



**THE INFLUENCE OF INVENTORY MANAGEMENT PRACTICES ON
OPERATIONAL EFFICIENCY: A STUDY ON SAUDI ALMARAI DIARY
COMPANY**



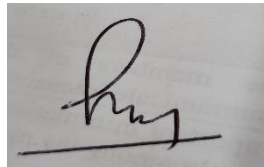
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**The Influence Of Inventory Management Practices On Operational Efficiency: Saudi
Almarai Dairy Company**

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This thesis is submitted in partial fulfillment of the requirements for the award of
Bachelor of Technopreneurship with Honors



2023

DECLARATION OF ORIGINAL WORK

I hereby declare that all the work of this thesis entitled The Influence Of Inventory Management Practices On Operational Efficiency: A study on Saudi Almarai Dairy Company

is original done by myself and no portion of the work encompassed in this research project proposal has been submitted in support of any application for any other degree or qualification of this or any other institute or university of learning.

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DEDICATION

I would like to appreciate the dedication of my beloved family members who educated me and motive me to learn until my degree level. And also, I express a deep sense of gratitude to my lecturer who is also my supervisor for my final year project, Datin Dr. Suraya Binti Ahmad, and my fellow friends. They have provided me with full support and advice throughout this research. Without their blessing and encouragement, this research is impossible to complete within a short period of time



ABSTRACT

There have been studies on the effect of inventory management techniques on operational effectiveness: a case study of the Saudi Arabian enterprise Almarai. Dairy production companies such as Almarai are seen to be failing as a result of inefficient management techniques. This study utilized a survey to ascertain the inventory-management procedures of Saudi Arabia-based Almarai firm and to assess the efficacy of the inventory-management techniques currently employed by these companies. In particular, the research will identify any obstacles that the Almarai firm faces as a result of its existing inventory management techniques. The absence of research on the inventory management procedures of the Almarai corporation prompted this investigation. Moreover, the researcher received 355 respondents through a Google survey from Almarai corporation and analyzed the respondents' data with the software SPSS by quantitative method. The survey found that the majority of Almarai companies employed the "Rule of Thumb" as an inventory-management method. Regarding the effectiveness of the used procedures, the survey indicated that the Almarai corporation was regarded to be fairly effective, with the company employing inventory management strategies such as Just in Time (JIT), and First in, First Out (FIFO). The findings indicated that fraud, scarcity of inventory, mistakes owing to incompetent employees, physical inventory not matching up with records, and an inability to keep up with consumer demand were among the most significant issues posed by Almarai's present inventory-management processes. This research contributes to the existing literature on the inventory management procedures of the Almarai firm and fills a knowledge gap on this under-researched area. The findings of this study will enlighten the decision-makers of Almarai organization regarding the best practices and diverse inventory-management tactics that are vital to the survival of their businesses and have been used by their competitors. This should enable them to evaluate their own inventory management methods and select whether to improve, modify, or preserve the current technique. This research will inform future intervention strategies designed to improve the survival rates of these dairy manufacturing enterprises. This might take the form of the creation of short courses to assist the Almarai company in enhancing its inventory-management practices.

Keywords: Inventory Management, Operational Efficiency, Almarai, Challenges.

ABSTRAK

Terdapat kajian tentang kesan teknik pengurusan inventori ke atas keberkesanan operasi: kajian kes perusahaan Arab Saudi Almarai. Syarikat pengeluaran tenusu seperti Almarai dilihat gagal akibat teknik pengurusan yang tidak cekap. Kajian ini menggunakan tinjauan untuk memastikan prosedur pengurusan inventori firma Almarai yang berpangkalan di Arab Saudi dan untuk menilai keberkesanan teknik pengurusan inventori yang digunakan oleh syarikat-syarikat ini. Khususnya, penyelidikan akan mengenal pasti sebarang halangan yang dihadapi oleh firma Almarai hasil daripada teknik pengurusan inventori sedia ada. Ketiadaan penyelidikan mengenai prosedur pengurusan inventori perbadanan Almarai mendorong penyiasatan ini. Selain itu, pengkaji menerima 355 responden melalui tinjauan Google daripada Almarai corporation dan menganalisis data responden dengan perisian SPSS secara kaedah kuantitatif. daripada Tinjauan mendapati bahawa majoriti syarikat Almarai menggunakan "Peraturan Ibu Jari" sebagai kaedah pengurusan inventori. Mengenai keberkesanan prosedur yang digunakan, tinjauan menunjukkan bahawa perbadanan Almarai dianggap agak berkesan, dengan syarikat itu menggunakan strategi pengurusan inventori seperti Just in Time (JIT), dan First in, First Out (FIFO). menunjukkan bahawa penipuan, kekurangan inventori, kesilapan disebabkan oleh pekerja yang tidak cekap, inventori fizikal yang tidak sepadan dengan rekod, dan ketidakupayaan untuk mengikuti permintaan pengguna adalah antara isu paling penting yang ditimbulkan oleh proses pengurusan inventori Almarai sekarang. Penyelidikan ini menyumbang kepada literatur sedia ada mengenai prosedur pengurusan inventori firma Almarai dan mengisi jurang pengetahuan mengenai bidang yang kurang dikaji ini. Penemuan kajian ini akan memberi pencerahan kepada pembuat keputusan organisasi Almarai mengenai amalan terbaik dan pelbagai taktik pengurusan inventori yang penting untuk kelangsungan perniagaan mereka dan telah digunakan oleh pesaing mereka. Ini sepatutnya membolehkan mereka menilai kaedah pengurusan inventori mereka sendiri dan memilih sama ada untuk menambah baik, mengubah suai atau mengekalkan teknik semasa. Penyelidikan ini akan memaklumkan strategi intervensi masa depan yang direka untuk meningkatkan kadar kelangsungan hidup perusahaan pembuatan tenusu ini. Ini mungkin dalam bentuk penciptaan kursus pendek untuk membantu syarikat Almarai dalam meningkatkan amalan pengurusan inventornya.

Kata kunci: Pengurusan Inventori, Kecekapan Operasi, Almarai, Cabaran.

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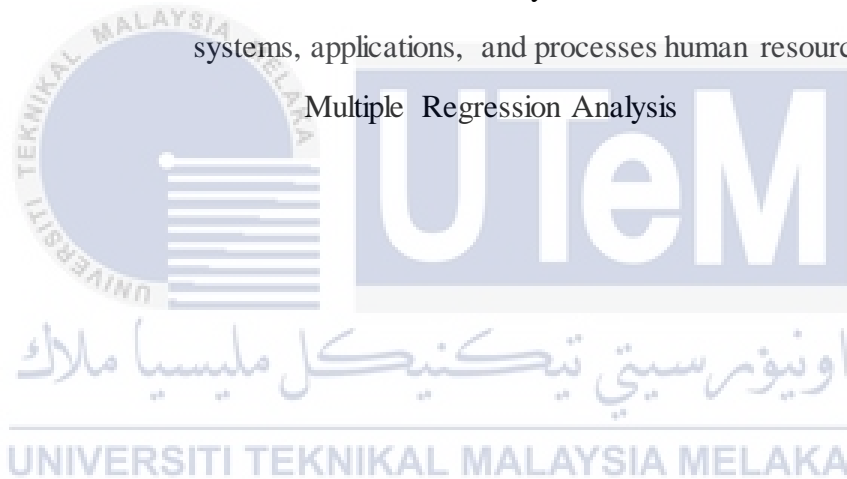
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LIST OF ABBREVIATIONS

ABBREVIATION	MEANING
GCC	Gulf Cooperation Council
IMP	Inventory management practices
JIT	Just In Time
MRP	Material Requirement Planning
RFID	Radio-frequency identification
EDI	Electronic data interchange
FIFO	First in First out
SKU	Stock Keeping Unit
OTD	On-Time Delivery
SAP-HR	systems, applications, and processes human resource
MRA	Multiple Regression Analysis



CHAPTER 1

INTRODUCTION

1.1 Introduction:

This chapter presents the background of the study, problem statement, research questions, research objectives, scope and limitation of the study, the significance of the study, and summary of the study.

1.2 Background of Study:

Historically, inventory management has meant either having too much inventory with insufficient management or having too little inventory with insufficient management. There can be severe penalties for excesses in either direction. According to (Lysons, K., & Farrington, B. (2016) Inventory management is defined as the process of maintaining stock inventory levels in conjunction with the physical distribution function in order to strike a balance between the need to minimize stock holding and maximize handling costs. Inventory problems became more prevalent as technical advancement enhanced an organization's capacity to produce things in greater quantities, at a faster rate, and with a variety of designs. According to (Godan, S. P., Variyath, A. M., & Sukumaran, A. , 2014). the audience exacerbated the situation by being sensitive to variations and adjustments in frequency design. Since the mid-1980s, there was no doubt that the strategic benefits of inventory management, production planning, and scheduling had become obvious. The success or failure of a business is directly related to the effectiveness of its inventory management, as effective inventory management not only helps to resolve the liquidity problem but also increases the profitability of the company. Inventory, of all types, is a significant component of capital (Panigrahi, C. M. A. ,2013).

In order to prevent stock outs, assure uninterrupted sales, and provide effective customer service, inventory management procedures include keeping sufficient stock and regulating inventory investment by maintaining an ideal level of production while lowering expenditures. Monetary and time expenses. Inventory management practices are to maintain an adequate quantity of stock. A quantity of stock that maintains an appropriate level of available demand while reducing the costs associated with it costs associated with storage, administration, and stocking. Numerous actions are within the purview of Inventory management practices including the following activities: acquisition, categorization, inspection, codification, and storage. Maintaining and taking stock, which includes stock control (Kamau, L. W., & Kagiri, A. W. 2015). The organized flow of production, rather than the irregular yet disturbing influence of running out of materials or goods. One of the most useful concepts in business is amplification, which is about boosting the value of an existing asset without increasing its size. As a result, the stock is crucial to a business association, as is the profit of the business. Disappointments for the company might be caused by inventory issues relating to abnormally high or low product amounts available. Output problems could occur if a private company runs out of an essential inventory item (Achieng, J. B. 2018).

The operational efficiency of providing the appropriate number and quality of raw materials is a primary objective of effective inventory management and operational efficiency. However, one mitigation strategy for achieving this goal is to understand when to order, how much to order, and how frequently to order so that the organization always has the appropriate level of raw materials and finished products at the lowest possible inventory total costs (Wangari & Kagiri, 2015) without experiencing material shortages or excesses. Assessing the efficiency and efficacy of inventory management and operational efficiency may be related to quantifying a firm's operational efficiency. While the capacity of a manufacturing organization to satisfy customer needs by producing enough quantities of high-quality completed items, avoiding waste, and shortening lead

times demonstrates strong operational efficiency. In the perspective of the preceding, this study examined the influence of inventory management and operational efficiency of quoted by manufacturing firms in the Kingdom of Saudi Arabia (Mbah, S., Obiezekwem, J., & Okuoyibo, A. 2019).

1.3 Problem statement:

Historically, inventory management has been referred to be either excessive inventory and insufficient management or insufficient inventory and enough management. Different penalties might be assigned to either extreme excess. Inventory management has been a challenge for many Saudi businesses. Inventory is an essential component of current assets, particularly for industrial companies. Huge sums are invested in inventories in order to facilitate the flow of production and satisfy customer demand. Nonetheless, retaining inventory incurs holding or carrying expenses as well as opportunity cost. Therefore, inventory management is essential for balancing the advantages and downsides of maintaining goods. When firms fail to successfully manage their inventory, they are likely to encounter stock-outs, a reduction in productivity and profitability, and dissatisfied customers (Lukumon, A., Abraham O., 2018). Consequently, the purpose of this study is to examine the impact of inventory management practices on the operational efficiency in Saudi Almarai Dairy Company.

A production company's optimal inventory level is regarded as the most important component in enhancing operational effectiveness. However, the optimal quantity of inventory is contingent on the precision of the demand prediction in meeting market demand. Inventory is seen negatively since it generates no revenue unless sold. Different inventory management strategies are being utilized by multinational corporations to enhance their competitiveness and performance. The progression of inventory management from just-in-time inventory systems through lean inventory systems to supply chain management is a typical corporate practice (Chowdhury & Hossain, 2020).

Mostly due to the uncertainty of business operations, the Saudi industrial sector lacks suitable inventory management practices. To stay competitive in a period of heavy rivalry with other producing nations, this industry must use proper inventory management practices. The industry may anticipate improving operational performance by implementing contemporary and innovative inventory management practices.

Managers of manufacturing businesses are aware of the role inventory plays in organization operations. In the majority of manufacturing businesses, direct materials contribute to the production process, hence impacting firm performance. Ineffective inventory management systems cause the majority of finished items to remain in the warehouse before being distributed for ultimate consumption, hence decreasing the organization's efficiency. However, for businesses operating in industries with a high turnover of raw materials and/or completed goods, however, computerized tracking systems have emerged as a crucial component of corporate strategies aimed at boosting productivity and sustaining competitiveness. Poor implementation of inventory management systems has a negative impact on the company's inventory management performance, resulting in a reduction in sales volume (Ngugi, E., Kimutai, G., & Kibet, 2019).

1.4 Research Questions:

The questions of the research will be stated as follows:

- What are the inventory management practices utilized by Saudi Arabia dairy company (Almarai)?
- How effective is the inventory management practices utilized by Saudi Dairy company (Almarai)?
- What are the challenges of the inventory management practices applied currently by Saudi Arabia dairy company (Almarai)?

1.5 Research Objectives:

There will be three main objectives of this research and they are as follows:

- To investigate on the inventory management practices of Saudi Arabia dairy companies such as Almarai company.
- To assess the effectiveness of inventory management practices applied by Saudi Dairy company (Almarai).
- To determine the challenges of the inventory management practices that are encountered Saudi Arabia dairy companies (Almarai).

1.6 Scope and limitation of the study:

The purpose of this study is to examine the inventory management practices of the Almarai dairy firm. Moreover, to determine the influence of inventory management practices on Almarai's operational efficiency by examining the effect of inventory management, the factors that contribute to the effect of inventory management, and the current issues they face. The study will take place in Riyadh, Saudi Arabia, and will be confined to workers, such as staff, supervisors, and engineers of the Almarai firm who reply to a survey about inventory management practices. The survey are managers and executives from a variety of departments, including finance, warehousing, and purchasing, planning, assembly, department of sales and marketing and production. This study also examined the management of inventory practices, the effect of inventory, the problems faced by respondents and the collection of respondent suggestions. Data were acquired from the company's management and senior levels, with a particular emphasis on individuals accountable for and managers of inventory management on daily basis.

The research will be undertaken quantitative to aid in the understanding and improvement of inventory management practices. This research will inform the production industry by serving as a reference for improved inventory management procedures.

1.7 Significance of study:

This research assists the inventory managers of Saudi Arabia Dairy Company in comprehending how effective inventory management may significantly lower organizational expenses, increase organizational operational efficiency, and facilitate the achievement of strategic goals. In addition to being crucial for providing further results on the topic, the study may also serve as a foundation for future research on similar topics.

1.8 Thesis outline:

This research will be about the influence of inventory management practices on operational efficiency.

- Chapter one will discuss introduction, background, problem statement, research questions, research objectives, scope and limitation of the study and significance of study.
- Chapter two will discuss the overall literature review, such as all past and previous studies.
- Chapter three discussion will be encompassing the theoretical concepts that further provide information regarding influence inventory management practices on operational efficiency.
- Chapter four data analysis and discussion what found when analysed research data.
- Chapter five conclusion and recommendation of the overall result of study.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

The purpose of this chapter on providing the theoretical models that are related to the topic of the research study. The chapter also presented the findings of the past research in regards to the influence of inventory management practices on operational efficiency, with a particular emphasis on special attention paid to Saudi Almarai Dairy Company. By reading the relevant kinds of literature, the dependent variables and independent variables were defined. At the end of this chapter, the proposed research framework can describe the theory.

2.2 Saudi Almarai Dairy Company

Almarai Manufacturer is a food manufacturer in Saudi Arabia. The company was founded in 1977 and is headquartered in Riyadh. In addition to dairy drinks, yoghurts, and sweets, the company also manufactures bread items, dinners, and chicken. Almarai also operates agricultural properties in Argentina (Almarai co ltd, 2013). Almarai is the brand name under which the firm advertises its products. The company's products are distributed throughout the Gulf Cooperation Council (GCC).

The firm began modestly and has grown to become one of the greatest dairy and food corporations in the world. It began as a dairy and laban processing enterprise before diversifying into other goods such as fruit juice, bread, and chicken. With the development of new product lines, the Almarai developed into a food firm. Additionally, Almarai has been prosperous, with yearly revenues exceeding SAR1 billion over the last two decades. Over the next decade, the corporation more than quadrupled its sales. The company's sales increased to over SAR23 billion in 2011. The firm has developed as it attempts to serve consumers with unmatched high-quality goods, investing

in world-class infrastructure, farms, distribution networks, and manufacturing processes (Almarai co ltd, 2013). For example, Almarai Hosten cows are extremely prolific, producing double the quantity of milk that European cows produce.

2.3 Inventory Management Practices

Inventory management methods are critical to the success of any organization, but they are especially important in manufacturing Inventory. As such, (Inegbedion, H., Eze, S. C., Asaleye, A. J., & Lawal, A. I. 2019). Inventory management practices (IMP) are the varied practices of a person. Companies to guarantee that inventories are maintained at maximized service at optimum levels costs are kept to a minimum. As a result of mainly concerned with maintaining a demand-and-supply equilibrium provision via the use of both control and monitoring as a result of production and procurement orders provide for a steady stream of raw materials and high-value activities management of inventory methods guarantee that manufacturing companies are possessing the ability to regulate themselves inventory. According to,(Kontuš, E. (2014) & Benjamin, A. F. 2016). An inventory management strategy is designed to ensure that a company's inventory needs are met on time and in the most cost-effective manner possible, increasing benefits while reducing expenses of maintaining inventory. A well-functioning inventory management system guarantees that the correct quality of supplies are available in the right quantities at the right time and in the right location with the right investment. According to, (Jam and Narang,1986). Inventory management, as defined by (Natabo, S. , 2019) is a procedure for keeping track of, inspecting, distributing, and controlling supplies.

2.3.1 Just in Time (JIT)

The inventory management system benefits from JIT. After using JIT, company's performance improved and manufacturing expenses decreased. The employees' comprehension of JIT and its benefits was crucial for executing it with ease and effectiveness. However, effective

communication and cooperation from suppliers play a crucial role in the success of these models, since all parties contribute equally (Bashar and Hasin, 2019). The Just in Time was an inventory management practices with the objective of maintaining just sufficient material at the right place and at the right time in order to make first the right quantities of inventories. According to (Carison, 2002).

In the Alrawabi dairy and beverage company sectors of United Arab Emirates, management development efforts play a crucial role. Since JIT has shown to be a potent instrument for Emirates manufacturers to compete on the global market and as a survival strategy, it should be given priority. Additionally, (Karim, S., 2019) it is believed that supervisors should be given with the JIT implementation procedure in order for them to comprehend the waste classifications and identification route. This allows the supervisor to decrease waste production. The Kaizen philosophy has been utilized to improve JIT.

2.3.2 Material Requirement Planning (MRP)

Following inventory practices such as strategic supplier relationship, just-in-time approach, materials need planning, and inventory cost control, (Okuoyibo, 2019) said that the success and efficiency of the manufacturing plant could be accomplished. According to (Saleem, 2020), the automated inventory management system had increased the inventory management efficiency of any firm. The conclusion is reached after examining the positive contributions of Radio-frequency identification (RFID) technology, Electronic data interchange (EDI), and Material requirements planning (MRP) system to the company, with the risk taken by the company being able to be minimized through the risk management process (Saleem, 2020).

MRP is a computer-based system that has provided its customers with a tried-and-true solution for controlling on-hand stock. The MRP is a logical planning system that nets gross requirements for dependent demand . MRP has aided businesses, particularly the oil and gas industry, in attaining

their management objectives. According to (Pratiwi and Santosa, 2020), the challenge posed by lot size in MRP is difficult to resolve since it incorporates several factors. The amount in each lot is predetermined, and the MRP suggests using the product in an economical manner by minimizing slow-moving stockpiles. Moreover, (Sethi, 2020) MRP techniques required in the food business are unusual since the government sets the regional minimum wage.

2.3.3 First In, First Out (FIFO)

To optimize FIFO in green supply chain inventory management in industry, particularly for food company components. Concentrating on identifying the excess and shortage required for FIFO in green supply chain stocks reduces the total cost of the supply chain. Applying FIFO techniques to a green supply chain inventory model of the food components sector results in improved inventory optimization (Ajay, Kapil, *et al.*, 2020).

2.4 Inventory Management Practices Theory

Several inventory management best practices (Just-in-Time, Material Requirement Planning, First In, First Out, Forecasting, Collaborative Planning and Replacement, Automatic Replenishment, and Material Requirement Planning) succeed. Despite this, that there is a lack of understanding and respect for such things, according to actual data how the techniques are implemented in the Kingdom of Saudi Arabia as well as their practical importance.

The manufacturing sector, the lack of awareness and limited implementation of these forward-looking ideas It's possible that advances in inventory management methods are to blame for the issuing a fine for wasting raw material, increasing production time, losing revenue, reducing product availability and inability to meet demand rising manufacturing costs and concerns about product quality are all threatening to devastate the industry. Therefore, there seems to be a huge gap between the theoretical and the practical. Inventories as well as a realistic strategy based on the realities of production the need to bridge the theoretical and practical divide cannot be

overstated. Here are a few theories to consider the best ways for inventory management practices. According to (*Natabo Sophia, 2019*).

2.4.1 Strategic Choice Theory

In the strategic choice theory, management decision had a significant efficiency on the firm's success. Moreover, the strategic choice theory focused on the link between efficiency of the firms and the management choices as well as external and internal environment relationship. Developed a model of strategic choice that illustrated the interdependence of the environment, organizations, their actions, and overall company success. The model placed a premium on achieving a higher level of efficiency in order to maximize efficiency, particularly when faced with limited resources; however, the strategic theory failed to place a premium on contextual factors such as the environment, technology, and degree of operation, and instead focused exclusively on how the structure of a business contributes to its efficiency (Michelson, 2013).

The concept emphasized achieving a better degree of efficiency in order to maximize efficiency, particularly in light of few resources; yet, strategic theory was unable to place a higher premium on contextual factors, like the surroundings, Taken into consideration both the technology and the degree of operational efficiency and only assessed how the firm's structure of a corporation contributes to its efficiency. Inventory management strategies were one of the options examined by management. When making decisions on how to enhance a firm's efficiency. The research study targeted at assisting us in comprehending the various inventory management systems available. Which managers make in order to enhance the consumer firm's efficiency in terms of quality, efficiency, optimum production for production and on-time delivery.