature has reflected a trend of broadening scope, which has expanded beyond its traditional domain as a unit of analysis to virtual networks or e-business. The academic work on business models began just a few decades ago following the Internet boom, where entrepreneurs were asked to explain how their ventures would create value (Brandenburger and Stuart, 1996) and how value would be captured as profit.

The idea of a business model has been widely discussed in academic research, resulting in various definitions that underscore its complex nature. Amit and Zott (2001) conceptualize a business model as the content, structure, and governance of transactions aimed at creating value through the exploration of business opportunities. From a value perspective, Teece (2010) proposed a statement that a business model defines how the enterprise develops and delivers value to the customer and then converts revenue into profits. The contribution of BM lies in the creation of opportunities to study traditional business issues from a different lens (essentially, value offer and value creation. Indeed, the most common definition of business model is "the logic of the firm, the way it operates, and how it creates and captures value for its stakeholders." Therefore, a business model represents how decision variables such as strategy, structure, and economics are interconnected and can foster a sustainable competitive advantage in specific markets.

The global logistics industry has undergone significant transformation in recent decades, driven by technological advancements, globalization, and evolving customer expectations (Christopher, 2016). As supply chains become increasingly complex, logistics firms must develop robust business models that create sustainable value while maintaining competitive advantage (Teece, 2010). This challenge is particularly acute in developing economies, where infrastructure limitations and institutional barriers often constrain operational efficiency (Arvis et al., 2016). Ethiopia's logistics sector exemplifies these challenges, with its landlocked geography creating unique obstacles for domestic firms (World Bank, 2020).

Academic literature emphasizes the critical role of business model design in overcoming such operational constraints (Zott & Amit, 2010). Osterwalder and Pigneur (2010) demonstrate how innovative business models can create value even in resource-constrained environments. In the logistics sector specifically, researchers have identified key success factors including network optimization, strategic partnerships, and technology adoption (Panayides, 2006). However, most existing studies focus on developed markets or major logistics hubs, leaving a significant gap in our understanding of how these principles apply to LLDCs (Rodrigue et al., 2017).

The Ethiopian context presents particular challenges for logistics providers. With 98% of international trade routed through Djibouti's port (World Bank, 2021), Ethiopian firms face high transit costs and unpredictable delays (Shewangizaw, 2019). Domestic infrastructure challenges include limited rail capacity, road quality issues, and underdeveloped warehousing facilities (African Development Bank, 2020). These constraints are compounded by coordination problems among government agencies, customs authorities, and private sector operators (Kifle et al., 2018).

Recent research suggests that logistics firms in developing economies must adopt hybrid business models that combine global best practices with local adaptations (Gereffi & Fernandez-Stark, 2016). This approach appears particularly relevant for MACCFA, which must balance international standards with the realities of Ethiopia's logistics environment. The company's business model warrants close examination as it attempts to navigate these competing demands while maintaining profitability and market position.

This study builds on existing business model literature while addressing several critical gaps. First, it extends the application of business model theory to the under-researched context of LLDCs. Second, it provides empirical insights into how logistics firms adapt their operations in infrastructure-constrained environments. Finally, the research offers practical recommendations for both policymakers seeking to improve Ethiopia's logistics performance and managers aiming to enhance their firms' competitiveness.

The investigation is particularly timely given Ethiopia's ambitious economic development goals, which rely heavily on improved logistics performance (Government of Ethiopia, 2020). As the country works to enhance its regional trade connections through initiatives like the African Continental Free Trade Area (AfCFTA), understanding and optimizing logistics business models becomes increasingly crucial (UNECA, 2021). The findings will contribute to both academic discourse and practical strategy development in this vital sector.

1.2 Statement of the problem

The Ethiopian logistics sector faces critical challenges that hinder its ability to support economic growth and regional trade competitiveness. As a landlocked country dependent on Djibouti's port for 95% of its international trade (World Bank, 2023), Ethiopia's freight transport system suffers from severe infrastructure deficiencies, including limited paved road networks (14% coverage) and underutilized rail capacity (African Development Bank, 2022). These structural constraints are exacerbated by operational inefficiencies, with cargo clearance times averaging 28 days and empty truck return rates reaching 40% on the Djibouti corridor (UNCTAD, 2023). The resulting logistics costs represent 19% of GDP (Ministry of Transport, 2023), creating significant barriers to trade efficiency and economic development.

Within this challenging context, MACCFA Freight Logistics serves as an important case study of how Ethiopian logistics providers navigate structural constraints while attempting to create value and maintain competitive advantage. Despite being one of Ethiopia's leading logistics firms with a comprehensive service portfolio and a strategic partnership with CEVA Logistics since 2020, MACCFA continues to face operational challenges including 35% shipment delays and operating costs 22% above regional benchmarks (MACCFA Internal Report, 2022). These performance gaps highlight the need for business model evaluation and adaptation in constrained operating environments.

The existing literature reveals significant gaps in understanding how logistics firms in landlocked developing countries optimize their business models under systemic constraints. While business model theory has been extensively studied in developed markets (Osterwalder & Pigneur, 2010; Teece, 2018), its application to infrastructure-constrained environments remains underdeveloped. This research gap is particularly acute in the Ethiopian context, where logistics providers must contend with unique combinations of geographical, institutional, and operational challenges (Shewangizaw, 2009; Fekadu, 2013).

The urgency of addressing these challenges has intensified with Ethiopia's implementation of the African Continental Free Trade Area (AfCFTA) and its aspiration to achieve middle-income status by 2025 (UNDP, 2012; MoFED, 2013). Without significant improvements in logistics efficiency, Ethiopia risks being unable to fully capitalize on regional trade opportunities, with projections suggesting logistics costs could rise to 25% of GDP if current trends continue (World Bank, 2023). For MACCFA specifically, failure to adapt its business model could result in progressive erosion of market share and competitive positioning.

This study aims to bridge these gaps by evaluating MACCFA's business model through the lenses of value creation and competitive advantage while considering Ethiopia's unique logistical constraints. The findings will contribute to both academic literature on business model adaptation in developing economies and practical strategies for logistics providers operating in similar constrained environments. The research will also inform Ethiopia's National Logistics Strategy (2022-2032) and support the country's broader economic development objectives.

1.3 Research questions

The study in its attempt to evaluate the business model of MACCFA freight logistics with a focus on value creation, will address the following research questions such as:

1) What does the current business model of MACCFA freight logistics looks like? And what are the key components of its business model?
2) How does MACCFA freight logistics create value for its customers and stakeholders?
3) What are the challenges faced by MACCFA freight logistics in optimizing its business model?
4) What strategies can MACCFA implement to enhance its business model and increase value creation?

1.4 objective of the study

General Objective:

the general objective of this study is to evaluate the business model of MACCFA Freight Logistics, examining its effectiveness in value-creation.

Specific Objectives

Specifically, this research aims to:

1. Analyze the current business model of MACCFA freight logistics.
2. Identify the key mechanisms and tools through which MACCFA creates value for its customers and stakeholders.
3. Assess the challenges MACCFA freight logistics faces while optimizing its business model

1.5 Research Hypotheses

The research hypothesis o of the Study is stated as follow:

Ho: There is no significant and positive relationship between value proposition and MACCFA's business model of value creation.

H1: There is a significant and positive relationship between value proposition and MACCFA's business model of value creation.

H0: There is no significant and positive relationship between customer segmentation and MACCFA's business model of value creation.

H1: There is significant and positive relationship between customer segmentation and MACCFA's business model of value creation

Ho: There is no significant and positive relationship between channel and MACCFA's business model of value creation.

H1: There is significant and positive relationship between channel and MACCFA's business model of value creation.

Ho: There is no significant and positive relationship between key partnership and MACCFA's business model of value creation

H1: There is significant and positive relationship between key partnership and MACCFA's business model of value creation.

Ho: There is no significant and positive relationship between key resource and MACCFA's business model of value creation.

H1: There is significant and positive relationship between key resources and MACCFA's business model of value creation

Ho: There is no significant and positive relationship between revenue stream and MACCFA's business model of value creation.

H1: There is significant and positive relationship between revenue stream and MACCFA's business model of value creation.

Ho: There is no significant and positive relationship between cost structure and MACCFA's business model of value creation.

H1: There is significant and positive relationship between cost structure and MACCFA’s business model of value creation.

Ho: There is no significant and positive relationship between key activities and MACCFA’s business model of value creation.

H1: There is significant and positive relationship between key activities and MACCFA’s business model of value creation

1.6 Significance of the study

This study advances logistics business model theory while providing practical solutions for MACCFA to overcome Ethiopia's operational challenges. The significance of the study is particularly described as follows;

1) **Academic Contribution**; This study expands business model theory by analyzing logistics operations in landlocked developing countries, and testing established frameworks in constrained environments. It fills gaps in literature focused primarily on developed markets.
2) **Practical Value for MACCFA**; the research identifies operational challenges (costs, delays) and proposes digital solutions and partnership strategies to enhance MACCFA's competitiveness and service quality.
3) **Stakeholder Benefits**; Provides actionable insights for logistics firms, policymakers, and researchers, while offering transferable lessons for similar developing economies.

1.7 Scope of the Study

This study examines MACCFA Freight Logistics' business model (2018-2023), focusing on value creation and competitive advantage within Ethiopia's logistics sector. The research analyzes operations along the Addis Ababa-Djibouti corridor (handling 95% of Ethiopia's trade) using company data, stakeholder interviews, and competitor benchmarks (World Bank, 2023; UNCTAD, 2022). The study excludes non-freight services and other logistics firms to maintain focus.

Key limitations include reliance on company-reported data, external factors like geopolitical tensions, and Ethiopia-specific conditions that may limit broader applicability. These boundaries ensure focused analysis while providing practical insights for MACCFA's operations and contributing to logistics research in developing economies (Osterwalder & Pigneur, 2010).

1.8 Organization of the Research Report

This research is presented in five well-structured chapters for clarity and coherence. Chapter 1 introduces the study, outlining Ethiopia's logistics challenges, MACCFA's role, research objectives, and limitations. Chapter 2 reviews relevant literature on business models and logistics in developing countries, identifying key research gaps. Chapter 3 details the methodology, explaining the case study approach, data collection methods (interviews, reports, benchmarking), and analysis techniques.

Chapter 4 presents and discusses findings on MACCFA's business model performance, including value creation, competitive positioning, and operational challenges. Finally, Chapter 5 summarizes conclusions, provides practical recommendations for MACCFA and policymakers, and suggests future research directions. This logical organization ensures comprehensive coverage while maintaining focus on the study's objectives

CHAPTER TWO

Literature Review

2.1 Introduction

This section of the study reviews related literature and articles, covers the explanation on the basic of definition of the business model concept, theories which provide a general understanding of the topic of the study. This chapter presents the theoretical base and concepts for the research to determine the theoretical boundaries. On top of that the section points out some of the challenges faced by freight logistics companies such as MACCFA.

2.2 THEORETICAL REVIEW

2.2.1 Business model definition

"Business model" is a widely discussed idea in academic research, resulting in various definition that underscore the complex nature of the concepts. According to Amit and Zott (2001) a business model is conceptualized as "content, structure and governance of the transaction with the objective of creating value by exploring opportunities. According to Teece (2010) the value creation and revenue generation strategies of a company are explained by BM. A business model clearly represents how decision variables such as strategy, structure and economics are interred connected, and are able to create competitive advantage.

The most fundamental and core value creation strategies a company are represented by the company's' business model (Shafer et al. 2005). Osterwalder and Pigneur (2010) provided a direct and most widely recognized definition, according to the researchers BM is the logic that explains companies value creation strategies of a company. In a similar manner Chesbrough and Rosenbloom (2002) identifies and classified the components of business model in to six major categories such as "value proposition, market segmentation, value chain structure, cost structure and profit potential, competitive strategy and value network". These the functions collectively explain how companies generate value, including how they integrate with suppliers and competitors. Despite the variation in these definitions, certain aspects of the literature remain consistent.

Nearly all interpretations of the concepts of “value creation”, “value delivery” and capture emphasizes on the importance of as aligning the organization’s activities with customer needs. Additionally, the identification of customer segments and the delineation of value networks are integral to understanding a business model's scope and impact. Cost structure and profit potential also play a crucial role, underscoring the economic viability of the model. According to Landau, Kama and Sailer, (2016), the traditional economy as well explains the BM of a company as its and it is difficult to copy the and used anywhere in the world as it is developed with in a unique environment.

A well planned and structured business model provide a strong competitive edge, posse the ability to “propose and create value to shareholders and it also has the capacity to generate and sustain profits (Newth. 2012). A value is created when business effectively utilize their resources with which they build the capacity to generate value. Hence organizations use BM as tools to create, deliver, and sustain value for their specific customer segments. The success of a company depends on factors such as channels, internal resources, key activities and partnerships.

Currently there are differently definitions and models which are widely accepted, cited and used with a high frequency such as; “four constitutive model” proposed Hamel, G., & Prahalad, C. K. (1996), and the “nine factor model” proposed by Osterwalder, A. & Pigneur, Y., (2010). However, the “nine factor model” managed grab the attention of most scholars as it fully discusses how business can create, transfer, and capture value.

2.2.2 Business model canvas (BMC)

BMC is usually recognized for its thoroughness and flexibility, making it useful for both academic study and real-world business applications. BMC, which is used for analyzing and creating business models, is made up of nine interconnected components, each representing a vital component of a business model Osterwalder, A. & Pigneur, Y., (2010). This framework not only helps assess current business models but also aids in visualizing potential new business strategies.

1. **Customer Segmentation**

Osterwalder and Pigneur (2010), defines a customer segment as a certain group of individuals or organizations with a certain need, behavior or characteristic which presents a markets opportunity that a business aim to serve and provide a solution. Understanding and identified a customer segment is the crucial

for any business model in order to develop their market niche. Effective segmentation enables firms to focus on particular groups, ensuring they provide relevant value propositions. Teece (2010) points out the growing significance of delivering value to clearly defined customer segments in a competitive landscape.

2. **Value Propositions**

Value proposition is the overall capability and actual performance a company in presenting the unique value that the organization it set to offer to its target customers. Osterwalder and Pigneur (2010) states that, the proposed value must meet or exceed customer expectation. According to Teece (2010), value proposition is dynamic and must adapt to technological changes and market demands to stay relevant, concept also incorporates others factors such as price, performance, customization, and design.

3. Channel

Channels are the methods an organization uses to deliver its value proposition to customers. They serve two main purposes: facilitating transactions and enhancing customer engagement (Marcus S., 2018). Channels can be directly managed by the organization, like company-owned stores or in-house sales teams, or they can involve third parties such as wholesalers and agents. Additionally, these channels should be utilized to increase awareness, help customers assess the value proposition, and support after-sales service (Osterwalder and Pigneur, 2010).

4. **Customer Relationships**

Customer relationship, differ across segments and are shaped by the organization's strategic goals and selected channels. These relationships can vary from very personal interactions to completely automated solutions (Marcus S., 2018). They may include co-creation, where customers collaborate to generate value, or self-service options**.** Morris et al. (2005) highlight the significance of cost factors, pointing out that various types of relationships (such as short-term versus long-term) influence the overall business model. Osterwalder and Pigneur (2010) stress that developing long-term relationships typically necessitates a focused effort on improving customer experience.

5. **Revenue Streams**

Revenue streams are crucial components of a business model, perhaps just as important as customer segments. They define how a business generates income from its customers in exchange for the value delivered. The demand for a particular service determines a company’s’ revenue stream

Revenue streams can differ greatly depending on the type of customer and their willingness to pay for a particular product or service. Generally, there are two main categories of revenue streams: transaction revenue and continuous revenue.

Transaction revenue refers to a one-time payment for a product or service. This is common for businesses that provide goods or services with limited engagement, like retail product sales. Payments in this category can happen at the point of sale or after the service is rendered. In contrast, continuous revenue comes from recurring payments over time, such as subscription services, service contracts, or maintenance agreements. Teece (2010) points out that continuous revenue models are becoming more popular among businesses because they offer the potential for predictable and ongoing cash flows.

In some cases, a business might use a combination of both revenue types, which provides flexibility and the chance to create more value for customers. This dual strategy improves the ability to address various customer needs, resulting in greater customer retention and satisfaction (Osterwalder & Pigneur, 2010). A study by Giwa et al. (2020) that looked into revenue models in Ethiopian businesses highlighted that implementing multiple revenue models can assist businesses in developing economies in achieving financial stability and reducing risks (Giwa et al., 2020).

6. **Key resources**

Key resources, includes both tangible and intangible assets company utilizes to produce products, provide services, and maintain its operations. Neves P. (2024) grouped them in to into four main categories: physical, intellectual, human, and financial resources. These resources have a significant contribution in enabling businesses to achieve their strategic objectives, connect with their target audience, and build strong customer relationships (Sai O., Dimitrios k. et al. 2025).

Physical resources consist of tangible assets such as buildings, machinery, and vehicles, which are necessary for manufacturing and logistics. Intellectual resources, while intangible, include valuable assets like brands, patents, and trademarks that help distinguish a business and provide a competitive advantage. Human resources pertain to the workforce and expertise within an organization, which is especially significant for knowledge-driven or creative enterprises, such as tech startups or design firms. Lastly, financial resources refer to the capital needed to support business operations and maintain liquidity (Osterwalder & Pigneur, 2010).

In Ethiopia, key resources are crucial for sectors like agriculture and technology. Research by Kebede (2021) indicates that the agricultural sector in Ethiopia needs physical resources such as irrigation systems, intellectual resources like agricultural expertise, and human resources including skilled farmers and managers to deliver value to customers (Kebede, 2021). Likewise, companies in Ethiopia's expanding tech industry heavily depend on intellectual and human resources, particularly when developing software solutions for local challenges (Alemu & Gebremedhin, 2020).

7. **Key Activities**

To create value for customers, an organization must engage in specific key activities. These processes and operations are essential for delivering the company's value propositions, reaching target markets, and maintaining customer relationships. Production activities involve manufacturing products or providing services. In Ethiopia, businesses in sectors like textiles or cement heavily depend on these production activities. Platform/network activities relate to businesses such as tech platforms that facilitate exchanges or offer infrastructure for third-party services. Problem-solving activities are particularly crucial in industries like consulting, where companies address specific challenges for clients (Johnson et al., 2008).

A study by Tadesse & Reddy (2020) examined the activities of Ethiopian businesses in the agribusiness sector, highlighting the significance of production and problem-solving activities in meeting the needs of smallholder farmers. The research indicated that key activities, such as training farmers on best practices or developing agricultural technology platforms, are vital for creating value in these markets.

8. **Key Partners**

Key partners are external entities that assist a business in achieving its goals. These partnerships are essential for acquiring resources, delivering services, and expanding reach. according to Osterwalder & Pigneur, (2010) any business-to-business partnership such as supplier-buyer relationships joint venture, cooperative partnership or any strategic aliens with in a business environment is known as key partnership

In Ethiopia, key partnerships often involve collaborations between local businesses and international suppliers or distributors. For instance, agricultural businesses may partner with NGOs or government organizations to enhance access to markets or financing. Strategic alliances in Ethiopia's agribusiness sector, such as partnerships between Ethiopian farmers and multinational agricultural companies, have been shown to improve production techniques and market access (Girma, 2019). Osterwalder and Pigneur (2010)

states that companies can be categorized in to two such as cost driven (companies that aimed at minimizing cost) and value driven (with the objective of delivering a significant value to their customers).

9. Cost structure

Cost are the primary expenses that an organization faces in order to maintain its business model. Thus, the cost structure of an organization categorizes and determine factors in the business model that determines the sources such as, key resources, key activities and key partnerships (Satria B., et al. 2020). A cost-driven strategy is often seen in industries that prioritize efficiency and mass production, such as Ethiopia's manufacturing sector, where cost control is essential. On the other hand, businesses like tech startups in Addis Ababa may lean towards a value-driven strategy, emphasizing the delivery of innovative solutions, even if it means making larger initial investments (Tadesse & Reddy, 2020).

2.2.3 Business Models and business Strategy

Business model and strategic management, though often used interchangeably and literatures often overlap they are distinctions exist. Zott et al. (2011) highlight two key differences, according to the researcher while Business model focus on building and strengthening its key partnerships, the business strategy focus on gaining a captive advantage, and compaction. While a business model prioritizes customers and value proposition, strategy focuses on financial performance and competitive a positioning (Chesbrough and Rosen Bloom,2002)

A business model analyzes, test and validate strategic decisions how ever it is not a strategy by itself Shafer et al. (2005). On the other hand, Seddon et al. (2004) offer an alternative perspective, defining business models as an abstraction of strategy that outlines a firm's value proposition, stakeholder engagement, and activity system. Although business models represent a component of strategy, they do not necessarily address competitive positioning (Porter, 2001).

Beyond their distinctions, strategy and business models interact dynamically. Richardson (2008) views business models as integrated systems of firm activities which is designed to implement effectively. A business model according to Casadesus-Masan ell and Ricart (2007, 2010) represents firms’ actual strategic approach.

2.2.4 Characteristics of business model in Freight and logistics

In freight and logistics industries as well, business model plays a critical role in delivering value to its stakeholders. Freight forwarders, operate in a complex and competitive environment where business model evaluation is essential for ensuring efficiency and sustainability. According to Smith et al. (2020), logistics business models are primarily structured around service integration, technological adoption, cost efficiency, and regulatory compliance.

One of the major characteristics of business model is its service integration, where freight forwarding companies provide an wholes tic service which includes are housing, transportation service and inventory management services as well as providing additional services such as offering their advice, (Johnson and LEE,2019). This integration enhances efficiency and customer satisfaction by providing seamless logistics solutions. Furthermore, technological advancements such as digital platforms, real-time tracking, and data analytics have become essential components of modern logistics models (Brown, 2021). Digital transformation not only optimizes route planning and operational efficiency but also enhances transparency and customer engagement (Williams & Zhao, 2022).

Another crucial aspect is the cost structure and revenue streams within freight and logistics. Companies must balance fixed and variable costs while ensuring profitability through diverse revenue models, including transactional pricing, subscription-based logistics, and strategic partnerships (Anderson et al., 2018). In addition, regulatory compliance plays a vital role in shaping business models, as logistics firms must adhere to international trade laws, environmental regulations, and customs procedures to avoid legal risks and ensure smooth operations (Miller & Thompson, 2020).

Evaluating these business models is critical for several reasons. Firstly, it ensures adaptability in a rapidly changing market influenced by economic fluctuations, technological advancements, and global trade shifts (Davis & Roberts, 2021). Secondly, assessment helps in enhancing operational efficiency by identifying inefficiencies and optimizing logistics processes (Harrison, 2019). Moreover, continuous evaluation strengthens competitive advantage, allowing companies to refine their strategies and differentiate themselves in a highly competitive market (Garcia et al., 2020).

Sustainability has also emerged as a key consideration in business model evaluation. With increasing regulatory and consumer demands for environmentally friendly logistics, companies must incorporate sustainable practices such as green transportation, carbon footprint reduction, and energy-efficient warehousing (Taylor & Kim, 2021). Lastly, evaluating business models enables companies to assess their financial performance, identifying high-margin services and improving profitability through strategic decision-making (Evans, 2018).

In summary, business model evaluation in the freight and logistics industry is not merely a strategic necessity but a fundamental approach to ensuring resilience, efficiency, and growth. By continuously assessing and refining their business models, logistics firms can enhance operational performance, maintain regulatory compliance, and sustain long-term profitability in a dynamic global market. The logistics firms improve their operational performances, maintain regulatory compliance and sustain long term profitability in a changing global market, by consistently working and improving their business model.

2.2.5 Value Creation in Freight and Logistics

Value creation is one of the most fundamental aspects of a business model that many research has given their consensus (Osterwalder & Pigneur, 2009; Zott et al., 2011 and Shafer et al., 2005) are some of the most notable researchers worth mentioning. These elements are crucial for understanding how businesses generate and sustain competitive advantages in the freight and logistics sector, particularly in the case of MACCFA.

The term value creation is defined as the total benefits that firms generated for customers and stakeholders. This generally in economic term mean the total surplus the business generated. Then this surplus it distributing among customers and owners through pricing mechanisms.

Therefore, as Osterwalder and Pigneur, (2009) states, business model facilitates transactions between stakeholders by enabling firms to create and capture value. For customers this value might mean a better customer experience, better quality or fast delivery it depends on the customers level of satisfaction. While for the business it has a different meaning where it translates into financial returns such as profit growth and stock price appreciation. However the term has a broader meaning where it’s not just delimited referring to customers and owners but it also incorporates other stakeholders such as employees society and every

stakeholder which get affected by the business operation or contributes to the business in any forms and ways (Gassmann et al., 2014 and Osiyevskyy et al., 2018).

The Role of Value Delivery in Business Value Capture

A firm's ability to deliver value significantly influences the value captures by the businesses this relationship therefore results in a reduced cost (Vadyslav B. et al., 2018). Enhancing efficiency whether through stringent cost control, selecting optimal suppliers, or adopting platform-based approaches in the process of delivering services and operating in any business settings (Meyer et al., 2018) resulting in overall increment in business value.

Moreover, reliable and effective value delivery, characterized by consistently fulfilling and exceeding customer expectations in key quality dimensions, which allows firms to maintain high prices (Sheehan & Bruni-Bossio, 2015). Conversely, failing to meet these expectations often forces firms to lower prices, thereby eroding business value.

2.2.6 Stakeholder Engagement

The relationship between logistics firms and their stakeholders, such as customers, suppliers, and policymakers, is complex and multifaceted (James G. et al., 2017). The idea of value creation is focused on meeting the organizational goal while keeping the stakeholders' needs and expectations in line (Freeman, 1984; Kumar and Singh, 2021). Customers are the greatest assets for any business accordingly, Logistics firms, like every other business, interact with customers. Therefore, understanding their behavior, their requirements, and their preferences is crucial for any business. Firms can improve and enhance service delivery by engaging customers effectively in the logistics process (Cain and Zhang 2020).

Secondly, logistics firms also interact and with the suppliers, with their engagement heavily relying on suppliers for the timely delivery of goods and materials. A strong partnership with a supplier improves efficiency and reduces costs. To enhance supply chain resilience and adaptability, logistics firms interact with or engage with suppliers through regular communication, with an intention of keeping mutual interest by sharing some risks and through a strategic alliance (Zhang and Zhao, 2021). Building a strong relationship with a supplier is particularly useful as it can help reduce risk in times of disruption (Bai and Sarkis, 2021). Additionally, logistics firms also interact with policymakers while navigating through the

regulatory environments and advocating for favorable policies. According to Mishra & Singh 2022, logistics firms influence policy decisions through industry associations, by providing data and valuable insights, and by collaborating with government initiatives.

Engaging stakeholders in collaborative initiatives can strengthen relationships and create shared value. Through a shared goal, logistics firms can leverage the expertise and resources of their stakeholders (Zhang & Zhao, 2021). Therefore, logistics firms should monitor and evaluate their stakeholder engagement strategies to assess their effectiveness. This evaluation can be helpful in identifying areas of improvement and can ensure the engagement effort aligns with the evolving stakeholder expectations (Mosing & Schultz, 2006). In summary, understanding stakeholder dynamics and developing effective engagement strategies is crucial for logistics firms to craft business models that align with the stakeholders' needs. By building strong relationships with customers, suppliers, and policymakers, logistics firms can enhance their resilience, adaptability, and overall performance.

2.2.7 Competitive advantage in Freight and Logistics

Profitability of in any company is closely related to its ability to generate more value for its stakeholders compared to its competitors and the business model of this companies determines their competitive position. (Argote & Ingram, 2000; Grant, 1999; Hall, 1993). The Firms that innovate and produce high-quality goods may have competitive advantages but may struggle with profitability if their pricing or cost structures are inefficient (Pellicelli, 2014).

. MACCFA freight logistics generates value by providing an end to and, integrated logistics service to its clients such as (importers, exporters, NGO and other agencies). In terms of competitive advantage, MACCFA may employ a combination of cost leadership through operational efficiency and economies of scale and differentiation through technology adoption, client-specific services, and strong local expertise.

2.2.8 Challenges of logistics firms in emerging markets

Many researchers have identified and discussed the challenges faced by logistics firms in emerging markets. Logistics performance is a strategic factor that shows the competitive nature of the business and/or the overall economy of the country (Damilola k. and Herwig Winkler (2022). The African, a continent which is

being characterized as fast growing and with huge amount of young population where a purchasing power of its population is growing with expanding middle class population, has a large amount of untaped resources.

However, infrastructural and socio- political challenges in sub- Saharan countries more practically still persists. Although technology is spreading in an increasing rate is growing rapidly, the telecommunication services in most sub-Saharan countries is limited to and is highly concentrated at urban areas (Dasgupta, S.et al., 2009). Telecommunication service in freight and logistics operations plays a critical role since for an improved freight control and tracking, communication signal are crucial making it difficult for fright logistics firms to adapt new technologies. Electricity service availability is also one of the most fundamental infrastructural service necessary for digital transformation otherwise, it would become impractical.

In summary, the challenges logistics firms in Emerging Economies such as sub-Saharan African countries face are categorized and discussed as follows:

1. **Infrastructural inefficiency**

   The logistics and supply chain sector in Africa faces basic infrastructural deficiencies such as poor land transportation networks, a non-existent railway transportation, and a lack of basic amenities such as stable electric service coverage, fast internet service, and wider coverage. The logistics cost in sub-Saharan Africa is particularly high, due to the poor transportation and limited warehouse capacity (2022). The Addis Ababa to Djibouti corridor is the most critical trade route, which could serve as a good example of the infrastructural challenges and inefficiencies faced by emerging countries. According to Tessema and Gebrehiwot (2022), the logistics sector in Ethiopia incurs 25-30 % of the product price.

2. **Regulatory and policy barriers**

   Poorly structured regulatory systems and unnecessary red tape hinder the effective supply chain and logistics operation in emerging economies.

   Frequently altered ambiguity creates an ambiguity, which complicates cross-border operations, and cases like this are widely observed worldwide (Chopra & Sodhi, 2021). The logistics and supply chain sector in Africa, more particularly in Ethiopia, is facing recurrent policy alterations and

bureaucratic delays experienced in clearing goods at the Ethiopian border post (Alemayehu et al.,2023).

3. **Workforce and skilled manpower shortage**

   Another major challenge is the lack of skilled professionals. According to Mwangi et al. (2020). training plays an important role by narrowing skill gaps. Within the local perspective, Gebremedhin (2021) argues that Ethiopian universities and vocational institutions are to be more responsible for the development of supply chain skills. Without skilled laborers, inventory management, transport planning, and customer service development are brought into inefficiency.

4. **Vulnerability to external disruptions**

   Emerging markets carry immense sensitivity regarding external shocks such as pandemics, political unrest, and climate change. The global supply chain's operations were disrupted due to COVID-19, with emerging economies taking center stage because of their weak infrastructure as well as financial systems (Chopra & Sodhi, 2021). Meanwhile, in Ethiopia, Alemayehu et al. (2023) allege that political unrest and border disputes make the existing inefficiencies even worse if the parameters are in context.

2.2.9 Digitalization and business model innovation

In today's world, where business competition has intensified, business model innovation is required. Organizations must innovate and come up with a fresh perspective on their ways or strategies of creating more value , while adapting to the dynamic market demand and employing advanced technological tools (Chesbrough, 2010). Emerging markets often face challenges related to a lack of infrastructure, resources, and institutional gaps, Firms sometimes focus on serving low-income consumers, tailoring their product and distribution methods (London &Hart, 2004).

The logistics sector in Ethiopia presents a significant opportunity for BMI, following the rapid technological advancement. The world bank (2022) report presented the government of Ethiopia is prioritizing the digital transformation, following the country’s rapid economic growth and evolving business environment. Digitalization creates a conducive environment for emerging countries like Ethiopia, by enabling them to address their challenges and as well as to innovate their business models accordingly.

In conclusion, in this extremely dynamic business world, freight logistics businesses like MACCFA must innovate their business model. By utilizing indigenous insight, adopting technology, and addressing systemic challenges, there is a chance for logistics companies to harness the transformative power of BMI to enhance sustainability and operational efficiency. While notable advancements have been made, ongoing research is necessary to evaluate the scalability and social impacts.

2.3 Empirical Literature Review

David Sjodin et al. (2020), in their attempt to address the knowledge gap regarding the design and implementation of value creation, the researchers employed a case study design to analyze how companies and customers contribute to the process of value creation and value capture, this method allows to observe different perspectives. The researchers took the BMI process as a unit of analysis for their study and gathered an extensive primary data from different manufacturing companies and implemented Gioia approach for data analysis. In their findings the researchers discussed the need to consider both value creation process and value capture at the same time with in the entire process of BMI. According to Ranjitha (2016), Firms in the emerging markets are striving to gain sustainable competitive advantage. The author emphasized the relationship between the business models and the competitive advantage. An effective business model is a combination of deliberate alignment of resources and capabilities to strike competitive advantage. The researcher attempted to study business models from the emerging markets and emphasized on emergence of multiple business models employed by the firms. The study employed multiple case studies which were developed in different time periods. The study examined that the choice of the firm in selecting the component of business model determines the success. Accordingly firms with multiple business models demonstrated higher chances of gaining competitive advantage. This is particularly relevant for logistics companies operating in regions like Ethiopia, where infrastructure challenges and bureaucratic inefficiencies hinder competitiveness. The high transportation costs and delays that plague the sector underscore the need for effective logistics strategies.

Brea-Solis et al. (2012) highlighted the importance of quantitative analyses in understanding the impact of business model choice on profitability. Their study of Walmart illustrates how variation in business model implementation can lead to significant differences in performance. This insight is critical for logistics firms, as it focuses on the need for careful evaluation of business model components and their interdependencies.

The concept of dynamic capabilities is also pivotal in understanding how firms adapt their business model in response to changing market conditions. Andrejs Čirjevskis (2016), explored the case of Samsung, proving that that dynamic capabilities enable firms to identify and allocate resources effectively. This adaptability is important ant for logistics companies, which must navigate complex and volatile environments. The research findings also highlighted that the synchronization of business models with external environment is essential for maintaining competitive advantage

Popa and Gaia (2022), their study aimed at describing the business model for freight forwarding service as part of the logistics network, in reference to fright shipments for individuals or corporations toward the market demand, as final customer, or to final points of goods distribution. The study utilized Business Process Modelling (BPM) tools to analyze and improve logistics processes. By identifying bottlenecks and inefficiencies, their study provided practical insight into how logistics firms can enhance their operational efficiency and value creation through systematic process evaluation.

Batocchio and Ghezzi (2021) identified and discussed the reasons why business models fail, while also and proposed a framework for implementation. The authors identified key factors such as alignment between value propositions and customer segments, financial viability and environmental constraints. In their findings they suggested that a structured approach to business model implementation can mitigate risk and enhances the likelihood of success, which is particularly relevant for logistics firms navigating complex operational landscapes.

Vijayan et al.(2016) emphasized on the importance of traceability and integration with supply chain, discussing in detail the role of supply chain strategies in gaining competitive advantage. Their analysis highlighted how strategic management decisions can influence the effectiveness of supply chain operations and ultimately impacting the firms competitive positioning. Finally, Wedening (2021) investigated the challenges faced by the Austrian-African SME investment facility in developing suitable business model for African market.

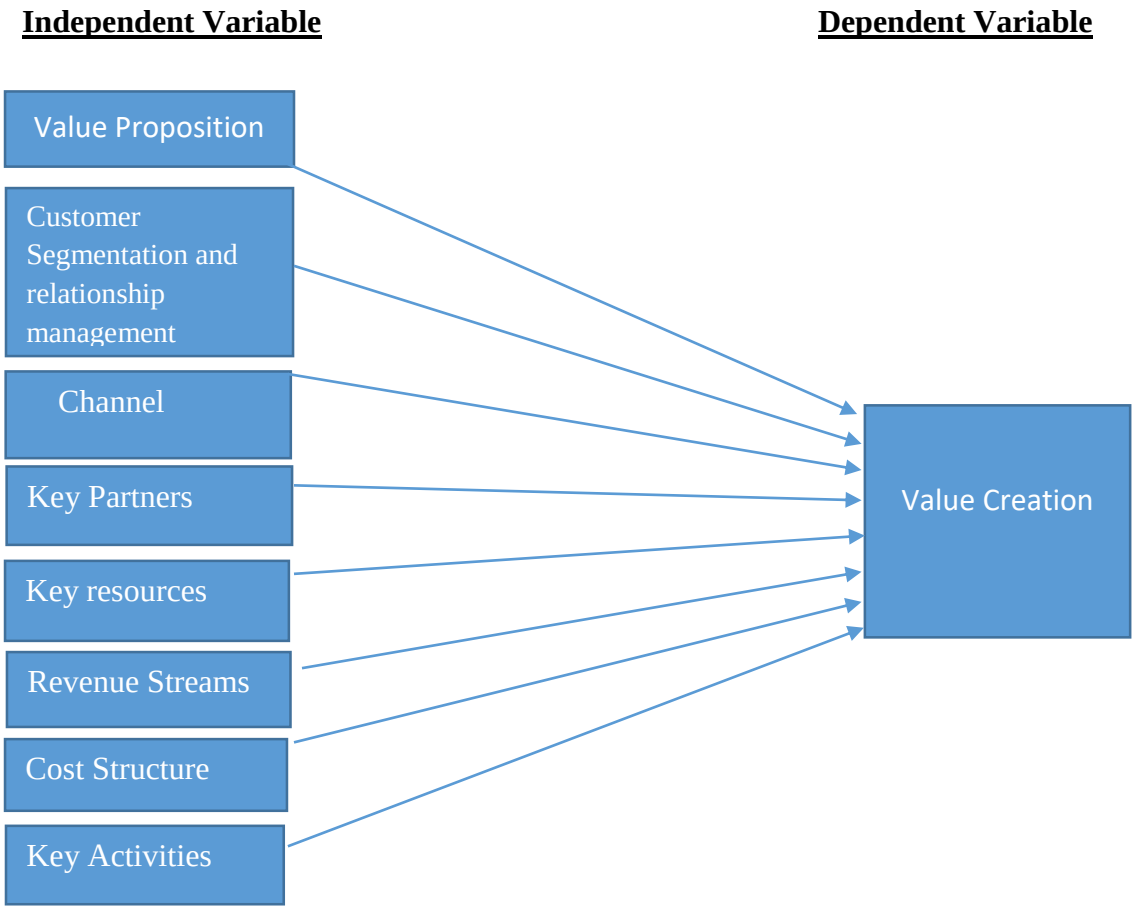
The researcher emphasized on the need for context specific business model that consider local conditions and market dynamics, which is particularly relevant for logistics firms operating in Africa, where unique challenges and opportunities exist.

Summary of Literature review

The literature review covered the business model with in the logistics sector, with the focus on MACCFA freight logistics. In this section, in order to establish the relevance to the chosen research title "evaluating Business model of MACFFA freight logistics, case study on value creation", relevant literatures have been identified, analyzed, and some important gaps are indicated.

The literature review presents a various definition of the term "business model", and value creation to build the relationship between the two concepts and establish a relevant to the research title. For a successful Logistics business operation crafting a strong business model is crucial. A success full business model builds a frame work and by taking sever factors into consideration such service integration, technological adoption and regulatory compliance. The concept of value creation in multifaceted and in in loves a comprehensive approach that integrate various strategies with the objective of enhancing the overall worth so a certain business. Includes understanding the stakeholder's needs, bringing innovation, improving operation efficiency and committing the sustainability. The literature review presents valuable insights regarding the complexity of business model in the logistics sector, with a focus on emerging country like Ethiopia. The identified gaps in the literature review also proposed a means for further research, which can provide information regarding the practical strategies for logistics firms and contribute to the breeder discourse on logistics business model In Land Locked Developing Countries (LLDCs).

Conceptual framework



CHAPTER THREE

Methodology of Study

3.1 Description of the Study Area

The following section reviewed the existing literature and documents related to the logistics and freight transportation sector, with a particular emphasis on the business model and value creation strategies employed by MACCFA freight logistics. The challenges and opportunities within the freight logistics industry are highlighted in this section, for a comprehensive understanding of MACCFA freight and Logistics operational context. To systematically investigate the business model of MACCFA and its impact on value creation, this chapter structures the research methodology employed. Kothari (2004) defined a research methodology as a systematic, theoretical analysis of the methods applied to a field of study. The methodology section of research includes research design, research approach, population and sample, data collection instruments, data source and type, data analysis, validity and reliability, and ethical considerations

3.2 Research approach

For the purpose of this study, a mixed-method approach is chosen to explore the business and value creation strategies of MACCFA freight and logistics. This particular research approach is a combination of both qualitative and quantitative methodologies, which is important as it allows the overall understanding of the subject matter (Johnson et al., 7007; Kothari,2004). The quantitative component will allow as to statistically analyze numeric data, while the qualitative nature of the study will provide a wide and deep insight on the participants perspective and experience (Crooker and Heigham, 2009).

This approach enables a researcher to collect data by employing data collection methods such as questionnaires and interviews. By minimizing the limitation associated with both qualitative and quantitative techniques (Palinkas et al.,2011), this approach will provide a foundation to explore the business model of MACCFA freight and logistics and its role in value creation. This comprehensive approach intends to provide an insight which will contribute greatly to the existing body of knowledge in the logistics industry (Aspers and Corte, 2019; Goertzen, 2017).

3.3 Research design

The study employs a descriptive research design, which will enable a researcher to determine the frequency of events and understand how different variables are related within a specified study area. To evaluate the business model of MACCFA freight logistics, with a focus on value creation. Descriptive research allows the researcher to describe the characteristics of a particular study area such as the business model evaluation, and collect and analyze data. Therefore, by employing this research design, major statistical measures such as mean, median, and mode will be implemented in order to quantify the concept of "value creation" at MACCFA.

3.4 Population and sample

The population of a particular study includes people, services, elements, or events involved and that are being investigated (Ngechu, 2004). Therefore, important information was gathered from key personnel within the organization such as managers, operations management staff, transportation management staff, and air cargo and liaison department staff.

According to Birhan Feleke (2023), the total number of direct and indirect staff members that were involved at MACCFA was 36. The current company status indicates that the number of employees is 50. By focusing on this target population, the study aimed to evaluate the business model and value creation at MACCFA, while highlighting the practices, challenges, and perceptions of those actively involved in the freight transport sector.

This comprehensive approach ensured that the study captured a diverse range of perspectives from both employees and customers, thereby enhancing the validity and reliability of the research findings. By focusing on both groups, the research aimed to provide an in-depth analysis of MACCFA's business model and its effectiveness in creating value. Insights gathered from employees involved in daily operations, alongside feedback from long-term customers, helped identify strengths, weaknesses, and opportunities for improvement in MACCFA's service delivery and overall business strategy.

Ultimately, this targeted sampling strategy not only strengthened the validity of the research findings but also ensured that the conclusions drawn were directly applicable to the company's context. This contributed to a more nuanced understanding of MACCFA Freight Logistics' business model and value creation mechanisms.

3.4.1 Sample Size

In this study the combination of both probability and non-probability sampling techniques was used. This approach was used in order to ensure a comprehensive understanding of the company's business model and value creation processes from both employee and customer perspectives as outlined by Birhan Feleke (2023). The non-probability sampling method was utilized to select the study location, focusing on MACCFA Freight Logistics in Addis Ababa, while a simple random probability sampling technique was used to choose the sample that consists of managers or supervisors employed in the company engaging in logistics activities such as marketing, operations, customs clearance and transportation, as well as the customers in accordance with their relationship with the company. This approach was chosen in order to provide an equal chance of being included in the sample and to enhance the representativeness of the findings. MACCFA has a total of 50 employees and 10 strategic customers working with the company for the past 4 years. It was determined that engaging long-term customers is important, as they likely have a deeper understanding of service quality and operational effectiveness (Kotler and Keller, 2016). Random sampling is therefore important as it minimizes sample selection bias and ensures the sample reflects the broader population (Creswell, 2014).

3.4.2 Sampling Technique

A purposive sampling technique was chosen as it enables the collection of an in-depth information participants which are directly or indirectly involved in the study area (Elfil and Negida, 2017). These participants are those who possess a specific knowledge and experience related to the research objectives (Kumar, 2005). Key stakeholders such as managers, supervisors, coordinators and officers from different departments, and also major customers are included in the sampling frame. This targeted approach provides a frame work and enhance the understanding of MACCFA can optimize its business model and improve the value creation within the organization (Creswell, 2008; Teddlie and Yu, 2007).

3.5 Method of data collection

The study used both primary and secondary data source, according to (Creswell, 2014; Saunders et al., 2019) these sources are aligned with established research practices in social sciences and supply chain studies). The Primary data will be obtained through, questionnaires administered to selected respondents. These methods allowed has found to be important to gather firsthand insights relevant to the research objectives, which is crucial for gaining context specific understanding in logistics and supply chain studies (Mentzer & Flint, 1997).

Secondly a secondary data will be collected from various reliable sources, including academic documents, institutional documents, published journals, and other pertinent publications. By providing context and validating findings a secondary data plays an important role of triangulating or crosschecking in research methodology (Johnston, 2017). The combination of these two methods provides a contextualized, comprehensive and accurate information about the research problem (Yin, 2018).

The study also follows a proper data collection procedure. According to Dillman et al, (2014), in order to ensure the validity and clarity of a data collected it's always important to design an appropriate data collection instrument such as questionnaires. There for an undertaking necessary preparation is a crucial step. Secondly, it's also important to consider the willingness and the availability of each participant, adhering to ethical research guideline (Israel and Hay 2006). A clear schedule for the distribution and collection of the questionnaires. Along with sufficient copies of the final questionnaire were prepared for distribution among participants. These procedures ensured a systematic and ethical approach to data collection, enabling the acquisition of reliable and valid information that supports meaningful analysis and interpretation (Creswell & Creswell, 2017).

3.6 Data Analysis

After data were collected, data processing was carried out. The raw data were converted into a suitable form for analysis and interpretation. Data on its own are meaningless; they are only pieces of factual information that can be measured, quantified, or categorized, and it is only through interpretation that data are transformed into meaningful information. Insights can be derived, patterns identified, and more knowledge gained by closely examining and analyzing the data through data analysis (Howe, 2005). Therefore, data analysis is a process of converting raw data into meaningful information. According to Kothari (2004), data analysis includes comparing the outcomes of different experiments across different groups and finally coming to a common conclusion.

The analysis, whether it is quantitative, qualitative, or mixed, serves various purposes such as describing and summarizing data, identifying relationships between different variables, comparing and highlighting differences among several variables, and forecasting outcomes. Statistical methods play an important role in any data analysis process on a given topic. The data analysis process involves various steps such as editing,

coding, classification, and tabulation of the collected data. Descriptive statistics such as median and mode, which are particularly useful in summarizing data and understanding central tendencies, were utilized.

The data collected through questionnaires were processed and analyzed using statistical packages and tools such as SPSS. This comprehensive approach to data analysis ensures that the findings of the research are robust, measurable, and meaningful in evaluating the business model of MACCFA Freight Logistics and its effectiveness in creating value for its customers and stakeholders.

Model Specification

The relation between the dependent and the independent variables is mathematically as follows:

VC = $a_0 + a_1VP + a_2CSG + a_3CH + a_4KP + a_5KR + a_6RS + a_7CS + a_8KA + \epsilon$

Where VC is the dependent variable

The independent variables are : VP- value proposition

CSG - customer segmentation and

CH-channel

KP-key partnership

KR- key resource

RS- Revenue stream

CS- Cost structure

KA- Key activities

ϵ - error term

3.7 Ethical Consideration

This research work followed the following appropriate steps.

The data collected have to be subject to the following ethical considerations:

1. During the data collectiovariablesn process, for request for participation in the research work was proposed through official letter.
2. Participation was voluntary and were informed about the purpose and the response will be used entirely for the research purpose only.
3. Participants were also informed that, the information collected from the respondents will be kept confidentially

3.8 Validity and Reliability Validity:

The ultimate objective of any research is to produce a reliable, valid, measurable and accurate outcome (Wilma, 2013). In any research the research methodology must comply with the established standards and criteria, therefore validity and reliability make sure that the research methodology complies with the standards.

3.8.1 Validity

Validity refers to the accuracy of the measurement of a study and its ability to measure what it tends to measure. It is the appropriateness and accuracy of data collected. It is the absence of methodological or systematic errors, if a research measurement satisfies and effectively addresses the research, the findings will also become consistent (Ylmaz, 2013).

The Validity of this particular study was enhanced through:

1 **Content Validity**: through review of the interview guide and making sure the interview questions are free from bias, through examining the wither or not the interview question align with the research problem and, by making sure the all the contents of the data collected really measures what it is set out to be measured to meet the research objective.

2 **Triangulation**: cross checking multiple data sources to confirm findings.

These measures ensure the study captures the complexity and diversity of the firms' business models (Yin, 2018).

3.8.2 Reliability

Reliability of a study, refers to the studies ability to achieve a consistent and dependable result. It is the degree to which a variable or set of variables consistently measures what it is intended to measure (Dunn,

1999). Its imply to the trustworthiness of instruments used in measuring or the credibility of the means of data collection and the interpretation of the information in qualitative study. Reliability in qualitative research is achieved through consistency and transparency in data collection and analysis (Lincoln & Guba, 1985). Reliability could be achieved by demonstrating reliability through clear descriptions of methods employed, ensuring their consistency, Employing established, proven tools and instruments for data collection.

One of the most popular methods for determining internal consistency is Cronbach alpha (Saunders 2009). This reliability test measure how consistent individual responses were throughout the process of the survey. According to Hair et al. (2007), the rationale for this test is identify wither the individual items or indicators of the scale are measuring the same things and thus the result of the test expected to be highly inter correlated. The value of the coefficient Cronbach alpha range between 0 and 1, while zero represents the absence of consistency, one presence a perfect internal consistency. Reliability test result of a coefficient with Cronbach's alpha between 0.8 and above are considered to have very good reliability and those between 0.7 and 0.8 good; while those between 0.6 and 0.7 indicate fair and satisfactory reliability (Mertens, 2010; Zikmund et al. 2010). As shown in the following table 3.1 alpha coefficient of every variable is greater than 0.7. This indicates that the items on the scale possess strong internal consistency, and that the research instrument used in the study is highly dependable.

NO.	Variable	Cronbach's Alpha	Item
1	Value proposition	0.923	7
2	Customer segmentation	0.828	7
3	Channel	0.940	6
4	Key partnership	0.895	5
5	Key resources	0.851	3
6	Revenue stream	0.728	4
7	Cost structure	0.802	3
8	Key activities	0.907	5
9	Overall Value creation	0.928	4

Table3.1 Reliability test

CHAPTER FOUR

Results, Analysis and Interpretation

4.1 Introduction

This chapter primarily focuses on the data analyzing and interpreting the data collected through questionnaires, hence findings are presented with detail and results are discussed. The findings are presented under the following major sections, starting from the demographics of the respondents and/or their background information. Followed by a detailed presentation of findings from the respondents lived experience and the MACCFA'S performance on value creation. The descriptions of the respondents are further discussed and triangulated with relation to previous researches and the company's internal data. Then. Collected data is thoroughly examined using various analytical techniques to extract meaningful insights and draw conclusion that align with the research objective. Therefore, by addressing the study's purpose, the structure and methods of the analysis are created to address the research questions. Therefor the acquired data is organized, assembled, and analyzed utilizing the Statistical Package for Social Science (SPSS) software. This comprehensive analysis encompasses demographic information of respondents, survey findings, and an in-depth discussion to provide a deeper understanding of the research outcomes.

4.2 Response Rate, Reliability Test, and Demographic Profile

4.2.1 Response rate

For the analysis of the study, questionnaires were prepared and distributed to 44 respondents. Some people didn't return the questionnaire nor responded and others didn't fill them out correctly, so they were discarded out of the study. However, the overall response rate from the survey was 75% (total of 33 people responded promptly), which falls into an acceptable range and it's is valid for analysis.

4.2.1 Demographic profile of respondents

This section presents the respondents characteristics and background such as age, gender, education, and work experience at MACCFA Freight logistics. The section also presents an in-depth data analysis which covers the general characteristics and frequency analysis of the collected data. The frequency distribution of the demographic data is analyzed and presented in percentage in the following table:

A) **Demographic profile of Employees at MACCFA**

Demographic data		frequency	percent
Gender	Male	32	64
	Female	18	36
Age	20-30	21	42
	31-40	20	40
	41-50	8	16
	50 and above	1	2
Level of Education	College Diploma	2	4
	Bachelor's Degree	29	58
	Master's Degree and above	19	38
Work experience	1-5	17	34
	6-10	15	30
	10-20	17	34
	20+	1	2

Table 4.1 frequency table of demographic data

As presented in the table above, the gender composition of respondents who participate in filling out the questionnaires, 32 or 64 % of the respondents are male, while 18 or 36 of the respondents are Female. As the result shows the number of male respondents is higher. The second section of the table presents that, 42% of the respondents are aged between 20 to 30 years of age, and 40% of them are aged between 31 to 40 years of age, while the rest 16% and 2% of the respondents are aged between 41 to 50 and above 51 years respectively. The majority of the respondents fall between the age range of 20-30 or younger generation which have its own implication as different generation and age groups respond to different and innovative ideas and existing principles differently. In this study age and gender provide a general description or background of the respondents, though it does not have a direct implication or transferable interpretation.

The third section, presents the educational background of the respondents. Accordingly, 58% of the Bachelor's degree holder, and the educational level of 38% of the respondents is masters and above, while, 4.0% of the respondents have obtained a college diploma. This finding shows that the respondents have a diverse educational background, which determines the level of MACCFA'S human capital. The last section

of the table presents the experience level of the respondents in freight and logistics or similar roles. Hence 34% of the respondents have worked in a similar company or in a similar role for about 5 years and 30% of the respondents have experience level of 6 to 10 years. While34% of the respondents and the rest 2% of the respondents have worked in the industry for 10-20 years and above 20 years in the same company or in similar role respectively. This finding is also important in the study as experience level of an employee is a great asset in determining the human capital which is crucial in setting a competitive advantage in an industry. Human capital is an asset, that determines the success of a company. It mainly incorporates the educational and experience level of stockholders in an organization. Finally, the study regarded these two attributes as crucial elements which are set to determine individuals' ability to create and deliver a proposed value.

4.3 DESCRIPTIVE ANALYSIS

This section presents the overall perception of the internal respondents regarding MACCFA's business model and its role in value creation. The study analyzed and presented its findings by using descriptive statistics on Statistical Package for Social Science (SPSS), in order to determine the mean and the standard deviation the respondents. Therefore, the nine vital business model components as defined by Osterwalder and Pigneur (2010), were used as a parameter, and were analyzed in the following subsections.

4.3.1 Value Proposition

Value proposition is the overall capability and actual performance a company in presenting the unique value that the organization it set to offer to its target customers. value proposition is a capability of a company in meeting the needs of the customer needs and expectations Osterwalder and Pigneur (2010).

VALUE PROPOSITION	**Mean**	**Std. Deviation**
MACCFA clearly communicates its Freight Logistics service offering to its stakeholders.	4.90	0.303
The services offered by MACCFA effectively meets the needs of the customer base.	4.74	0.443
The company focuses on quality of service.	4.74	0.443

MACCFA provides unique logistics service	3.46	1.182
Compared to other logistics providers, MACCFA offers an exceptional and superior value	3.64	1.064
The proposed value by the company accurately reflects the actual services delivered	4.66	0.479
MACCFA considers fast and reliable service delivery as key advantages	4.36	0.827
Grand mean	4.3143	

Table 4.2 descriptive statistics on value proposition of the MACCFA

The above Table 3: result indicates that respondents generally perceive MACCAFA's value proposition positively. The result with mean of 4.90 and with standard deviation of 0.303, indicating that the respondent generally agrees and that there is a general consensus, that MACCFA fright logistics company clearly communicates its service offering effectively with its stakeholders. The company's service offerings are also effective in meeting their customer requirement with a mean of 4.74 and standard deviation of 0.443, indication that there is a strong agreement and consensus among the respondents about the statement. Accordingly, MACCFA's proposed values generally reflects its actual service offerings and the respondents also strongly agree with this statement, with a mean of 4.66 and standard deviation of 0.479.

The company focuses on quality of service and considers fast and reliable service delivery as key competitive advantages. Though the respondents generally have a positive perception about MACCFA's position in logistics services and exceptionally superior value offerings the results indicated that the responses are highly opinionated with a mean of 3.46 and 3.64 respectively and standard deviation of 1.182 and 1.064 respectively. This finding indicates that though MACCFA has a competitive edge and a relative first mover advantage, there is still a gap in differentiating its value offerings to its customers, to be able to offer an exceptional service.

4.3.2 CUSTOMER SEGMENTATION

Osterwalder and Pigneur (2010), defines a customer segment as a certain group of individuals or organizations with a certain need, behavior or characteristic which presents a markets opportunity that company intends to serve and provide a solution. Understanding and identified a customer segment is the crucial for any business model in order to develop their market niche. Though MACCFA's market niche is generally described by the sector itself, most logistics companies

further segment their specific customers hence this section discuss the results from the employee's perception regarding the company's target customers.

Customer Segmentation and customer relationship	**Mean**	**Std. Deviation**
MACCFA understands the specific needs of its different customer groups,	4.86	0.351
The company provides a customize service to its clients based on their unique requirements	3.08	1.085
The company has an effective relationship management strategy in place to build long term customer relationship	4.22	0.418
I believe MACCFAs customer segmentation Approach ensures tailored service delivery.	4.10	0.364
The company handles complaint and feedbacks in a professional manner	4.90	0.303
I am aware of the different customer segments MACCFA targets	4.26	0.443
Customer needs and expectations are systematically collected and analyzed.	4.34	0.479
Grand mean	4.2514	

Table 4.3. descriptive statistics on Customer Segmentation and customer relationship

According to the results from the above the above table, the respondents are generally aware of the specific customer segment that the company targets as indicated by the result with a mean of 4.26 and standard deviation of 0. 443.The Company understands the specific need of its target market and provides a customized service. Though the results shows that there is a general agreement towards this statement with a mean of 3.08, it comes out to be highly opinionated with a high standard deviation of 1.085 indicating that there is significant disagreement or diverse response among the respondents about the fact. This indicated that that, the either the service niche that MACCFA offers is either is too general and or the company has not built its competitive edge yet. According to the respondents the company has an effective relationship management's strategy, and a mechanism to collect and analyze customers need with their expectations. The company also has an effective relationship management strategy and procedures and handles complaints and feedbacks professionally.

4.3.3 Channels

Channels are mechanisms, which organizations set to deliver their proposed values to their customers. According to (Marcus S., 2018), this value delivery mechanisms are structure to facilitate transactions and enhance customer engagement. Hence this subsection, analyze the respondent's perception of channel of MACCFA's service delivery mechanisms in the following table.

Channel of communication for its outbound services	**Mean**	**Std. Deviation**
Communication throughout the lifecycle of shipments is proactive and reliable	3.72	0. 640
The company has a mechanism for an open and responsive communication channels	3.58	0.702
The company utilized an advanced and innovative technologies to improve its customer communication	2.78	0.932
Costumers will be communicated promptly for any delivery issues	4.04	0.856
The company has a well set up and reliable mechanism for tracking freight status	4.82	0. 388
the company service delivery is timely and exceeds client relationship	3.30	0. 886
Grand mean	3.7067	

Table 4.4 channel service delivery

According to the findings, the company has a well set up and reliable mechanisms for tracking fright status and delivering timely service. The company has also set a mechanism for an open and responsive communication throughout the lifecycle of shipment, in orders to communicate promptly with its customers

4.3.4 **Key Partnerships**

Key partners are external entities that assist a business in achieving its goals. These partnerships are essential for acquiring resources, delivering services, and expanding reach. Key partnerships can take various forms, including strategic alliances, joint ventures, buyer-supplier relationships, and cooperative

partnerships (Osterwalder & Pigneur, 2010). Therefore, this subsection will analyze the responses of the employees of MACCFA regarding their view on the company's relationship with its customers.

Key Partnerships	**Mean**	**Std. Deviation**
MACCFA effectively collaborates with customs and port authorities	3.9	0.580
MACCFA's collaboration with third parties adds value to logistics chain	3.30	0.974
The company manages issues or delays from the external partners effectively or proactively	3.84	0.650
The company has built and maintained a strong relationship with logistics partners.	4.66	0.479
Working in collaboration with suppliers and key partners has a positive impact on service delivery	4.90	0.303
Grand mean	4.120	

Table 4.5. key partnerships

As shown on the above table 4.5 the results, indicates that MACCFA has built and maintained a strong relationship with logistics partners, suppliers and key stakeholders (such as, customs and port authorities) that positively contribute and have impact on service delivery. There is general agreement regarding the importance of partnerships among the respondents. Though the company manages issues or delays from the external partners effectively or proactively, there seems to be a varied opinion regarding its contribution to adding value to its customers, the results indicated that the respondents have a varied perception of the fact with a mean of 3.30 and with a high standard deviation of 0.974**.**

4.3.5 Key Resources

Key resources, refers to the essential assets the company utilizes to produce products, provide services, and maintain its operations. These resources can be grouped into four main categories: physical, intellectual, human, and financial resources. Each of these plays a crucial role in enabling businesses to achieve their strategic objectives, connect with their target audience, and build strong customer relationships.

Key resources	Mean	Std. Deviation
MACCFA has sufficient infrastructure that support logistics activities	3.40	0. 857
The company has sufficient technological and intellectual capabilities to track and handle freight activities contributing positively to the process of value creation	4.42	0.499
The company utilizes its resources in an effective manner	4.26	0. 443
Grand mean	4.0267	

Table 4.6. key resources

The result from the above table indicates that MACCFA has sufficient technological and intellectual capabilities to track and handle freight activities, which is contributing positively to the process of value creation, where respondents generally agree to the statement with a mean of 4.42 and low standard deviation of 0.499. however, though respondents do perceive that MACCFA has sufficient infrastructure that support logistics activities the respondents' perceptions seem to vary significantly, with a mean of 3.40 and standard deviation of 0.857, which is close to 1 and considered to be a higher standard deviation. Though the company operates in a land locked country with a huge infrastructural limitation, the result proves the companies' ability in effectively utilized its resources to deliver timely service to its customers.

4.3.6 Revenue Stream

The revenue stream of a company defines a company's mechanism to generate income by delivering values its customers. A revenue stream is therefore a crucial component of the business model. These revenue stream can vary greatly depending on the demand for specific product or service the company offers.

Revenue Stream	Mean	Std. Deviation
The pricing strategies that the company follows are aligns well with the value delivered to customers	4.002	0. 795
Revenue model (such as, transaction revenue and continuous revenue) is flexible to adapt to market changes.	4.16	0.422
The company clearly communicates its revenue generation	4.18	0.388

strategies, within the organization		
Financial sustainability is a clear strategic priority at MACCFA.	4.70	0.463
Grand mean	4.265	

Table 4.7 revenue stream 1

The respondents generally agree that MACCFA communicates its revenue generation strategies, within the organization. The respondents agree the pricing strategy of the company align well with the delivered value to its customers, with a mean of 4.002 and a slightly higher standard deviation of 0.795, indicating that some of the respondents have a different view from the general statement. Hence the company has developed a flexible to revenue model to be able to adapt to the market change. Finally, the company strategically prioritizes financial sustainability and the respondents generally agreed to the statement with a mean of 4.70 and standard deviation (SD) of 0.463.

4.3.7 Cost Structure

The cost structure of a company primarily includes the organizations expenses; the organization incur in the process of delivering value to its customers and in its effort to maintain its business model. These expenses are mainly influenced by the other business model components that play a crucial role in business profitability such as key resources, key activities and key partnerships.

Cost structure	**Mean**	**Std. Deviation**
MACCFA focuses on maximizing its profit margin without compromising the service quality	4.12	0. 718
The company implements an effective operational cost management structure	3.58	1.108
The efficient operational strategies of the company serve as an effective cost saving strategy	4.16	0. 650
Grand mean	3.7067	

Table 4.8. Cost structure

The above table proves that the respondents are MACCFA, perceive their company performance on cost managements is good with a mean of 4.12. Accordingly with a mean of 3.58 and standard deviation of 1.108 the respondents at MACCFA generally perceive that the company has implements an effective

operational cost management strategy. The company also have an efficient operational strategy, which serves as an effective cost saving strategy. Hence the company focuses of maximizing its profit margin without compromising the delivered value to its customers.

4.3.8 Key Activity

To create value for customers, an organization must engage in specific key activities. These processes and operations are essential for delivering the company's value propositions, reaching target markets, and maintaining customer relationships.

Overall value creation	**Mean**	**Std. Deviation**
The company's customs clearance processes effectively reduce regulatory delays and create value	4.74	0.443
Innovation in fright and customs operations (e.g. The use of digital tools) enhances service accuracy and transparency	4.62	0.490
The company use of route optimization and tracking technologies adds value by improving delivery reliability	4.82	0.388
Integration of information systems enhances coordination between departments and with customers.	3.94	0.890
Continuous improvement and process innovation are evident across MACCFA's functions.	3.42	0.702
Grand mean	4.3080	

Table 4.9. key activities

Table 4.9 presented the findings; accordingly, the findings shows that the company's effort to continuously improve and process innovations is evident across MACCFA's functions. Particularly innovation in fright and customs operations have proved to enhance service accuracy and transparency. The company has also improved its functions by implementing a rout optimization technology (such as TMS, -ArcGIS and GPS and Telematic systems, custom and border integration, dynamic load planning tools:) in order to add value by improving delivery reliability. The integration of information system also enhances coordination between departments and its customers, enabling the company to build a clear customs clearance processes to reduce regulatory delays and finally to create value.

4.1.1 Value Creation

A business model serves as the framework through which firms create and capture value, facilitating transactions between stakeholders (Osterwalder & Pigneur, 2009). The concept of value creation in a business model shows the total benefits generated for customers and stakeholders. This generally in economic term is referred as the total surplus or social gain from trade (Vladyslav B. et al., 2018). This surplus is then distributed between the customer and owners through pricing mechanisms.). These elements are also crucial in understanding how businesses generate and sustain competitive advantages in the freight and logistics sector, particularly in the case of MACCFA.

Overall value creation	**Mean**	**Std. Deviation**
The company's key resources and key activities contribute positively to value creation	3.80	0.670
There is a strong relationship between internal performance of the company and its competitiveness in the market	4.40	0. 535
I am confident in MACCFAs ability to continue delivering exceptional service and creating value in the future.	4.44	0.501
Key logistics activities at MACCFA are strategically designed to create value and sustain growth.	4.44	0. 501
Grand mean	4.27	

Table 4.10. Overall value creation

The above table the discuss the result the participants response. MACCFA has strategically designed its logistics activities to contribute positively to value creation and sustainable growth and the respondents generally agree with a mean (M) of 4.44 and standard deviation of 0.501, indicating the existence of general agreement and consensus to the statement. As a result, the companies' key activities and key resources have a positive contribution, with mean of 3.80 and standard deviation (SD) of 0.670 which as a higher, indicating that some respondents may have slightly different opinions. The respondents believe that there is a strong relationship between MACCFA's internal operation performance and its competitiveness in the

market with a mean of 4.40 and standard deviation (SD) of 0. 535, indicating there is strong agreements to the statements. Therefor MACCFA's employees have a positive outlook in the company's ability to continue delivering exceptional service and will keep creating value in the future.

4.5 Regression analysis

A regression analysis is a valuable and a very powerful analytical tool, to examine a relationship between several independent variables the dependent variable (Jaccard, Guilamo-Ramos, Johansson and Bouris,2006). The association between the identified dependent variable "value creation" and the independent variables "the components of the business model canvas" as discussed in the study, was explained using a multiple linear regression model.

According to Stevens (2009), statistical assumptions are essential as provide control over the research process by testing reliability, and predictability. Therefore, assumptions such as linearity, normality, multicollinearity, and homoscedasticity were tested before proceeding to the regression analysis.

4.5.1 Normality distribution

To test the normality of the distribution, skewness and kurtosis, two of the most know statistical methods were employed. According to George and Mallery (2010), a normality assumption is satisfied when the Skewness and Kurtosis statistics are between -2.0 and +2.0, and a statistical value which is closer to zero is considered to be asymmetric or peaked. As shown in the following normality distribution table, the statistical value of both Skewness and Kurtosis test are between the accepted range of -2 to +2. Accordingly, the lowest Skewness value being -1.083 and the highest kurtosis value is +0.056, and the lowest and the highest Kurtosis value ranging between -1.422 and +0.081. therefore, is it possible to conclude that the studies variables satisfy the normality assumption.

		Kurtosis		Kurtosis	
Variables	N	Statistic	Std. Error	Statistic	Std. Error
value proposition	33	-0.731	0.409	-0.648	0.798
customer segmentation	33	0.056	0.409	-0.581	0.798
channel	33	-0.029	0.409	-0.828	0.798
key partnership	33	-0.493	0.409	-0.235	0.798

key resource	33	0.442	0.409	-1.352	0.798
revenue stream	33	0.546	0.409	-0.795	0.798
cost structure	33	-0.362	0.409	-0.443	0.798
key activity	33	-1.083	0.409	0.081	0.798
value creation	33	0.029	0.409	-1.422	0.798

Table 4.11. Descriptive Statistics

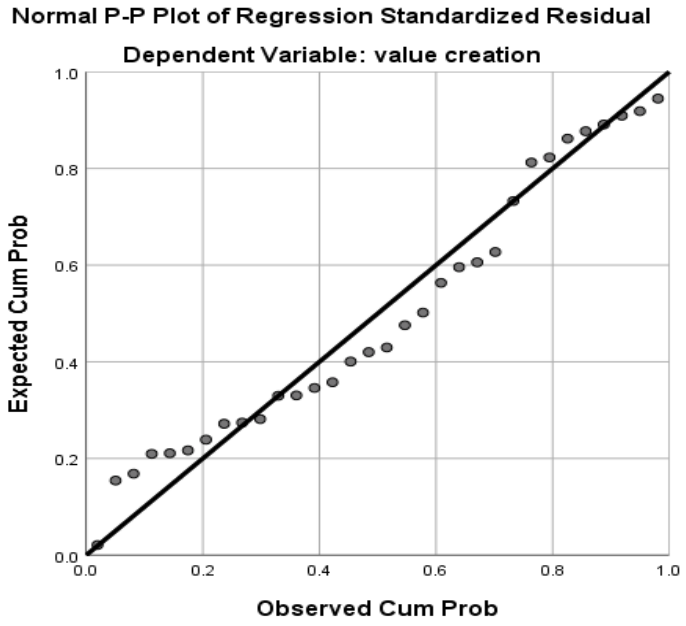


Figure 4. 1 Normality test

4.5.2 MultiCollinearity Test

Multicollinearity occurs, when independent variable is highly correlated (Keith, 2006). According to Field (2009), if the resulting value of VIF is below 10 and the tolerance value is above 0.2 it indicates that there are no multicollinearity issues. According to the presented table here in below, the result of most of the independent variable, have a value of VIF that exceeds the threshold level of 10 and a tolerance value well below 0.2. The only variable that has no serious multicollinearity issue is the independent variable cost structure; however, the rest of the variables indicated a serious multicollinearity concern.

Model		Collinearity Statistics	
		Tolerance	VIF

T*able 4.12 collinearity statistics*

1	(Constant)		
2	VP	0.020	50.981
3	CSG	0.039	25.741
4	CHA	0.047	21.178
5	KP	0.055	18.193
6	KR	0.068	14.791
7	RS	0.163	6.142
8	CST	0.830	1.205
9	KA	0.019	53.440

4.5.3 Linearity test and Homoscedasticity test

A linearity test established the relationship between the dependent and independent variable is linear or not, and whether it fulfills the criteria for correlation and regression analysis. A homoscedasticity on the other hand is a presumption, which states that the variance of error terms is comparable regardless of the values of the independent variables. As presented in the following figure 4.2, it is possible to visually inspect the scatter plot of the standardized residuals by the regressions standardized predicted value, both linearity and homoscedasticity can be determined. However, the scatter plot revealed the existence of a patterns are spread none randomly implying that both the linearity and homoscedasticity assumptions are violated. Finally, the result shows a nonlinear and heteroscedastic relationship between the variables.

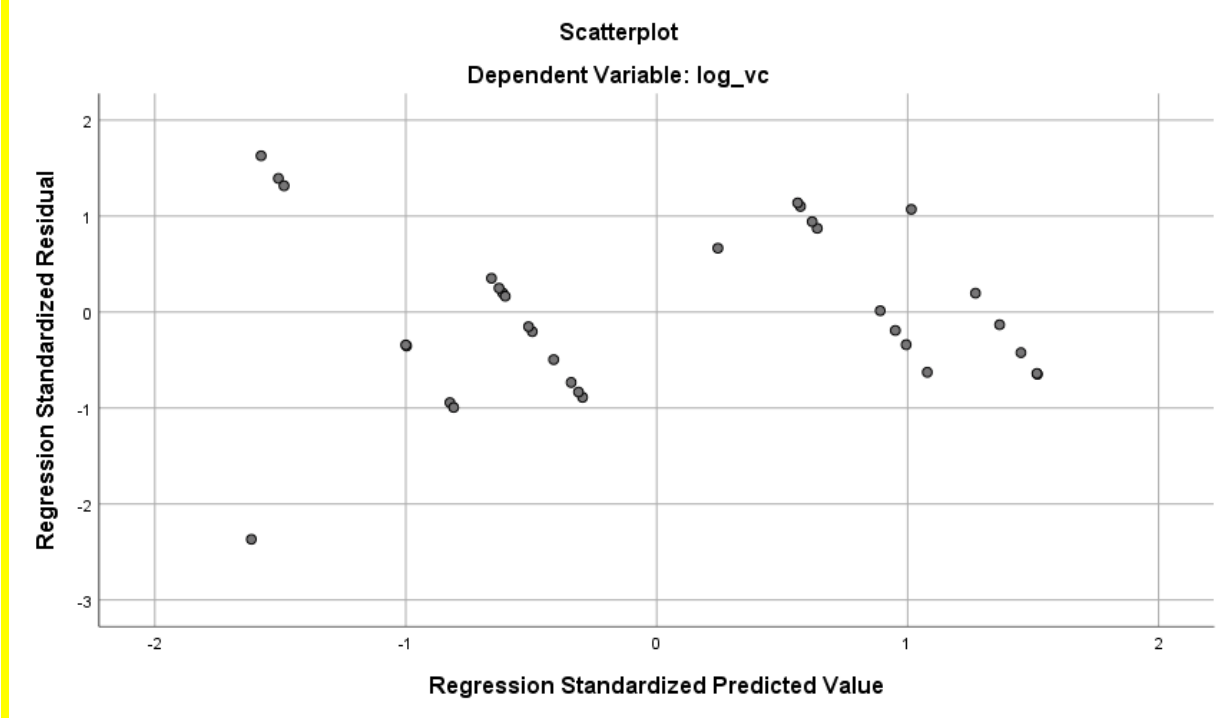


Figure 4.2 Normality test

4.5.4 Model summary

In the following table, the summary of the model explains that a significant amount of the variance in the dependent variable which is value creation. This indicated that R^2 value of 0.945, implying that 94.5% of the variation is explained by the independent variables. Other factors that are not included in the method account for the remaining 5.5%.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.972[a]	0.945	0.934	0.12928

Table 4.13 model summary

4.5.5 ANOVA test

The ANOVA table, is a table that as presents the overall statistical significance/acceptability of the model. As shown below, there is a statistically significant correlation between the variables with a p-Value equal to 0.00, which is less than p-Value 0.05 implying that the independent variables have a significant impact on the value creation. Therefore, as indicated by the ANOVA table presented in the below table the F-test with F=88.211 and p-value < 0.001, which confirms that the independent variable can contribute to the variations in the dependent variables.

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.795	8	1.474	88.211	.000[b]
	Residual	0.685	41	0.017		
	Total	12.480	49			

Table 4.14 ANOVA.

4.5.6 Coefficient table of the regression analysis

In order to evaluate the level of impact the predictor variables have on the model, a standard t-test and β value were observed. Beta value (β) presents the degree to which the dependent variable is affected by a change in the standard deviation of the independent variable and it provides a more comprehensive understanding of the significance of the predictors in the model. According, If the p-value of the regression

analysis is smaller or significant at 0.05, and a larger t-value, it implies that the predictor variable contributes greatly and that there is a significant influence in the outcome (Field, A., 2013).

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.904	0.464		4.108	0.000
	VP	0.459	0.244	0.576	1.881	0.067
	CSG	-0.533	0.222	-0.409	-2.405	0.021
	CHA	-0.122	0.135	0.160	0.902	0.372
	KP	0.179	0.140	0.189	1.277	0.209
	KR	0.732	0.135	0.799	5.439	0.00
	RS	-0.038	0.097	-0.030	-0.389	0.699
	CST	-0.012	0.028	-0.017	-0.419	0.677
	KA	-0.296	0.285	-0.306	-1.037	0.306

Table 4.15. coefficient table

As shown in the above coefficient table, the variable Key Resource, presents t value =5.439, β-value=0.799 which is greater than 0.5 and the p-value =0.00 which is significant at 0.01 level, indicating that key resource is a strong positive predictor of value creation. However the regression model, value proposition(t = 1.881, β= 0.576, and p = 0.067, customer segmentation (t = -2.405, β= -0.409 and p = 0.021),channel(t = 0.902, β= 0.160 and p = 0.372),key partnership(t = 1.277, β= 0.189 p = 0.209), revenue structure (t = -0.389, β= -0.030 p = 0.699), cost structure (t = -0.419, β= -0.017 p = 0.677), key activity(t = -1.037, β= -0.306 and p = 0.306) collectively presents a smaller t-value, and β value< 0.5 and p-value >0.05 indicating that the variables have a weak or statistically unreliable effect on value creation.

4.6 Discussion

The study aimed to evaluate the business model of MACCFA Freight Logistics using the Business Model Canvas (BMC) framework. Accordingly, data were collected from 50 employees of MACCFA Freight Logistics using a structured questionnaire based on a 5-point Likert scale, which measured their level of

agreement with each statement. The study followed a mixed approach, with which the collected data were analyzed using descriptive statistics such as frequency tables, characterized by high means and standard deviations, in order to evaluate the respondents' perceptions of each component of the business model. The subsequent correlation analysis also proved the pairwise relationship between variables and showed that the elements of the Business Model Canvas are significantly related to the dependent variable (value creation). However, the multiple regression analysis found only one variable that has a significant relationship. This could be due to the high collinearity observed in Table 4.12, which resulted in a serious multicollinearity issue. As observed in Table 4.15, most of the independent variables have VIF values that exceed the threshold level of 10 and tolerance values well below 0.2, which might obscure the variables' individual effects. However, the variable "key resources" proves to have a significant relationship with the dependent variable, value creation.

MACCFA Freight Logistics PLC is a prominent Ethiopian logistics company established in 1994, operating throughout Ethiopia (including Addis Ababa, Dire Dawa, Kaity, Mojo, Moyale, and Semera), and headquartered in Addis Ababa. Over the past three decades, it has evolved into a comprehensive logistics provider, offering services across air, sea, rail, and road freight, as well as customs clearance, warehousing, and project logistics. The key resources are all the tangible and intangible components that MACCFA benefits from in creating and delivering value. The most important determinant of the performance difference between businesses is the company's ability to utilize its resources effectively. Businesses may have similar or completely different resources; however, the level of utilization of these resources drives them to different performance results (Meziyet UYANIK, 2023). Accordingly, MACCFA offers ambient storage solutions, weekly ocean freight services covering over 600 routes and connecting 10,000 points, as well as ground transport within Ethiopia and cross-border services to neighboring countries, with customs clearance performance of 100% compliance with Ethiopian customs requirements. These core competencies are the capabilities that represent the spirit of the business that competitors cannot easily imitate to create a competitive advantage that create customer value, and that can be disseminated (Hamel & Prahalad, 1996). MACCFA seems to understand this core concept and has particularly been working for the past four years to strengthen and widen its resource base by partnering with prominent global companies such as CMA CGM and CEVA Logistics PLC.

The company signed a joint venture contract with CEVA Logistics in 2023, with the objective of enhancing its global reach and service offerings. This partnership with CEVA Logistics allowed the company to open a 1,000-square-meter Less-than-Container Load (LCL) facility and Container Freight Station (CFS), which serves as a logistics hub within the Modjo Dry Port, connecting to the port of Djibouti via the Ethio-Djibouti Railway, and supports the growing logistics needs of Ethiopia and surrounding markets. The partnership also helped MACCFA to develop air-conditioned and cold-chain warehousing facilities. In conclusion, MACCFA seems to understand the significance of strengthening its key resources, both tangible (such as LCL facilities, air-conditioned and cold-chain warehouse facilities, specialized side-loader trucks equipped with GPS) as well as intangible resources that the company has built over the past three decades and those resulting from its partnerships (such as the company's brand, knowledge and experience, corporate image, and corporate identity), which are worth mentioning. According to the RBV perspective, a firm's organizational resources and capabilities, such as its sales force and marketing capabilities, form the basis of its value-creation capabilities and competitive advantage (J. B. Barney & Hesterly, 2015; Wernerfelt, 1984).

CHAPTER FIVE

Summary of Findings, Conclusion and Recommendation

5.1 Introduction

The previous chapter presented the results of the result findings and provides a detailed discussion, while the proceeding chapter presents the full summary of the results, discussions, conclusions and recommendations. Accordingly, section 5.1 presents summary of major findings while the section 5.2 presents the conclusion of the research finding. 5.3 present recommendations of the researcher and the last section 5.4 covers the Limitations and Directions for Future Study.

5.2. Summary of Major Finding

According to Newth (2012), a superior business model has the ability to offer value propositions, create strong competitive advantage and the ability to secure a sustainable profit. Every marketing activity begins with identifying customers' needs and developing a new innovative method to address those needs effectively. A business model help develop capabilities to explore revenue source and to be financially viable, with which it creates value. Capabilities are built in a company's value chain using strategic assets or strategic resources, such as value proposition, strategic resources and channels of value delivery (V K Ranjith, 2016). This qualitative relationship between variables propels profitability.

The study, aim to evaluate the business model of MACCFA freight logistics this study using Business Model Canvas (BMC) framework. Accordingly, data was collected from 50 employees of MACCFA freight logistics, by using a structured questionnaire based on 5-point Liker-scale which is based on their agreement level on each statement. The study followed a mixed approach, with which a collected data was analyzed, by using descriptive statistics such as frequency table, mean and standard deviation in order to evaluate the respondent's perception on each component of business model.

According to the demographics of the respondents the majority (64%) of the respondent are male and 42% of the employees belongs to the 20-30 age group. Furthermore the 58% of the respondents hold a bachelor's degree or more and 34% of the respondents are worked in the industry starting with experience level of 1-5

years. This finding mostly important in the study as experience level and educational background of an employee is a great asset in determining the human capital which is crucial in setting a competitive advantage in an industry. Human capital is an asset, that determines the success of a company. It mainly incorporates the educational and experience level of stockholders in an organization. Finally, the study regarded these two attributes as crucial elements which are set to determine individuals' ability to create and deliver a proposed value.

As clearly presented on the conceptual framework, the study adopted Osterwalder and Pigneur (2010), business model canvas, which constitutes nine components or variables, to evaluate the business model of MACCFA and analyzes the variables contribution to value creation. The study assessed MACCFAs key resources, key activities, key partnerships, revenue stream and cost structure, as well as the values proposition of the company, how effectively the company segments its customers and manage to build a long-term relationship with its customers. One fundamental characteristic business models in freight logistics industry are, service integration, where firms offer end-to-end solutions, including transportation, warehousing, and value-added services such as inventory management and supply chain consulting (Johnson & Lee, 2019). This integration enhances efficiency and customer satisfaction by providing seamless logistics solutions. Evaluating these business models is critical for several reasons. Firstly, it ensures adaptability in a rapidly changing market influenced by economic fluctuations, technological advancements, and global trade shifts (Davis & Roberts, 2021). Secondly, assessment helps in enhancing operational efficiency by identifying inefficiencies and optimizing logistics processes (Harrison, 2019). Moreover, continuous evaluation strengthens competitive advantage, allowing companies to refine their strategies and differentiate themselves in a highly competitive market (Garcia et al., 2020).

5.3 Conclusion

In conclusion the overall structure at MACCFA strongly support, its value proposition. As indicated by the collected and analyzed data, the company has built a strong foundation for value creation. Hence the study, aimed at evaluating the business model of MACCFA freight logistics, by implementing business model canvas (BMC). Accordingly, the data was collected from 50 employees of MACCFA freight logistics, by using a structured questionnaire based on 5-point liker scale. The collected data were analyzed by using

descriptive statics such as frequency table, mean and standard deviation in order to evaluate the respondent's perception on each component of business model.

The major finding of this study reveals that; key resources prove to have significant relationship with the value creation. Accordingly, MACCFA offers ambient storage solutions, weekly ocean freight services covering over 600 routes, connecting 10,000 points, offers ground transport within Ethiopia and cross-border services to neighboring countries, with custom clearance performance of 100% compliance with Ethiopian customs requirements. This core competencies are the capabilities that represent the spirit of the business that competitors cannot easily imitate to create a competitive advantage, that make customer value, and that can be disseminated (Hamel & Prahalad, 1996). MACCFA seems to understand this core concept that it has been particularly working for the past four years to strengthen and widen its resource base by partnering with most prominent and global companies such as CMA CGM and CEVA Logistics PLC. Finally, the company seems to understand the significance of strengthening its key resources both tangible (such as LCL facilities, air-conditioned and cold chained warehouse facilities, specialized side-loader trucks equipped with GPS) as well as intangibly resources which the company built for the past three decades as well as the ones which resulted through its partnership (such as the company's brand, knowledge and experience, corporate image and corporate identity) are worth mentioning. As well as, a MACCFA's resources and capabilities, such as its sales force and marketing capabilities best known as customer experience, form the basis of its value creation capabilities and competitive advantage (J. B. Barney & Hesterly, 2015; Wernerfelt, 1984).

Some key finding indicates that, MACCFA clearly communicates its freight logistics service offerings to its stakeholders and addresses complaints and feedbacks in an effective manner. The company has built a strong relationship with its key partners, supplier and other stakeholders (such as: customs and port authority) that have a positive contribution to value creation and impacts service delivery.

According to Munda (2020) and Mandeep (2023), advanced and innovative technologies are crucial in enhancing freight forwarding practices and overall business performance of the company. However, while the company has setup responsive and reliable mechanism for tracking freight status, that contribute to improved timely delivery that meet or exceeds customers expectation.

However, the findings indicates that there is a gap in the utilization of advanced and innovative the technologies with in the company's channel of communication. Though customers relationship is a vital component with in the business model canvas, these activities are not supported by a more advanced technologies that support an open and responsive communication.

Moreover, although the company has built its internal capabilities and infrastructure that support its logistics activities, the company still face common infrastructural challenges that prevails in emerging countries like Ethiopia. Freight forwarding companies also need to manage delays from external parties, proactively and professionally. However, the result from the respondents shows that there is a sight disagreement and responses are highly opinionated indicating that MACCFA's delay management from the external parties is poor or controversial. Which lead to a wrong perception among the respondents, that MACCFAs collaboration with third parties does not have a significant contribution in adding value to customers.

Finally, though MACCFAs internal activities and its ability to deliver value to its target markets looks promising, this challenges if unaddressed may cause the company some serious problems. For instance, it could hinder the company's long-term competitive, and growth potential. Therefore, this study not only validate the relevance of business model canvas as an evaluative tool for internal value creation but also provide a roadmap by evaluating the most significant component of the business model canvas that have that most impact on value creation.

5.4 Recommendation

Based on the findings and observed gap the following recommendations are proposed:

The use of comprehensive information technology systems and digitalized tools provide a smooth operation and enhance visibility; hence it's recommended that the company should invest more on advanced and innovative logistics software (for better shipment tracking, export documentation handling, delivery reliability and customer relation management), and digital tools for a better operational performance and a greater customer satisfaction.

Freight forwarding companies shall engage or partner with diverse networks of suppliers, carriers with local authorities, and partners across different regions. Building a strong relationship and maintaining an open communication with key partners is particularly important to enhance operational flexibility. MACCFA has built a partnership with CMA CGM, a world learns in transport and logistics, MACCFA has also entered

into a joint venture agreement with CEVA logistics, a top leading global partner. MACCFA is also an agent for Ethiopian Airlines and many other international carriers and shipping companies. However, the finding from the respondents which has reported a low mean value=3.30 and standard deviation of 0.974, which indicate the lack of general consensus. The result may indicate that these partnerships may not have impacted MACCFA freight logistics operations significantly or the participants are not well aware of the of the impacts(benefits) the partnership have brought to the company. Therefor the Partnership should be reevaluated to ensure alignment with the value proposition and reduce cost structures. The company should also share it's up to date reports regarding its performance, that portrays impact, that the company has exhibited due to its partners influence, and facilitating training with the partner companies, to engage and improve its employees understanding about the how this well-known global companies operates and how the partnership is benefiting their company.

Respondents also indicate that, MACCFA's both channels of internal and external communication are insufficient or underutilized. Freight forwarding companies shall be open, transparent and responsive. Hence communication throughout the lifecycle of shipment need to be proactive and reliable. The company should have a mechanism and the necessary innovative technologies to internal and external communication. A prompt communication with customers regarding any delivery issues which contributes significantly for timely service that exceeds client's expectations. Therefore, reviewing the existing communication strategies, exploring innovative digital options for a better outreach and a better flow of information within the organization, is found to be crucial. This is particularly useful in enhancing coordination with in the organizational setting and will contribute significantly for a timely service delivery, leading to a better customer experience and internal alignment.

Finally training help have enhance skills and competencies, continues employee training contributes greatly in fostering shared visions and promotes intradepartmental collaboration, the company should create awareness within the company, regarding the company's BMC framework and create a relevance in to how each department contribute to value creation and delivery.

5.5 Limitation of the study

The research paper has had some limitations. First, the study only included results collected through questionnaires due to resource and time limitations. Second, the way the questionnaire was constructed had

some limitations, and it hindered the research to use a thorough analysis of the result using inferential analysis. Secondly, a business model of a company affects several stakeholders, particularly customers, key partners and government bodies. However, the study only included results collected from the employees of the company, which can be biased due to several reasons. Therefore, future studies should take all this factors for a completer and more comprehensive outcome

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APPENDIX:

QUESTIONNAIR FOR EMPLOYEES

ADDIS ABABA UNIVERSITY: SCHOOL OF COMMERCE

DEPARTMENT OF LOGISTICS AND SUPPLY CHAIN MANAGEMENT

Dear Respondent, the purpose of this questionnaire is to gather relevant information that will be used for the study entitled Evaluating Business Model of MACCFA Freight Logistics with main focuses on case study on Value Creation, for the partial fulfillment of the MA in Logistics and Supply Chain Management from Addis Ababa University.

I would like to extend my deep appreciation to your company and to you for your willingness and cooperation in undertaking this valuable research. The information you provide will help me better understand the business of MACCFA freight logistics and its impact on value creation. The information you provide in this questionnaire will only be used for the sole purpose of the research and will remain confidential.

Therefore, I kindly request that you complete the following questions to reflect your opinions as accurately as possible and give factual information to the best of your knowledge. Thank you for your support and cooperation.

If you have any inquiries, please use the following address:

Thank you for your cooperation!

Tsion Getachew Phone no. +251 943292633

Email: - tgetachew755@gmail.com

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SECTION (A): DEMOGRAPHIC INFORMATION

1) What is your gender?

Male ☐ Female ☐

2) Please indicate your age

20-30 years old ☐ 31-40 years old ☐

41-50 years old ☐ >50 Years Old ☐

3) What is the highest level of education you have completed? Select one.

Certificate ☐ College Diploma ☐

Bachelor's Degree ☐ Master's Degree ☐

Doctorate Degree ☐

4) How Long have you worked in the logistics and supply Chain Industry?

1-5 years ☐ 5-10 years ☐ 11-20 years ☐ > 20 years ☐

SECTION (B) STRUCTURED QUESTION

The flowing section presents statements regarding the value creation aspect of MACCFA fright logistics business model. The responses provided a valuable data for evaluating the firms approach sin value creation, hence please each statement carefully and indicate by ticking **(√)** the box on the scale of 1-5 based on your level of agreement.

A) VALUE PROPOSITION

1= Strongly Disagree, 2=Disagree, 3 = Neutral, 4=Agree, 5= Strongly Agree					
	Code				
	1	2	3	4	5

MACCFA clearly communicates its Freight Logistics service offering to its stakeholders.					
The services offered by MACCFA effectively meets the needs of the customer base.					
The company focuses on quality of service.					
MACCFA provides unique logistics service					
Compared to other logistics providers, MACCFA offers an exceptional and superior value					
The proposed value by the company accurately reflects the actual services delivered					
MACCFA considers fast and reliable service delivery as key advantages					

B) CUSTOMER SEGMENTATION

1= Strongly Disagree, 2=Disagree, 3 = Neutral, 4=Agree, 5= Strongly Agree					
	Code				
	1	2	3	4	5
MACCFA understands the specific needs of its different customer groups,					
The company provides a customize service to its clients based on their unique requirements					
The company has an effective relationship management strategy in place to build long term customer relationship					
I believe MACCFAs customer segmentation Approach ensures tailored service delivery.					
The company handles complaint and feedbacks in a professional manner					
I am aware of the different customer segments MACCFA targets					
Customer needs and expectations are systematically collected					

and analyzed.					

C) channels

1= Strongly Disagree, 2=Disagree, 3 = Neutral, 4=Agree, 5= Strongly Agree					
	Code				
	1	2	3	4	5
Communication throughout the lifecycle of shipments is proactive and reliable					
The company has a mechanism for an open and responsive communication channels					
The company utilized an advanced and innovative technologies to improve its customer communication					
Costumers will be communicated promptly for any delivery issues					
The company has a well set up and reliable mechanism for tracking freight status					
the company service delivery is timely and exceeds client relationship					

D) KEY PARTNERSHIPS

1= Strongly Disagree, 2=Disagree, 3 = Neutral, 4=Agree, 5= Strongly Agree					
	Code				
	1	2	3	4	5
MACCFA effectively collaborates with customs and port authorities					
Working in collaboration with third parties adds value to logistics chain					

The company manages issues or delays from the external partners effectively or proactively					
The company has built and maintained a strong relationship with logistics partners.					
Working in collaboration with suppliers and key partners has a positive impact on service delivery					

E) KEY RESOURCES

1= Strongly Disagree, 2=Disagree, 3 = Neutral, 4=Agree, 5= Strongly Agree					
	Code				
	1	2	3	4	5
MACCFA has sufficient infrastructure that support logistics activities					
The company has sufficient technological and intellectual capabilities to track and handle freight activities					
The company has sufficient human capital, and intellectual resources that contributes positively to the value creation process					
The company utilizes its resources in an effective manner					

F) REVENUE STREAM

1= Strongly Disagree, 2=Disagree, 3 = Neutral, 4=Agree, 5= Strongly Agree					
	Code				
	1	2	3	4	5
I am familiar with the key revenue streams of MACCFA					
Pricing strategies are aligned with the value delivered to customers					

Revenue model is flexible to adapt to market changes					
Revenue generation strategies are clearly communicated within the organization					
Financial sustainability is a clear strategic priority at MACCFA.					

G) COST STRUCTURE

1= Strongly Disagree, 2=Disagree, 3 = Neutral, 4=Agree, 5= Strongly Agree					
	Code				
	1	2	3	4	5
The competitive pricing strategy at MACCFA considers the value delivered					
The company focuses on maximizing its profit margin without compromising the service quality					
The company implements and effective operational cost management structure					
The efficient operational strategies of the company serve as an effective cost saving strategy					

H) Value Creation

1= Strongly Disagree, 2=Disagree, 3 = Neutral, 4=Agree, 5= Strongly Agree					
	Code				
	1	2	3	4	5
The company business model contributes to its value creation goals					
The company's key resources and key activities contribute positively to value creation					
There is a strong relationship between internal performance of					

the company and its competitiveness in the market					
I am confident in MACCFAs ability to continue delivering exceptional service and creating value in the future.					
The company business model contributes to its value creation goals					

I) Key Activity

1= Strongly Disagree, 2=Disagree, 3 = Neutral, 4=Agree, 5= Strongly Agree					
	Code				
	1	2	3	4	5
The company's customs clearance processes effectively reduce regulatory delays and create value					
Innovation in fright and customs operations (e.g. The use of digital tools) enhances service accuracy and transparency					
Use of route optimization and tracking technologies adds value by improving delivery reliability					
Integration of information systems enhances coordination between departments and with customers					
Continuous improvement and process innovation are evident across MACCFA's functions					
Key logistics activities at MACCFA are strategically designed to create value and sustain growth.					