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AN INDUSTRY WISE COMPARITIVE STUDY ON EMPLOYEE PERCEPTION ABOUT LOGISTICAL DRIVERS IMPLEMENTATION IN MSME UNITS

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ABSTRACT

As companies are moving towards increased global competitiveness, the strategic issues surrounding supply chain management increasingly demands attention of firms for cost reduction, increased quality, improved customer service and continuity of supply which significantly elevates supply management stature within organisations. The MSME units act as a catalyst for our economic development, therefore it is important to analyse the various supply chain practices undertaken by them.

KEYWORDS: *Supply Chain Management, Logistical Drivers, Employee Engagement, MSME, One- Way ANOVA, Chi Square Analysis, Percentage Analysis*

Article History

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INTRODUCTION

Problem Definition

Each supply chain has its own unique set of market demands, customer base, and operating challenges and yet the drivers that influence SC efficiency remains essentially the same in every case. In the case of MSME units, decisions regarding the Logistical Drivers have an important role as it helps the firms to manage better their day to day activities in a cost effective and efficient manner. Among the various industrial estates, the Manvila unit is the one that came into limelight due to its poor operating conditions. The MSME units play an important part in our economic development. Therefore, it is necessary to give importance to their development. A proper supply chain management and implementation of the SC drivers helps them to carry out their operation more effectively. In the ever changing business environment, the continuous improvement of these drivers plays a vital role in ensuring the operational efficiency. So it is necessary to know whether the employees perceive the current practices as effective as they are the main assets of any organization.

Objective of the Study

- To determine the influence of the type of industry on the employee perception about inventory management methods adopted at MSME's of Manvila Industrial Estate and its effectiveness.

- To determine the influence of the type of industry on the employee perception about Transportation decisions at MSME's of Manvila Industrial Estate and its effectiveness.
- To determine the influence of type of industry on theemployee perception about Warehouse Management decisions at MSME's of Manvila Industrial Estate and its effectiveness.
- To determine the influence of the type of industry on employee perception about the importance of Logistical Drivers implementationat MSME's of Manvila Industrial Estate.
- To determine the influence of the type of industry on employee engagement at MSME's of Manvila Industrial Estate.

Scope of the Study

The supply chain drivers affect the overall performance of an organization. In order to understand the supply chain practices in the MSME units and the effectiveness of its Logistical Drivers, a study on the Logistical Drivers Implementation of the MSMEs of Manvila Industrial Estate is carried out. The study gives a brief account of the inventory management, storage facility and the transportation practices, on the basis of the employee's perception and how it can be effectively improvised to increase the SC efficiency in the long run. The study can be further extended to analyse the Logistical driver's implementation at various MSME units. This holistic approach helps in the development of similar units.

Research Design

The descriptive research design was adopted to carry out the study about the Logistical Drivers implementation of MSME units. Descriptive research is aimed at casting light on current issues or problems through a process of data collection that helps to describe the situation more completely. For the study, primary data collection methods were used to collect data from the employees of different MSME units of Manvila Industrial Estate to analyse their perception about the Logistical Drivers implementation and secondary data collection methods were adopted to get the details of the Small Scale Industries, the Logistical Drivers etc..Both Questionnaires and schedules were used to collect data from the employees of the MSME units for understanding their opinion about the currently adopted Logistic Driver strategies.

For the particular study out of a population of 322 employees, a sample size of 176 employees was taken with 95% confidence interval. The sampling method adopted was Proportionate Stratified Random Sampling.

Table 1: Proportionate Stratified Random Sampling of MSME Units at Manvila

Industry	Number of Units	Population	Sample
Glass	1	4	3
Furniture	4	34	20
Packaging	1	10	6
Steel and Aluminium	4	23	13
Bio-chemical	2	8	5
Food	5	34	19
Engineering Works	3	109	60
Polymer	5	100	50
TOTAL	**25**	**322**	**176**

Table 1 shows that 3 out of 4 employees working in the glass industry of the Manvila industrial estate were interviewed. Similarly 20 employees of furniture industry, 6 of packaging, 13 of steel and aluminium, 5 of bio-chemical, 19 of food, 60 of engineering works and 50 of polymer industry were interviewed to find their perception on the Logistical drivers implementation at the units.

Data Collection

Primary and secondary data collection methods were used for the study.

Primary Data Collection

Structured questionnaires and schedules were used to collect data from the employees regarding their perception about the Logistical Drivers.

Secondary Data Collection

Data regarding the industries, logistical drivers and other information were taken from already available journals, reference books and from the internet.

Questionnaire Design

The questionnaire/schedule framed for the research study is a structured one in which all the questions are predetermined before conducting the survey. It was designed to gather homogenous data, which will help in the easy analysis of data. To enable this, close ended questions were used, which ensured that every respondent answered in the most objective manner possible, without subjectivity on the part of the interpreter biasing the actual data itself.

The scales used to evaluate question is a Likert 5 point scale (Strongly Disagree, Disagree, Neutral, Agree, and Strongly Agree).

Statistical Tools and Technique Used

Percentage Analysis

Chi-square analysis

One WayANOVA

Hypotheses

Hypothesis 1: There is no significant difference between the type of industry and the employee perception about the extensively used inventory management method.

Hypothesis 2: There is no significant difference between the type of industry and the employee perception about the Factors that influence organisation inventory management and control.

Hypothesis 3: There is no significant difference between the type of industry and the employee perception about the benefits derived from inventory management.

Hypothesis 4: There is no significant difference between the type of industry and the employee perception about the appropriate inventory control technique.

Hypothesis 5: There is no significant difference between the type of industry and the employee perception about the effectiveness of the inventory management methods.

Hypothesis 6: There is no significant difference between the type of industry and the employee perception about the overall benefits derived from the inventory management.

Hypothesis 7: There exist no association between the type of industry and the employee perception about the mode of transportation used.

Hypothesis 8: There is no significant difference between the type of industry and the employee perception about the cost which affects the transportation decision of each company

Hypothesis 9: There is no significant difference between the type of industry and the employee perception about the factors which affects the optimal transportation system.

Hypothesis 10: There is no significant difference between the type of industry and the employee perception about the effectiveness of transportation design

Hypothesis 11: There is no significant difference between the type of industry and the employee perception about the overall benefits derived from transportation management.

Hypothesis 12: There is no significant difference between the type of industry and the employee perception about the use of the systematised warehouse management system.

Hypothesis 13: There exist no association between the type of industry and the employee perception about the benefits derived from the systematised warehouse management system.

Hypothesis 14: There is no significant difference between the type of industry and the employee perception about the warehousing cost incurred by the organisation.

Hypothesis 15: There is no significant difference between the type of industry and the employee perception about the factors affecting warehousing operation

Hypothesis 16: There is no significant difference between the type of industry and the employee perception about the effectiveness of warehousing decision in the organisation.

Hypothesis 17: There is no significant difference between the type of industry and the employee perception about the benefits of warehousing decision in the organisation.

Hypothesis 18: There is no significant difference between the type of industry and the employee engagement methods.

Analysis Done to Meet the Objectives

- To determine the influence of the type of industry on the inventory management methods adopted at MSME's of Manvila Industrial Estate and its effectiveness.
- Tool Used: ANOVA

- To determine the influence of the type of industry on the Transportation decisions at MSME's of Manvila Industrial Estate and its effectiveness.
- Tools Used: ANOVA and Chi-Square analysis
- To determine the influence of the type of industry on the Warehouse Management decisions at MSME's of Manvila Industrial Estate and its effectiveness.
- Tools Used: ANOVA and Chi-Square analysis
- To determine the influence of the type of industry on perception about the importance of Logistical Drivers implementation at MSME's of Manvila Industrial Estate.
- Tool Used: ANOVA
- To determine the influence of the type of industry employee engagement methods at MSME's of Manvila Industrial Estate.
- Tool Used: ANOVA

Findings

- The important findings of the study are the following:
- There are only up to 25 functioning manufacturing units currently present at the Manvila Industrial Estate.
- The majority of the workers of the MSME units at Manvila are males.
- The study shows that there is Logistical Drivers Implementation at these units.
- The majority of the employees are satisfied with their inventory, transportation and warehouse management decisions.
- Employee perception about the inventory management methods varies with respect to the industry.
- Employee perception about the Transportation management methods varies with respect to the industry.
- Employee perception about the warehouse management method varies with respect to the industry.
- Advanced technology is not being used for inventory and warehouse management in the MSME units.
- The majority of the MSMEs uses small load carriers for transportation.
- The engineering industry uses trucks mainly for their transportation.
- Some of the units have poor warehousing infrastructure.
- All firms have proper inventory and ordering management methods.
- Only a few firms rely on ABC technique for inventory control, others use the EOQ method.
- Employees are willing to pursue higher education for promotion, to go that extra mile; they do contribute creative ideas and suggestions to the firms, and are involved in job while at work.

Small manufacturing firms enjoys numerous benefits of their own transportation which assists in reducing costs, enhancing profits, meeting frequent customer requirements and provides stability during periods of uncertainty.

Some of the firms are on the verge of closing due to the lack business.

The employee engagement varies with respect to industries.

Implications of the Study

An industry wise comparative study about the logistical driver's implementation of the MSME units onthe Manvila Industrial Estate was carried out in order to find the overall effectiveness of the manufacturing units in terms of inventory, transportation and Warehouse management. It is known that Proper inventory management in SC reduces logistics costs, augments financial structure & functioning, which leads to reduction in overall costs which further leads to overall competitive strength. Transportation, warehousing & stocking assists in proper order processing, purchasing, joint goal setting, problem solving, long range planning covering potential markets to be reached, technology acquisition, product development, profit sharing etc. It can be inferred from the study that most of the MSME units are satisfied with their current level of performance. Majority units have good businesses while some are facing bit trouble. However the majority of them perceives that their inventory, transportation and warehouse management decisions are effective.

The result of one way ANOVA in inventory management depicted that the significant values for the type of industry and the extensively used inventory management method (.000), the Factors that influence organisation inventory management and control (.006), benefits derived from inventory management (. 000), the perception about the appropriate inventory control technique (. 000), the perception about the effectiveness of the inventory management methods (.000), the overall benefits derived from the inventory management (.000) are all less than 0.05. Therefore it is clear that the null hypothesis is rejected and alternate hypothesis is accepted. Thus we can conclude that the inventory management and the perception about it differ with respect to industry.

The next test was to find out about the differences between industries with respect to transportation design. For that two tests were used. The chisquare analysis was carried out to find out if the mode of transport differ w.r.t industries. It can see that the significant values for the type of industry and the mode of transportation used (.000) is less than.05. Therefore it is clear that the null hypothesis is rejected and alternate hypothesis is accepted. There is difference in the mode of transport being used by each industry. Oneway ANOVA was another test used. It depicted that the significant values for the type of industry and cost which affects the transportation decision of each company (. 043), the overall benefits derived from transportation management (. 000), the factors which affects the optimal transportation system(. 000) are less than 0.05. Therefore, it is clear that the null hypothesis is rejected and alternate hypothesis is accepted. Thus we can conclude that the transportation management and the perception about it differ with respect to industry for the above said factors. However, the significant value for the type of industry and the effectiveness of transportation design (.664) is greater than.05, which implies the null hypothesis that there is no significant difference between the type of industry and the effectiveness of transportation design is accepted. Irrespective of the industry, all of them perceive that their transportation design is effective.

To find the perception about the warehouse management with respect to different industries, chisquare analysis and oneway ANOVA was used. The chisquare analysis was carried out to find out if the different industries had a systematised warehousing system. Here the significant value for the type of industry and the use of the systematised

warehouse management system (.000) is less than 0.05. Thus it was concluded that there is significant difference between the type of industry and the use of systematised warehouse management system. The one way ANOVA results depicted that the significant values for the type of industry and the warehousing cost incurred by the organisation (.000), the factors affecting warehousing operation (.000), the effectiveness of warehousing decision in the organisation (.007), the benefits derived from warehousing decision in the organisation (.034) are all less than.05. Thus it was concluded that the warehouse management and the perception about it differ with respect to industry for the above said factors. The various employee engagement methods were also analyzed in this study. It was found that employees are willing to pursue higher education for promotion, to go that extra mile; they do contribute creative ideas and suggestions to the firms, and are involved in job while at working. Small firms should be encouraged to adopt an advanced warehousing management system as it can handle multi-stockroom inventories, leads to efficient space utilization & flexibility of arrangement, provides ready availability of stocks, outperforms competitors in customer service and leads to the minimization of material deterioration & pilferage. There should be proper warehousing planning & control as it provides complete storage to various items, helps in distribution of goods economically, meets the demands of consuming departments and also assists in building goodwill & inviting business. Thus from the overall analysis we can conclude that different industries perceive different methods in terms of inventory management, transportation management and warehousing management. Each industry perceives their individual operations in these three heads to be effective.

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