IF : 4.547 | IC Value 80.26 VOLUME-6, ISSUE-6, JUNE-2017 • ISSN No 2277 - 8160

Original Research Paper Management

# A Study on Satisfaction of Customers with Surface Logistics

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**ABSTRACT** Worldwide companies have started adopting global sourcing and distribution strategies and have given higher priorities on efficient management of supply chain and logistics. Such global strategy has significant implication on the growth of Indian logistics industry. The data or information is related to various surface logistics related issues or practices of this industry. The informants are people involved in supply chain operation of particular industry. The study is limited to surface logistics in India not covering other mode of logistics or multi model logistics.

**KEYWORDS** : Indian logistics industry, Surface logistics, Customers.

## Introduction

In olden days logistics was local, involving storage and material movement from one city to another city by train or truck. The lowering of trade barriers by various countries, combined with rapid advances in global transportation and information technology, has led to the proliferation of global manufacturing networks. Now manufacturing and services are global to take advantage of low cost wage structures and also to reach the local markets. In global manufacturing of this kind, components may be sourced from several countries, assembled in yet another country, and distributed to the customers all over the world. Information transfer regarding the location and status of moving inventory, payments and also the customs paper work plays a big role in efficient logistics. These networks are not generally under single ownership but are group formations of independent companies in alliance for a specific and special purpose. They compete with similar cooperating networks. Such networks are common in all industrial sectors including the automobile, pharmaceutical, aero-space, electronics, computer, food, and apparel industries. Thus, logistics and supply chain management are of fundamental importance to any economy.

Since logistics involves global movement of materials, information and funds from country to country, it requires excellent state – of - the – art country infrastructure such as Airports, Seaports, Internet and other IT and finance related facilities. Having good logistics infrastructure culture becomes a prerequisite for attracting global manufacturing and service companies in the country.

India should proactively attract investments by following the Supply Chain Cluster Paradigm, where in all the stakeholders in the supply chain such as manufacturers, logistics providers, financial institutions, etc., are co located in the region, creating a value chain of excellence which is difficult to replicate. The facilities in the cluster can be built simultaneously through careful planning rather than sequentially.

Logistics is defined as the broad range of activities concerned with effective and efficient movement of semi-finished or finished goods from one business to another and from manufacturers/ distributors/retailers to the end consumers. The activities within the sphere of logistics include freight transportation, warehousing, material handling, protective packaging, inventory control; order processing, marketing, forecasting, and customer service.

## Review of Literature

Fawkes (2014) made his predictions for the challenges facing the logistics sector in 2014. He concluded that whilst the logistics industry continues to face some difficult challenges, the outlook certainly appears brighter than it has for some time. A key part of the economic recovery, efficient transport management will require an investment of time and money. But for those that have the confidence and foresight to do so, the return on investment should be well worth it.

Baid (2013) studied the challenges faced by logistic sectior in India. He found that the transportation market in India is expected to continue offering significant opportunities to all concerned stakeholders. However, for the sector to reach its full potential, the timing and economics would depend on how the various drivers and inhibitors evolve in future. While the quality of road infrastructure is certainly likely to improve, the pace of infrastructure development is critical to minimize losses, both economic and environmental. He concluded that With increasing competition and cost, focus on outsourcing, entry of foreign players is having positive impact on the industry.

Larson and Halldorsson (2004) introduce by describing four unique perspectives on the relationship between logistics and Supply Chain Management. Results of an International survey of logistics/ SCM experts are reported. 200 questionnaires were sent to leading logistics educators. Based on experts opinion, cluster analysis conducted and confirms that the existence of the four perspectives on logistics versus SCM re-labeling, traditionalist, unionist and intersectionist.

## Rationale of the Study

The importance of logistics in organization significantly increased. Organizations are realizing the huge potential savings that efficient logistics can offer, and its impact on revenue growth and improved profitability. Moreover, the increasing complexity of supply networks, globalization of businesses, proliferation of product variety, and shortening of product lifecycles forcing them to realize that it is better to allow the experts to manage their logistics, and this results in acceptance of outsourcing as a business practice. Worldwide companies have started adopting global sourcing and distribution strategies and have given higher priorities on efficient management of supply chain and logistics. Such global strategy has significant implication on the growth of Indian logistics industry. The data or information is related to various surface logistics related issues or practices of this industry. The informants are people involved in supply chain operation of particular industry. The study is limited to surface logistics in India not covering other mode of logistics or multi model logistics.

## Objectives

- To find out the satisfaction of customers with surface logistics

## Hypotheses

H01: There is no significant difference among respondents in terms of satisfaction towards high quality of services in surface logistic

H02: There is no significant difference among respondents in terms of satisfaction towards high decision precision in surface logistic

H03: There is no significant difference among respondents in terms of satisfaction towards high reliability of surface logistic

## Research Methodology

### Research Design

The current study, on one hand, considers many issues and practices related to surface logistics in automobile companies of Maharashtra because of which require exploration of ideas and flexibility of research design but on the other hand, it requires accurate description of association of some variables. Hence the study is exploratory cum descriptive in nature. The study is based on both primary and secondary data. Structured questionnaire technique were used to collect primary data from the target. 5-point Likert type of scale where 1 denotes strongly disagree and 5 denotes strongly agree. Secondary data is collected from published articles, research papers, business magazines, journals, periodicals, and websites of SIAM, ACMA, ARAI.

### Sample Size and Techniques

The participants are selected from the directories of various associations like Automotive Component Manufacturers of India (ACMA), Society of Indian Automobile Manufacturers (SIAM) and Automotive Research Association of India (ARAI). Accordingly a sample size of 50 is chosen for the analysis. The simple random sampling method is used to gather data from the respondents**.**

### Tools Used

The collected data was punched in SPSS 20. To analyze Customers' satisfaction level towards surface logistic chi square has been used.

### Hypotheses testing

***H01: There is no significant difference among respondents in terms of satisfaction towards high quality of services in surface logistic***

A chi-square statistic was calculated to examine if there is difference among respondents in terms of satisfaction towards high quality of services in surface logistic.

**Table 1: Chi-square Test Statistics for Satisfaction towards High Quality**

| | High Quality |
|---|---|
| Chi-Square | 18.000a |
| Df | 4 |
| Asymp. Sig. | .001 |
| a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 21.4. | |

The test was found to be statistically significant, $\chi$ 2(4, n = 107) = 18.000, p<.05.

**Table 2: High Quality**

| | Observed N | Expected N | Residual |
|---|---|---|---|
| Highly Satisfied | 25 | 21.4 | 3.6 |
| Satisfied | 34 | 21.4 | 12.6 |
| Neutral | 13 | 21.4 | -8.4 |
| Dissatisfied | 25 | 21.4 | 3.6 |
| Highly Dissatisfied | 10 | 21.4 | -11.4 |
| Total | 107 | | |

The results suggest that respondents did not just randomly give their opinion in terms of satisfaction towards high quality of services in surface logistics. Instead it appears that frequency of highly satisfied and satisfied respondents is more than the dissatisfied and highly dissatisfied respondents. Thus results shows that respondents in general are more satisfied with services of surface logistics in terms of high quality.

***H02: There is no significant difference among respondents in terms of satisfaction towards high decision precision in surface logistic***

A chi-square statistic was calculated to examine if there is difference among respondents in terms of satisfaction towards high decision precision in surface logistic.

**Table 3: Chi-square Test Statistics for Satisfaction towards high decision precision**

| | High Decision Precision |
|---|---|
| Chi-Square | 53.402[a] |
| Df | 2 |
| Asymp. Sig. | .000 |
| a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 35.7. | |

The test was found to be statistically significant, $\chi^2(2, n = 107) = 53.402, p<.05$.

**Table 4: High Decision Precision**

| | Observed N | Expected N | Residual |
|---|---|---|---|
| Highly Satisfied | 22 | 35.7 | -13.7 |
| Satisfied | 71 | 35.7 | 35.3 |
| Neutral | 14 | 35.7 | -21.7 |
| Total | 107 | | |

The results suggest that respondents did not just randomly give their opinion in terms of satisfaction towards high decision precision in surface logistics. Instead it appears that frequency of highly satisfied and satisfied respondents is more than the neutral respondents. Thus results shows that respondents in general are more satisfied with services of surface logistics in terms of high decision precision.

***H03: There is no significant difference among respondents in terms of satisfaction towards high reliability of surface logistic***

A chi-square statistic was calculated to examine if there is difference among respondents in terms of satisfaction towards high reliability of surface logistic.

**Table 5: Chi-square Test Statistics for Satisfaction towards High Reliability**

| | High Reliability |
|---|---|
| Chi-Square | 33.776[a] |
| Df | 2 |
| Asymp. Sig. | .000 |
| a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 35.7. | |

The test was found to be statistically significant, $X^2(2, n = 107) = 33.776, p<.05$.

**Table 6: High reliability**

| | Observed N | Expected N | Residual |
|---|---|---|---|
| Highly Satisfied | 34 | 35.7 | -1.7 |
| Satisfied | 61 | 35.7 | 25.3 |
| Neutral | 12 | 35.7 | -23.7 |
| Total | 107 | | |

The results suggest that respondents did not just randomly give their opinion in terms of satisfaction towards high reliability of surface logistics. Instead it appears that respondents in general are more satisfied with services of surface logistics in terms of high reliability.

## Conclusion

There is strong association between logistic industry and their customers i.e. business organization. A country's economic growth depends on the availability of a robust and seamless logistics infrastructure. Transportation, warehousing, handling of material, inventory management and order processing are the major logistics activities, which impact the customer cost and operation. The speed of the movement of goods depends to a great extent on the various modes of transportation like rail, road, air, and sea. An integrated approach to logistics and soft infrastructure helps in reducing costs and enhancing the customer service level. The manufacturing and

logistics scenarios are changing very fast with evolution of new technologies such as IOT, augmented reality, social media, mobile and cloud etc. With these developments in ICT, the logistics infrastructure requirements also change rapidly. To improve the logistics, India can redesign the existing network using ICT technologies.

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