EVALUATING THE EFFECT OF STRATEGIC COST MANAGEMENT PRACTICE IN SUPPLY CHAIN MANAGEMENT ON COMPETITIVE ADVANTAGE OF PHARMACEUTICAL MANUFACTURERS IN ADDIS ABABA, ETHIOPIA

BY

HAWI KABA LIKISA

JUNE 2023

ADDIS ABABA, ETHIOPIA

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A THESIS SUBMITTED TO THE SCHOOL OF COMMERCE, COLLEGE OF BUSINESS AND ECONOMICS, ADDIS ABABA UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR MASTER'S OF ARTS DEGREE IN LOGISTICS AND SUPPLY CHAIN MANAGEMENT

ADVISOR: BUSHA TEMESGEN (PHD)

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ADDIS ABABA, ETHIOPIA

ADDIS ABABA UNIVERSITY

SCHOOL OF COMMERCE

This is to certify that the thesis prepared by Hawi Kaba, entitled: "Evaluating the Effect of Strategic Cost Management Practice in Supply Chain Management on Competitive Advantage of Pharmaceutical Manufacturers in Addis Ababa, Ethiopia", submitted in partial fulfillment of the requirements of the Degree of Master of Art in Logistics and Supply Chain Management complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

Signed by the Examining Committee:

External Examiner: ___________________ Signature: ___________________ Date: _______

Internal Examiner: ___________________ Signature: ___________________ Date: _______

Advisor: ____________________ Signature: ___________________ Date: _______

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Chair of Department or Graduate Program Coordinator

DECLARATION

I, Hawi Kaba, hereby declare that the thesis entitled: “Evaluating the Effect of Strategic Cost Management Practice in Supply Chain Management on Competitive Advantage of Pharmaceutical Manufacturers in Addis Ababa, Ethiopia”, submitted to Addis Ababa University School of Commerce for the award of the Degree of Master of Arts in Logistics and Supply Chain Management is my own original work and that I have not previously in its entirety or in part submitted at any university for a degree.

Hawi Kaba

Signature: ________________________

Date: ______________________________

CERTIFICATION

This is to certify that the thesis entitled: "Evaluating the Effect of Strategic Cost Management Practice in Supply Chain Management on Competitive Advantage of Pharmaceutical Manufacturers in Addis Ababa, Ethiopia", submitted to Addis Ababa University School of Commerce for the award of the Degree of Master of Arts in Logistics and Supply Chain Management has been carried out by Hawi Kaba under my guidance and supervision.

Advisor: Dr. Busha Temesgen

Signature: ________________________

Date: ______________________________

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Acronyms

SCM	Supply Chain Management
SCMT	Strategic Cost Management
ABCM	Activity-Based Costing and Management
JIT	Just in Time Inventory
TQM	Total Quality Management

Abstract

This study aimed to evaluate the effect of strategic cost management practices used by pharmaceutical manufacturers throughout their supply chain management on competitive advantage of the firm. An explanatory and descriptive study design was employed. Target populations of the study were employees of the nine pharmaceutical manufacturing companies that have their head offices or factories found in Addis Ababa, Ethiopia. 105 respondents were selected through purposive sampling technique. Questionnaires were used to collect primary data from respondents and the data collected were analyzed using both descriptive and inferential statistics. The findings shows that target costing is the most commonly employed strategic cost management technique in pharmaceutical supply chain management by pharmaceutical industries, followed by life cycle costing and, finally, activity based costing. The study findings also shows that target costing and life cycle costing have a considerable impact on competitive advantage, but activity based costing had little impact. Hence, the study concluded that strategic cost management has a significant impact on competitive advantage. As a result, pharmaceutical manufacturers seeking a competitive advantage are recommended to employ target costing and life cycle costing.

Key Words: Strategic Cost Management, Activity based costing, Target Costing, Life Cycle Costing and Competitive Advantage

CHAPTER ONE

1. INTRODUCTION

This chapter discusses the study's background, problem statement, research questions, objectives, significance, scope of the research, and limitations. Furthermore, in the end of the chapter, this study addressed operational definition and paper organization.

1.1. Background of the Study

Supply Chain Management has been defined in a number of ways. According to (Wisner et al., 2014), one of the most well-known definitions of supply chain management is "Supply chain management is the integration of trading partners' key business processes from initial raw material extraction to the final or end customer, including all intermediate processing, transportation and storage activities, and final sale to the end product customer." Effective management must consider how to juggle all the various links in this chain as soon as possible without sacrificing any of the quality or level of customer satisfaction while also keeping expenses low.

Supply Chain Management and Cost Management are among the top issues on the agenda of business practitioners and academic researchers as supply chain effectiveness and cost efficiency are important performance indicators for both supply chains and the organization (Wang et al., 2018). Consequently, cost reduction is among the most cited objectives in supply chain management (Seuring, 2002). Additionally, if costs are to be reduced, companies increasingly turn their attention to their supply chain partners, so both suppliers and customers reach out for new frontiers of competitiveness and profitability. In order to boost net income, businesses concentrate on cutting costs in their supply chains (Kumar et al., 2007). More pressure is being put on companies to cut costs in order to retain higher margins as deflationary tendencies persist in many global marketplaces (Christopher and Gattorna, 2005). Changes to the supply chain, according to (Tummala et al., 2006), assist reduce costs and make it easier for businesses to compete on price. Companies need to minimize costs everywhere and concentrate on SCM if they want to survive in the market.

It is said that conventional cost management techniques fails to notice the opportunity to take advantage of connections with the company's suppliers and clients. The argument has been made that conventional management accounting systems do not easily accommodate SCM viewpoints. Hence, supply chain management needs the use of new cost management methodologies in addition to conventional methods namely strategic cost management. Strategic cost management is described as "deliberate decision-making aimed at aligning the firm's cost structure with its strategy and optimizing the execution of the strategy" (Anderson, 2006). It involves planning, controlling, decision-making, and communication phases of management. As a result the role of cost management has evolved from a simple cost determination and control of finances to a complex role of adding value via better resource allocation. Strategic cost management seeks to increase competitive advantage by taking a comprehensive approach to an organization's costs, both internal and external (Slagmulder and Cooper, 2003).

The pharmaceutical industry is seen as a global enterprise with a significant impact on people's lives. Consequently, disruptions in the manufacturing or distribution process can harm people's lives by causing access issues to drug products. As a result, the application of optimization techniques in the pharmaceutical supply chain sector has remained a persistent source of interest for academics and scientists (Uthayakumar and Priyan, 2013). In the pharmaceutical sector, there are more trade-off considerations because products often have extended lead periods and higher inventory levels than in other industries. Consequently, it is critical for pharmaceutical businesses to ensure that they have an optimal network design that allows them to be agile and offer lifesaving treatment as soon as it is needed while attempting to decrease costs in order to gain a competitive advantage (Srimarut and Mekhum, 2020).

Because the pharmaceutical supply chain is more complex due to the involvement of several stakeholders such as pharmaceutical producers, wholesalers, distributors, customers, information service providers, and regulatory bodies, the pharmaceutical industry is understudied (Bhakoo and Chan, 2011). Additionally, there is a dearth of study on the use of strategic cost management in supply chain interactions in developing nations (Singh et al., 2016). It's critical to understand the connection between strategic cost management and the supply chain management as supply chain costs are a major driver of costs, in addition to flows of goods and information (Seuring, 2002). Hence, this study will describe the tools that can be used to strategically and comprehensively manage supply chain costs namely activity based costing, target costing and life cycle costing and evaluate their effect on competitive advantage of pharmaceutical companies.

1.2. Statement of the Problem

Access to medications in healthcare systems is measured in terms of availability and pricing (Wirtz et al., 2017). In order to lower the cost of care, reduce increased pain and suffering, decrease the length of sickness, and minimize unnecessary impairments and deaths globally, access to affordable, high-quality essential medicine is important (Ozawa et al., 2019). But a third of the world's population does not regularly have access to basic medications, which leads to a chain reaction of avoidable distress and suffering (Ahmadiani and Nikfar, 2016). In low-income nations, this estimate increases to over 40%, and in the poorest nations in Asia and Africa, it increases to over 50% (Perehudoff et al., 2019). Lack of funds or awareness can make it difficult to obtain necessary medications in many poor nations, which raises the risk of morbidity and mortality (Alsairi, 2017). In addition to the lack of vital medications, the high cost of medications is hindering the delivery of healthcare services (Gronde et al., 2017). In low- and middle-income nations, where up to 90% of the population pays out-of-pocket for medicines, the cost of medications is a concern (Cameron et al., 2017). This has a significant impact on the cost of medications and how well diseases are treated (Zarif-Yeganeh et al., 2019).

One of the poor countries suffering the terrible effects of the lack of and high cost of medications is Ethiopia (Carasso et al., 2009). In Ethiopia context several studies have been conducted to illustrate the price of pharmaceuticals. According to (Ali et al., 2014) one of the key factors contributing to Ethiopia's low level of access to important medications is the cost of the medications, which is prohibitive for the poor. It was noted that drug costs set by pharmaceutical companies are one of the primary variables affecting access to treatment and are also the root of excessive household financial burden. Another study also found that treatment costs in Ethiopia are higher than in other African nations when compared to international reference prices for pharmaceutical items, particularly in private pharmacies (Meehan et al., 2012). Hence supplying affordable pharmaceuticals efficiently and effectively is urgently needed to enhance the health care service of developing countries.

Numerous studies have examined the issue of pharmaceutical product costs in Ethiopia, but solely from an economic angle that considers market prices established by pharmaceutical companies and their impact on the cost of medications (Abrha et al., 2018, Hailu et al., 2020, Sisay et al., 2021, Ali et al., 2014). Unfortunately, there hasn't been any research on how to apply strategic cost management strategies to determine the market prices for pharmaceutical items. Supply chain literatures suggested that firms would considerably benefit from integration of strategic cost management practices in their supply chain activities by reducing cost while providing quality products to their customers (Mohd Jamal et al., 2020). Irrespective of this there is little empirical research evaluating the interaction of strategic cost management and supply chain management practices and its impact in organizational performance. The evaluation of the impact of strategic cost management techniques in the pharmaceutical supply chain will not only aid in raising the effectiveness of the healthcare system but also enhance competitive advantage of the sector in the market. Therefore this paper aims to fill the gaps in the literature by evaluating the effect of strategic cost management practice along the supply chain on competitive advantage involving pharmaceutical manufacturers in Ethiopia.

1.3. Research Questions

This research was conducted in response to the following research questions:-

1. What is the extent of strategic cost management is being practiced along the supply chain management of pharmaceutical manufacturers?
2. How does strategic cost management practice in terms of activity based method, target costing and life cycle costing affect the firm’s competitive advantage?
3. What are the major factors affecting the strategic cost management implementation along the supply chain of pharmaceutical manufacturers?

1.4. Objectives of the Study

1.4.1. General Objective

The general objective of the study is to evaluate the effect of strategic cost management practices used by pharmaceutical manufacturers throughout their supply chain management on firms' competitive advantage.

1.4.2. Specific Objectives

This research was carried out to answer the following specific objectives. The research aims to:-

- ✓ Assess the extent to which strategic cost management is practiced along supply chain management of pharmaceutical manufacturing companies
- ✓ Examine the effect of strategic cost management practice in terms of activity based method, target costing and life cycle costing on the competitive advantage of the firms
- ✓ Identify the key factors affecting the strategic cost management implementation along the supply chain of pharmaceutical manufacturers

1.5. Significance of the Study

The study findings will contribute to the body of literature as no previous studies dealing with the interaction between strategic cost management and competitive advantage in leading pharmaceutical manufacturing companies in Ethiopia have been conducted. Nonetheless, this survey assess key concepts and principles of strategic cost management and how they interact with the organizational procedures of a pharmaceutical manufactures to gain competitive advantage. As pharmaceutical business faces cost challenges that support the need for important cost management methods to be developed the implementation of proposed suggestions in the study will assist to overcome their challenges in addition to gaining competitive advantage.

1.6. Scope of the Study

The main purpose of this study is to evaluate the effect of strategic cost management practices used by pharmaceutical manufacturers throughout their supply chain management on firms' competitive advantage. Activity-based costing, kaizen costing, benchmarking, quality costing, activity-based management, target costing, life cycle costing, and other techniques are among the numerous tools and methodologies that are pertinent to strategic cost management. However, this research was conceptually delimited to activity-based management, target costing, and life cycle costing. Despite the fact that there are numerous parties participating in the pharmaceutical supply chain, the research highlighted pharmaceutical manufacturers due to the more expansive nature of pharmaceutical supply chain management. Methodologically, the study focused only on the quantitative research approach.

1.7. Limitation of the Study

Due to limited research capacity of the researcher, not all pharmaceutical supply chain actors, including importers, distributors, and retailers, were represented in the survey data, making it unable to generalize the results to the pharmaceutical industries. Only primary quantitative data were collected for analysis. However, inclusion of qualitative research approach would have given the bigger picture. The absence of comparable studies in pharmaceutical manufacturers to compare, contrast, and draw comparative conclusions is the study's third constraint.

1.8. Definition of Key Terms

For the purposes of this study the following key terms are applicable:

Strategic Management / Strategic Planning: It is both an art and a science to create, carry out, and assess cross-functional decisions that help an organization accomplish its goals. The goal of strategic management is to successfully operate an organization by fusing together management, marketing, finance, production, research and development, and information systems (Steiss, 2019).

Cost Management: Monetary evaluation of the resources used to attain a goal or aim in an efficient and effective manner (Hansen et al., 2021).

Strategic Cost Management: The use of cost management strategies to save costs while also strengthening a company's position in the market (Slagmulder and Cooper, 2003).

Supply chain: The network of organizations engaged in the many processes and activities that create value and result in products and services in the hands of the final consumer through upstream and downstream linkages (Janvier-James, 2012).

Supply Chain Management: The management of upstream and downstream relationships with suppliers and customers to deliver superior customer value at less cost to the supply chain as a whole (Janvier-James, 2012).

Supply Chain Cost: All relevant expenses incurred by the company or organization in question across its supply chain (Sachan et al., 2005).

Pharmaceutical supply chain: The entire process from pharmaceutical product manufacture to supply chain management system delivery of items to end users (Shah and engineering, 2004).

1.9. Organization of the Study

The structure of this research was divided into five parts; the first chapter dealt with the study's background, problem statement, research question, objectives, significance, scope, and limitations as well as its plan, terminology definitions, purpose, and organizational structure. The second chapter includes a review of pertinent literature that goes into detail about the theoretical and empirical elements that underpin and explain the study's practical components. The third chapter concentrated on the research methodologies, including the research methodology, research design, data type and source, study population, sampling technique, data gathering tools, data analysis methods, validity and reliability, and ethical concern. Chapter four contains the discussion and analysis part. Finally the fifth chapter presents summary, conclusions, recommendations and future research directions.

CHAPTER TWO

2. REVIEW OF RELATED LITERATURE

This chapter covers reviews of theoretical and empirical literature. The theoretical literature review gets into the principles and various parts of supply chain management and cost management strategies, whilst the empirical literature review digs into how related literature from around the world addressed strategic cost management in their supply chain and its impact on competitive advantage of firms.

2.1. Theoretical Literature Review

2.1.1. Supply Chain Management

The Boston Consulting Group first used the term "Supply Chain Management" in 1980; nevertheless, it wasn't until 1990 that it really became popular. (Mattsson, 2003) and (Stock et al., 2009) claim that the term "SCM" is not clearly defined. According to (Mattsson, 2003) neither the concept in the literature nor its application in real-world situations are obvious. According to (Stock et al., 2009), the word "SCM" has evolved over time and does not have a clear definition. The definition offered by Handfield and Nichols as: "The supply chain comprises all operations related to the flow and transformation of goods from the stage of raw materials (extraction) through to the end consumer, as well as the related information flows. Both information and materials move up and down the supply chain. To establish a lasting competitive advantage, supply chain management (SCM) integrates these activities through strengthened supply chain linkages."(Handfield and Nichols Jr, 1999). It is highlighted that the management of material and information flows and the management of relationships—the two primary concerns of supply chain management—are merged in this concept. Supply chain management's entire scope can only be covered by combining the two parts. Although there are certain notions, it is agreed that the term "supply chain management" is still in its infancy. Overall, the topic of supply chain management is quickly expanding and is not a problem that can be solved by using a particular theory or technique.

2.1.2. Strategic Cost Management

Strategic cost management is defined as management measures that reduce costs while also improving a firm's strategic position (Anderson and Dekker, 2009). In order to enable a product or service's cost to approximate that of the firm's strategy and maximize its strategic performance, a firm must pursue strategic cost management. According to (Guan et al., 2009), strategic cost management involves using data about an enterprise's costs to manage costs strategically while also figuring out the best ways to gain a long-term competitive advantage. Cost reduction, productivity enhancement, customer happiness, profit maximization, and improved strategic positioning are the goals of strategic cost management.

Three main ideas that make up the notion are value chain, strategic positioning and cost-driven factors (Shank and Govindarajan, 1992). The value chain framework is a technique for segmenting the chain of activities that extends from fundamental raw materials to the final users in order to comprehend the behavior of cost and the sources of distinction. Initiatives for cost control that are extended outside of organizational boundaries fall under this category. The subject of strategic positioning is the part that cost management plays depending on how the business has decided to compete in the market. A business can have competitive advantage by cost leadership or differentiation and cost analysis plays a different role in strategic cost management in crucial ways. Cost-driven analysis is concerned with cost driving factors. Strategic cost management acknowledges that costs are influenced or driven by a variety of variables that are intricately intertwined (Elsayed et al., 2011).

The strategic approach to cost management in supply chains places special emphasis on a few key areas. Another set of strategic cost drivers are presented, as well as the concept of strategic positioning. A few flaws must be mentioned, though. First, the three primary concepts continue to be distinct cornerstones of the notion. Except for a reference to strategy literature, no explicit justifications are offered for their decision. As a result, the idea has been strengthened by cost-management methods like target costing and activity-based costing.

2.1.3. Strategic Cost Management Tools and Methods

This section discusses specific strategic cost management tools and methods that have a potential to support supply chain performance of the firm.

2.1.3.1. Target Costing

Target costing is a comprehensive approach to strategic cost management that places a high priority on lowering the total cost of the product beginning with the planning and design phases. Products are created and produced utilizing a market- and customer-focused method called target costing as a consequence of knowing the demands and preferences of consumers in terms of the features and uses of products through a market study. Target costing seeks to achieve the following objectives: lowering costs over the course of a product's life cycle; ensuring high product quality and customer satisfaction; carrying out profit planning; ensuring rapid introduction and development of new products; and assisting companies in securing and preserving competitive advantage. This objective is achieved by estimating the lifespan cost at which a company must develop a proposed product in order for it to have the features and characteristics necessary for it to be profitable at the projected selling price. A business can determine its target cost by estimating the anticipated selling price of a proposed product and deducting the intended profit margin. The next step is to design the product so that it will satisfy customers while also being produced at the goal cost (Cooper and Slagmulder, 1999).

2.1.3.2. Activity Based Methods

The goal of activity-based management (ABM), which has its roots in activity-based costing, is to effectively manage the tasks and costs involved in producing an item or rendering a service. ABM functions by ensuring that the resource-intensive operations are adequately managed. The value-added and non-value-added operations of a corporation are tracked down and distinguished by ABM. The examination of activities makes it possible to get rid of unnecessary chores and the costs that go along with them. Cost savings from non-value-added activities are conceivable and may provide businesses a cost edge over rivals. In order to determine why expenses are incurred for activities, activity-based management also does cost driver analysis by examining and quantifying the effects of cost drivers (Quesado et al., 2021).

2.1.3.3. Life Cycle Costing

The business activity of managing a company's products in the most effective way throughout their lifecycles, from the time a product is first envisaged until it is retired and disposed of, is known as product lifetime management (PLM). A company's product management system is known as PLM. It manages the product portfolio in an integrated way, including all of its parts and goods. By boosting product revenues, reducing product-related expenses, and raising the value of both existing and future goods, PLM's ultimate objective is to maximize the value of the product portfolio for both consumers and shareholders (Stark, 2020). The idea of life cycle costing enables decision-makers to analyze and comprehend the full picture of the cost of a product's life cycle, from planning and research through disposal. In light of this, life cycle costing concentrates emphasis on the overall cost that will be incurred across a product's full life cycle.

2.1.4. Competitive Advantage

For more than 50 years, the management community has focused on the creation of theories that serve to explain competitive advantage. According to Korsakien (2012), the business-held and distributed resources and capabilities advantage provide businesses a positioning and performance edge over rivals. As a result, a company's competitive advantage is characterized as a considerable edge over its rivals as a result of cost allocation and operational outcomes that are dependent on positioning strategy. An organization gains a competitive advantage when it creates or acquires a collection of characteristics that enable it to outperform its rivals. The development of supplier capabilities to generate customer value and obtain cost and/or differentiation advantages, leading to market share and firm profitability, is the source of competitive advantage in the rapidly changing global economy. Cost and quality are said to be a component of the competitive advantage dimension, according to Souza and William (2000).

Businesses should develop strategies that include the entire supply chain, beginning with the provision of goods, materials, and product design to customers at competitive rates, in order to gain a competitive edge over their rivals. It has been highlighted that strategic cost management sees products, processes, and resources as creative objects for achieving a strategic competitive advantage. Hence this study used the dimensions of strategic cost management to assess the competitive edge of firms.

2.2. Theoretical Framework

The theories of supply chain management which formed the theoretical background of the study include transaction cost theory, resource based view and contingency theory.

2.2.1. Transaction Cost Theory

Transaction cost theory, also known as transaction cost economy, is a key theory in the study of strategy because it deals with issues such as why businesses broaden or outsource activities to the outside world, how businesses establish limits, and how they should manage activities (Schmidt et al., 2019). This theory holds that as every economic activity centers on a transaction, the governance mechanism should be matched to the specifics of the transaction in order to maximize corporate activity. There are three alternative types of governance mechanisms: market governance, where prices rule; intermediate governance, where complex contracts and strategic alliances rule; and hierarchical governance, where managers rule within the confines of the business's structure. According to transaction cost theory, the preferable mode of governance is one that reduces transaction costs since there are "rational economic reasons" for choosing that method of controlling transactions (Cuypers et al., 2021).

2.2.2. Resource-Based View

The resources-based view, which tackles the issues of an organization's identity and is primarily concerned with the sources and nature of capabilities, is a growing and dominating theoretical backdrop in the strategic literature. The resources-based view emphasizes that a firm's resources are one of the primary factors in determining its success and its edge over others. According to Barney (1999), a corporation has to be organized to take advantage of its resources and competencies. The reporting structure, management control systems, and pay policies are only a few of the components included in the organization criteria. It is crucial to stress that, despite a firm's possession of a variety of priceless, uncommon, and difficult-to-replicate resources, inefficient organization will limit the full utilization of these resources.

According to many supporters of the resource-based perspective, a single organization's resources and skills are what enable it to gain a competitive edge. Internal organizational resources hence fuel competitive advantage. But other researchers have broadened the purview of the resource-based approach to concentrate on resources that cross organizational boundaries (Das and Teng, 2000; Matthews, 2003); this is known as the "extended resource-based view". Research has shown that it may be feasible for organizations to combine resources in novel ways across organizational borders to gain an advantage over their rivals. By properly managing interactions with other parties, such as suppliers, consumers, governmental organizations, and institutions, businesses may create significant resources. So, by using its essential resources in a way that goes beyond the limits of the company, a corporation may establish and maintain a competitive edge.

2.2.3. Contingency Theory

The contingency theory of supply chain management is based on the idea that there isn't a single method or system that can be suitable for every situation. Instead, supply chain management systems are influenced by organizational and environmental factors (Otley, 2016). These variables are regarded as contingent variables. According to (Chaikambang et al., 2012), internal factors are organizational problems like resources, technology, and culture, and external factors include competitiveness and environmental unpredictability. Therefore, the efficiency of supply chain management depends on its capacity to adjust to changes in internal as well as external factors. Suppliers are a crucial component of an organization's environment, according to Flynn et al. (2010). Therefore, the degree of strategic supplier collaboration should be in line with the environmental and situational factors.

This study applies transaction cost theory in the context of implementation of strategic cost management tools to achieve cost reduction in the firms supply chain which intern improve competitiveness of the firm (Chaikambang et al., 2012).

2.3. Empirical Review

2.3.1. Strategic Cost Management Techniques Implementation

An activity-based costing model for supply chain management has been created by (Schulze et al., 2012). Activity-based supply chain setup and activity-based supply chain operations make up the model's two primary phases. Prior to making any other decisions, a company must choose its products, suppliers, and overall supply strategy. Second, when suppliers are chosen and products are created, the rates of time-based cost drivers are calculated.

A study by (Hsu and Qu, 2012) of the concept of strategic cost management in the Canadian medical industry concluded that hospitals adopt different cost management strategies, depending on their market position: A cost revenue enhancing strategy is adopted by hospitals with lower inter-organizational dependence with payers. With strong market power, these hospitals can charge a high price to recover the increased costs. Non-dominant hospitals adopt the cost reduction strategy, complying with the institutional expectation of cost containment.

An ABC model was used by a large UK retail company and a number of suppliers to support their supply chain management (SCM) procedures, according to a case study published in (Dekker, 2003). This cost model used value chain analysis as its foundation and incorporated cost data from all points in the supply chain. It was discovered that organizational theory and transaction cost economics were useful angles for explaining the case findings. The study concluded that managing coordination needs and appropriation problems in inter-firm relationships is essential. These cost-management techniques for inter-firm coordination are expected to be used only in situations where parties have enough trust or control over one another and the sensitive nature of the data involved to be confident in each other's intentions.

(Chivaka, 2005) investigates and gains insight into the ways in which strategic cost management is implemented along a product's supply chain in the developing nation of South Africa, involving first-tier suppliers, manufacturers, as well as retailers. Additionally, it is important to consider the supply chains' stage of development as well as the strategies used to foster greater collaboration when analyzing how management accounting technologies are used to promote cost management along supply chains in developing nations. It becomes clear from a deeper examination of some of the techniques utilized in the three supply chains under consideration that sophisticated management accounting-like tools are being deployed. These techniques include delivery scheduling and quality focus, which are equivalent to JIT, as well as RTMs analysis and quality emphasis, which are analogous to life cycle costing and activity analysis and quality focus, respectively. The study provided here indicates that some practitioners are employing these advanced management accounting tools, or at least some of them, in an intuitive way without using the conventional nomenclature used in management accounting literature. Additionally, according to this study, if particular words (like ABC) are used to evaluate a tool's presence and subsequent implementation, it is feasible to conclude that it is not being used. However, if the characteristics of the procedures that practitioners are using are taken into account and then contrasted with those of the instruments listed in the management accounting literature, a better judgment is likely to be obtained.

Target costing characteristics are identified by (Everaert et al., 2006) in three European businesses that have employed the approach, and it is discovered that these qualities are connected to the way a target is defined and how progress toward that objective is monitored. The study proposed that more research look at how open a company is to suppliers, who is in charge, how busy they are, and where they are in the supply chain, as well as if these factors might account for the observed disparities in company characteristics.

2.3.2. The Role of Strategic Cost Management Techniques

The ability of activity-based costing and management to improve company performance, either directly or indirectly, was empirically demonstrated. (Player and Gibson, 1999) examined the use of activity-based costing and activity-based management in wholesale distribution firms to show how the two activity-based approaches effectively implement the principles of strategic cost management. Companies with some sort of ABC implementation had higher returns on total assets than those without any such implementation. When created, planned, and put into practice, ABM systems give users the knowledge and resources to recognize product and customer profitability. Besides, (Rattanaphaphtham and Ussahawanitchakit, 2010) provide evidence that firms that deliver high-quality products as a result of manufacturing efficiency, which ABC/M facilitates, can charge higher prices, increasing profit margins on sales and return on investment. Furthermore, (Zehir et al., 2006) observed that an increase in competitive advantages due to cost benefits derived from ABC/M motivates enterprises to attain excellent financial performance.

Target costing, on the other hand, can help a company produce items with reduced costs, higher quality, and cutting-edge technology (Matarneh et al., 2016). Target costing reduces product or service costs by reducing production costs through the application of spending restrictions and the avoidance of waste (Helms et al., 2005).

Life cycle costing is also important for improving performance and lowering costs. According to (Atia et al., 2020, Mévellec and Perry, 2006), an organization seeking cost reduction and performance improvement must focus its cost management activities on all stages of product manufacturing.

2.4. Conceptual Framework

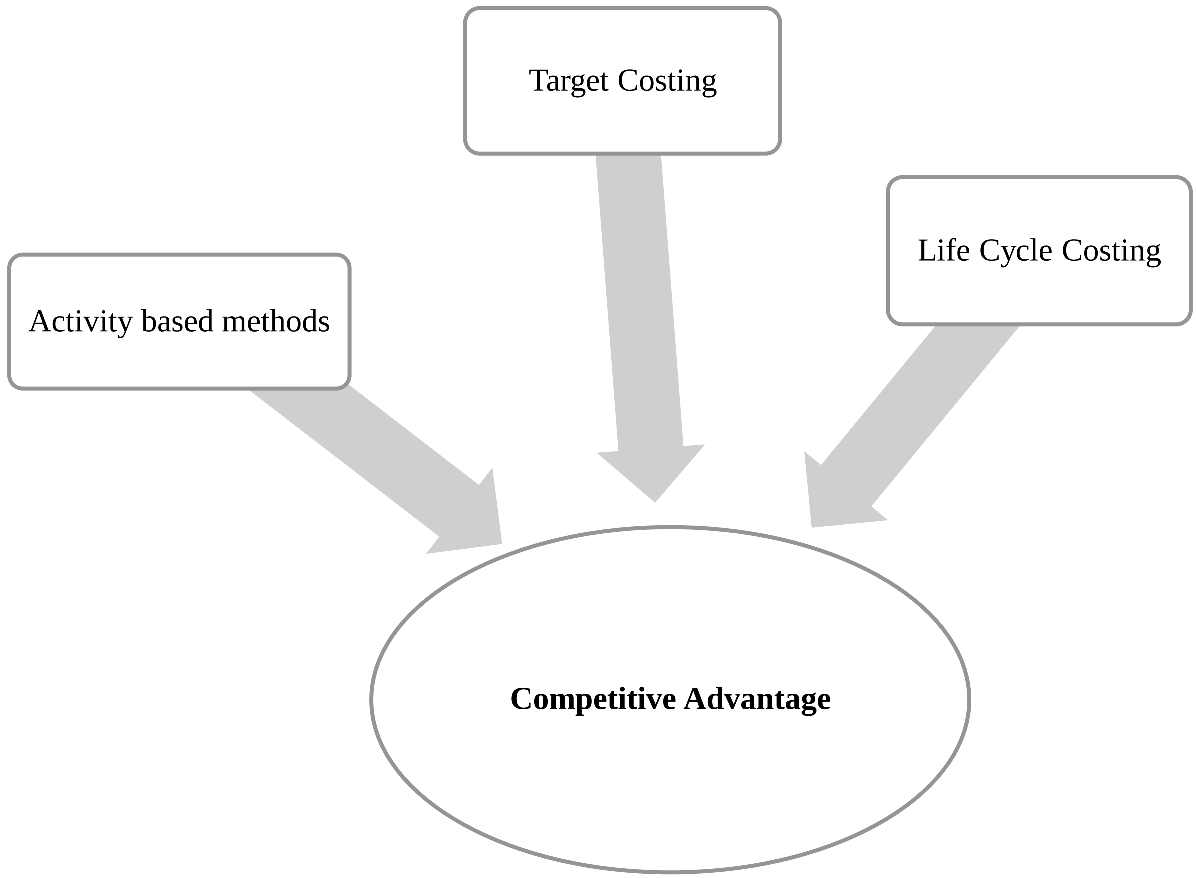

Figure 1: Conceptual framework of the study

Source: Adopted from (Adigbole et al., 2022)

CHAPTER THREE

3. RESEARCH METHODOLOGY

The methodological part focus on research procedures employed in the study. It includes research approach, research design, data type and data source, population of the study, sampling procedure, data gathering instruments, data analysis techniques, validity and reliability and ethical consideration.

3.1. Research Approach

The primary goal of this study is to assess the effect strategic cost management practices used by pharmaceutical manufacturers throughout their supply chain management on competitive advantage. Therefore, a quantitative research approach was used to test the study's objective. This method was chosen because it will make it possible to investigate the relationship between variables and these variables may be quantified, allowing for the statistical analysis of numerical data.

3.2. Research Design

Research design is the logical sequence that connects the empirical data to a study's original research objectives and finally to its findings (Aberdeen and Yin, 2013). The researcher employed a cross-sectional field survey method to investigate the application of strategic cost management techniques along the supply chain of chosen pharmaceutical manufacturers in Ethiopia's Addis Ababa states, as well as their impact on competitive advantage. In light of this, this study used an explanatory and descriptive research design to explore the relationships between the independent and dependent variables as well as the degree to which strategic cost management has been implemented inside the organization.

3.3. Target Population

The study's source population is composed of pharmaceutical manufacturers who possess a current license issued by the Ethiopian Food and Drug Authority (EFDA). According to EFDA applicants update there are 9 manufacturers found in Addis Ababa. Thus the total number of target population were the employees of 9 pharmaceutical manufacturers found in Addis Ababa. According to the HR Database (2023) of each pharmaceutical manufacturers found in this city, there are a total of 4,200 active employees assigned in head office. Among them, this study considered only the employees working at finance, procurement, marketing and logistic departments for the reason that these staff are believed to have more relevant information and understanding about the cost and supply chain management than other functions. The total number of staff in these functions counted 360.

3.4. Sampling Technique

Purposive sampling is employed in the study to select respondents from the target population. Purposive sampling is a sampling strategy where the researcher selects participants from the population using his or her own discretion (Tongco, 2007). This entails locating and choosing individuals or groups of individuals who have particular expertise in or experience with a topic of interest. As a result, the researcher targeted 105 personnel at top managerial position and supervisors such as general managers, technical managers, logistics and supply chain managers, sales and marketing managers, procurement managers and chief accountants as these officers are believed to be knowledgeable in order to provide the information needed in the study and also they are accountable in decision making process.

3.5. Type of Data and Data Source

Data can be gathered in primary, secondary, or a combination of ways, according to Catherine (2017). The researcher creates primary data with the express intent of addressing the current issue. As opposed to primary data, secondary data includes pertinent information that has been gathered for a different reason yet from which a worthwhile conclusion may be drawn (Saunders, 2010). This study was primarily based on primary data because there was no secondary data that matched the study's aims.

3.6. Data Collection Instrument

In this study, primary data is collected form targeted respondents using questionnaire. The questionnaire was chosen for this study because it provides a quick, efficient, and cost-effective method of acquiring large amounts of information from subjects, and it also has the advantage of providing appropriate time for informants to reply. Data is collected through closed-ended questions that are answered using Liker's five-point scale. The questionnaire was adopted from (ADIGBOLE, 2018) with minor modification made to suit researcher's objectives. The questionnaire has four parts as describe below:

Part one refers to the demographic information of the targeted respondents.

Part two has a total of 19 statements designed to assess the magnitude of strategic cost management techniques, with 9, 5, and 5 items meant to assess the extent of activity-based costing, target costing, and life cycle costing implementation, respectively.

Part three has a total of 7 statements designed to assess the impact of strategic cost management practices on firm's competitive advantage

Part four has a total of 10 statements designed to evaluate factors affecting strategic cost management implementation

3.7. Data Analysis Method

Both descriptive and inferential statistics were applied to the data analysis. The strategic cost management techniques and supply chain practices were examined using descriptive statistics including mean, standard deviation, and frequency. Using frequency and relative indices, factors influencing strategic cost management practices in the supply chain were examined. Inferential statistics using multiple linear regression is made to determine the impact of independent variables (strategic cost management techniques) on the dependent variable (competitive advantage) and to evaluate the most dominant factors affecting strategic cost management practices in the supply chain.

3.8. Validity and Reliability

3.8.1. Validity

In terms of construct validity, this means that the instruments capture the variables they are designed to. Supervisors with in-depth knowledge will evaluate the reliability of the data collection tools. By aligning evaluation metrics with the goals and objectives and by making helpful modifications to the research instruments through pilot studies, the researcher will attempt to improve validity. The Center for the Enhancement of Teaching defines validity as the degree to which a test actually assesses the things it claims to. The correctness and significance of conclusions drawn from study findings determine their validity. It refers to how well the data analysis results reflect the phenomenon that is the subject of the study. It is the data's accuracy and plausibility. Obtaining data that accurately reflects the notion being measured is referred to. As a result, 30 questionnaires were distributed to chosen respondents in pharmaceutical manufacturing facilities in Addis Ababa, Ethiopia for the pilot study. Following the completion of the surveys by the respondents, each item was reviewed in order to test the wordings of the questions and identify unclear questions.

3.8.2. Reliability

According to Miller (2009), reliability refers to how consistently a survey, test, observation, or other measurement process yields the same results across time. It is, in essence, the consistency or stability of scores throughout time or across raters. In this research Cronbach's alpha was used to assess the questionnaire's internal reliability. As multiple items were used to construct the questionnaire of the study the reliability of each items were tested separately. The result of each variable is presented in the table below.

Table 3. 1 Results of Reliability Test

Variables	No. of Items	Cronbach’s Alpha Coefficients
Activity Based Method	9	.821
Target Costing	5	.887
Life Cycle Costing	5	.804
Competitive Advantage	7	.876
Environmental Factor	5	.857
Information Technology	3	.800
Business Strategy	2	.928

(Source: Own Survey, 2023)

According to (Hair et al., 2011), Cronbarch's Alpha value less than 0.7 is regarded bad, while those over 0.7 are acceptable. The values of Cronbach's Alpha for each variable of the questionnaire of this study were in the range of 0.8 and 0.928. As a result, the measuring device used in this investigation can be regarded as reliable instrument.

3.8 Ethical Consideration

In situations where participants are present in their daily environments, qualitative research are routinely carried out. Therefore, any research involving humans must be cognizant of any potential ethical concerns that may arise from such encounters. The researcher will take into account the ethical concerns of research studies by outlining the goal of the study in clear terms, maintaining the right to privacy of participant replies, and using the data only for the research study's academic purposes. Respondents will not be required to write their names and will be guaranteed anonymity in their responses in order to protect the confidentiality of the information they provide. To dispel any uncertainty regarding the validity and dependability of the data acquired for the research study goals, the researcher will provide letters of introduction and research licenses to respondents.

CHAPTER FOUR

4. DATA ANALYSIS AND INTERPRETTIONS

This chapter presents the discussion and interpretation of data collected through questionnaires. The discussion focuses on respondents' profile, the practice of strategic cost management tools and the effect of strategic cost management techniques on competitive advantage of the firm.

3.1. Response Rate

Table 4. 1 Response Rate of Questionnaire Distributed

Questionnaires	Frequency	Percentage (%)
Total distributed	105	100.0%
Returned questionnaires	95	90.5%
Unreturned questionnaires	10	9.5%
Response errors	3	2.9%
Total valid and usable	92	87.6%

(Source: Own Survey, 2023)

As the results in Table 4.1 indicates from the total of 105 copies of questionnaire administered to the targeted employee of 9 pharmaceutical manufacturing firms in Addis Ababa 95 of them were returned. From these only 92 questionnaires were valid to be used for analysis, representing 87.6% response rate. After completing the necessary data preparation, SPSS 27.0 was used to run a multiple regression model analysis to assess a number of variables at once. Finally, statistical testing was done on the suggested hypotheses. Results for each distinct target are explained based on the multiple linear regression analysis's findings.

3.2. Demographic Profile of the Respondents

To determine how closely the samples were representative of the population from which they were taken, it is important to examine basic demographic information regarding the respondents. Variation in these traits might affect the correlations between variables. The demographic features of the respondents, including sex, education, position, and work experience were taken into account.

Table 4. 2 Demographic data of the Respondents

Variables	Category	Frequency	Percent
Gender	Female	43	46.7
	Male	49	53.3
	Total	**92**	**100.0**
Education	Undergraduate degree	50	54.3
	Postgraduate degree	42	45.7
	Total	**92**	**100.0**

4.

Variables	Category	Frequency	Percent
Job Title	Procurement Manager	8	8.7
	Accountant	7	7.6
	Logistics and Supply Chain Manager	8	8.7
	General Manager	8	8.7
	Finance Manager	8	8.7

	Assistant Supply Chain Manager	23	25.0
	Sales and Marketing Representative	23	25.0
	Technical Manager	7	7.6
	Total	**92**	**100.0**
Variables	Category	Frequency	Percent
Work Experience in position	Below 2 years	6	6.5
	2-3 years	14	15.2
	3-5 years	19	20.7
	5-10 years	34	37.0
	Above 10 years	19	20.7
	Total	**92**	**100.0**

(Source: Own Survey, 2023)

Gender: Table 4.2 shows that the majority of the respondents were male (53.3%) while 46.7% of the respondents were female. This indicate that males are more involved in the strategic cost management and supply chain management duties than females.

Education: As shown in the table 4.2 majority of the respondents' held a bachelor's degree (54.3%) followed by postgraduate degree (45.7%) and none had lower education. This shows that the respondents are well educated and knowledgeable.

Job Title: 8 (8.7%) of the respondents were from the top management level (i.e. general managers, finance managers, procurement managers and logistics and supply chain managers). 7.6% of the respondents were accountants and technical managers, while majority of the respondents were from assistant supply chain managers and sales and marketing representatives each accounting for 25% of the responses. This implies that the respondents are more of supervisors that are more close to the process than top managers.

Work Experience: In respect to the working experience of the respondents, Table 4.2 shows that most of the respondents' had work experience of 5-10 years (37%). This demonstrates that the respondents have sufficient experience to discuss the management systems at their respective organizations.

4.3. Descriptive Analysis

To assess the strategic cost management practices of pharmaceutical manufacturers mean and standard deviation statistical analysis were performed. Among these statistical analysis mean value is an important indicator to determine the extent of strategic cost management practices on each variable. According to Scott (1999), a mean in the range 1-2.8; disagreed within 2.81-3.2; neither agreed nor disagreed and above 3.2 is considered as an agreed. Additionally, standard deviation demonstrates the variety of an observed response; for example, if the deviation is larger than 1.000, there is significant variation in respondents' perspectives.

4.3.1. Strategic Cost Management Techniques

This study examined pharmaceutical manufacturers' strategic cost management techniques using descriptive statistical analysis based on the three variables of the conceptual framework developed for the study.

4.3.1.1. Activity Based Methods

The use of activity-based management and costing as a strategic cost management tool in the sampled companies is reflected in activity-based techniques. Nine items from the questionnaire that were scored on a Likert scale of five scales were used to measure this construct. To assess the activity-based techniques practices of pharmaceutical manufacturers mean and standard deviation statistical analysis were performed.

Table 4. 3 Descriptive Statistics of Activity Based Methods

S.No	Items	Mean	SD*
1	Analysis of the value chain activities of the company is normally carried out.	3.01	.955
2	The causes of the company's activity costs are normally investigated.	2.77	.878
3	Activities are usually analyzed into added value and non - added value activities and performance measures are determined for each activity.	2.98	.877
4	The company examines and qualifies the effect of cost drivers.	2.99	.819
5	Activities required for the manufacture of products which drive costs are effectively managed in the company.	3.04	.811
6	Allocations of cost to products are done using appropriate activity consumption rate.	2.82	.971
7	There are Procedures in the company for the determination of activities required for the manufacture of the firm's product	3.92	.952
8	Cost driver for each activity in the firm are determined	3.83	1.065
9	Adequate records of cost drivers and activities of the company are kept.	2.54	1.287
Group mean		**3.10**	**.96**

(Source: Own Survey, 2023)

The application of activity-based management in the sampled enterprises is reflected in item 1 through 5. Table 4.3 reveals that the majority of respondents neither agreed nor disagreed with the claim in item 1 which deals with value chain analyses were typically performed by firms as the mean scored value was found to be 3.01 with std. 0.955. It is clear from this analysis that the selected pharmaceutical manufacturers have a poor utilization of value chain analysis. As seen in table 4.3, respondents disagreed on item 2, which is intended to assess whether the causes of the company's activity costs have been investigated with a mean value of 2.77 and std. 0.878. This suggests that the sample companies don't look into the reasons behind their activity costs. The statement "activities are typically analyzed into added value and non-added value activities and performance measures are determined for each activity" appears on item 3. According to the responses, respondents were neutral as the average mean value scored was 2.98 and std. of 0.877. This demonstrates that neither the firms' activities are divided into those that offer value and those that do not, nor are performance metrics established for each activity. Table 4.3 data also reveals that the respondents were neutral with item 4, which states that the enterprises examines and qualifies the impact of cost drivers (mean = 2.99, std. 0.819). Finally, for item 5 which states that activities required for the manufacture of products which drive costs are effectively managed, majority of the respondents scored a mean value of 3.04 and std. 0.811. This shows that the investigated companies fail to manage manufacturing cost-driving activities effectively.

Item 6 through Item 9 reflect the sampled firms' use of activity-based costing. As table 4.3 shows respondents remained neutral on the statement that states the allocation of costs to product are done using appropriate consumption rate with a mean and std. value of 2.82 and .971 respectively. On item 7 respondents agreed that firms have procedures for the determination of activities required for production (mean = 3.92, std. 0.952). This indicates that firms have good practices to identify the tasks needed to produce a product. Since a mean value of 3.83 was scored for item 8 which suggests that cost driver for each activity is well determined, the majority of respondents agreed to this statement. Despite their positive perception, their level of agreement on this attribute show high variability in stand as the standard deviation was found to be above the threshold (Std.= 1.065). Finally, they disagreed with high variability in stand on item 9, indicating that appropriate records of cost drivers are not preserved (mean = 2.54, std. 1.287).

The highest mean value for activity based costing and management is item 7, which has a value of 3.92, while the lowest mean value is item 9, which has a mean value of 2.54. But majority of respondents, in general, were neutral with the majority of the questions as the group mean is 3.1, showing that activity-based management and costing are not well-implemented in the sampled organizations.

4.3.1.2. Target Costing

Target costing implementation represents the sampled enterprises' use of Target costing as a strategic cost management technique. This concept was measured using five questionnaire items rated on a Likert scale of five scales. To assess this practice mean and standard deviation statistical analysis were performed.

Table 4. 4 Descriptive Statistics of Target Costing

S.No	Items	Mean	SD*
1	A market survey is usually conducted to determine the best specifications desired by customers before new products are manufactured.	3.50	.896
2	Target price and target profit of new products are usually determined before production take place.	3.46	1.010
3	The company usually researched for and sets competitive prices for their new products.	3.55	.790
4	The desirable or allowable production cost of new products which is determined as the difference between the target selling prices and target profit margin is usually estimated.	3.37	.898
5	Improvements and adjustments on the current design of the proposed product are usually made in target costing thus leading to cost reduction and achievement of the target cost.	3.20	.997
Group mean		**3.42**	**.92**

(Source: Own Survey, 2023)

According to table 4.4, respondents indicated that they agreed with the application of item 1, which indicates that market survey is conducted to determine customers' desire, which gives a mean and std. value of 3.5 and 0.896 respectively. This indicates that firms have good performance in market survey. In the item 2, the mean scored was 3.46 indicating that the respondents agreed to whether target price and target profit of new products are determined before production. This shows that firms usually have moderate practice for target price and target profit. However, their level of agreement on this attribute show high variability in stand as the standard deviation was 1.010. In item 3, respondents were questioned about if their company conducted market research and established competitive prices for new products. The mean and std. value for this item were 3.55 and .790 respectively, which indicates that market research for competitive price is implemented by sampled organizations.

Table 4.4 also shows that respondents agreed on item 4 that states that the desirable or allowable production cost of new products is determined as the mean value for this statement is 3.37. This investigation suggests that target costing approaches are used to estimate the production costs of new items by the sampled firms. Finally, target costing is evaluated by item 5 if improvements and alterations to the current design of the proposed products were typically made. The mean value for this item is 3.2 indicating improvements and adjustments on the current design of products are not well implemented in firms.

The highest mean value for target costing was scored by item 3, which has a value of 3.55, while the lowest mean value was scored by item 5, which has a mean value of 3.2. The majority of respondents, as described above, agreed with the most of the questions as the group mean is 3.42, demonstrating that target costing is moderately adopted in the sampled organizations.

4.3.1.3. Life Cycle Costing

Life cycle costing implementation represents the sampled enterprises' use of life costing as a strategic cost management technique. This concept was measured using five questionnaire items rated on a Likert scale of five scales. To assess this practice mean and standard deviation statistical analysis were performed.

Table 4. 5 Descriptive Statistics of Life Cycle Costing

S.No	Items	Mean	SD*
1	Information about customers and competitors are gathered by the company	3.61	.710
2	Costs incurred at each stage of the product life cycle are properly determined for the purpose of cost management.	3.55	.717
3	The stage and time of achieving improved revenue and cost reduction for all the stages of the product life cycle are determined.	3.38	.924
4	Other tools of strategic cost management such as target costing and value engineering are used in effecting cost reduction at each of product life cycle.	2.90	.839
5	There is trade off and balancing between the standards specified by the customers in term of the quality and response time and the selling price.	3.05	1.020
Group mean		**3.3**	**.84**

(Source: Own Survey, 2023)

Table 4.5 shows respondents agreed on item 1 that states information about customers and competitors are gathered by the firms (mean 3.61; std. 0.71). This suggests that customers and competitors information is well gathered by the sampled firms. Additionally, they also believed that cost incurred at each stage of the product life cycle are properly determined as demonstrated on item 2 (mean 3.55; std. 0.717). From this analysis it can be deduced that firms use life cycle costing tools at each stage of product life cycle for proper management of cost.

Table 4.5's data reveals that the respondents agreed with item 3, which states that the time of achieving improved revenue and cost reduction along the products life cycle are determined. The mean and std. value were 3.38 and .924 respectively, indicating that the life cycle costing method for estimating when improved income will be realized is adequately applied. Item 4 was used to assess the implementation of other tools such as value engineering in the sampled firms and the respondents remained neutral (mean 2.9; std. 0.839). Additionally, respondents also remained neutral for item 5 as the mean value of this statement was 3.05 with std. of 1.020 indicating firms lack trade off and balancing between the standards in terms of quality, response time and selling price.

The highest mean value for life cycle costing is item 1, which has a value of 3.61, while the lowest mean value is item 4, which has a mean value of 2.9. As described by the group mean score of 3.3, respondents agreed to life cycle costing practices demonstrating that life cycle costing is moderately implemented in the sampled firms.

Table 4. 6 Summary of Strategic Cost Management

SCM Practices	**No of Items**	**Group Mean**
Target Costing	5	3.42
Life Cycle Costing	5	3.3
Activity Based Methods	9	3.10
Grand Mean		3.27

(Source: Own Survey, 2023)

Table 4.6 shows that the three strategic cost management approaches were applied in varied degrees by the assessed companies. Target Costing's implementation obtained the highest mean score, 3.42, followed by Life Cycle Costing (3.3), and Activity Based Method (3.1). According to these findings, Target Costing is the most often employed strategic cost management approach, followed by Life Cycle Costing and, finally, the Activity Based Method. This result is consistent with the study of (Yazdifar and Askarany, 2012), who reported that target costing was prevalent among the manufacturing and service firms. Regarding Life Cycle Costing this finding is in line with the study of (Gliaubicas et al., 2015), which reported some level of implementation of life cycle costing in the Lithuanian manufacturing companies. Whereas, this result disagrees with that of (Rogošić and Ramljak, 2012, Imeokparia, 2013), who reported that activity based costing was the mostly used strategic management accounting technique in Croatian and South Western Nigeria manufacturing companies. This could be as a result of decision makers remain unconvinced that whether activity based method advantages over traditional cost management techniques. The main influential factors are its complexity, compatibility and the observability of its results and its trialibility (Askarany and Yazdifar, 2007). Hence top management support, simplifying the ABC implementation process, finding acceptable ABC software, and ultimately, ensuring that all impacted workers understand and actively support the implementation process are all important components in ensuring ABC achievement (Abdul Majid and Sulaiman, 2008).

4.3.2. Competitive Advantage

This study use descriptive statistical analysis to investigate pharmaceutical manufacturers' competitive advantage while taking into account the firm's ability to sell products at lower costs; attaining efficiency in production; being able to introduce higher-quality products at higher prices; sourcing high-quality raw materials at lower costs; achieving higher margins and greater returns on assets; and developing brand name in the market. This concept was measured using seven questionnaire items rated on a Likert scale of five scales.

Table 4. 7 Descriptive Statistics of Competitive Advantage

S.No	Items	Mean	SD*
1	Competitive advantages is achieved with the implementation of strategic cost management in the company and which leads to improvement in organizational performance.	3.40	0.915
2	The company is able to sell its products at lower cost when compared with its competitors.	3.45	0.779
3	The company is efficient in its production and so could avoid unnecessary costs thereby leading to cost reduction.	3.39	0.896
4	The company is able to launch higher quality products into the market and achieves greater product acceptance.	3.56	1.031

5	The company is able to source for quality raw materials at reduced prices and leading to lower product cost	3.16	0.941
6	The company achieves higher profit margin greater return on assets with valuable resources such or unique competence.	3.14	0.956
7	The company has created a brand name for itself.	3.23	0.969
Group mean		**3.33**	**.927**

(Source: Own Survey, 2023)

The respondents generally agreed that companies' use of strategic cost management approaches offers them a competitive edge in the marketplace, as evidenced by the competitive advantage results provided in Table 4.7. As a result of implementing strategic cost management, it can be argued that enterprises obtain competitive advantage, which results in performance improvement. On item 2, which is intended to assess firms ability sell their products at lower cost in comparison with their competitors, on average, the respondents agreed with mean and std. value of 3.45 and 0.779 respectively. On average respondents agreed on item 3 confirmed by the mean value of the item as it was found to be 3.39 with std. 0.896. This indicates that firms are productively efficient, which lowers costs. Additionally, respondents agreed on item 4 used to assess firms ability to launch higher quality products into the market. The mean and std. scored values of this item were 3.56 and 1.031 respectively. Whereas, respondents remained neutral for on item 5 (mean 3.16; std. 0.941) and 6 (mean 3.14; std. 0.956) used to assess firms ability to source for quality raw materials at reduced prices and achieves higher profit margin greater return on assets with valuable resources respectively. This indicates that firms were unable to source quality raw materials at lower price which impact its ability to achieve higher profit margin. Finally, respondents agreed that their firms have created brand names as confirmed by mean value of 3.23.

The highest mean value for competitive advantage was scored by item 4, which has a value of 3.56, while the lowest mean value is item 6, which has a mean value of 3.14. As described by the group mean score of 3.33, respondents agreed to competitive advantage practices demonstrating that competitive advantage is moderately achieved in the sampled firms.

4.3.3. Factors Affecting the Strategic Cost Management Practice

The factor that affect the strategic cost management practice environmental side, information technology side and the business strategy side were analyzed using mean, standard deviation and relative index in table 4.8, 4.9, 4.10 and 4.11 respectively.

Table 4. 8 The factor that affect the strategic cost management practice environmental side

S.No	Items	Mean	SD*
1	Incompatibility of company competition in the sector and level of rivalry among firms	3.83	.921
2	Top managers' perception of environmental uncertainty and their willingness to adapt to a changing market	4.01	.908
3	Government norms, regulations, policies	4.21	.749
4	Political uncertainties	3.95	.906
5	Social uncertainties such as religion, environment, language, cultural issues, limitations of communication	3.25	1.323
Group mean		**3.85**	**.961**

(Source: Own Survey, 2023)

In general, as indicated in the above on tables 4.8, group mean value of 3.85 showed that respondents agreed on the environmental factors effect on strategic cost management practice of pharmaceutical manufacturing companies. Specifically, incompatibility of company competition, top managers perception, government factors, political uncertainties and social uncertainties have an impact on strategic cost management implementation with a mean score of 3.83, 4.01, 4.21, 3.95 and 3.25 respectively. This indicates that environmental uncertainty highly affects the strategic cost management practice.

Table 4. 9 The factor that affect the strategic cost management practice information technology side

S.No	Items	Mean	SD*
1	Lack of communication tools such as electronic fund transfer and electronic data exchange	3.18	1.119
2	Lack of internet based information and communication technology	3.30	1.077
3	Lack of supply chain management planning tools to execute or manage the various activities and relationships in the entire supply chain	3.74	1.047
Group mean		**3.41**	**1.081**

(Source: Own Survey, 2023)

Generally, as indicated in the tables 4.9, group mean value of 3.41 showed that respondents agreed on the information technology factors effect on strategic cost management practice of pharmaceutical manufacturing companies. Specifically, communication tools, internet based information and supply chain management tools have an impact on strategic cost management implementation with a mean score of 3.18, 3.3 and 3.74 respectively. This indicated that information technology affects the strategic cost management practice.

Table 4. 10 The factor that affect the strategic cost management practice business strategy

S.No	Items	Mean	SD*
1	Implementation of differentiation strategy	3.62	1.118
2	Implementing cost leadership strategy	3.70	0.980
Group mean		**3.66**	**1.049**

(Source: Own Survey, 2023)

In tables 4.10 above the mean and standard deviation of business strategy effect on strategic cost management practice was depicted, and the group mean value of 3.66 showed that respondents agreed on this factor effect on strategic cost management practice of pharmaceutical manufacturing companies. Specifically, differentiation strategy and cost leadership have an impact on strategic cost management implementation with a mean score of 3.62 and 3.7 respectively. This indicated that business strategy also affects the strategic cost management practice.

Table 4. 11 Relative important index analysis of the factors affecting strategic cost management practice

RELATIVE IMPORTANT INDEX		
Factors affecting strategic cost management practice	RII	Rank
Environmental Factors	0.77	1
Information Technology	0.68	3
Business Strategy	0.73	2

(Source: Own Survey, 2023)

Based on the relative index table 4.11 the ranking depicted in the last columns showed that the effect of environmental factors on strategic cost management practice ranked as 1 and business strategy and information technology are ranked 2 and 3 respectively. This indicates that environmental factors are highly affecting strategic cost management practice, followed by business strategy and lastly information technology. This finding is consistent with the study of (Pavlatos and Systems, 2018), who identified environmental uncertainty and business strategy as having potentially effect on strategic cost management implementation.

4.2. Inferential Statistics

4.2.1. Regression analysis

Regression analysis attempts to investigate the relationship between two or more variables using an equation, often known as a regression line. Because it was created using the least squares approach, the line is also known as the line of best fit. By reducing the dependent's error sum square, the least square method estimates the variables in a regression equation.

In a regression analysis, there are two different kinds of variables. The factors that are used to predict the variable of interest are referred to as independent variables and the variable whose value is to be predicted is referred to as the dependent variable. Regression is referred to be simple if the relationship between two variables (one dependent and other independent) is explored at once, whereas multiple involves the study of more than two variables simultaneously. For multiple regression, the following model specification is used (Chatterjee and Hadi, 2006, Ngo and La Puente, 2012):

$Y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_k x_k + e$ where, y = dependent variable and x_1, x_2, x_3 …………… x_k are independent variables, β_0 = y-intercept and β_1, β_2…… β_k are regression coefficients.

There are five assumptions that must all be tested for the results of a regression analysis to be considered valid. These include homoscedasticity, autocorrelation, linearity, multicollinearity, and normality. Diagnostic plots can be used to determine whether these presumptions are full filled (Ngo and La Puente, 2012).

4.2.1.1.Homoscedasticity

Homoscedasticity refers to the fact that the variance of errors is the same across all IV levels. Heteroscedasticity is evident when the variance of errors varies at different IV levels. Minor heteroscedasticity has little effect on significance tests; however, when heteroscedasticity is significant, it can lead to significant distortion of findings and seriously weaken the analysis, increasing the potential of a Type I error. A visual study of a plot of the standardized residuals by the regression standardized projected value can be used to test this assumption. This graph compares the standardized values predicted by our model to the standardized residuals obtained. The fluctuation in the residuals should be fairly similar as the anticipated values grow (along the X-axis). If everything is in order, this should appear as a random array of dots. If the graph resembles a funnel, then this assumption has most certainly been broken (Jarque and Bera, 1980).

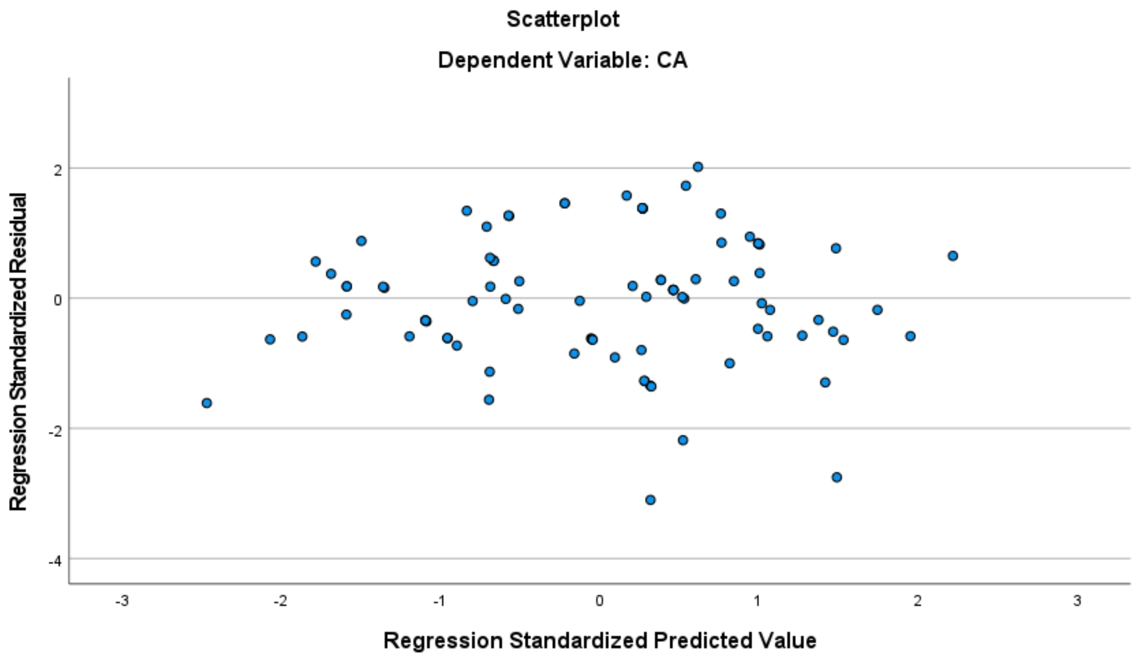

Figure 2 Homoscedasticity test

(Source: Own Survey SPSS Output, 2023)

The scatter plot graph presented in figure 2 demonstrates that the distribution is virtually uniform below 0 and above zero for the vertical and horizontal axes, indicating that the assumption of homoscedasticity was met.

4.2.1.2.Autocorrelation

One of the most important assumptions of linear regression is autocorrelation. When the present value of 'y; is reliant on its past value, the dependent variable is said to be auto correlated. In such instances, the R-Square (which indicates how well our model performs) is said to make no sense. The Durbin-Watson test is used to examine the dependent variable's autocorrelation. The Durbin-Watson statistic falls between 0 and 4. A value of 2 or close to 2 suggests that no first-order autocorrelation exists. A reasonable range is 1.5 to 2.5.

Table 4. 12 Autocorrelation

Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate	**Durbin-Watson**
.770[a]	.594	.580	.46023	1.417
a. Predictors: (Constant), Life Cycle Costing, Activity Based Method, Target Costing				

(Source: Own Survey SPSS Output, 2023)

The Durbin-Watson statistics value in this study was 1.41, which is close to the acceptable range (Akter, 2014).

4.2.1.3.Linearity

The standard multiple regression model can only evaluate the relationship between dependent and independent variables if the associations are linear. In actuality, certain non-linear connections can be modeled using a linear regression framework (Osborne et al., 2002). This can be determined by graphing residuals versus projected Y values. A residual is the difference between what is plotted in your scatter plot at a certain position and what the regression equation indicates should be plotted at that same point.

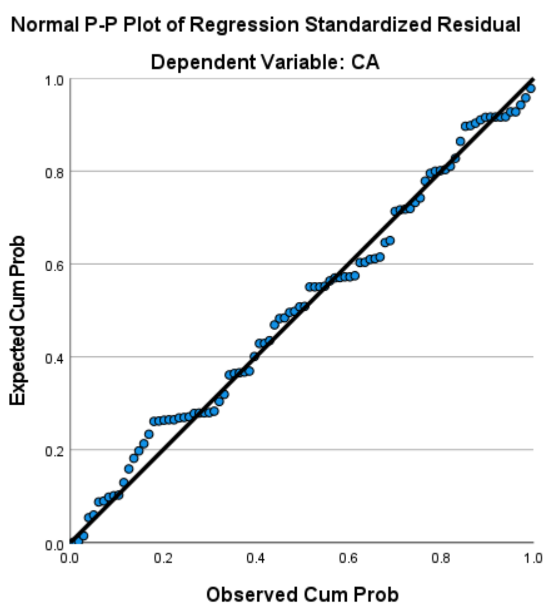

Figure 3 Linearity test

(Source: Own Survey SPSS Output, 2023)

As shown in the figure above the residuals spread randomly around the 0-line indicating that the relationship is linear.

4.2.1.4.Normality

Regression is based on the assumption that variables have normal distributions. Non-normally distributed variables may alter correlations and significance tests (Osborne et al., 2002). Several types of information can help the researcher evaluate this assumption: visual inspection of data plots, skew, kurtosis, and P-P plots provide information regarding normality. Outliers can be detected visually by inspecting histograms or frequency distributions, or by converting data to z-scores whereas, inferential statistics on normality could be adopted from Kolmogorov-Smirnov tests.

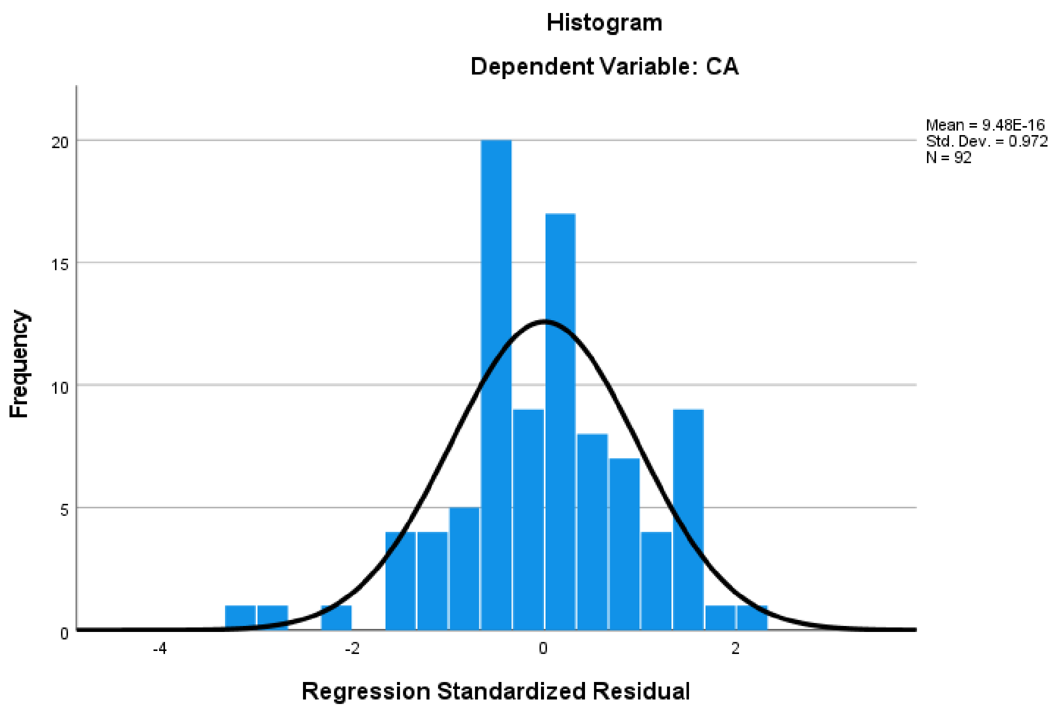

Figure 4 Normality test

(Source: Own Survey SPSS Output, 2023)

The figure above shows symmetric bell shaped histogram which is evenly distributed around zero indicating the normality assumption was fulfilled.

4.2.1.5.Multicollinearity

The occurrence of correlations between more than two predictors is referred to as multicollinearity. In severe circumstances, multicollinearity might result in no unique least squares solution to a regression analysis (Osborne et al., 2002). Although various different diagnostics are available, the variance inflation factor (VIF) is a prominent metric of multicollinearity. A VIF ≥10 is often thought to indicate harmful collinearity, though problems are possible with lower VIF values.

Table 4. 13 Multicollinearity test

		Tolerance	VIF
1	(Constant)		
	Activity Based Method	.678	1.474
	Target Costing	.420	2.380
	Life Cycle Costing	.318	3.142

(Source: Own Survey SPSS Output, 2023)

In this study the VIF is 1.474, 2.380 and and 3.142 indicating the absence of harmful collinearity since these values are less than 10.

4.2.1.6. Strategic Cost Management Techniques and Competitive Advantage

Multiple linear regression model was used in order to determine the explanatory power of the independent variables (activity-based method, target costing and life cycle costing) on dependent variable (competitive advantage).

Table 4. 14 Model Summary

Model Summary				
R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.770[a]	.594	.580	.46023	1.417

a. Predictors: (Constant), Life Cycle Costing, Activity Based Method, Target Costing

(Source: Own Survey SPSS Output, 2023)

The competitive advantage dependent variable's variation is explained by the independent variable's (combination of strategic cost management techniques) variance to the tune of 59.4%, according to the aforementioned by coefficient of determination of 0.594, while the remaining 40.6% is explained by extraneous variables, which have not been included in this model.

Table 4. 15 ANOVA Test

ANOVA [a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	27.215	3	9.072	42.828	.000[b]
	Residual	18.640	88	.212		
	Total	45.854	91			
a. Dependent Variable: Competitive Advantage						
b. Predictors: (Constant), Life Cycle Costing, Activity Based Method, Target Costing						

(Source: Own Survey SPSS Output, 2023)

Additionally, it was determined from the ANOVA test that the fitted model is significant because the P-value of the statistics is 0.00, which is less than the level of significance (α = 5%). These analysis shows the overall significance/ acceptability of the model from a statistical perspective, while the F value 42.828 shows the variation between the group means.

Table 4. 16 Regression analysis of independent variables and dependent variable

Coefficients [a]				
Model	Unstandardized Coefficients	Standardized Coefficients	T	Sig.

		B	Std. Error	Beta		
1	(Constant)	.145	.288		.504	.615
	Activity Based Methods (ABCM)	.155	.092	.132	1.683	**.096**
	Target Costing (TC)	.391	.085	**.431**	4.580	.000
	Life Cycle Costing (LCC)	.353	.106	**.327**	3.335	.001
a. Dependent Variable: Competitive Advantage						

(Source: Own Survey SPSS Output, 2023)

The constant 0.145 means that, in a condition where all independent variables are zero, competitive advantage as dependent variable is predicted to be 0.145. This value has no effect of the three variables on Competitive Advantage. The aforementioned beta values illustrate the strength of the association between the variables, with higher values denoting a strong relationship. Target costing in this study had the greatest Beta coefficient of 0.431. The conclusion that follows is that target costing had the greatest influence on competitive advantage. Life cycle costing, on the other hand, is discovered to be the second most important dimension, with a Beta value of 0.327, indicating that this dimension is significantly associated and greatly determines the competitive advantage. Since the p value is greater than 0.05, the effect of activity-based approaches on competitive advantage is not significant

Table 4. 17 Regression analysis between strategic cost management and competitive advantage

SCM Practices	**Standardized Beta Coefficients**
Target Costing	.431
Life Cycle Costing	.327
Activity Based Methods	.132

(Source: Own Survey SPSS Output, 2023)

As summarized in table 4.18 the study found that competitive advantage is positively impacted by the usage of target costing in the sampled manufacturing firms. This finding agrees with that of (El-Dyasty, 2007), who reported that target costing could enhance the ability of a company to be able to survive and compete successfully. The study also found that competitive advantage in the sampled manufacturing firms is positively influenced by the application of life cycle costing, which is consistent with that of (Petrova and Zarudnev, 2013), who reported that a successful implementation of Life cycle costing provided a competitive advantage for the companies. Whereas, competitive advantage is not significantly impacted by activity based method, which disagrees (Beheshti and Systems, 2004), who reported that activity-based cost management can enhance the competitive position of a firm. The finding of this current study could be as a result of the firms not using activity based method to secure competitive position or that the environment for effective implementation of activity based method was not available in the firms.

4.2.1.7. Contingent Factors and Strategic Cost Management Techniques

Multiple linear regression model was also used in order to determine the explanatory power of the factors affecting strategic cost management implementation in terms of environmental factors, information technology and business strategy.

Table 4. 18 Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.560[a]	.314	.291	.47806
a. Predictors: (Constant), Business Strategy, Environmental factors , Information Technology				

(Source: Own Survey SPSS Output, 2023)

As indicated in the table 4.19, the linear combination of contingent factors i.e., environmental factors, information technology and business strategy only explains 31.4% of the variance in strategic cost management techniques. Whereas the remaining 68.6% is explained by extraneous factors, which have not been included in this model.

Table 4. 19 ANOVA Test

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	9.212	3	3.071	13.435	.000[b]
	Residual	20.112	88	.229		
	Total	29.323	91			
a. Dependent Variable: Strategic Cost Management Techniques						
b. Predictors: (Constant), Business Strategy, Environmental Factors , Information Technology						

(Source: Own Survey SPSS Output, 2023)

Table 4.20 shows the overall significance/ acceptability of the model from a statistical perspective with p value of 0.000, which is below 0.05. The association between the variables is therefore statistically significant, indicating that the variance described by the model is not the result of chance.

Table 4. 20 Regression analysis of factors affecting strategic cost management practice

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.611	.266		6.064	.000
	Environmental Factors	.252	.082	**.338**	3.053	.003
	Information Technology	.074	.075	.120	.995	.323
	Business Strategy	.111	.066	.199	1.684	.096
a. Dependent Variable: SCMT						

(Source: Own Survey SPSS Output, 2023)

Referring the results in Table 4.21, the p-value of the variables to examine the significance level of each variable was .003, .323 and .096 for environmental factors, information technology and business strategy respectively. As a p-value of all a variable below 0.05 implies that the variables have no significant relationship with the dependent variable, information technology and business strategy have no significant effect on SCMT. Whereas, environmental uncertainty had significant influence on SCMT with beta value (β) and the p-value of 0.338 and 0.003 respectively.

CHAPTER FIVE

5. Summary, Conclusion and Recommendation

This chapter was designed to provide a quick review of the study's findings, followed by conclusions, recommendations, limitations and recommendations for further research.

5.2. Summary

This study looked at how strategic cost management practices in supply chain management affected the competitive advantage of pharmaceutical manufacturing businesses in Addis Ababa, Ethiopia. The study specifically evaluates the strategic cost management practices in terms of three key methodologies, namely activity-based approaches, target costing and life cycle costing in the sampled organizations. Additionally, it examines key factors affecting strategic cost management practices. The key findings' summaries and explanations are provided below based on the study's findings.

First, it was found that the selected enterprises only modestly employ strategic cost management methods with a grand mean of 3.27. According to the study, the group mean for activity-based costing was 3.1. This suggested that the respondents were opposed to the use of this strategy within their company. Target costing implementation had a group mean of 3.42, indicating that respondents moderately agreed to the use of this method in their own companies. Finally, respondents somewhat agreed with the application of life cycle costing, as seen by the group mean of 3.3.

Second, a regression study of strategic cost management strategies revealed that these techniques accounted for 59.4% of the variability in the firm's competitive advantage.

Finally, a regression study of factors affecting strategic cost management implementation revealed that environmental uncertainty, information technology and business strategy collectively accounted for 31.4% of the variability in the firm's strategic cost management implementation.

5.3. Conclusion

According to the descriptive analysis of the study, target costing and life cycle costing methodologies are somewhat used in enterprises, however the activity based method is not used. As a result, it is possible to infer that strategic cost management is modestly performed in the selected pharmaceutical manufacturing companies.

It was also noticed that the use of target costing and life cycle costing improves the businesses' competitive advantage. This is true since these strategies are relevant to cutting costs and, as a result, lowering selling prices while preserving quality, which leads to enterprises increasing their competitive advantage. However, the application of activity-based approaches has no discernible impact on competitive advantage. As a result, it is possible to conclude that strategic cost management strategies can be useful for establishing a competitive advantage.

Environmental factors is an elements impacting strategic cost management practice, whereas information technology and business strategy may not be a difficulty in applying these strategic cost management techniques.

5.4. Recommendation

- ✓ The present strategic cost management techniques of the case study corporations are average. As a result, corporations must enhance their practices in order to remain competitive and optimize revenues.
- ✓ The case corporations use the Activity Based Method (ABCM) seldom. As a result, enterprises should utilize ABCM to make strategic decisions regarding the structure and composition of the supply chain since it provides cost information about activities, goods, customers, and suppliers, revealing possibilities to boost profitability and competitiveness.
- ✓ Companies seeking a competitive advantage should enhance their implementation of Target Costing (TC) and Life Cycle Costing (LCC), since both strategies have been shown to provide a competitive advantage to those that use them.
- ✓ Before applying strategic cost management approaches, companies should examine the of the environment in which they operate. Hence top management support should play a significant role on the betterment of the environment as well as sustainability of the business.

5.5. Limitations and Suggestions for Future Research

- The scope of the research is confined to strategic cost management strategies such as activity-based methodologies, target costing, and life cycle costing. However, there are additional cost-cutting strategies that can help improve competitiveness by enhancing supply chain management operations. Total Cost of Ownership (TCO), in particular, is an important instrument for analyzing the costs of acquiring and using goods or services across their life cycle. It may also be a useful tool for tracking the hidden indirect costs connected with supplier transactions, especially if buying divisions are seen as strategically important. As a result, TCO approach should be examined in future study.
- There is a scarcity of literature and empirical evidence for the pharmaceutical sector in general, and especially for the Ethiopian pharmaceutical industry. As a result, the majority of the Strategic cost management practice variables and metrics were adapted from other industrial literature. As a result, the study's ability to examine and measure the strategic management methods of pharmaceutical firms is limited. As a result, more research should be conducted to see whether the conclusions of this study will still hold true in these organizations.
- Despite the fact that many parties are involved in pharmaceutical supply chain management, the study is confined to pharmaceutical manufacturing businesses. As a result, it is advised that future research include other stakeholders such as distributors and retailers.
- This research employs survey research to assess the impact of strategic cost management on competitive advantage. Because this approach is limited in obtaining accurate data, it is advised that future research perform case studies to bring out the intricacies.

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APPENDICES

ADDIS ABABA UNIVERSITY SCHOOL OF COMMERCE DEPARTMENT OF LOGISTICS AND SUPPLY CHAIN MANAGEMENT GRADUATE PROGRAM

The case of Pharmaceutical Manufacturers

Dear respondent,

This questionnaire is intended to collect data on “Evaluating the Effect of Strategic Cost Management Practice in Supply Chain Management on Competitive Advantage of Pharmaceutical Manufacturers in Addis Ababa, Ethiopia”, as a partial fulfillment of the requirement for the Degree of Master of Arts in Logistics and Supply Chain Management. Kindly please spare few minutes of your time and respond to the questions below as honestly as you can. Please note that this survey is for academic purpose only; your responses will be strictly confidential and the data will only be used as an aggregate. (NB: No need of writing your name).

Thank you for your cooperation!!!

Questionnaire used for the Study

Part I: General Information

Gender

- Male
- Female

Highest level of education

- College Diploma
- Undergraduate Degree
- Postgraduate Degree
- Doctorate and Above

Job Title----------------

Work Experience in position

- Below 2 years
- 2-3 years
- 3-5 years
- 5-10 years
- Above 10 years

Part II: Adoption of Strategic cost management in the pharmaceutical supply chain

1. Please tick as appropriate from the options of: Strongly disagree (1), Disagree (2), Neutral (3), Agree (4), and Strongly agree (5).

Activity – based costing and management (ABM)	1	2	3	4	5
Analysis of the value chain activities of the company is normally carried out.					
The causes of the company's activity costs are normally investigated.					

Activities are usually analyzed into added value and non - added value activities and performance measures are determined for each activity.					
The company examines and qualifies the effect of cost drivers.					
Activities required for the manufacture of products which drive costs are effectively managed in the company.					
Allocations of cost to products are done using appropriate activity consumption rate.					
There are Procedures in the company for the determination of activities required for the manufacture of the firm's product					
Cost driver for each activity in the firm are determined					
Adequate records of cost drivers and activities of the company are kept.					

Target Costing (TC)	1	2	3	4	5
A market survey is usually conducted to determine the best specifications desired by customers before new products are manufactured.					
Target price and target profit of new products are usually determined before production take place.					
The company usually researched for and sets competitive prices for their new products.					

The desirable or allowable production cost of new products which is determined as the difference between the target selling prices and target profit margin is usually estimated.					
Improvements and adjustments on the current design of the proposed product are usually made in target costing thus leading to cost reduction and achievement of the target cost.					

Life Cycle Costing (LCC)	1	2	3	4	5
Information about customers and competitors are gathered by the company					
Costs incurred at each stage of the product life cycle are properly determined for the purpose of cost management.					
The stage and time of achieving improved revenue and cost reduction for all the stages of the product life cycle are determined.					
Other tools of strategic cost management such as target costing and value engineering are used in effecting cost reduction at each of product life cycle.					
There is trade off and balancing between the standards specified by the customers in term of the quality and response time and the selling price.					

Part III: Competitive Advantage

Please indicate the extent of your agreement with any of these options Strongly disagree (1), Disagree (2), Neutral (3), Agree (4), and Strongly agree (5).

Competitive Advantage	1	2	3	4	5

Competitive advantages is achieved with the implementation of strategic cost management in the company and which leads to improvement in organizational performance.					
The company is able to sell its products at lower cost when compared with its competitors.					
The company is efficient in its production and so could avoid unnecessary costs thereby leading to cost reduction.					
The company is able to launch higher quality products into the market and achieves greater product acceptance.					
The company is able to source for quality raw materials at reduced prices and leading to lower product cost					
The company achieves higher profit margin greater return on assets with valuable resources such or unique competence.					
The company has created a brand name for itself.					

Part IV: Factors that affect strategic cost management in supply chain

Please indicate the extent of your agreement with any of these options to no extent (1), to a limited extent (2), to a moderate extent (3), to a great extent (4), and to a very great extent (5).

Environmental Factors	1	2	3	4	5
Incompatibility of company competition in the sector and level of rivalry among firms					
Top managers' perception of environmental uncertainty and their willingness to adapt to a changing market					
Government norms, regulations, policies					
Political uncertainties					

Social uncertainties such as religion, environment, language, cultural issues, limitations of communication					
Information technology					
Lack of communication tools such as electronic fund transfer and electronic data exchange					
Lack of internet based information and communication technology					
Lack of supply chain management planning tools to execute or manage the various activities and relationships in the entire supply chain					
Business strategy					
Implementation of differentiation strategy					
Implementing cost leadership strategy					