YANGON UNIVERSITY OF ECONOMICS

DEPARTMENT OF MANAGEMENT STUDIES

MBA PROGRAMME

THE EFFECT OF INVENTORY MANAGEMENT ON ORGANIZATIONAL PERFORMANCE AT COMMERCIAL PLASTICS COMPANY LIMITED

HTET HTET PHYO

EMBA II-43

EMBA 19th BATCH

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ACADEMIC YEAR (2022-2024)

Supervised by:

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EMBA II - 43

EMBA 19th Batch (Campus)

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THE EFFECT OF INVENTORY MANAGEMENT ON ORGANIZATIONAL PERFORMANCE AT COMMERCIAL PLASTICS COMPANY LIMITED

"This thesis is submitted to the Board of Examiners in partial fulfillment of the requirements for the degree of Master of Business Administration (MBA)".

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ACCEPTANCE

This is to certify that the thesis entitled **"The Effect of Inventory Management on Organizational Performance at Commercial Plastics Company Limited"** has been accepted by the Examination Board for awarding a Master of Business Administration (MBA) degree.

Board of Examiners

(Chairman)

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(Examiner)

MAY, 2024

ABSTRACT

The objectives of the study are to analyze the effect of inventory management on organizational performance and to analyze the indirect effect of inventory management on organizational performance through competitive advantage at Commercial Plastics Company Limited. There are 60 employees who are managers, assistant managers, and supervisors. They are responsible for warehouse department, production department, maintenance department, finance department and sourcing department at Commercial Plastics Company Limited. Census sampling method is used to collect all related 60 employees and structured questionnaire is applied to collect data through online survey method. Both descriptive and regression methods are applied. Additionally, secondary data is collected from textbooks, journals, research papers, websites and so on that is the relative to inventory management practice. The findings reveal that vendor management inventory and computerized inventory management have a significant and positive effect on organizational performance. Furthermore, there is mediating effect of competitive advantage on the relationship between vendor management inventory and organizational performance. Then, there is mediating effect of competitive advantage on the relationship between computerized inventory management. These findings highlight the importance of vendor management inventory and computerized inventory management in enhancing organizational performance. The study suggests that Commercial Plastics Company Limited should focus on improving inventory management to boost competitive advantage, ultimately leading to improved organizational performance.

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LIST OF ABBREVIATIONS

CA	Competitive Advantage
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CIM	Computerized Inventory Management
COGS	Cost of Goods Sold
CPC	Commercial Plastics Company Limited
DGM	Deputy General Manager
EDI	Electronic Data Interchange
ERP	Enterprise Resource Planning
ESG	Environmental, Social, and Governance
FIFO	First In First Out
HR	Human Resources
IT	Information Technology
Lab	Laboratory
M & E	Mechanical & Electrical
MSEs	Micro and Small Enterprises
OP	Organizational Performance
PET	Polyethylene Terephthalate
QA	Quality Assurance
QC	Quality Control
RK	Record Keeping
SEM	Structural Equation Modelling
VMI	Vendor Managed Inventory

CHAPTER 1

INTRODUCTION

Effective inventory management is paramount within the manufacturing area, pivotal for ensuring timely product availability while averting both stock shortages and excesses. By minimizing carrying expenses and maximizing profitability, streamlined inventory management serves as a linchpin for financial optimization. Moreover, it fosters seamless communication channels among manufacturers, distributors, and retailers, facilitating coordinated efforts across production, transportation, and storage domains. In essence, adept inventory management enhances visibility, reduces costs, and positions operations optimally for achieving success. The effective inventory management contributes to profitability through the reduction of expenses related to material storage and handling. Inventory management ensures that materials of appropriate quality and quantity are accessible when needed, considering factors such as cost efficiency, ordering expenses, purchase prices, and the optimal utilization of working capital (Lysons & Farrington, 2006). It also dictates the appropriate levels of material stockholding.

Vendor management inventory (VMI) embodies a strategic approach for inventory control within manufacturing enterprises, affording benefits such as cost minimization, improved product accessibility, reduced transportation cost, and more efficient replenishment procedures. By fostering closer collaboration between manufacturers and suppliers, VMI enables companies to optimize inventory levels, and reduce stockouts (Cachon & Fisher, 2000). VMI represents a strategic coordination approach, typically between a seller, often a supplier or manufacturer, and a buyer. Under VMI, the supplier assumes complete responsibility for managing and controlling inventory levels within the buyer's organization. This encompasses decisions regarding inventory levels, supply processes, and replenishment steps in the organization. By providing the supplier with comprehensive information on organizational inventory, VMI enables the buyer to effectively monitor, regulate, and oversee inventory levels within the organization (Tang, 2006). VMI plays a key role in offering a competitive edge. It delegates inventory management responsibilities to the vendor, resulting in increased productivity, efficiency, and effectiveness in operations. VMI also enhances customer satisfaction and reduces inventory-related costs (Zavanella & Zanoni, 2009).

Information technology expedites the transmission of business transactions, outperforming manual transactional tools like fax machines in terms of speed. Consequently, it enhances the precision and timeliness of information flow across different stages of business processes, fostering improved operational efficiency within organizations (Kekre & Mukhopadhyay, 1992). To excel in their roles within an organization and meet consumer demands effectively, inventory managers rely on information technology. By utilizing computers, stock control processes can be significantly enhanced, allowing for the calculation of optimal stock levels and efficient shipping. This is achieved through the analysis of various inventory factors such as stock levels, demand patterns, and delivery rates, facilitated by computer systems (Baily et al., 2021). According to Botta-Genoulaz and Millet (2006), computerized inventory management system represents a technological solution that automates and enhances inventory-related operations within manufacturing firms. It utilizes advanced software and technologies to track inventory levels in real-time monitoring of inventory levels, facilitates the management of stock movements, and supports data-driven decision-making processes. ERP system is a comprehensive software package comprising a range of standard functional modules such as production, sales, human resources, and finance, among others. These modules are either developed or integrated by the vendor and can be customized to meet the specific requirements of each customer. The primary aim of an ERP system is to unify all departments and functions within a company onto a single computer system capable of addressing their diverse needs. While ERP systems traditionally focused on planning, they now encompass broader functionalities such as financial control, operational management, analysis, reporting, and routine decision support.

FIFO assumes the first items into inventory are the first items sold. It is the most common inventory valuation method because of its simplicity. The method facilitates cost-flow assumptions when moving products from inventory to COGS (Paesl, 2023). FIFO ensures the sale or use of the oldest inventory items before newer ones, effectively mitigating the likelihood of inventory obsolescence and spoilage. Through the adoption of FIFO, manufacturing enterprises can mitigate the potential for inventory write-downs, lower carrying costs, and maintain adherence to regulatory requirements. Following the FIFO principle is logical for businesses, as it reduces the risk of obsolescence by prioritizing the sale of the oldest goods first. The first in first out (FIFO) system dictates

that components received first should be dispatched or issued first. This approach aids in tracking components, inventory, spare parts. Implementing the FIFO system benefits the organization by reducing the likelihood of component misplacement and the storage of outdated components (Manohar & Appaiah, 2017).

According to Cheng and Podolsky (1996), record keeping refers to accurate tracking, monitoring, and control of inventory levels and effective record keeping involves maintaining comprehensive records of inventory transactions, including receipts, withdrawals, transfers, and adjustments. By implementing robust record-keeping practices, manufacturing companies can optimize inventory management processes, enhance operational efficiency, and achieve better control over their supply chain operations.

Competitive advantages refers through a strategic focus on price, quality, and delivery in inventory management within the manufacturing industry (Kamau & Kagiri, 2015). Effective inventory management practices enable companies to offer competitive pricing by minimizing holding costs, reducing stockouts, and optimizing order quantities. Additionally, efficient inventory management contributes to improved delivery performance, enabling companies to meet customer demand promptly and reliably. By streamlining inventory processes, and leveraging technology, manufacturing companies can gain a competitive edge in terms of price competitiveness, product quality, and delivery reliability. According to Adeyemi and Salami (2010), the businesses must enhance their ability to manufacture high-quality products at reduced costs while simultaneously delivering superior customer service. This multifaceted approach is essential for companies to remain competitive, retain good quality, customer satisfaction, and achieve sustainable success in the dynamic business landscape of today.

According to Neshkova and Guo (2012), organizational performance is closely linked to effective inventory management practices, impacting key metrics such as profit, output levels, and cost efficiency in the manufacturing industry. The optimized inventory management leads to improved profitability by reducing holding costs, minimizing stockouts, and enhancing cash flow through better working capital management. Furthermore, efficient inventory management ensures consistent output levels by maintaining adequate stock levels to meet demand without excessive overstocking or shortages. This consistency in output helps manufacturing companies capitalize on revenue opportunities and maintain market competitiveness. By implementing sound

inventory management strategies, manufacturing companies can enhance organizational performance across key financial and operational indicators, driving profitability, maintaining output levels, and improving cost efficiency.

Effective management of inventory control that is adaptable and responsive to changing circumstances is essential for driving organizational performance. This entails implementing strategies and systems that can swiftly adjust to fluctuations in demand, market conditions, and other variables, ensuring that inventory levels are optimized to support operational objectives. By maintaining a flexible approach to inventory management, organizations can enhance output efficiency, minimize costs, improve profitability, and ultimately achieve their performance goals (Ogbo & Ukpere, 2014).

Commercial Plastics Company Limited, through its subsidiary in Myanmar, recycles wasted plastic bottles. CPC enhanced its production capabilities to create food-grade recycled PET products, sourcing raw materials locally and supporting regional waste management. The company employs advanced mechanical recycling processes with top-tier equipment from an esteemed Italian firm, producing high-quality food-grade PET flake and resin. The recycle plastic market has been growing globally, encouraged by national level regulations and companies' initiatives on promoting the use of recycled materials, as well as the high awareness for environmental consideration. Overall, CPC's journey reflects its growth, innovation, and strategic commitment to sustainable practices in the plastics recycling industry. This study explores how the mediation effect of competitive advantage between inventory management and organizational performance.

1.1 Rationale of the Study

In today's dynamic marketplace, effective inventory management plays a pivotal role in ensuring operational efficiency and meeting market demands. By efficiently managing inventory levels of raw materials, work-in-progress items, and finished goods, Commercial Plastics Company Limited can effectively capitalize on emerging market opportunities, improve technology system, optimize resource utilization, and maintain a competitive edge in the environmentally conscious plastic recycling industry.

Organizational performance is critical to grow or survive the business. Organizational performance encompasses various aspects such as financial stability, operational efficiency, and customer satisfaction, all of which are critical for the

company's success and sustainability. It ensures the company's ability to invest in innovation, technology, and expansion, thereby driving growth and competitiveness in the market. Moreover, it enables streamlined processes, cost reduction, and timely delivery of products, enhancing overall productivity and profitability. By prioritizing organizational performance, Commercial Plastics Company Limited can effectively navigate challenges, capitalize on opportunities, and achieve its strategic objectives, ultimately contributing to its long-term success and growth in the recycled plastic industry.

Competitive advantage is essential to compete in the marketplace. Competitive advantage is a firm's ability to outperform competitors by leveraging superior resources and capabilities effectively. This advantage depends on some key characteristics: durability and transferability. Durability refers to how long the competitive edge lasts and transferability measures how difficult it is for other firms to acquire these resources (Sadler, 2003). Competitive advantage enables Commercial Plastics Company Limited to build long-term relationships with vendors, attract environmentally conscious consumers, and capitalize on emerging market trends in the competitive landscape of the recycled plastic industry.

Commercial Plastics Company Limited faces the challenge of optimizing its operational efficiency and maintaining a competitive edge in the manufacturing industry. As a company specializing in the transformation of raw materials into finished goods for recycling items, Commercial Plastics Company Limited’s success hinges on its ability to effectively manage inventory.

Vendor management inventory is an essential element to manage the inventory effectively. Vendor management inventory (VMI) allows suppliers to manage inventory for buyers, ensuring timely restocking, reducing stockouts, minimizing surplus, and lowering storage costs for improved inventory control and supply chain coordination. Computerized inventory management is also an important factor for inventory management. Computerized inventory management (CIM) systems automate tracking, enhance accuracy, and reduce human error, providing real-time data, predictive analytics, and automated reporting to streamline operations and improve efficiency. First in first out is other important factor for inventory management. Implementing first in first out (FIFO) ensures the oldest inventory is used first, preventing expiration, reducing waste, and maintaining product quality, especially for perishable items. Record keeping is an additional key factor of inventory management. Accurate record keeping (RK) is

essential for tracking inventory, forecasting demand, and planning purchases, enabling timely reordering, preventing overstocking or stockouts, and supporting financial accuracy and auditing. Effective inventory management is crucial for the company to minimize costs, reduce waste, and ensure timely production to meet customer demands, thereby enhancing its overall organizational performance.

This study examines the effect of inventory management practices on organizational performance, with competitive advantage acting as a mediator in this relationship. By conducting a thorough examination of these interconnected aspects, the objective is to offer valuable insights to the management team of the company. This aims to refine practices related to inventory management, capitalize on competitive advantages, and enhance organizational performance significantly.

Understanding the nuanced connections between inventory management, competitive advantage, and organizational performance is crucial for long-term success and sustainability in the competitive manufacturing landscape. This study holds the potential to inform strategic decision-making within Commercial Plastics Company Limited enabling the company to implement targeted interventions that optimize inventory management practices, capitalize on competitive advantages, and foster sustainable organizational growth and success.

1.2 Objectives of the Study

The main objectives of the study are as follows:

1. To analyze the effect of inventory management on organizational performance in Commercial Plastics Company Limited.
2. To analyze the indirect effect of inventory management on organizational performance through competitive advantage as the mediator in Commercial Plastics Company Limited.

1.3 Scope and Method of the Study

This study is mainly focused on the effect of inventory management on organizational performance at Commercial Plastics Company Limited. There are 60 employees who are managers, assistant managers, and supervisors. They are responsible

for warehouse department, production department, maintenance department, finance department and sourcing department at Commercial Plastics Company Limited. Data is collected from all related 60 employees with structured questionnaires through online survey methods by using census sampling method. Both descriptive statistics and liner regression methods applied. Additionally, secondary data is collected from textbooks, journals, research papers, websites and so on that is the relative to inventory management practice.

1.4 Organization of the Study

This study comprises five chapters. Chapter one serves as an introduction regarding the rationale of the study, objectives of the study, scope and method of the study along with the organization of the study. Chapter two is composed of the theoretical background with inventory management (vendor management inventory, computerized inventory management, FIFO, record keeping), competitive advantage and organizational performance, then previous study and conceptual framework of the study at Commercial Plastics Company Limited. Chapter three includes the profile along with vision and mission, organization structure, and inventory management and additional, reliability test and demographic profile of Commercial Plastics Company Limited. The analysis of inventory management on organizational performance takes place in chapter four including the research design. Chapter five covers findings and discussions, suggestions and recommendations, and further research as a conclusion.

CHAPTER 2

THEORETICAL BACKGROUND

This chapter discusses the theoretical framework of inventory management and competitive advantage through organizational performance at Commercial Plastics Company Limited. It constructs a conceptual framework that guides the study's design and analysis of dependent variables and independent variables.

2.1 Inventory Management

Inventory management refers to the systematic planning, organizing, and controlling of inventory or stock of goods within an organization to ensure efficient utilization of resources while meeting customer demand (Stevenson, 2018). It involves various processes such as inventory tracking, replenishment, storage optimization, and inventory valuation. Inventory management aims to strike a balance between maintaining adequate stock levels to fulfill customer orders and minimizing excess inventory to reduce holding costs and obsolescence risks.

Inventory comprises the extensive array of tangible goods or materials held within a business entity throughout its production, distribution, or sales procedures. It encompasses diverse items such as raw materials, components, works-in-progress, finished products, spare parts, and essential operational supplies. The concept of inventory has broadened from its origins in manufacturing systems to include service businesses and projects. This expansion is achieved by defining inventory as encompassing all tasks within the production process, including any work that occurs before production is completed. Serving as a pivotal element of a company's operations and financial stability, inventory constitutes a substantial portion of its assets and locks up capital resources.

Anantadjaya et al. (2021) found that strategic inventory management significantly influences a company's overall performance. This strategic approach entails proactive inventory management, focusing on optimizing inventory levels, reducing carrying costs, and improving cash flow. Successful implementation of strategic inventory management requires the utilization of advanced techniques and technologies, coupled with a thorough

understanding of the company's supply chain dynamics and customer demand patterns. Their research demonstrated that organizations adopting strategic inventory management practices typically achieve enhanced performance in critical areas such as productivity, profitability, and customer satisfaction.

By optimizing inventory levels and minimizing carrying costs, companies can improve cash flow and allocate resources to other business areas, thereby fostering increased productivity and profitability. Moreover, strategic inventory management is pivotal in enhancing customer satisfaction by ensuring the availability of the right inventory in the right quantity and at the right time to meet customer demand, ultimately leading to heightened levels of customer loyalty and repeat business. Akbar et al. (2020) emphasized the considerable impact of inventory models on product pricing strategies. The selection of inventory models within a company can notably shape its approach to pricing strategies. Inventory costs, covering expenses associated with acquisition, storage, and management, are pivotal factors in determining product prices. These inventory costs must be considered in setting product prices to ensure the company generates a profit. Consequently, the selection of inventory models directly influences inventory costs and, consequently, product pricing.

Effective inventory management entails vigilant oversight and regulation of goods flow across the supply chain to uphold optimal levels, striking a balance between meeting customer demands and mitigating carrying costs as well as the perils of obsolescence or spoilage. Prudent inventory management is imperative for heightening operational efficacy, ensuring timely fulfillment of customer orders, mitigating stockouts, and ultimately amplifying profitability. In the context of services, inventory pertains to all activities completed before the sale, encompassing partially processed information as well. Efficient inventory management can enhance the profitability of a company by reducing the amount of capital tied up in inventory, allowing for allocation to alternative ventures like investing in new products, expanding operations, or distributing dividends to shareholders. Moreover, effective inventory management contributes to customer satisfaction by ensuring the availability of products when needed, consequently expanding the customer based and profitability of the enterprise. Gečienė (2020) conducted a study examining the correlation between perceived planning performance and various methods utilized to establish planning parameters.

2.1.1 Vendor Management Inventory

Vendor management inventory (VMI) refers to a strong distribution network to function optimally, as it depends on clients promptly responding to orders from the vendor. This minimizes the demand-supply gap, ultimately ensuring timely delivery to the end customer, meeting their needs effectively (Jame, 2008). An integrated distribution network is essential for sharing consumption data to prevent both understocking and overstocking situations. As the supplier is responsible for inventory management in vendor management inventory (VMI) systems, instances of stockouts are reduced due to scheduled resupply plans, eliminating handling costs for the client. A successful VMI setup requires a strong relationship between the supplier and the client, facilitating effective communication from the outset of their business dealings. This positive relationship fosters mutual understanding and goodwill between the supplier and the customer (Frahm, 2008).

In a collaborative supply chain management approach known as vendor management inventory (VMI), the vendor or supplier is in charge of overseeing the buyer's or customer's inventory levels. In VMI, the supplier follows up the buyer's inventory levels and initiates replenishment orders autonomously based on predefined agreements and demand forecasts. This approach aims to streamline inventory management processes, reduce stockouts, minimize excess inventory, and enhance overall supply chain efficiency through improved coordination and information sharing between trading partners.

In vendor management inventory (VMI), a significant challenge arises with lead times, particularly when inventory is imported, and there is a high variability in client orders as well as shifting preferences (Rajagopolan et al., 2007). This can result in potential overstocking in the client's warehouse and delays in the delivery of certain goods from the supplier. To address these challenges, clients should share their inventory status and movement reports with suppliers to prevent delivery shortages that could disrupt company operations. This collaboration also enables inventory reduction to prevent excessive capital tie-up, thus improving cash management. Additionally, any reductions in supply and associated costs are ultimately passed on to the end-user customer.

2.1.2 Computerized Inventory Management

Computerized inventory management refers to the use of digital tools and software systems to automate and optimize inventory-related processes within an organization. These systems utilize technology to track inventory levels in real-time, streamline procurement processes, and facilitate efficient inventory control (Muller & Kersten, 2014). By leveraging computerized inventory management, organizations can improve inventory accuracy, reduce manual errors, enhance decision-making, and ultimately, increase operational efficiency. They describe computerized inventory management as a digital approach that data analytics optimizes inventory levels, minimize stockouts, and improve inventory turnover rates. These systems enable organizations to automate replenishment processes, track inventory movements in real-time, and generate insights for strategic decision-making.

According to Swatman and Swatman (1991), electronic data interchange (EDI) facilitates the exchange of data between computer systems by initiating standardized document formats, known as transaction sets, which are utilized for the routine transmission of large volumes of repetitive documents. Implementing EDI is linked to reduced administrative costs and enhanced speed and accuracy in data management. It empowers organizations to transmit and receive standardized business communications rapidly, flexibly, cost-effectively, and with heightened security and precision compared to traditional postal services. EDI serves as a standard means of transferring commercial information between computers.

Integrating information technology (IT) into business operations to establish connectivity among supply network partners through information exchange has emerged as a competitive advantage over rivals in the same industry. IT is acknowledged as a pivotal force in the current market environment (Bartezzaghi & Ronchi, 2003).

Mundia et al. (2015) noted that electronic data interchange (EDI) and enterprise resource planning (ERP) represent the prevailing communication technologies utilized in various companies, although several other communication methods are also employed. EDI involves the utilization of transaction sets to facilitate the exchange of data between computer systems.

2.1.3 First In First Out

First In First Out (FIFO) is an inventory control method that prioritizes the sale or distribution of goods based on their date of receipt (Budiawan et al., 2019). Under the FIFO method, the earliest batch of goods received is the first to be sold or distributed to customers. This approach is classified as a perpetual inventory system within the inventory accounting model. FIFO ensures that older inventory is utilized first, thus maintaining a stock rotation that keeps inventory fresh. Consequently, companies opt for the FIFO method to manage inventory freshness, especially when dealing with items that have limited shelf life.

The FIFO method is perceived as an inventory valuation technique wherein it is assumed that the earliest acquired items are the first ones to be utilized or sold, irrespective of the actual physical flow. This method's effectiveness lies in its impact on the data presented in the balance sheet, as it ensures that the initial inventory purchases are the first ones deducted from the inventory account. Consequently, the remaining balance primarily comprises items purchased at more recent cost prices, thereby maintaining balance in the recorded prices on the balance sheet. One of the primary objectives of FIFO is to align the physical flow of goods, and its advantages include preventing profit manipulation by the company and bringing the final inventory value closer to current running costs. Moreover, the FIFO method is widely adopted by companies due to its simplicity in calculation and implementation, ensuring that the final inventory value on the balance sheet aligns with current market prices and helps in mitigating inventory damage and obsolescence (Sembiring et al., 2019).

The First In First Out (FIFO) method is an inventory valuation technique used to determine the cost of goods sold (COGS) and the value of ending inventory. Under FIFO, it is assumed that the first inventory items purchased or produced are the first to be sold or used, meaning that the oldest inventory costs are assigned to sales first before more recent costs. This method results in the COGS reflecting the cost of the earliest inventory acquired, while the ending inventory reflects the cost of the most recent purchases or production according to (Datar & Rajan, 2021). FIFO minimizes the risk of inventory obsolescence by selling older items first, improving overall inventory management efficiency and reducing losses associated with obsolete inventory.

2.1.4 Record Keeping

Record keeping in inventory management refers to the systematic process of documenting and organizing information related to the acquisition, storage, movement, and usage of inventory within an organization (Chase et al., 2021). This includes maintaining accurate records of inventory levels, transactions, stock movements, and any changes in inventory status. Effective record keeping ensures that businesses have up-to-date and reliable information about their inventory, enabling them to make informed decisions, track inventory costs, prevent stockouts or overstocking, and comply with regulatory requirements. Record keeping in inventory management involves maintaining detailed records of all inventory-related activities, including purchases, sales, transfers, adjustments, and inventory counts. These records are typically stored in a centralized database or inventory management system, allowing for easy access and retrieval of information as needed.

Inventory management evaluation is crucial for informed decision-making regarding procurement and sales. While some companies conduct physical inventory counts at regular intervals, such as monthly or quarterly, for dollar-based inventory assessments to estimate inventory value in monetary terms on a day-to-day basis (Amold, 1998).

2.2 Competitive Advantage

Competitive advantages represent enduring attributes of the entity or external circumstances that confer superiority to the enterprise over competitors within the specific market context over a defined timeframe. These advantages are the distinguishing features or attributes possessed by a product or brand, granting them an edge over their nearest rivals. According to Kotler and Gertner (2007), competitive advantage is achieved by delivering superior value, offering lower prices, or providing additional benefits that justify premium pricing.

Competitive advantage in inventory management refers to the strategic edge that a company gains over its competitors by effectively managing its inventory resources (Duran et al., 2008). This advantage allows the company to achieve superior performance outcomes, such as higher profitability, increased output level, improved quality and customer satisfaction, compared to its rivals. Competitive advantage in inventory

management from a price perspective involves the ability of a company to offer its products at lower prices than its competitors while maintaining profitability. This is achieved through efficient inventory management practices that minimize holding costs, reduce wastage, and optimize procurement processes. By controlling costs associated with inventory, companies can pass on savings to customers in the form of competitive pricing, thereby gaining a price advantage in the market.

Mentzer et al. (2000) stated possessing a competitive advantage typically implies that an organization exhibits one or more of the following abilities relative to its competitors: offering lower prices, delivering higher quality, ensuring greater reliability, and providing shorter delivery times. These capabilities consequently contribute to the organization's overall performance improvement. Efficient management of inventory offers avenues for establishing a sustainable competitive edge and bolstering the competitive standing of firms. This involves minimizing the expenses associated with inventory holding by maintaining optimal inventory levels, ensuring they are situated appropriately, and are available at the required time and cost to produce the necessary quantity of goods (Atnafu & Balda, 2018).

According to Kamau and Kaigiri (2015), the optimizing inventory procedures and utilizing advanced technology, manufacturing firms can enhance their competitive advantage through improved price competitiveness, superior product quality, and reliable delivery performance. Price perspective involves the ability of a company to offer its products at lower prices than its competitors while maintaining profitability. This is achieved through efficient inventory management practices that minimize holding costs, reduce wastage, and optimize procurement processes. By controlling costs associated with inventory, companies can pass on savings to customers in the form of competitive pricing, thereby gaining a price advantage in the market (Duran et al., 2008). Quality relates to the ability of a company to maintain high product quality standards while effectively managing its inventory levels. This involves ensuring that products are readily available, free from defects, and meet or exceed customer expectations. By implementing robust inventory management systems that prioritize quality control measures, companies can enhance product reliability, consistency, and durability, thereby gaining a reputation for superior product quality in the marketplace (Stevenson et al., 2007). Delivery revolves around the company's ability to fulfill customer orders quickly, reliably, and efficiently. This entails maintaining optimal inventory levels to meet demand fluctuations,

minimizing lead times through streamlined supply chain processes, and ensuring on-time delivery of products to customers. By achieving superior delivery performance, companies can enhance customer satisfaction, build trust, and gain a competitive edge over rivals in the market (Chopra & Meindl, 2007).

2.3 Organizational Performance

Organizational performance in the context of inventory management refers to the effectiveness and efficiency with which a company manages its inventory resources to achieve its strategic goals and objectives (Jacobs & Swink, 2011). It encompasses various dimensions of performance, including financial health, operational efficiency, customer satisfaction, and market competitiveness, all of which are influenced by the company's inventory management practices. Organizational performance in inventory management from a profit perspective refers to the ability of a company to generate positive financial returns through effective management of its inventory resources. Companies with superior inventory management practices can achieve higher profit margins by minimizing costs while maximizing sales revenue, thereby enhancing overall profitability.

According to Cania (2014), organizations strive to enhance competition among themselves to capture a larger market share, attract more customers, and boost sales. The rapid changes brought about by globalization, advancements in information systems, and other factors have intensified competition. Consequently, many organizations are market-driven in setting their performance goals. These goals include cost reduction, achieving sales targets, expanding the customer base, increasing market share, improving productivity and quality, and developing innovative products. Achieving these objectives is largely dependent on effective human resources management within organizations. The workforce, being crucial to success, plays a pivotal role in enabling the attainment of organizational performance goals.

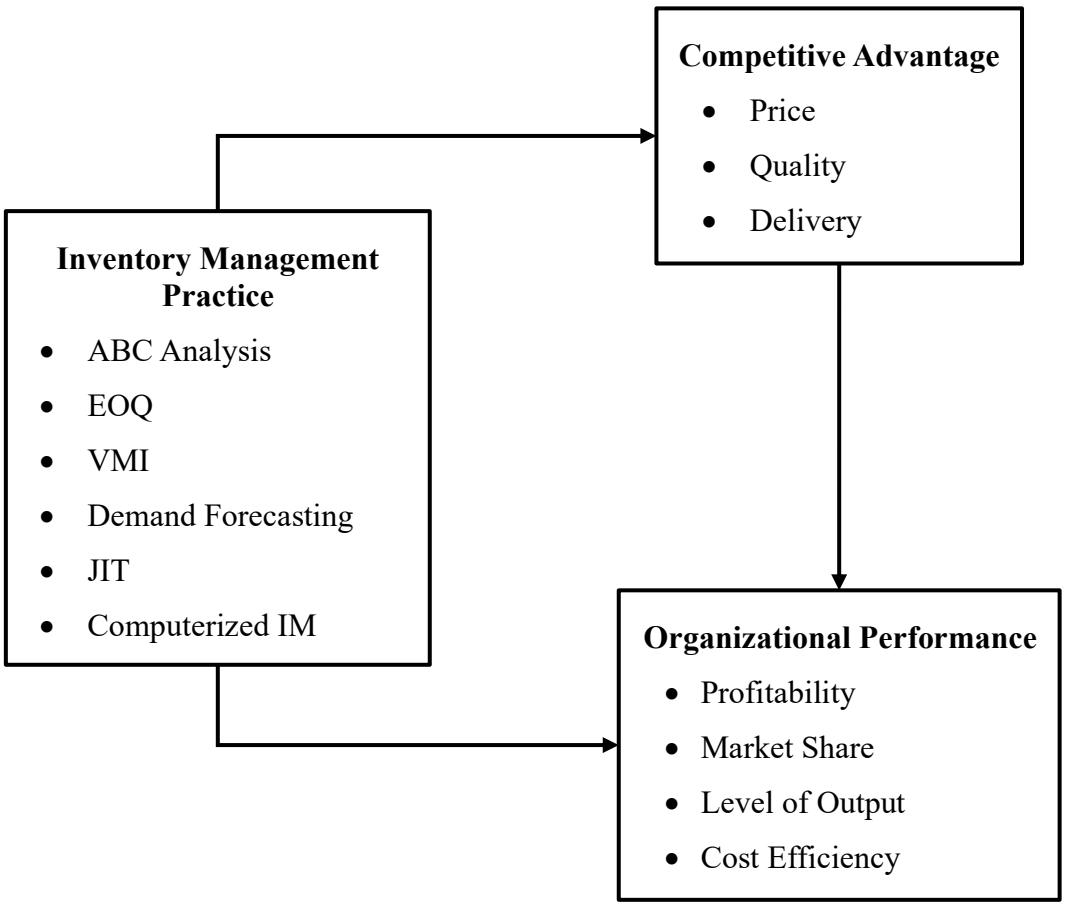
Level of output in inventory management relates to the company's capacity to maintain optimal production levels and meet demand requirements while managing inventory effectively. This involves balancing inventory levels to avoid stockouts or overstocking, optimizing production schedules to maximize output, and ensuring timely replenishment of inventory to support production activities. Companies that can maintain consistent levels of output while efficiently managing inventory resources are better

positioned to meet customer demand and capitalize on market opportunities (Stevenson et al., 2007). Cost efficiency perspective focuses on the company's ability to minimize costs associated with inventory holding, handling, and procurement. Companies that achieve cost efficiencies in inventory management can lower operating expenses, improve cash flow, and enhance overall financial performance (Monczka et al., 2018).

2.4 Previous Study

There are many research papers that analyze inventory management and organizational performance. In the referenced research, Atnafu (2018) mentioned how inventory management impacts organizational performance, with a focus on the mediating role of competitive advantage. The conceptual framework proposed by Atnafu (2018), is described in Figure (2.1) below:

Figure (2.1) Conceptual Framework of Atnafu & Balda



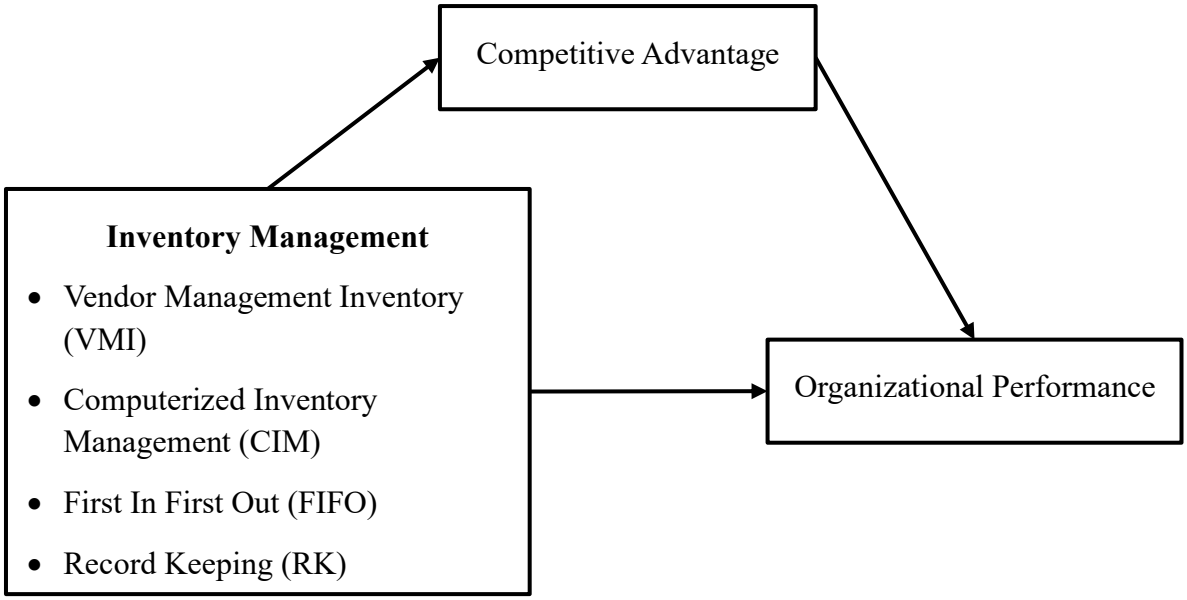
Source: Atnafu & Balda (2018)

According to Figure (2.1), This study investigated how inventory management practices influence the competitiveness and organizational performance of firms. Atnafu (2018) gathered data from 188 micro and small enterprises (MSEs) operating within the manufacturing sub-sector. Structural equation modeling (SEM) was employed to examine the proposed relationships and hypotheses outlined in the conceptual framework. The findings explored that higher levels of inventory management practices were associated with improved competitive advantage and organizational performance. Moreover, competitive advantage was found to directly and positively impact organizational performance. This, in turn, can bolster MSEs' competitiveness and organizational performance, thereby contributing to the country's economic development. Moreover, it was found that there was a mediating effect of competitive advantage on the relationship between inventory management and organizational performance.

2.5 Conceptual Framework of the Study

Inventory management is one of the main concepts in supply chain to get better performance. This framework highlights the unique challenges of plastics recycling, emphasizes the importance of sustainable practices and technology integration, and underscores the significance of cross-functional collaboration, continuous improvement, and employee training in achieving optimal inventory management outcomes. The conceptual framework of study is shown in Figure (2.2) below:

Figure (2.2) Conceptual Framework of the Study



Source: Adapted from Atnafu & Balda (2024)

The conceptual framework investigates the relationship between inventory management, competitive advantage, and organizational performance. Inventory management, which involves the control and optimization of raw materials, work-in-progress, and finished goods, is independent variable, when organizational performance is dependent variable and competitive advantage is mediating variable. Organizational performance is assessed through various metrics, including financial indicators like revenue growth and profitability, operational efficiency measures such as productivity and waste reduction, and customer satisfaction levels. Competitive advantage serves as a mediating factor in this relationship. Thus, efficient inventory management leads to a stronger competitive advantage, which then influences organizational performance. Overall, the framework aims to elucidate how effective inventory management, mediated by competitive advantage, influences organizational performance within the plastics recycling manufacturing sector, providing insights for strategic decision-making and operational excellence in Commercial Plastics Company Limited.

CHAPTER 3

PROFILE AND INVENTORY MANAGEMENT OF COMMERCIAL PLASTICS COMPANY LIMITED

The chapter is structured into three segments. The profile of Commercial Plastics Company Limited is composed in the initial section, followed by the effect of inventory management in the subsequent part. The final section examines the demographic data of respondents associated with Commercial Plastics Company Limited.

3.1 Profile of Commercial Plastics Company Limited

Commercial Plastics Company Limited is a relatively young company, established in December 2016 and situated in Yangon, Myanmar. The inception of CPC was initiated by its shareholders with the primary objective of venturing into PET recycling, focusing on the transformation of post-consumer PET bottles. In late 2019, CPC embarked on a significant transformation journey aimed at enhancing its production capabilities to produce food-grade recycled PET products.

Commercial Plastics Company Limited collects post-consumer PET bottles from various sources across Myanmar, indicating its dedication to sourcing raw materials locally and contributing to waste management efforts in the region. Upon collection, CPC initiates a meticulous manufacturing process aimed at transforming raw materials into high-quality finished goods. CPC operates the proven process of mechanical recycling with equipment from leading suppliers to de risk the overall operations. Collaborating with an esteemed Italian company designed for its cutting-edge recycling plants, CPC utilizes state-of-the-art machinery and technologies to convert collected PET bottles into food-grade PET flake and PET resin. This manufacturing process involves a series of advanced steps, including label removal and material sorting, facilitated by specialized equipment such as delabelers and wet elutriators.

Commercial Plastics Company Limited produces food-grade PET flake and PET resin of high quality. The company's dedication to quality assurance and environmental responsibility underscores its position as a trusted supplier of recycled PET products. CPC's reach extends beyond domestic borders, with its products distributed both locally

and internationally. With a focus on expanding its market presence, CPC serves customers across Europe and Asia, delivering sustainable solutions for packaging and manufacturing needs. Through its innovative approach to recycling and commitment to environmental stewardship, CPC continues to make strides in promoting a circular economy while meeting the demands of a global marketplace.

Additionally, the establishment of Commercial Plastics Holding in Singapore serves as a platform for CPC's geographic expansion, enabling the company to explore new markets, forge partnerships, and leverage international opportunities in the field of PET recycling. Continuously expansion is in Vietnam that is developing process and target market ahead to Bangladesh and Philippines.

Overall, CPC's evolution from inception to its current state underscores its growth trajectory, commitment to innovation, and strategic vision for sustainable business practices in the plastics recycling industry.

3.1.1 Vision and Mission of Commercial Plastics Company Limited

The vision is to become the recognized market leading producer of high-quality food grade recycled packaging material serving the leading global beverage and consumer product companies. The mission is to build a scalable industrial platform to address the growing demand for high quality recycled packaging material. CPC has been established as a scalable platform operating at the intersection of operational efficiency and environmental, social, and governance (ESG) standards. By adhering to high operational and ESG standards, CPC not only ensures the sustainability of its business practices but also positions itself as a leader in the industry, capable of accommodating future growth and evolving market demands. These key milestones reflect CPC's commitment to excellence, sustainability, and driving positive change in the plastics recycling landscape.

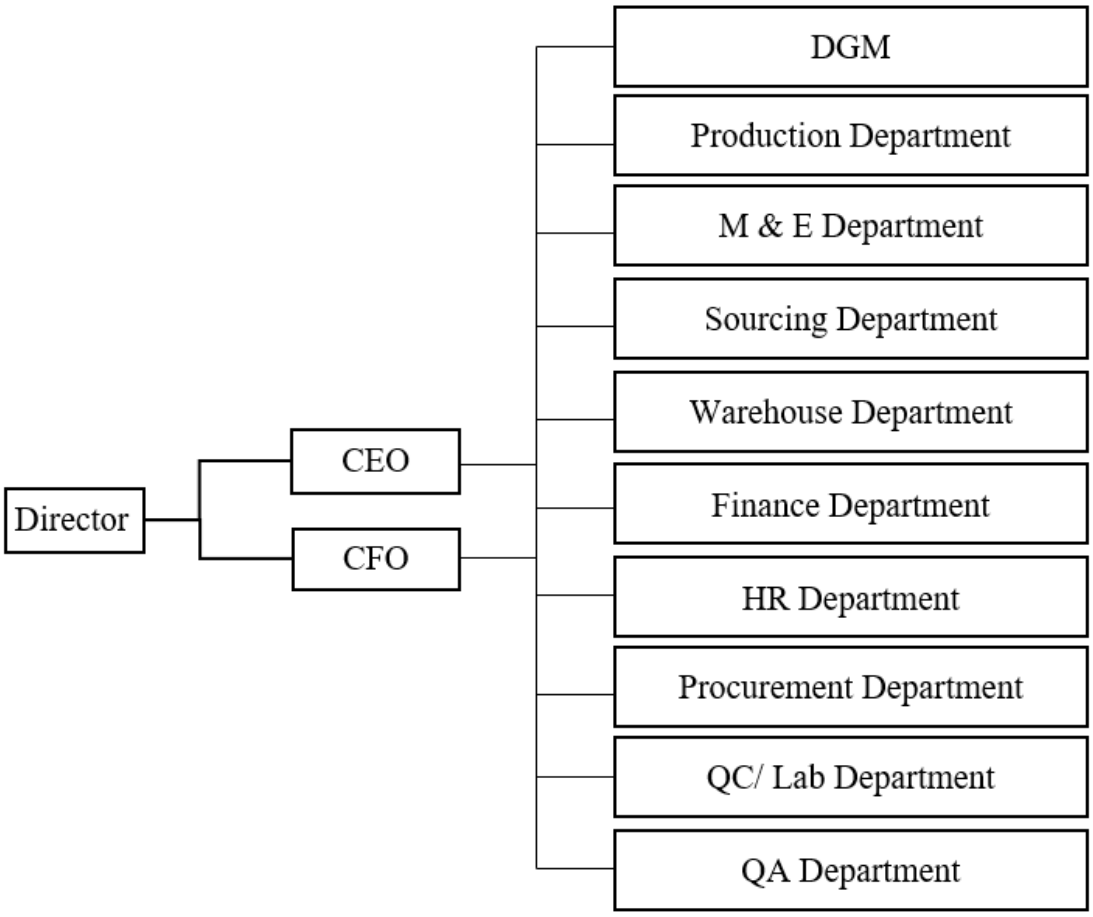
Commercial Plastics Company Limited operates on a business process supported by four pillars, each contributing to the company's success and growth trajectory. Firstly, CPC excels in the collection of post-consumer PET bottles, leveraging its extensive experience in setting up a robust supplier network. Secondly, CPC boasts a strong production pillar, having already established an advanced equipment platform through collaborations with various reputable vendors. This configuration enables CPC to

streamline its manufacturing processes and maintain efficiency in transforming raw materials into high-quality finished products. The third pillar of CPC's business process revolves around quality management, where the company distinguishes itself from traditional recyclers by prioritizing stringent standards, particularly in food-grade packaging. With management expertise in ensuring product quality and safety, CPC not only meets but exceeds the expectations of discerning clients, further enhancing its market reputation and competitive edge. Finally, CPC benefits from strong investors and leadership, which form the fourth pillar of its business process. Backed by robust financial support and led by a management team with a proven track record in the industry, CPC is well positioned for sustained growth and success. These pillars collectively form the foundation of CPC's business process, driving its mission to deliver sustainable solutions and contribute positively to the plastics recycling industry.

3.1.2 Organization Structure of Commercial Plastics Company Limited

The organization chart of the company is shown in Figure (3.1). This chart outlines the hierarchical framework of departments within the organization.

Figure (3.1) Organization Chart of Commercial Plastics Company Limited



Source: Commercial Plastics Company Limited (2023)

In Commercial Plastics Company Limited, the organizational structure comprises nine departments, each serving specific functions and roles within the company. At the top level of management, there are three key positions: Director, Chief Executive Officer (CEO), and Chief Financial Officer (CFO). These individuals oversee the decision-making processes, and financial management of the company. Moving down the hierarchy, the middle management level includes deputy general manager (DGM), managers, and assistant managers. They play a pivotal role in coordinating activities, managing resources, and ensuring that organizational goals are met efficiently and effectively. The remaining staff members constitute the operational level of the organizational structure. These employees are responsible for carrying out specific tasks and responsibilities within their departments, contributing to the overall functioning and productivity of the company.

3.2 Inventory Management of Commercial Plastics Company Limited

Inventory management at Commercial Plastics Company Limited involves a systematic approach to overseeing the accurate record, the storage, and utilization of raw materials and finished products within the organization. Effective inventory management plays a crucial role in supporting the operations and growth of Commercial Plastics Company Limited. By optimizing inventory levels, minimizing stockouts, and ensuring product quality, the company can meet customer expectations, enhance operational efficiency, and drive business success.

3.2.1 Vendor Management Inventory

Collection is considered one of the most challenging aspects of recycling. The company has developed a collection strategy which is easily replaceable in other emerging markets. This proficiency not only guarantees a consistent supply of raw materials but also enables CPC to duplicate its effective model in various emerging markets, paving the way for future growth and expansion.

Vendor management inventory (VMI) plays a pivotal role in the inventory management strategy of Commercial Plastics Company Limited. Through VMI, the company establishes close relationships with specific suppliers who take proactive measures to monitor stock levels and initiate reorders as needed and the key benefit of using VMI is the avoidance of stockouts.

In addition to improving operational efficiency and product quality, VMI has also led to cost savings for Commercial Plastics Company Limited. By allowing suppliers to manage re-order levels, the company reduces the administrative burden associated with inventory management and can optimize transportation logistics, resulting in reduced transportation costs. Overall, VMI has proven to be a valuable tool for Commercial Plastics Company Limited, enabling them to optimize inventory levels, enhance product quality, and achieve cost efficiencies while maintaining a seamless supply chain process.

3.2.2 Computerized Inventory Management

Computerized inventory management is crucial to the operations of Commercial Plastics Company Limited, seamlessly integrating various business functions. The company uses Electronic Data Interchange (EDI) technology to improve communication and data exchange with suppliers. This technology automates the purchasing process, generating purchase orders after vendor communication to ensure timely and accurate orders. It provides real-time updates on stock levels, simplifying inventory management and replenishment. In manufacturing, enterprise resource planning (ERP) software is vital. It allows precise monitoring of raw materials and work-in-progress inventory while tracking production stages and finished goods balances. For sales operations, the computerized inventory system provides accurate, up-to-date product availability information. Sales teams can create sales orders after verifying customer orders and warehouse balances, and then prepare delivery notes in the system. In accounting, the computerized inventory system ensures accurate and current financial records. It automates inventory transaction recording and prepares receivable and payable lists, supporting financial reporting, cost analysis, and auditing processes. This integration offers a clear and precise view of the company's financial health related to inventory management. In summary, the computerized inventory management system at Commercial Plastics Company Limited integrates essential business functions, ensuring efficient operations, accurate data, and overall improved performance.

3.2.3 First In First Out

At Commercial Plastics Company Limited, the first in first out (FIFO) method is a critical component of the company's inventory management strategy. This method ensures that older inventory items are prioritized and used before newer ones, which is particularly important for chemicals and packaging materials that are susceptible to expiration and damage. In the raw material process, this practice prevents waste and financial loss by utilizing inventory items before they become obsolete. Similarly, in the finished goods process, the warehouse department maintains a checklist and ensures compliance with quality standards approved by the QC department. When fulfilling sales orders, the warehouse department selects products based on the FIFO method, ensuring that older inventory is dispatched first. This approach effectively mitigates storage risks

by reducing the likelihood of product spoilage or obsolescence, as it ensures the consumption of older inventory items first. Additionally, by using fresher raw materials in the manufacturing process, the company has been able to enhance the quality of its final products. It optimizes inventory management practices, enhances operational efficiency, and supports the company's business objectives by ensuring a systematic and efficient inventory flow.

3.2.4 Record Keeping

Commercial Plastics Company Limited, efficient inventory management is important for sustaining seamless operations and meeting production demands. The documentation of inventory is pivotal for ongoing operations, starting from the raw materials purchase to the final reporting stage with attached documents. The process begins with the submission of request forms for purchases, sales, payment approvals, and HR processes, which are then reviewed and approved by the respective departments, ensuring acknowledgment records in the system. The Sourcing department maintains records of raw material purchases, including vendor information, price tracking, monthly volume, and a comprehensive vendor list with charts.

Similarly, the warehouse department is responsible for managing purchase orders, sales orders, goods delivery notes, goods received notes, and inventory balance reports. In the production department, records are kept of running hours, consumption, input/output lists, and internal transfer forms. Final reports are compiled and maintained by the accounting department, encompassing monthly comparison data, management reports, aging lists, manufacturing cost lists, and budget records. Thorough inventory record-keeping ensures the timely availability of materials for repairs or project requirements, thus minimizing disruptions in production processes caused by material shortages. In conclusion, effective inventory record-keeping is vital for Commercial Plastics Company Limited, enabling optimized inventory management, streamlined operations, and adherence to accountability standards.

3.3 Reliability Test

A reliability test is conducted to assess the consistency and accuracy of the measurement scales utilized in the study. This method evaluates reliability by examining

the internal consistency of the research questionnaires, which are presented in the Likert scale format. Cronbach's alpha is employed to assess the reliability of each construct and ensure the composite reliability. Typically, alpha values of 0.7 or higher are considered acceptable indicators of reliability (Abdillah & Jogiyanto, 2014). In this research, the questionnaire comprises three sections. The initial section covers inventory management factors such as vendor management inventory, computerized inventory management, first in first out, and record-keeping. The subsequent section focuses on competitive advantage, while the final part addresses organizational performance. The reliability (alpha values) of the variables is detailed in Table (3.1).

Table (3.1) Reliability Analysis of the Study

Sr. No.	Variables	Cronbach's Alpha	No. of Items
1	Vendor Management Inventory	0.874	6
2	Computerized Inventory Management	0.918	4
3	First In First Out	0.908	4
4	Record Keeping	0.895	4
5	Competitive Advantage	0.945	10
6	Organizational Performance	0.950	10

Source: Survey Data (2024)

The result presented in Table (3.1) indicates that the Cronbach's Alpha coefficient values for all scales surpass the established cutoff value of 0.7, with each result exceeding 0.8 in the reliability test. This outcome shows that the scales utilized in this study exhibit high levels of internal consistency and reliability. Consequently, the findings can be interpreted with confidence, affirming the validity and reliability of the factors assessed within the scales. These factors encompass various contextual elements pertaining to inventory management and their subsequent impact on organizational performance. Therefore, it is reliable to conduct further analysis.

3.4 Demographic Profile of Respondents

In the analysis, the demographic characteristic of the respondents is examined and collect the data through survey questionnaires. The survey involves 60 employees affiliated with Commercial Plastics Company Limited. Six demographic categories are considered: gender, age, educational level, position, department, and years of employment. The distribution of respondents across these categories is presented in Table (3.2).

Table (3.2) Demographic Profile of the Respondents

Sr. No.	Demographic Factors	No. of respondents (60 respondents)	Percentage (100%)
1	Gender		
	• Male	42	70
	• Female	18	30
2	Age (Years)		
	• 21 – 30	22	37
	• 31 – 40	27	45
	• 41 & Above	11	18
3	Educational Level		
	• Diploma	9	15
	• Bachelor	47	78
	• Master	4	7
4	Position		
	• Supervisor	36	60
	• Assistant Manager	13	22
	• Manager	11	18
5	Department		
	• Warehouse	18	30
	• Mechanical & Electrical	8	13
	• Sourcing	8	13
	• Production	12	20
	• Finance	14	24
6	Service (Years)		
	• Under 1	9	15
	• 1 – 2	19	32
	• 2 – 3	18	30
	• Above 3	14	23

Source: Survey Data (2024)

According to the survey data, the proportion of male respondents exceeds that of female respondents in the gender category. Specifically, 70% of the respondents are male, while 30% are female. This distribution reflects the nature of the work environment, where male employees are deemed more suitable for roles within a manufacturing setting compared to their female counterparts.

Based on the survey data analysis for the age group, the respondents fall within the range of 21 to 30 years old, comprising 37% of the total respondents. Following, 45% of the respondents are aged between 31 to 40 years, while 18% are above 41 years old. This distribution indicates that the majority of employees at Commercial Plastics Company Limited are in the middle age bracket, and they likely possess significant experience and expertise suitable for reliable positions.

From the result of the analysis of respondents' educational backgrounds, it is evident that the majority hold bachelor's degrees, constituting 78% of the total respondents while 7% of the participants possess master's degrees, and 15% hold diploma. This distribution is that a significant portion of the respondents have completed higher education, with a predominant number having attained bachelor's degrees.

According to the survey findings regarding job positions, the majority of respondents, constituting 60%, hold the position of supervisor, making it the largest group among the respondents. Following this, 22% of respondents are assistant managers, while 18% are managers. This distribution defines that supervisors play a crucial role in overseeing day-to-day operations and directly managing activities on the shop floor. Assistant managers and managers, on the other hand, are involved in overseeing and managing the overall results and performance of the company.

As the result of the survey data regarding departments, the analysis reveals that 30% of respondents are affiliated with the warehouse department, making it the largest group among the departments. Following this, 20% of respondents are from the production department, while the finance department accounts for 24% of the respondents. Additionally, 13% of respondents each belong to the mechanical & electrical department and the sourcing department. This distribution highlights the varied representation of employees across different functional areas within Commercial Plastics Company Limited.

This survey found 15% of respondents reported having less than 1 year of working experience, while 32% indicated having 1 to 2 years of experience. Additionally, 30% of respondents reported having 2 to 3 years of experience, while 23% reported having over 3 years of experience. These results indicate that the majority of respondents fall within the 1 to 2 years of working experience range at Commercial Plastics Company Limited, suggesting a relatively young and dynamic workforce composition.

In conclusion, the workforce at Commercial Plastics Company Limited is mainly male and mostly aged 31 to 40 years. In addition, the most of respondents are bachelor's degree holders and mainly in supervisor level. The majority of employees have between 1 to 2 years service, reflecting a young and dynamic workforce across various departments.

CHAPTER 4

ANALYSIS ON THE EFFECT OF INVENTORY MANAGEMENT ON ORGANIZATIONAL PERFORMANCE AT COMMERCIAL PLASTICS COMPANY LIMITED

Firstly, an analysis of inventory management, competitive advantage, and organizational performance at Commercial Plastics Company Limited is illustrated using mean scores derived from descriptive statistics analysis. Subsequently, regression analysis is employed to investigate the impact of inventory management on organizational performance. Lastly, the indirect effect mediated by competitive advantage at Commercial Plastics Company Limited.

4.1 Research Design

This study aims to investigate the effect of inventory management on the overall performance of Commercial Plastics Company Limited. The study involves 60 key employees, comprising managers, assistant managers, and supervisors, responsible for diverse departments such as warehouse management, production, maintenance, finance, and sourcing. Through a census sampling approach, data gathered from all 60 employees using structured questionnaires distributed via online survey platforms. There are two types of question types; multiple choice questions for demographic data and 5-point Likert scale (where: strongly disagree is rated as 1; disagree is 2; neutral is 3; agree is 4; and strongly agree is 5) questions for measuring variables.

The mode scores were utilized, drawing upon the approach outlined by (Sözen & Güven, 2019). These scores were classified into distinct categories based on the range of each item. The categorization is as follows:

Scores falling within the range of 1.00 to 1.80 mean strongly disagree.

Scores ranging from 1.81 to 2.60 mean disagree.

Scores between 2.61 and 3.40 mean neutral.

Scores falling within the range of 3.41 to 4.20 mean agree.

Scores ranging from 4.21 to 5.00 mean strongly agree.

4.2 Inventory Management, Competitive Advantage and Organizational Performance of Commercial Plastics Company Limited

This section outlines the inventory management adopted by Commercial Plastics Company Limited, where inventory management is considered as the independent variable, encompassing components such as vendor management inventory, computerized inventory management, first in first out (FIFO), and record-keeping. These elements are examined in relation to organizational performance, which serves as the dependent variable. Moreover, competitive advantage as a mediating variable between inventory management and organizational performance. The structured questionnaire used for data collection employs a five-point Likert scale, ranging from strongly disagree to strongly agree, to measure various items related to inventory management practices and their perceived impact on organizational performance.

4.2.1 Inventory Management

Inventory management includes vendor management inventory, computerized inventory management, first in first out and record keeping. Descriptive statistics, including mean values and standard deviation, have been calculated to provide insights into the inventory management of Commercial Plastics Company Limited.

4.2.1.1 Vendor Management Inventory

Vendor management inventory (VMI) is measured with six statements. The mean value, standard deviation and overall mean value are described in Table (4.1).

Table (4.1) Vendor Management Inventory

Sr. No.	Description	Mean	Standard Deviation
1	The firm purchases specified items from specific linked suppliers of the inventory of the organization.	4.17	0.74
2	The firm uses VMI to eliminate the need to reorder.	4.30	0.70
3	The firm avoids stock outs by use of VMI.	4.07	0.69
4	VMI has led to improved quality.	4.00	0.64
5	There is a reduction on transportation costs.	3.83	0.74
6	Suppliers manage re-order levels.	3.67	0.91
	Overall Mean	**4.01**	

Source: Survey Data (2024)

According to Table (4.1), the mean values, including the overall mean score, range from 3.41 to 4.20, indicating that employees agree except the firm uses VMI to eliminate the need to reorder. Furthermore, they agree the firm purchases specified items from specific linked suppliers and avoids stock outs. On the other hand, the employees strongly agree on the VMI in resolving reorder issues.

4.2.1.2 Computerized Inventory Management

Computerized inventory management (CIM) is measured with four statements. The mean value, standard deviation and overall mean value are described in Table (4.2).

Table (4.2) Computerized Inventory Management

Sr. No.	Description	Mean	Standard Deviation
1	The firm uses Electronic Data Interchange Technology.	4.10	0.71
2	The firm has computerized all inventory management systems.	4.13	0.62
3	Investment in information technology in management results in an number of improved ways of rendering services annually.	3.83	0.74
4	Computer-based systems are used to monitor inventory.	4.00	0.69
	Overall Mean	**4.02**	

Source: Survey Data (2024)

According to Table (4.2), the mean values, (including the overall mean score) range from 3.41 to 4.20, it represents that employees agree computerized inventory management (CIM). The employees agree that Commercial Plastics Company Limited uses computerized systems, especially for inventory management system. Moreover, the employee agree computer-based systems are also used to monitor inventory.

4.2.1.3 First In First Out

First In First Out (FIFO) is measured with four statements. The mean value, standard deviation and overall mean value are described in Table (4.3).

Table (4.3) First In First Out

Sr. No.	Description	Mean	Standard Deviation
1	FIFO has reduced the costs associated with expiry of goods.	3.72	0.64
2	FIFO has been able to reduce storage risk.	3.77	0.67
3	Final product quality has been improved.	3.58	0.74
4	FIFO has an effect on organizational performance.	3.62	0.76
	Overall Mean	**3.67**	

Source: Survey Data (2024)

According to Table (4.3), the mean values, (including the overall mean score) range from 3.41 to 4.20, indicating that employees agree on first in first out (FIFO). The most employees agree on FIFO in reducing the obsolete risk. Additionally, the employees from Commercial Plastics Company Limited agree that FIFO can reduce the cost of expired products.

4.2.1.4 Record Keeping

Record keeping (RK) is measured with four statements. The mean value, standard deviation and overall mean value are described in Table (4.4).

Table (4.4) Record Keeping

Sr. No.	Description	Mean	Standard Deviation
1	Helps the firm figure out exactly how much inventory need.	3.83	0.53
2	Proper documentation ensures that material availability meets repair or project demand.	3.73	0.73
3	Accuracy of inventory records is necessary to determine replenishment of individual items.	3.63	0.55
4	Accuracy of records provides the management with the information which is used to ensure accountability.	3.53	0.68
	Overall Mean	**3.68**	

Source: Survey Data (2024)

According to Table (4.4), the mean scores, (including the overall mean value) between 3.41 and 4.20, it states that the employees agree on the record keeping (RK). The majority of employees agree that Commercial Plastics Company Limited accurately determines the necessary inventory levels as record keeping. Additionally, the employees agree that proper documentation ensures materials are available to meet repair or project demands.

4.2.2 Competitive Advantage

Competitive advantage is measured with ten statements. The mean value, standard deviation and overall mean value are described in Table (4.5).

Table (4.5) Competitive Advantage

Sr. No.	Descriptions	Mean	Standard Deviation
1	The company builds long-term relationship with suppliers.	4.30	0.70
2	The company selects closer location suppliers.	3.90	0.88
3	The company meets customers' expectations.	4.03	0.80
4	The company receives the right material of the right quality.	3.87	0.85
5	The firm offers high quality products and services to its customers.	3.93	0.86
6	The inventory management system has increased product quality.	3.93	0.78
7	The firm provides customized products and services.	3.63	0.92
8	There is improved delivery time of requirements.	4.00	0.94
9	Customer lead times are shortened.	3.80	0.84
10	The firm provides dependable delivery.	4.13	0.72
	Overall Mean	**3.95**	

Source: Survey Data (2024)

As shown in Table (4.5), the mean values, including the overall mean score, range from 3.41 to 4.20, indicating that employees agree except the aspect of building long-term relationships with suppliers. The most employees agree that the company ensures reliable delivery and meets the customers' expectations. Additionally, the respondents strongly agree on establishing the good relationships with suppliers.

4.2.3 Organizational Performance

Organizational performance is measured with ten statements. The mean value, standard deviation and overall mean value are described in Table (4.6).

Table (4.6) Organizational Performance

Sr. No.	Description	Mean	Standard Deviation
1	Inventory control system has increased profitability.	4.40	0.56
2	Inventory turnover is satisfied.	4.30	0.65
3	There is increased operations efficiency.	4.47	0.57
4	Determining order quantities and inventory levels has an effect on organizational performance.	4.47	0.62
5	There is a decline of idle time.	4.33	0.66
6	The firm has experienced the optimal level of inventory due to the adoption of the inventory management practice.	4.27	0.63
7	Costs related to handling inventory are minimized.	4.30	0.65
8	The firm can easily control the cost of inventory due to the adoption of the inventory management practice.	4.10	0.71
9	The organization is able to balance between the holding cost and ordering cost due to the use of the inventory management practice.	4.33	0.66
10	The firm uses it to ensure that there is an efficient and effective level of inventory in the firm.	4.53	0.62
	Overall Mean	**4.35**	

Source: Survey Data (2024)

According to Table (4.6), the mean values, (including the overall mean score) range from 4.21 to 5.00, indicating that employees strongly agree on organizational performance related to inventory management except the firm control the cost of inventory due to the adoption of the inventory management practice. The most employees

strongly agree to ensure that there is an efficient and effective level. Another side, the respondents agree with the improvement of operations efficiency.

4.3 Analysis on the Effect of Inventory Management on Organizational Performance

In this section, the effect of inventory management on organizational performance is analysed, based on the conceptual framework. In order to analyse the effect of inventory management on organizational performance of Commercial Plastics Company Limited. Multiple Linear Regression Model is used to analyse the findings of survey collected from the respondents. Table (4.7) describes the analysis of inventory management on organizational performance.

Table (4.7) Effect of Inventory Management on Organizational Performance

Variables	Unstandardized Coefficients		β	t	Sig
	B	Std Error			
(Constant)	.598	.202		2.962	.004
Vendor Management Inventory	.497***	.111	.504	4.461	.001
Computerized Inventory Management	.257**	.117	.280	2.194	.032
First In First Out	.120	.082	.128	1.472	.147
Record Keeping	.076	.096	.073	.784	.436
R	.930				
R Square	.864				
Adjusted R Square	.855				
F Value	90.897***				

Source: Survey Data (2024)

***Significant at 1% level, ** Significant at 5% level, *Significant at 10% level

The analysis in this study aimed to evaluate the effect of inventory management on organizational performance using linear regression tests. Multiple regression tests were applied to simultaneously examine several independent variables in relation to the dependent variable, identifying potential linear relationships. In this context, inventory management was considered the independent variable, while organizational performance was treated as the dependent variable.

The coefficient for vendor management inventory is highly significant ($\beta = .497$, $p < .001$), indicating a strong positive relationship between this inventory management aspect and organizational performance. Computerized inventory management also shows a significant relationship with organizational performance ($\beta = .257$, $p < .005$), although it is less impactful compared to vendor management inventory. In contrast, first in first out and record keeping do not demonstrate a statistically significant relationship with organizational performance. According to the results in Table (4.7), the R square is 0.864, and the adjusted R square is 0.855, meaning the model accounts for 85.5% of the variance in organizational performance at Commercial Plastics Company Limited. The F-value of 90.897 further confirms the overall significance of the model.

According to Table (4.7), the constant value is .598. If the management team does not implement any inventory management, the organizational performance will be 2.02 times. The unstandardized coefficients for the variables are as follows: vendor management inventory at 0.497, computerized inventory management at 0.257, first in first out at 0.120, and record keeping at 0.076. Vendor management inventory has the highest coefficient value of 0.497 among all the independent variables, making it the most effective inventory management practice for enhancing organizational performance at Commercial Plastics Company Limited. first in first out and record keeping have no significant effect on organizational performance.

VMI and CIM play crucial roles for Commercial Plastics Company Limited as they directly enhance operational efficiency, ensure quality assurance, reduce costs, strengthen competitive positioning, and support growth adaptation. Employing these inventory management strategies allows the company to improve its overall performance and accomplish strategic goals more efficiently. In conclusion, the analysis underscores the importance of vendor management inventory and computerized inventory management in influencing organizational performance positively, providing valuable

insights for organizations seeking to enhance their inventory management to optimize employee outcomes.

4.4 Analysis on Mediating Effect of Competitive Advantage between Inventory Management and Organizational Performance

A mediation model illustrates how the relationship between an independent variable and a dependent variable is influenced when a third variable, known as a mediator, is introduced. The mediator helps to explore the dynamics between the primary variables. In this study, competitive advantage is identified as the mediator to clarify how different aspects of inventory management such as vendor management inventory, computerized inventory management, first in first out, and record keeping relates to organizational performance. Mediation analysis is used to understand the role of competitive advantage in linking inventory management and organizational performance. Regression analysis indicates that vendor management inventory and computerized inventory management have significant effects on organizational performance, whereas first in first out and record keeping do not. Therefore, the study focuses on the mediating effect of competitive advantage for vendor management inventory and computerized inventory management.

To explore if competitive advantage plays a mediating role between vendor management inventory, computerized inventory management, and organizational performance, the following steps are followed:

1. Evaluate the overall effect through regression analysis to understand how independent variables affect dependent variables.
2. Conduct regression analysis to see how independent variables influence the mediating variable.
3. Perform regression analysis to observe how independent variables and the mediating variable affect the dependent variable.
4. Utilize the Sobel test to ascertain the significance of the mediating variable.
5. Compute the indirect, direct, and total effects accordingly.

4.4.1 Mediating Effect of Competitive Advantage on the Relationship between Vendor Management Inventory and Organizational Performance

As a first step, the direct effect of vendor management inventory (independent variable) on organizational performance (dependent variable) is analyzed. The results are shown in Table (4.8).

Table (4.8) Effect of Vendor Management Inventory on Organizational Performance

Variables	Unstandardized Coefficients		β	t	Sig
	B	Std Error			
(Constant)	.751	.214		3.508	.001
Vendor Management Inventory	.895***	.053	.908	16.745	.001
R	.908				
R Square	.824				
Adjusted R Square	.821				
F Value	280.381***				

Source: Survey Data (2024)

***Significant at 1% level, ** Significant at 5% level, *Significant at 10% level

As shown in Table (4.8), the total effect of vendor management inventory on organizational performance is 0.895. Then the effect of vendor management inventory (independent variable) on competitive advantage (mediating variable) is analyzed and the result is shown in Table (4.9).

Table (4.9) Effect of Vendor Management Inventory on Competitive Advantage

Variables	Unstandardized Coefficients		β	t	Sig
	B	Std Error			
(Constant)	.181	.316		.571	.570
Vendor Management Inventory	.942***	.079	.839	11.923	.001
R	.839				
R Square	.703				
Adjusted R Square	.698				
F Value	142.165***				

Source: Survey Data (2024)

***Significant at 1% level, ** Significant at 5% level, *Significant at 10% level

As shown in Table (4.9) the coefficient value is .942 and standard error is .079 for the effect of vendor management inventory on competitive advantage (effect of independent variable and mediating variable). After analysis on effect of vendor management inventory (independent variable) on competitive advantage (mediator), the third step of testing mediating effect is continued. In this step, the independent variables are vendor management inventory and competitive advantage, and dependent variable is organizational performance. The results are shown in Table (4.10).

Table. (4.10) Effect of Vendor Management Inventory and Competitive Advantage on Organizational Performance

Variables	Unstandardized Coefficients		β	t	Sig
	B	Std Error			
(Constant)	.717	.208		3.449	.001
Vendor Management Inventory	.716***	.095	.726	7.540	.001
Competitive Advantage	.190**	.085	.217	2.249	.028
R	.915				
R Square	.838				
Adjusted R Square	.832				
F Value	152.197***				

Source: Survey Data (2024)

***Significant at 1% level, ** Significant at 5% level, *Significant at 10% level

As shown in Table (4.10), the coefficient value of competitive advantage on organizational performance is 0.190 with standard error value 0.085. To test the mediating effect of competitive advantage between vendor management inventory, and organizational performance, the Sobel test is conducted. The data is shown in Table (4.11).

Table (4.11) Sobel Test Result for Mediating Test for Competitive Advantage between Vendor Management Inventory and Organizational performance

Input			Test statistic	Std. Error	*p*-value
a	.942	Sobel test:	2.19702395	0.08146475	0.02801874
b	.190	Aroian test:	2.18959801	0.08174103	0.0285534
S_a	.079	Goodman test:	2.20452595	0.08118752	0.02748738
S_b	.085	Rest all	Calculate		

a = direct effect of quality of information sharing to quality

b = direct effect of quality to organizational performance

S*a* = standard error of quality of information sharing to quality

S*b* = standard error of quality to organizational performance

Source: Survey Data (2024)

***Significant at 1% level, ** Significant at 5% level, *Significant at 10% level

P value 0.02 is less than 0.05. Thus, there is mediating effect of competitive advantage between vendor management inventory, and organizational performance at the 5% significant level. The total effect, direct effect and indirect effect are as follow:

Total Effect = 0.895

Direct Effect = 0.716

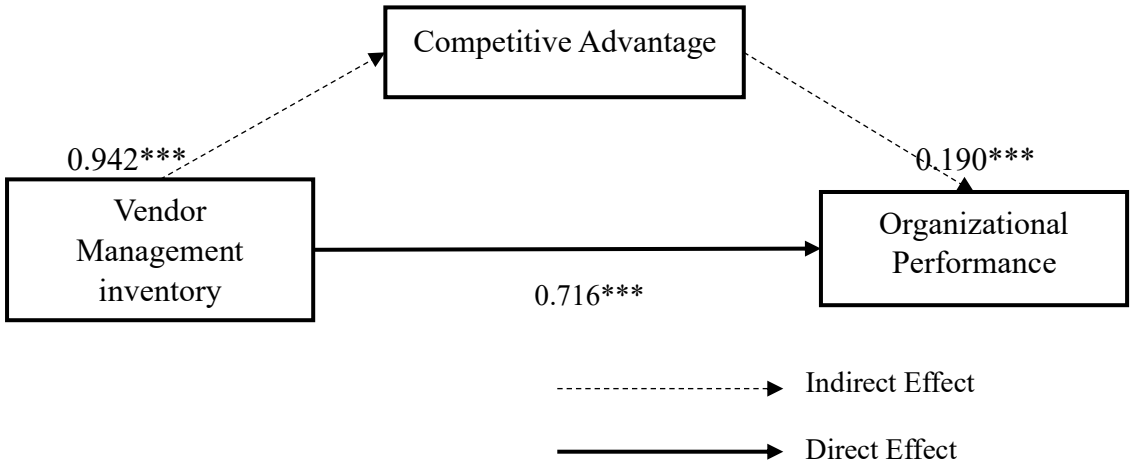
Indirect Effect = 0.942 × 0.190 = 0.179

Direct Effect + Indirect Effect = Total Effect

0.716 + 0.179 = 0.895

The direct effect and indirect effect can be seen in Figure (4.1).

Figure (4.1) Mediating Effect of Competitive Advantage on the Relationship between Vendor Management Inventory and Organizational Performance



Source: Survey Data (2024)

Statistically significant indicate *** at the 1% level, ** 5% level and * 10% level

The results indicate a significant positive impact of vendor management inventory on organizational performance, as illustrated in Figure (4.1). Additionally, the indirect effect analysis shows that vendor management inventory also significantly affects organizational performance. This demonstrates that competitive advantage mediates the relationship between vendor management inventory and organizational performance at Commercial Plastics Company Limited.

The study further reveals that the overall impact of competitive advantage on organizational performance, when mediated by competitive advantage, is more substantial than the direct effect of vendor management inventory. This implies that employees with a strong sense of vendor management inventory contribute to improved performance. Therefore, promoting vendor management inventory among employees and ensuring high levels of competitive advantage are crucial strategies for enhancing organizational performance at Commercial Plastics Company Limited.

4.4.2 Mediating Effect of Competitive Advantage on the Relationship between Computerized Inventory Management and Organizational Performance

As a first step, the direct effect of computerized inventory management (independent variable) on organizational performance (dependent variable) is analysed. The findings are presented in Table (4.12).

Table (4.12) Effect of Computerized Inventory Management on Organizational Performance

Variables	Unstandardized Coefficients		β	t	Sig
	B	Std Error			
(Constant)	1.043	.217		4.816	.001
Computerized Inventory Management	.819***	.054	.891	15.228	.001
R	.891				
R Square	.794				
Adjusted R Square	.791				
F Value	231.906***				

Source: Survey Data (2024)

***Significant at 1% level, ** Significant at 5% level, *Significant at 10% level

As shown in Table (4.12), the total effect of computerized inventory management on organizational performance is 0.819. Then the effect of computerized inventory management (independent variable) on competitive advantage (mediating variable) is analysed and the outcomes are displayed in Table (4.13).

Table (4.13) Effect of Computerized Inventory Management on Competitive Advantage

Variables	Unstandardized Coefficients		β	t	Sig
	B	Std Error			
(Constant)	.646	.337		1.920	.060
Computerized Inventory Management	.821***	.084	.785	9.819	.001
R	.785				
R Square	.616				
Adjusted R Square	.610				
F Value	96.418***				

Source: Survey Data (2024)

***Significant at 1% level, ** Significant at 5% level, *Significant at 10% level

As shown in Table (4.13) the coefficient value is .821 and standard error is .084 for the effect of computerized inventory management on competitive advantage (effect of independent variable and mediating variable). After analysis on effect of computerized inventory management (independent variable) on competitive advantage (mediator), the third step of testing mediating effect is continued. In this step, the independent variables are computerized inventory management and competitive advantage, and dependent variable is organizational performance. The results are displayed in Table (4.14).

Table (4.14) Effect of Computerized Inventory Management and Competitive Advantage on Organizational Performance

Variables	Unstandardized Coefficients		β	t	Sig
	B	Std Error			
(Constant)	.857	.201		4.259	.001
Computerized Inventory Management	.583***	.078	.634	7.442	.001
Competitive Advantage	.288***	.075	.327	3.840	.001
R	.914				
R Square	.836				
Adjusted R Square	.830				
F Value	149.888***				

Source: Survey Data (2024)

***Significant at 1% level, ** Significant at 5% level, *Significant at 10% level

As shown in Table (4.14), the coefficient value of competitive advantage on organizational performance is 0.288 with standard error value 0.075. To test the mediating effect of competitive advantage between computerized inventory management, and organizational performance, the Sobel test is conducted. The data is shown in Table (4.15).

Table (4.15) Sobel Test Result for Mediating Test of Competitive Advantage between Computerized Inventory Management and Organizational performance

Input			Test statistic	Std. Error	*p*-value
a	.821	Sobel test:	3.57404975	0.06615689	0.0003515
b	.288	Aroian test:	3.55795368	0.06645618	0.00037376
S_a	.084	Goodman test:	3.59036628	0.06585623	0.00033021
S_b	.075	Rest all	Calculate		

a = direct effect of quality of information sharing to quality

b = direct effect of quality to organizational performance

S*a* = standard error of quality of information sharing to quality

S*b* = standard error of quality to organizational performance

Source: Survey Data (2024)

***Significant at 1% level, ** Significant at 5% level, *Significant at 10% level

P value 0 is less than 0.01. Thus, there is mediating effect of competitive advantage between computerized inventory management, and organizational performance at the 1% significant level. The total effect, direct effect and indirect effect are as follow:

Total Effect = 0.819

Direct Effect = 0.583

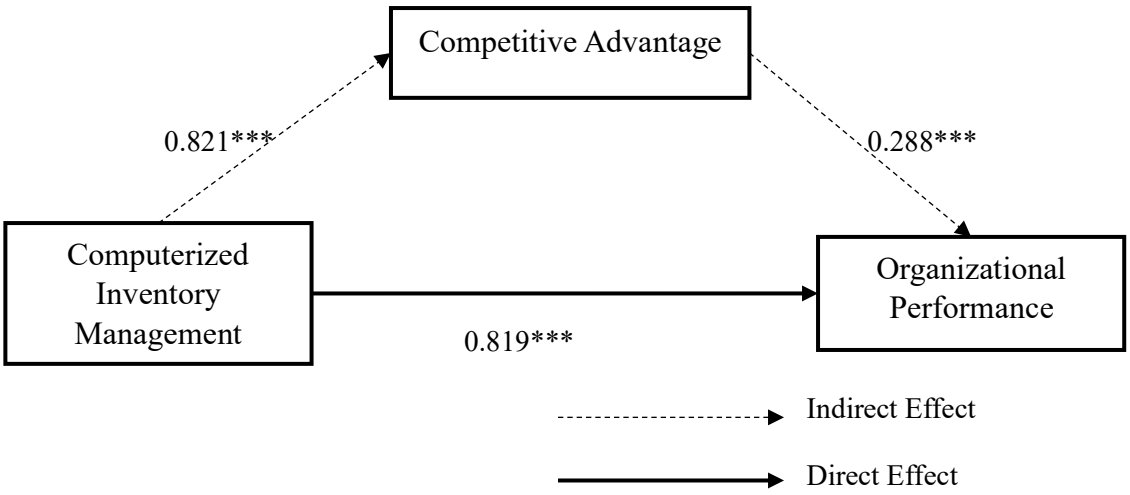
Indirect Effect = 0.821 × 0.288 = 0.236

Direct Effect + Indirect Effect = Total Effect

0.583 + 0.236 = 0.819

The direct effect and indirect effect can be seen in Figure (4.2).

Figure (4.2) Mediating Effect of Competitive Advantage on the Relationship between Computerized Inventory Management and Organizational Performance



Source: Survey Data (2024)

Statistically significant indicate *** at the 1% level, ** 5% level and * 10% level

The result shows that there is a positive significant effect of computerized inventory management on organizational performance, as shown in Figure (4.2). Regarding with the indirect effect, it is found that there is significant effect of computerized inventory management on organizational performance as well. Thus, there is a mediation effect of competitive advantage on the relationship between computerized inventory management, and organizational performance of Commercial Plastics Company Limited.

The study indicates that the overall impact of competitive advantage on organizational performance, when mediated through competitive advantage, is more significant than the direct influence of computerized inventory management. This states that employees who have a strong sense of computerized inventory management tend, which in turn leads to enhanced performance. It is found fostering computerized inventory management among employees and ensuring high levels of competitive advantage are important strategies for improving organizational performance at Commercial Plastics Company Limited.

In conclusion, the research indicates that both VMI and CIM significant effect on organizational performance, directly influencing. There have Sobel tests on this variables.

Additionally, these inventory management dimensions indirectly affect organizational performance through competitive advantage, as observed in the mediating effect analysis. VMI exhibits the most pronounced positive impact on organizational performance at a 99% confidence level, followed by computerized inventory management, which also demonstrates significant positive effects. Consequently, these factors emerge as the most influential contributors to organizational performance by virtue of their impact on competitive advantage.

CHAPTER 5

CONCLUSION

This chapter presents the findings and discussions based on the data analysis relating to the effect of inventory management on organizational performance at Commercial Plastics Company Limited. This chapter presents the findings and discussions derived from the data analysis regarding the effect of inventory management on the organizational performance of Commercial Plastics Company Limited. Additionally, this chapter includes suggestions and recommendations for improving inventory management. The chapter concludes with an outline of the areas where further studies are needed to deepen the understanding of inventory management's effects on organizational performance.

5.1 Findings and Discussions

This study focuses on the inventory management at Commercial Plastics Company Limited. The purpose of the study is to look into how inventory management affects an organization's performance and competitive advantage. Additionally, it seeks to understand how competitive advantage influences the overall performance of Commercial Plastics Company Limited.

A questionnaire survey was conducted with 60 employees at Commercial Plastics Company Limited using a census sampling method. The gender distribution revealed a higher number of male employees compared to female employees, likely due to the nature of manufacturing work, which often involves physical labor and operational roles traditionally dominated by males. Most of the workforce falls within the 31-40 age group, indicating a relatively experienced team. The educational background of the employees supports the company’s operations and its capacity to implement complex inventory management systems. Supervisors make up the largest group, indicating a significant number of mid-level managers responsible for daily operations. Assistant managers and managers form the upper management, overseeing supervisors and making operational decisions.

At Commercial Plastics Company Limited, based on the descriptive analysis is conducted to evaluate employees' views on inventory management. The employees agree to VMI practices. This consensus highlights VMI's effectiveness in resolving reorder issues, preventing stockouts, and ensuring high-quality inventory management. Moreover, the employees agree the effectiveness of computerized inventory systems. Employees recognize that the company effectively utilizes these systems for inventory management, underscoring the perceived benefits and efficiency within the organization. Then, the employees agree that FIFO helps maintain product quality and consistency, reducing financial losses associated with obsolete or expired inventory. Additionally, the respondents agree that the record-keeping supports financial accuracy and auditing processes, providing transparency and accountability in inventory management. Moreover, the employees agree on competitive advantage that enhances market share, profitability, overall success, and career growth. The employees agree the effect of inventory management on organizational performance as competitive prices, meet delivery deadlines, and profits under inventory management.

The regression analysis revealed that only the variables of vendor management inventory and computerized inventory management were significant with 1% and 5% significant level. These factors are critical because they ensure timely and accurate stock information, which helps reduce stockouts. Additionally, these automate tracking processes, minimizing human error. Employees at Commercial Plastics Company Limited generally recognize and agree on the importance and effectiveness of these two aspects of inventory management.

In conclusion, this study underscores the significance of inventory management on organizational performance, with competitive advantage acting as a pivotal mediator. By fostering a culture that prioritizes effective inventory management practices such as VMI and CIM. Commercial Plastics Company Limited can cultivate a more streamlined inventory management system, leading to improved performance outcomes. These findings offer valuable insights for organizations seeking to enhance their inventory management processes and overall organizational performance.

5.2 Suggestions and Recommendations

The study's findings mean various angles for Commercial Plastics Company Limited to improve organizational performance through enhanced inventory management. Commercial Plastics Company Limited should strengthen the vendor management inventory system by fostering real-time, integrated communication with suppliers to ensure precise and timely stock replenishment, thereby reducing stockouts and excess inventory. Then, the company should upgrade computerized inventory management systems with advanced software for real-time tracking, predictive analytics, and automated reporting to enhance accuracy and efficiency. Moreover, the company should utilize data analytics to monitor trends, predict demand, and optimize inventory levels for better decision-making. Provide regular training for employees on best practices in inventory management and new technologies to improve accuracy and efficiency. Additionally, Commercial Plastics Company Limited should maintain the first in first out method to reduce the costs associated with expiring goods and improve product quality, ensuring compliance through regular audits.

Furthermore, the company should improve record-keeping practices with accurate documentation to ensure timely reordering and optimal inventory levels, enhancing operational performance. Leverage improved inventory management to build a competitive advantage through better customer satisfaction and higher product quality. Finally, company should establish a continuous improvement process by gathering and analyzing feedback from employees and stakeholders to identify areas for further enhancement. By adopting these measures, Commercial Plastics Company Limited can significantly improve its inventory management, leading to better organizational performance, increased efficiency, and a stronger market position.

In conclusion, vendor management inventory (VMI) and computerized inventory management (CIM) are essential for improving organizational performance. Commercial Plastics Company Limited should enhances that VMI through coordination with suppliers, ensuring timely restocking and lowering costs associated with stockouts and surplus inventory. The company should maintain that CIM automates tracking, improving record accuracy and minimizing human error. By boosting employee motivation, these systems enhance organizational performance through increased productivity, as efficient processes and a reduced workload lead to greater job satisfaction.

5.3 Need for Further Research

This study focuses on examining the impact of inventory management on organizational performance at Commercial Plastics Company Limited. To gain a more comprehensive understanding of this relationship, several suggestions for future research are proposed. Firstly, conducting the studies help explore the long-term effects of different inventory management on both competitive advantage and organizational performance. Secondly, comparative analyses across various industries or organizational contexts reveal specific differences in the impact of inventory management. Lastly, combining quantitative analysis with qualitative investigations provide deeper insights into how employees perceive and experience inventory management. This study specifically investigated the inventory management system at Commercial Plastics Company Limited. Addressing these research gaps could offer valuable insights into improving inventory management practices to enhance both organizational performance and overall efficiency in the future.

REFERENCES

Adeyemi, S.L., & Salami, A.O. (2010). Inventory management: A tool of optimizing resources in a manufacturing industry a case study of Coca-Cola Bottling Company, Ilorin plant. *Journal of Social Sciences, 23*(2), 135–142.

Akbar, M. A., Mahmood, S., Alsanad, A., Shafiq, M., Gumaei, A., & Alsanad, A. A. A. (2020). Organization type and size-based identification of requirements change management challenges in global software development. *IEEE Access, 8*, 94089-94111.

Amlod, T.J. 1998. *Introduction to Material Management*, (3rd ed.) Upper Saddle River Prentice Hill.

Anantadjaya, S. P., Nawangwulan, I. M., Irhamsyah, M., & Carmelita, P. W. (2021). Supply chain management, inventory management & financial performance: evidence from manufacturing firms. *Linguistics and Culture Review, 5*(S1), 781-794.

Atnafu, D., & Balda, A. (2018). The impact of inventory management practice: Empirical evidence from micro and small enterprises in Ethiopia. *Cogent Business & Management, 5*(1), 1–16.

Baily, P., Farmer, D., Crocker, B., & Jessop, D. (2021). *Procurement principles and management* in the digital age (12th ed.). Pearson.

Bartezzaghi, E., & Ronchi, S. (2003). Internet supporting the procurement process: Lessons from four case studies. *Integrated Manufacturing Systems*, *14*(8), 632–641.

Botta-Genoulaz, V., & Millet, P.A. 2006. An investigation into the use of ERP systems in the service sector. *International Journal of Production Economics, 99*(1-2), 202-221.

Budiawan, R., Simanjuntak, J., & Rosely, E. (2019). Inventory management application of drug using FIFO method. *Test Engineering and Management*, *83*, 7785-7791.

Cachon, G. P., & Fisher, M. (2000) Supply chain inventory management and the value of shared information. *Management Science, 46*(8*)*, 1032-1048.

Cania, L. (2014). The impact of strategic human resource management on organizational performance. *Economia. Seria Management*, 17(2), 373-383.

Chase, R. B. F., & Aquilano, N. J. (2021). *Operations management for competitive advantage.*

Cheng, T. C., & Podolsky, S. (1996). *Just-in-time manufacturing: an introduction.* Springer Science & Business Media.

Chopra, S., & Meindl, P. (2007). *Supply chain management. Strategy, planning & operation*, 265-275.

Datar, S. M., & Rajan, M. V. (2021). *Horngren's cost accounting: a managerial emphasis*. Pearson.

Duran, S., Liu, T., Simchi-Levi, D., & Swann, J. L. (2008). Policies utilizing tactical inventory for service-differentiated customers. *Operations Research Letters*, *36*(2), 259-264.

Frahm, S. (2008). *Vendor managed inventory (VMI):* Three steps in making it work. Inbound Logistics. Retrieved from https://www.inboundlogistics.com/cms/article/making-vendor-managed-inventory-work/

Gečienė, J. (2020). The resilience of organizations in the context of regional social sustainability: management challenges under uncertainty. *Organizacijų vadyba: sisteminiai tyrimai,* (83), 37-55.

James, H. (2008). Inventory management and purchasing often overlooked as a profit center. *Construction equipment distribution Magazine*.

Jacobs, M. A., & Swink, M. (2011). Product portfolio architectural complexity and operational performance: Incorporating the roles of learning and fixed assets. *Journal of Operations Management*, *29*(7-8), 677-691.

Kamau, L. W. & Kagiri, A. W. (2015). Influence of inventory management practices on organizational competitiveness: A case of Safaricom Kenya Ltd. *International Academic Journal of Procurement and Supply Chain Management, 1* (5), 72-98.

Kekre, S., & Mukhopadhyay, T. (1992). Impact of electronic data interchange technology on quality improvement and inventory reduction programs*:* A field study. *International Journal of Production Economics, 28*(3), 265–282.

Kotler, P., & Gertner, D. (2007). Country as brand, product and beyond: A place marketing and brand management perspective. In *Destination branding,* 55-71.

Lysons, K., & Farrington, B. (2006), *Purchasing and supply chain management*. Pearson Education.

Manohar, H. M., & Appaiah, S. (2017). Stabilization of FIFO system and Inventory Management. *International Research Journal of Engineering and Technology, 4*(6), 5631-5638.

Mentzer, J. T., Min, S., & Zacharia, Z. G. (2000). The nature of inter-firm partnering in supply chain management. *Journal of Retailing,76*(4), 549–568.

Monczka, R. M., Trent, R. J., & Handfield, R. B. (2018). Purchasing and supply chain management. *Cincinnati, OH: South-Western College Publishing*.

Müller, R., & Martinsuo, M. (2015). The impact of relational norms on information technology project success and its moderation through project governance. *International Journal of Managing Projects in Business*, *8*(1), 154-176.

Mundia, C., Langat, E. K., & Lelegwe, S. (2015). Effect of information system on upstream supply chain management among supermarkets in Nakuru town, Kenya. *International Journal of Economics, Finance and Management Sciences*, *3*(5), 535-540.

Neshkova, M. I., & Guo, H. (2012). Public participation and organizational performance: Evidence from state agencies. *Journal of public administration research and theory*, *22*(2), 267-288.

Ogbo, A. I., & Ukpere, W. I. (2014). The impact of effective inventory control management on organisational performance: A study of 7up bottling company nile mile enugu, nigeria. *Mediterranean Journal of Social Sciences*, *5*(10), 109-118.

Paesl, J. (2023). Inventory valuation methods for manufacturing entities. Lutz. Retrieved from https://www.lutz.us/blog/inventory-valuation-methods-for-manufacturing-entities.

Rajagopalan, S., Lawrence, F. B., & Krishnadevarajan, P. (2007). Vendor managed inventory best practices in a distribution environment. *Review of the Electronic & Industrial Distribution Industries*, *6*(1), 564–572.

Sadler, P. (2003). *Strategic management*. Kogan Page Publishers.

Sembiring, A. C., Tampubolon, J., Sitanggang, D., & Turnip, M. (2019). Improvement of inventory system using first in first out (FIFO) method. In *Journal of Physics: Conference Series, 1361*(1), 12-70. IOP Publishing.

Sözen, E., & Güven, U. (2019). The effect of online assessments on students' attitudes towards undergraduate-level geography courses. *International Education Studies, 12(*10), 1-8.

Stevenson, W. J., Hojati, M., Cao, J., Mottaghi, H., & Bakhtiari, B. (2007). *Operations management*. McMcGraw-Hill Irwin.

Stevenson, W. J. (2018). *Operations Management* (13th ed.). McGraw-Hill Education.

Swatman, P. M., & Swatman, P. A. (1991). *The Strategic Importance of Integrating Electronic Data Interchange Into the Organisation Systems*. School of Computing Science, Curtin University of Technology.

Tang, C. S. (2006). Perspectives in supply chain risk management. *International Journal of Production Economics, 103*, 451-488.

Zavanella, L., & Zanoni, S. (2009). A one-vendor multi-buyer integrated production-inventory model: The 'Consignment Stock'case. *International journal of production economics*, *118*(1), 225-232.

APPENDIX I

Survey Questionnaire for Inventory Management on Organizational Performance

Dear Respondents,

The purpose of this study is to examine "Effect of Inventory Management on Organizational Performance at Commercial Plastics Company Limited". This survey is concerned with the Executive Master of Business Administration conferred by Yangon University of Economics. Please kindly answer the following questions, as it is very important for me to have your response. All your responses are confidential and will only be used for the purposes of this research.

Thank you in advance for taking the time to complete this survey.

Best Regards,

Htet Htet Phyo
EMAB-II-43
19th Batch - Year 2022-2024 Yangon University of Economics

Questionnaire for Commercial Plastics Company Limited's employees Only.

Part-1 Demographic Information

Please read each question carefully and tick in the box ☐ corresponding to the response that most accurately represents your view.

1. Gender
   - (a) Male ☐
   - (b) Female ☐

2. Age (Year)
   - (a) 21 - 30 ☐
   - (b) 31 – 40 ☐
   - (c) 41 & Above ☐

3. Education Level
   - (a) Diploma ☐
   - (b) Bachelor ☐
   - (c) Master ☐

4. Position
   - (a) Supervisor ☐
   - (b) Assistant Manager ☐
   - (c) Manager ☐

5. Department
   - (a) Warehouse ☐
   - (b) Mechanical & Electrical ☐
   - (c) Sourcing ☐
   - (d) Production ☐
   - (e) Finance ☐

6. Service (Year)
   - (a) Under 1 ☐
   - (b) 1 – 2 ☐
   - (c) 2 – 3 ☐
   - (d) Above 3 ☐

Part-2 Inventory Management

Under this part, the number 1 to 5 represents a continuum with 5 being strongly agreement and 1 being strongly disagree. If satisfied, please indicate the level of satisfaction in a Likert scale (1= Strongly Disagree, 2 = Disagree, 3= Neutral, 4 = agree, 5= Strongly Agree). Provide one response in every statement. Based on experience, please tick the number that best represents the opinion about the statement.

Please choose the most correct one only for each question.

Descriptions		**1**	**2**	**3**	**4**	**5**
1	**Vendor Management Inventory (VMI)**					
a	The firm purchases specified items from specific linked suppliers of the inventory of the organization.					
b	The firm uses VMI to eliminate the need to reorder.					
c	The firm avoids stock outs by use of VMI.					
d	VMI has led to improved quality.					
e	There is a reduction on transportation costs.					
f	Suppliers manage re-order levels.					
2	**Computerized Inventory Management (CIM)**					
a	The firm uses Electronic Data Interchange Technology.					
b	The firm has computerized all inventory management systems.					
c	Investment in information technology in management results in an number of improved ways of rendering services annually.					
d	Computer-based systems are used to monitor inventory.					
3	**First In First Out (FIFO)**					
a	FIFO has reduced the costs associated with expiry of goods.					
b	FIFO has been able to reduce storage risk.					
c	Final product quality has been improved.					
d	FIFO has an effect on organizational performance.					

4	**Record Keeping**					
a	Helps the firm figure out exactly how much inventory need.					
b	Proper documentation ensures that material availability meets repair or project demand.					
c	Accuracy of inventory records is necessary to determine replenishment of individual items.					
d	Accuracy of records provides the management with the information which is used to ensure accountability.					

Part-3 Competitive Advantage

Rate the following statements by ticking below the figures as represented above.
(1= Strongly Disagree, 2 = Disagree, 3= Neutral, 4 = agree, 5= Strongly Agree)

Descriptions		**1**	**2**	**3**	**4**	**5**
1	The company builds long-term relationship with suppliers.					
2	The company selects closer location suppliers.					
3	The company meets customers' expectations.					
4	The company receives the right material of the right quality.					
5	The firm offers high quality products and services to its customers.					
6	The inventory management system has increased product quality.					
7	The firm provides customized products and services.					
8	There is improved delivery time of requirements.					
9	Customer lead times are shortened.					
10	The firm provides dependable delivery.					

Part-4 Organizational Performance

Rate the following statements by ticking below the figures as represented above.

(1= Strongly Disagree, 2 = Disagree, 3= Neutral, 4 = agree, 5= Strongly Agree)

Descriptions		**1**	**2**	**3**	**4**	**5**
1	Inventory control system has increased profitability.					
2	Inventory turnover is satisfied.					
3	There is increased operations efficiency.					
4	Determining order quantities and inventory levels has an effect on organizational performance.					
5	There is a decline of idle time.					
6	The firm has experienced the optimal level of inventory due to the adoption of the inventory management practice.					
7	Costs related to handling inventory are minimized.					
8	The firm can easily control the cost of inventory due to the adoption of the inventory management practice.					
9	The organization is able to balance between the holding cost and ordering cost due to the use of the inventory management practice.					
10	The firm uses it to ensure that there is an efficient and effective level of inventory in the firm.					

APPENDIX II

RELIABILITY TEST

Vendor Management Inventory
Reliability Statistics

Cronbach's Alpha	N of Items
.874	6

Computerized Inventory Management
Reliability Statistics

Cronbach's Alpha	N of Items
.918	4

First In First Out
Reliability Statistics

Cronbach's Alpha	N of Items
.908	4

Record Keeping
Reliability Statistics

Cronbach's Alpha	N of Items
.895	4

Competitive Advantage
Reliability Statistics

Cronbach's Alpha	N of Items
.945	10

Organizational Performance
Reliability Statistics

Cronbach's Alpha	N of Items
.950	10

APPENDIX III

REGRESSION ANALYSIS

1. Effect of Inventory Management on Organizational Performance at Commercial Plastics Company Limited.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.930[a]	.864	.855	.253609067353462	.731

a. Predictors: (Constant), Vendor Management Inventory, Computerized Inventory Management, First In First Out, Record Keeping

b. Dependent Variable: Organizational Performance

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.385	4	5.846	90.897	.000[b]
	Residual	3.666	57	.064		
	Total	27.051	61			

a. Dependent Variable: Organizational Performance

b. Predictors: (Constant), Vendor Management Inventory, Computerized Inventory Management, First In First Out, Record Keeping

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.598	.202		2.962	.004
	Vendor Management Inventory	.497	.111	.504	4.461	.000
	Computerized Inventory Management	.257	.117	.280	2.194	.032
	First In First Out	.120	.082	.128	1.472	.147
	Record Keeping	.076	.096	.073	.784	.436

a. Dependent Variable: Organizational Performance

2. Effect of Vendor Management Inventory on Organizational Performance at Commercial Plastics Company Limited.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.908[a]	.824	.821	.281910707600614	.847

a. Predictors: (Constant), Vendor Management Inventory

b. Dependent Variable: Organizational Performance

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.283	1	22.283	280.381	.000[b]
	Residual	4.768	60	.079		
	Total	27.051	61			

a. Dependent Variable: Organizational Performance

b. Predictors: (Constant), Vendor Management Inventory

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.751	.214		3.508	.001
	Vendor Management Inventory	.895	.053	.908	16.745	.000

a. Dependent Variable: Organizational Performance

3. Effect of Vendor Management Inventory on Competitive Advantage at Commercial Plastics Company Limited.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.839[a]	.703	.698	.416449546058636	.975

a. Predictors: (Constant), Vendor Management Inventory

b. Dependent Variable: Competitive Advantage

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24.656	1	24.656	142.165	.000[b]
	Residual	10.406	60	.173		
	Total	35.062	61			

a. Dependent Variable: Competitive Advantage

b. Predictors: (Constant), Vendor Management Inventory

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.181	.316		.571	.570
	Vendor Management Inventory	.942	.079	.839	11.923	.000

a. Dependent Variable: Competitive Advantage

4. Effect of Vendor Management Inventory and Competitive Advantage on Organizational Performance at Commercial Plastics Company Limited.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.915[a]	.838	.832	.272838299665541	.748

a. Predictors: (Constant), Competitive Advantage, Vendor Management Inventory

b. Dependent Variable: Organizational Performance

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.659	2	11.330	152.197	.000[b]
	Residual	4.392	59	.074		
	Total	27.051	61			

a. Dependent Variable: Organizational Performance

b. Predictors: (Constant), Competitive Advantage, Vendor Management Inventory

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.717	.208		3.449	.001
	Vendor Management Inventory	.716	.095	.726	7.540	.000
	Competitive Advantage	.190	.085	.217	2.249	.028

a. Dependent Variable: Organizational Performance

5. Effect of Computerized Inventory Management on Organizational Performance at Commercial Plastics Company Limited.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.891[a]	.794	.791	.304419517401176	.822

a. Predictors: (Constant), Computerized Inventory Management

b. Dependent Variable: Organizational Performance

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.491	1	21.491	231.906	.000[b]
	Residual	5.560	60	.093		
	Total	27.051	61			

a. Dependent Variable: Organizational Performance

b. Predictors: (Constant), Computerized Inventory Management

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.043	.217		4.816	.000
	Computerized Inventory Management	.819	.054	.891	15.228	.000

a. Dependent Variable: Organizational Performance

6. Effect of Computerized Inventory Management on Competitive Advantage at Commercial Plastics Company Limited.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.785[a]	.616	.610	.473447431681293	.590

a. Predictors: (Constant), Computerized Inventory Management

b. Dependent Variable: Competitive Advantage

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.612	1	21.612	96.418	.000[b]
	Residual	13.449	60	.224		
	Total	35.062	61			

a. Dependent Variable: Competitive Advantage

b. Predictors: (Constant), Computerized Inventory Management

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.646	.337		1.920	.060
	Computerized Inventory Management	.821	.084	.785	9.819	.000

a. Dependent Variable: Competitive Advantage

7. Effect of Computerized Inventory Management and Competitive Advantage on Organizational Performance at Commercial Plastics Company Limited.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.914[a]	.836	.830	.27458833288627 4	.897

a. Predictors: (Constant), Competitive Advantage, Computerized Inventory Management
b. Dependent Variable: Organizational Performance

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.603	2	11.301	149.888	.000[b]
	Residual	4.449	59	.075		
	Total	27.051	61			

a. Dependent Variable: Organizational Performance
b. Predictors: (Constant), Competitive Advantage, Computerized Inventory Management

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.857	.201		4.259	.000
	Computerized Inventory Management	.583	.078	.634	7.442	.000
	Competitive Advantage	.288	.075	.327	3.840	.000

a. Dependent Variable: Organizational Performance