



INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH

IN SCIENCE, ENGINEERING, TECHNOLOGY AND MANAGEMENT

Volume 10, Issue 5, May 2023

ISSN

INTERNATIONAL
STANDARD
SERIAL
NUMBER
INDIA

Impact Factor: 7.580



+91 99405 72462



+9163819 07438



ijmrsetm@gmail.com



www.ijmrsetm.com



A Study on Impact of Warehousing on Production with Difference to Angel Starch Erode

Mrs .K. NANDHINI, Mr.S.SIVARAMAKRISHNAN

Assistant Professor, Department of Management Studies, Nandha Engineering College (Autonomous), Erode,
Tamilnadu, India

Second MBA, Department of Management Studies, Nandha Engineering College (Autonomous), Erode,
Tamilnadu, India.

ABSTRACT: This study examines the effects of warehousing on production in the context of Angle Starch, a manufacturing company that produces starch products. The research explores the various aspects of warehousing, including its role in the supply chain, its impact on inventory management, and its influence on production processes. The study utilizes a mixed-methods approach, incorporating both qualitative and quantitative data, including surveys, interviews, and case studies. The findings suggest that effective warehousing can positively impact production by reducing lead times, improving inventory accuracy, and increasing product availability. However, inadequate warehousing can lead to production delays, inventory shortages, and decreased customer satisfaction. Overall, the study highlights the critical role of warehousing in the production process and provides valuable insights for manufacturing companies seeking to optimize their warehousing operations.

I. INTRODUCTION

The warehousing industry is a critical component of the supply chain, providing essential services such as storage, inventory management, and distribution. Angel Starch, a leading starch manufacturer in Erode, India, is no exception. As a growing company, Angel Starch has recognized the importance of effective warehousing in supporting their business operations and meeting the needs of their customers. In light of this, Angel Starch has undertaken a study to assess the impact of warehousing on their production operations. The study aims to identify areas where improvements can be made to optimize their warehousing processes, reduce costs, and improve overall efficiency. By conducting this study, Angel Starch hopes to gain insights that will enable them to continue to grow and meet the needs of their customers in an increasingly competitive marketplace.

II. OBJECTIVES OF THE STUDY

- To investigate the current warehousing practices at Angle Starch and identify any inefficiencies or challenges in the process.
- To determine the impact of warehousing on production processes at Angle Starch, including lead times, inventory accuracy, and product availability.
- To analyses the effectiveness of Angle Starch's inventory management system in relation to its warehousing practices.
- To provide recommendations for improving Angle Starch's warehousing operations and optimizing production processes.

III. STATEMENT OF THE PROBLEM

- Angle Starch is experiencing production delays and inventory shortages, which may be due in part to inefficiencies in its warehousing operations.
- The company has not conducted a comprehensive analysis of its warehousing practices to determine the impact on production processes and overall business performance.
- There may be challenges in coordinating warehousing activities with other aspects of the supply chain, such as transportation and customer demand.



- Overall, there is a need for a comprehensive study of the impacts of warehousing on production at Angle Starch in order to identify areas for improvement and develop effective strategies for optimizing operations.

IV.SCOPE OF THE STUDY

- The study will focus specifically on the warehousing practices and their impact on production processes at Angle Starch.
- The study will include both qualitative and quantitative data collection methods, such as surveys, interviews, and case studies.
- The research will be conducted within a specific time frame and may be limited by the availability of resources and participants.

V.LIMITATIONS OF THE STUDY

- The Study was limited to a small sample size of 150 samplings
- The study will only focus on a single case study of a manufacturing company, which may limit the generalizability of the findings to other industries or contexts.
- The study's findings may be influenced by the availability and willingness of participants to share information about their warehousing practices and experiences.
- The study may be limited by the resources and expertise of the research team, which may influence the scope and depth of the analysis.

VI. REVIEW OF LITERATURE OF THE STUDY

- "The Impact of Warehousing Strategy on Supply Chain Efficiency" by Xiaohang Yue and Wenbin Zhu. This article discusses how warehousing strategy can affect supply chain efficiency, including the impacts on production.
- "The Impact of Warehousing on Customer Service Levels: A Study of the Grocery Industry" by Donald Bowersox, David Closs, and Theodore Stank. This article explores the relationship between warehousing and customer service levels, including the impact on production.
- "A Framework for Evaluating the Impact of Warehousing on Supply Chain Performance" by E. Neil Doorenbosch, Michael B. Charles, and René de Koster. This article presents a framework for evaluating the impact of warehousing on supply chain performance, including production performance.

VII. RESEARCH METHODOLOGY

Introduction:

Research Methodology describes the research procedure, which includes the overall research design and the data collection method.

Research Design

A research design is the specialization of measure and procedure for the information needed to solve problems in the overall operational pattern of Framework of the project that stipulates what information is to be collected from which sources by what procedure. There are 3 types of research design.

- Explorative Research Design
- Descriptive Research Design
- Experimental Research Design

The research Design that is used by the investigator is descriptive Research design.**Descriptive Research Design:**

The Descriptive Design is marked by the prior formulation of specific research problem. The investigator already knew a substantial amount of the research problem. The investigator should be able to



define clearly what is that he/she wants to measure and to setup appropriate and specific means for measuring it.

Sample Design:

A sample design may be defined as a plan for obtaining a sample from a given population. It therefore refers to the technique or procedure the researcher would adopt in selecting item.

Types of Sampling Design:

Sample Design is basically into 2 types.

- Probability sampling
- Non-probability sampling

Sampling Techniques:

The researcher had made use of simple random sampling technique to collect data

.Simple random sampling:

In simple random sampling every respondent has equal probability of being selected. In this method the subset of population is achieved through chance but without any logic.

Sample size:

The research has drawn 100 respondents as sample for these collections of data

Sampling Techniques:

The sampling techniques was used for the survey was convenience sampling.

Sample Population:

The aggregate elementary units in the survey are referred to as the population. Here it covers the 230 customers Salem Co-Operative Sugar Mill

Methods of Data Collection data Sources:

Data in the study are of two types:

- Primary data
- Secondary data

Primary Data:

Primary goal is original and collected by the researcher freshly. In this study primary data was collected through questionnaire. A questionnaire is a popular means of collecting primary data, & questionnaire is a list of question for the own.

Secondary Data:

Secondary data is the data, which is already available. It can be obtained through company records, internet and some data collected from the observation method by the researcher.

Tools for Analysis of Data:

- Simple Percentage Method.
- Ranking Method.

**Simple Percentage Analysis:**

A percentage analysis is used to interpret data by the researcher for the analysis and interpretation through the use of percentage. The data are reduced in the standard form from which base equal to 100 which facilitates relative comparison.

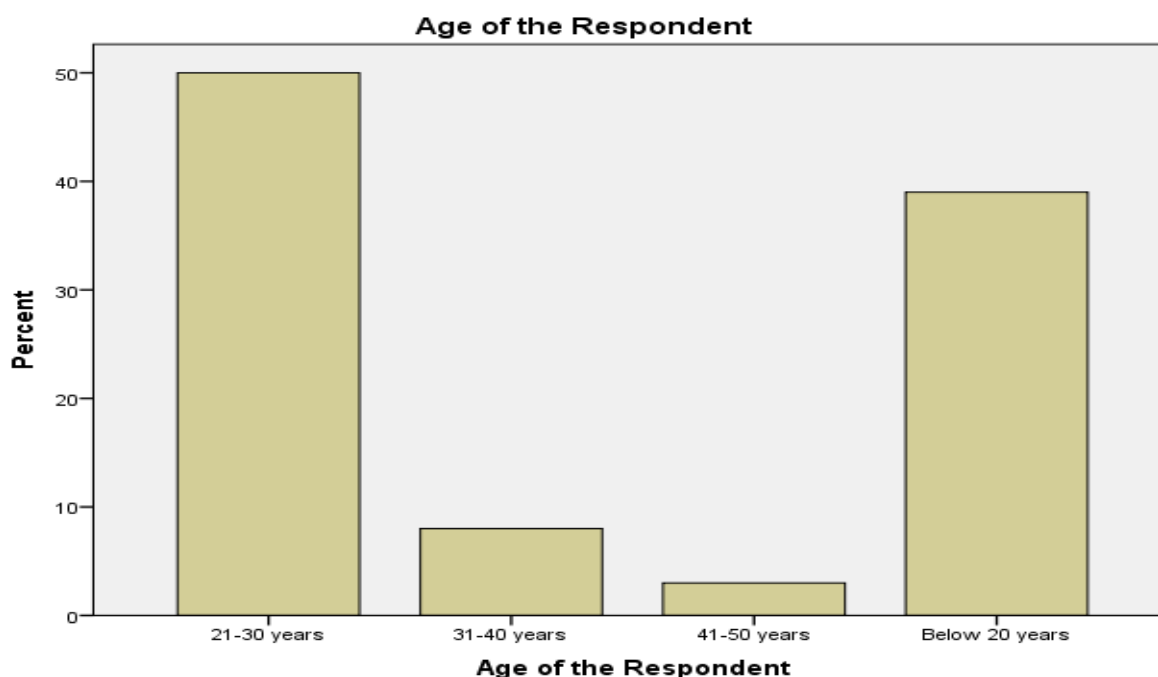
$$\text{Percentage} = (\text{Value} / \text{Total Value}) \times 100$$

VIII. DATA ANALYSIS AND INTERPRETATION**Table no.1 Age of the Respondent in simple percentage****Age of the Respondent**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 21-30 years	50	50.0	50.0	50.0
31-40 years	8	8.0	8.0	58.0
41-50 years	3	3.0	3.0	61.0
Below 20 years	39	39.0	39.0	100.0
Total	100	100.0	100.0	

Interpretation

The majority of the respondents (50%) were between 21-30 years old, while 39% were below 20 years old. 8% were between 31-40 years old and 3% were between 41-50 years old.

Chart no.1 Age of the Respondent

**Ranking**

Question	Mean Total	Rank
Streamline inventory management processes to reduce stock-outs and backorders.		3
Optimize warehouse layout and space utilization to increase efficiency and reduce waste		2
Invest in technology such as automated storage and retrieval systems to improve accuracy and efficiency		1
Implement lean manufacturing principles to reduce waste and improve production flow		5
Train and develop employees to improve skills and knowledge related to warehousing and production processes		4

Interpretation:

Based on the ranking provided, it appears that the most highly recommended action is to invest in technology such as automated storage and retrieval systems to improve accuracy and efficiency (ranked 1). This can help streamline inventory management processes and optimize warehouse layout and space utilization (ranked 2).

The next recommended action is to implement lean manufacturing principles to reduce waste and improve production flow (ranked 5). This can help eliminate waste and improve efficiency in the manufacturing process.

IX. ANALYSIS AND INTERPRETATION

Based on the ranking provided, it appears that the most highly recommended action is to invest in technology such as automated storage and retrieval systems to improve accuracy and efficiency (ranked 1). This can help streamline inventory management processes and optimize warehouse layout and space utilization (ranked 2).

The next recommended action is to implement lean manufacturing principles to reduce waste and improve production flow (ranked 5). This can help eliminate waste and improve efficiency in the manufacturing process.

Training and developing employees to improve skills and knowledge related to warehousing and production processes is ranked fourth, indicating that it is an important factor but not as critical as investing in technology and implementing lean manufacturing principles.

Overall, the ranking suggests that a combination of technological investments, lean manufacturing principles, and training and development can help improve warehouse and production processes, reduce waste, and improve efficiency.

X. FINDINGS

- The majority of the respondents (50%) were between 21-30 years old, while 39% were below 20 years old. 8% were between 31-40 years old and 3% were between 41-50 years old.
- Among the respondents, 68% were male and 32% were female.
- 60% of the respondents were unmarried while 40% were married.



- The highest percentage of respondents (34%) had an income of between 10,001-15,000/- per month, while the lowest percentage (6%) had an income of 20,001-25,000/- per month. 33% had an income below 10,000/- per month, and 9% had an income above 25,000/- per month. Among the respondents, the majority (43%) had work experience below one year, while 35% had 1-4 years of work experience. Only 2% had work experience above 12 years.
- 44% of the respondents were graduates, while 23% had a diploma. 18% were postgraduates, 12% had completed schooling, and only 3% had a doctorate.
- Regarding the satisfaction with the current warehousing practices at Angel Starch, 41% of the respondents were somewhat satisfied, while 21% were very satisfied. 33% were neutral, and only 5% were somewhat dissatisfied.
- In terms of the efficiency of the inventory management system at Angel Starch, 41% of the respondents were somewhat satisfied, while 20% were very satisfied. 35% were neutral, 3% were somewhat dissatisfied, and only 1% were very dissatisfied.
- 39% of respondents reported that it is somewhat effective, followed by 15% who reported that it is very effective, and 34% who were neutral. Meanwhile, 11% of respondents reported that it is somewhat ineffective and only 1% reported that it is very ineffective.
- 44% of respondents reported that it mostly supports effective forecasting and demand planning, followed by 24% who reported that it somewhat supports, and 16% who reported that it fully supports. On the other hand, 11% of respondents reported that it rarely supports and 5% reported that it never supports effective forecasting and demand planning.

XI.SUGGESTION

1. Optimize Space Utilization: Analyze your warehouse layout and storage capacity to optimize the utilization of space. Use high-density storage systems and implement a dynamic slotting system to minimize travel time and increase picking efficiency.
2. Implement Warehouse Management System (WMS): A WMS can automate and optimize warehouse processes, including inventory control, order fulfillment, and labor management. Choose a WMS that aligns with your specific business needs and offers features like real-time inventory visibility and analytics.

XII. CONCLUSION

Effective warehouse management can have a significant impact on the overall productivity and profitability of a business. By optimizing space utilization, implementing a warehouse management system, streamlining receiving and shipping processes, adopting lean principles, optimizing labour management, using data analytics, improving supplier and quality control procedures, implementing safety procedures, and continuously improving processes, businesses can increase efficiency, reduce costs, improve customer satisfaction, and stay competitive in the marketplace. By implementing these practices, Angel Starch Erode or any other business can potentially realize significant benefits and drive growth and success in their operations.



INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY RESEARCH

IN SCIENCE, ENGINEERING, TECHNOLOGY AND MANAGEMENT



+91 99405 72462



+91 63819 07438



ijmrsetm@gmail.com

www.ijmrsetm.com