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A Study on Impact of Inventory Management in Particular to Cost Effectiveness in Mytronics Solution Pvt Ltd

Santhrupthi K
Department of Management and Commerce,
Amrita School of Arts and Science, Mysore
Amrita Vishwa Vidyapeetham, India

Aashish C I
Department of Management and Commerce,
Amrita School of Arts and Science, Mysore
Amrita Vishwa Vidyapeetham, India

Abstract
Inventory management is a management of all kinds of assets that a business hold either to sell or to convert them to finished products. This study analysed the impact of inventory management on the following objectives: impact of ordering frequency on cost effectiveness and procedure used to identify suppliers by Mytronics Solutions Private Limited, Mysuru. The primary data was obtained using a questionnaire that was circulated to all of the company's employees. Selected statistical techniques are descriptive statistics and chi square test. Results of the study is that dependent variables and independent variables influence the cost effectiveness of the organisation. In this study impact of inventory management to cost effectiveness is dependent variable and ordering frequency and procedure used for identification of suppliers are independent variables. This study concludes that higher ordering frequency results in lower cost effectiveness and lower ordering frequency results in higher cost effectiveness.

Keywords: Inventory Management

Introduction

Managing all kinds of assets is classified as one of the biggest inventory problems. Every business organisation whether big or small face inventory management problem which can affect the overall performance of business. Inventories still permit the accumulation of raw matter in economic piles as a way of using these primary components in the completed product. (Akshay, 2020). Therefore maintaining proper inventory management practices becomes essential strategy in order to survive in this competitive business world. Sellers must provide enough amounts of stock at the point of demand to fulfil consumer requirements, and guarantee effective dispensing schemes that incorporate vehicle routing (Nagarajan, Ganesh, Barua, Resmi, & P., 2012). An efficient and effective management of inventory is one of the core elements for success of any enterprise. The main goal of inventory management is to balance the contradictory economy that does not want to hold too much stock. Maintaining large stocks creates hidden costs and disorderly corporate operations on the other hand with too little inventory. For the proper operation of any firm, inventory is vital. It works as a connection between acquisition and sales. The inventory represents the organization's present assets/work capital. It is therefore extremely important to have proper inventory control. (N., P., Deepan, & S, 2019)

Inventory indicates the list of products and materials held by a company to be sold or sold. General definition of inventory is "all work among the method of production - all work that's or has occurred before the completion of production".

Inventory applies to any or all work that has occurred – raw materials, partially finished product, finished product before delivery, and departure from the generating system – in the form of a manufacturing production system. Inventory in the sense of services refers to any and all work completed prior to sale, as well as some process data.

Inventory Management, according to Stevenson (2010), is defined as a system used in companies to manage their inventory. This involves monitoring inventory levels, forecasting potential demands and deciding when and how. The system used by companies to organise, store and replace inventories is inventory management to maintain adequate stocks of items whilst at the same time reducing costs.

Company Profile

3c's Analysis

Company

Mytronics Solutions Private Limited is a Non Government, Electronic Manufacturing Services (EMS) company incorporated under Registrar Of Companies (ROC) Bangalore, on 27 October 2020. This company is located in Mysuru. They are suppliers of wide range of products like Product Testing, SMD and PTH Components Assembly and Testing, PTH Components Assembly and Testing, Proto Type Assembly and Testing. They are accomplished for features like long working life, low maintenance and high functionality.

Company's Capital authorised and paid-up is Rs. 50,00,000. This company is involved in the manufacture of television and radio transmitter and apparatus for telephony and line telegraphy. Sandya Hansogi Rama Rao Raghavendra Rao, Rajendraprasad Puttalingappa Kamenahally And Somu Gopal Naik. are the key Directors of Mytronics Solutions Private Limited.

Because of the climate and reduced traffic, Mysore is the biggest second city in Karnataka. People begin moving Mysore to work. (T., 2019)

Customers

Their customer demands are from a varied range of industries which include, Industrial, Telecommunication, Textiles, Power Electronics and Automobile. They are suppliers to Rangsons and electronics Mysuru, AT&S Nanjangudu.

Competitors

Competitors of Mytronics Solutions Private Limited are Advance Components & instruments Mysuru, Dia Manufacturing Pvt Ltd.

Objectives

- To Analyse The Impact Of Ordering Frequency On Cost Effectiveness Of A Mytronics Solutions Pvt. Ltd.
- To Assess The Procedure Used To Identify The Suppliers By Mytronics Solutions Pvt. Ltd.

Literature Review

- The lean inventory systems, strategic partnerships and the technology used by sugar manufacturing companies in Kanya have a major impact on revenues, profitability and sales volume, resulting in better financial efficiency, was found by Lwiki and ojera and Mugenda and Wachira (2013).To evaluate the impact of inventory management, activities at an important 5 percent level, descriptive statistics were used to assess the relationship between the inventory management variables such as sales returns (r=0.740) and the equity returns (r=0.653).
- Atnafu (2018) This report investigated the impact of inventory management practises on a company's effectiveness and competitiveness. In order to evaluate hypotheses, a structural equation model was used (SEM). The findings indicate that MSEs are gaining a greater degree of experience in inventory management gives them a competitive advantage that has a clear and positive effect on their business success.
- Mulyungi, Mulindabigwi (2015) The study analyses the significant impact of management practises on its financial efficiency in terms of profitability at the organisational level. And they looked at the impact of lean inventory management systems, information technology, lead time, and demand on manufacturing companies' financial results. Descriptive statistics were used to analyse the impact of inventory management systems and to determine the nature and scale of the relationship between inventory management variables. Findings were that there exists a strong relation between lean inventory management systems(0.621), information technology(0525), lead time(0598), and supply and demand(0.698) on financial performance of manufacturing firms. Regression analysis indicated that a variation of 81.5%(0.815) of performance with four independent variables.
- AdamuDanlami Ahmed, SalihuAliyuModibbo, KumsheHauwa Modu and BahammanSaleh
  Muhammad (2015) this study found the relationship between inventory management and financial performance conducted in Nigerian stock exchange market. Descriptive sytatistics, pearson correlation and multiple regression are used. Findings of the analysis is that the inventory management is significantly related to the profitability of a company. Also concludes that lack of inventory

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management will hinder the financial performance of the organisations. It was suggested to keep minimum inventory as well as to have proper checks to ensure minimum wastage in order to avoid delay of finished goods in store.

- Kamau Lucy Wangari, Dr. Assumpta W.Kagiri (2015) this study discusses that in order to survive and meet the market demand effectively company must have proper supply chain management. The main objective was to study the effects of inventory shrinkage, inventory investment and inventory turnover on competitiveness.Both descriptive and inferential statistics were accustomed analyse the results. And suggestion was stated to consider implementation of a vendor managed inventory in order to lower incidents of stock out situations, increase the level of customer services and reduce costs due to an increase in inventory turnover .
- Everline Chebet, Dr.Samson Kitheka (2019) this study examined the affect of inventory management practices like systematic application production in data processing(SAP), just in time system and economic order quantity on organisational performance. Empirical evidence was used to analyse the findings. Study concluded that economic order quantity must reviewed regularly and inventory control system to be monitored at all time. Study recommended that since SAP was found to affect the organisational performance significantly, to make use of SAP technology efficiently. And since EOQ was found to be important technique, to ensure to order the recommended lot size as determined by EOQ.
- Bindura university (2018) analysed the impact of inventory control techniques on ZEDTDC(SR)'s performance and the effect of inventory cost on organisation's performance. Descriptive research techniques was used as analysis technique. The research found that inventory control techniques, ABC Analysis and Vendor Managed Inventory have positive impact on performance of organisation. And high inventory costs affects the organisational performance. It also recommended for the organisation to use robust inventory control systems and policies. And also to adopt JIT and EOQ to minimise the inventory costs.
- Inventory management and its role in the competition benefit of manufacturers in African nation have been investigated by the Naliaka and Namusonges Groups (2015). Data infrastructure, internal control systems, and inventory management activities were also identified as key factors influencing a producing firm's aggressiveness in the report. To analyse the findings, Descriptive statistics was used. This study focused on producing corporations and thence this can't be generalised to retail corporations.
- Ogbo, et al (2014) on the impact study on the organisational performance in Effective internal control management: According to a study conducted at the 7up Bottling Company in Enugu, Nigeria, there is a strong link between successful internal control management and organisational efficiency. The findings of the study indicated that organisations gain greatly from effective internal control system. the advantages embody best use of resources, price reduction, improved sales effectiveness, waste reduction that all result in improved gain and organisational performance.
- In this report, Masudin,Kamara, Zulfikarijah, and Dewi (2018) state that in today's dynamic business environment, price control is a critical tool for staying competitive. In such a situation, inventory management provides control over client requests, resulting in increased customer loyalty and financial efficiency. The aim of this research is to look at inventory management and procurement practises and how they affect structure efficiency. Money efficiency and client satisfaction are the performance metrics analysed in this study. The method used is secondary data collection, which entails collecting information on inventory management and procurement activities. The findings of this study show that machine-controlled procurance practises such as e-products improve structure efficiency, while world category procurance practises improve structure performance as well. Inventory control was also found to improve structure efficiency in the report.

Research Methodology

Research Design: The pattern to be adopted by the researcher in carrying out the research analysis is called the design of the research. This study has used the quantitative analytical design.
Target demographic: Mytronics Solutions Pvt. Ltd. was the population studied in this study. Mytronics Solutions Pvt. Ltd. workers were the target demographic.
The sample size for this analysis is 25 people.
Instruments for Data Collection: The primary data was obtained using self-administered questionnaires. Chi square tests and bar graphs were used as statistical tools.

Data Analysis and Interpretation

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How do you determine ordering frequency

	OBSERVED N	EXPECTED N	RESIDUAL
11-20%	2	8.3	-6.3
21-30%	20	8.3	11.7
31-40%	3	8.3	-5.3
TOTAL	25		

CHI Square Test

Chi–Square	24.560[a]
Df	2
Asymptotic. Sig.	.000

The minimum expected cell frequency is 8.3. 0 cells (0.0%) have expected frequencies less than 5.

Since the P table is.000 and the significance P value is 0.05 (5 percent mean), we can assume that there were no random variances between the sample category value and the expected values.
As a company increases its ordering frequency, it has lower cost efficiency, and when it decreases its ordering frequency, it has higher cost efficiency.

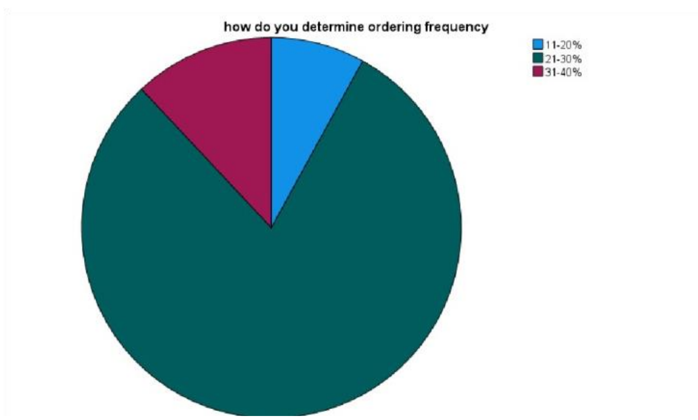

Figure 1

According to above calculations out of 25 employees, 80% of employees agree that the ordering frequency varies from 21-30%.

What are the Procedures used to Evaluate Potential Suppliers

	OBSERVED N	EXPECTED N	RESIDUAL
Reputation	22	12.50	9.5
Previously Worked with Suppliers	3	12.5	-9.5
Total	25		

Test Statistics

Chi–Square	14.440[a]

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Df	1
Asymptotic. Sig.	.000

The minimum expected cell frequency is 12.5. 0 cells (0.0%) have expected frequencies less than 5.

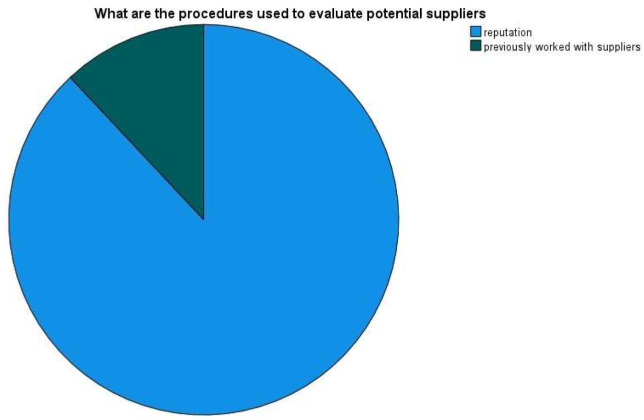

Figure 2

Since the tabular P value is.000 and the significance P value is 0.05(5% significance level), we can assume that any difference between the sample category values and the expected values was not due to random variance and is significant.
According to the above findings, 88 percent of workers agree that the protocol for identifying suppliers is based on supplier credibility, and 12 percent agree that previous familiarity with suppliers is one of the requirements for identifying supplier.

What are the Problems Associated with Ordering Process?

	OBSERVED(N)	EXPECTED(N)	RESIDUAL
Loss of Order	1	12.50	-11.50
Unavailability of Materials	24	12.50	11.50
Total	25		

Test Statstics

Chi–Square	21.160[a]
Df	1
Asymptotic. Sig.	.000

The minimum expected cell frequency is 12.5. 0 cells (0.0%) have expected frequencies less than 5.

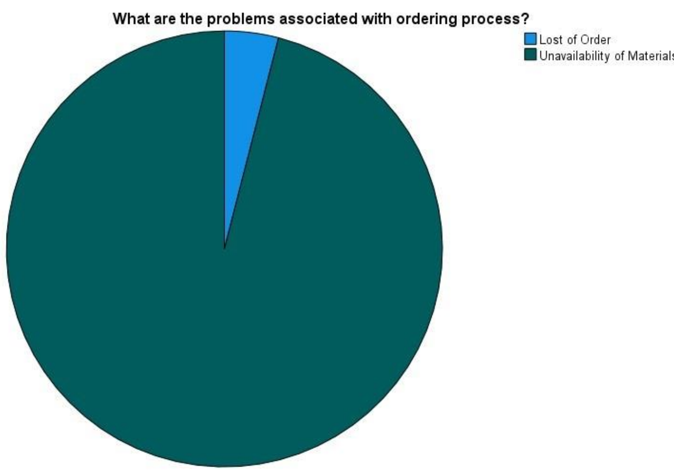

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Figure 3

How Effective is the Delivery of Suppliers in Terms of Time and Quality

	Observed N	Expected N	Residual
80-99%	22	12.5	9.5
60-79%	3	12.5	-9.5
Total	25		

Test Statistics

Chi–Square	14.440[a]
Df	1
Asymptotic. Sig.	0.000

a. The minimum expected cell frequency is 12.5. 0 cells (0.0%) have expected frequencies less than 5.

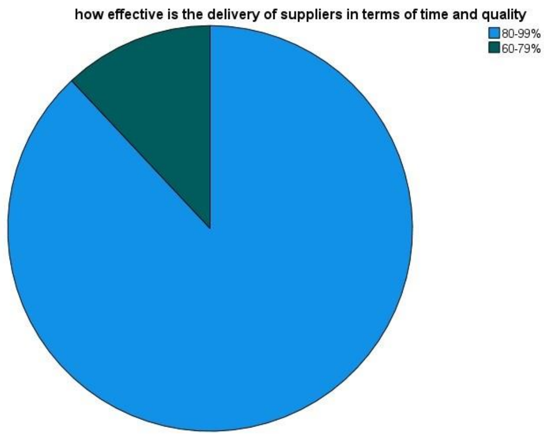

Figure 4

Conclusions

According to tests conducted, it is evidently seen that there is significant relations between variables. When there is increase in the ordering frequency by the company, there is lower cost efficiency and when there is decrease in ordering frequency by the company, there is higher cost efficiency and this is proved by conducting chi square test. Where as in the second test it is clear from the calculation of chi square test that this company mainly looks at the reputation of suppliers for identifying potential customers which could even affect the time and quality of the delivery by suppliers. According to the company, on a average 80-90% is the efficiency of suppliers delivery in terms of time and quality.

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