

A Research on Supplier Performance with Reference to Switching Technologies Gunther Limited

K.Murugan, H.S.Abzal Basha, P.Venkaresh

Abstract— This study is conducted in Switching Technologies Gunther Limited titled “A Study On Supplier Performance” gives various detail about the suppliers who were importing raw materials to the organization to manufacture reed switches. This study explains the factors that commonly influence the performance of the suppliers. Brief information about the industry and company profile is given and also a short description of various research papers related to the study is mentioned to throw light on a few information that helps to conduct the study. The need for education, along with the objectives and scope, is explained. As far as the source of data is concerned with an interview with the executive personnel is used as a primary source and company’s records, documents are used as a secondary source of data. The tools such as order cycle lead time, process capability indices, and Pareto analysis has been used. There are few limitations in the study which are mentioned. Detailed information about the data analysis, along with the interpretation, is given to know about the data collected from the organization. The study also provides various suggestions to provide appropriate clearance, increase ordering the materials more frequently, by using management software to automate the transmission of information and optimize the network design. This study draws to a close with the overall conclusion for a better understanding of the study.

Key Words: Supplier, software, Organisation.....etc.

I. INTRODUCTION

SCM is an important aspect of the manufacturing organization. Supply chain management suggests the organization how to deliver the produced product in the proper manner. It is having the chain which starts with the manufacturer and which goes to the wholesaler and after that goes to dealer and which passes through the retailer and finally goes to the customer. This is a very complicated process in the organization which requires lot of effort and proper study which makes the organization better performer. In the present study it’s the strength of supply chain management for better productivity and for better control in the organization.

II. STATEMENT OF PROBLEMS

- This study is conducted only for three months in the current situation.
- This study is subjected to the regulations of Toxic substances control act for importing chemicals.

- Topologies, sub-divisions, textures of the importing materials cannot be determined.
- The Constraints of the employees to provide precise details about their importer is limited.

III. OBJECTIVES OF THE STUDY

Primary objective:

- To maximize the overall value of the purchaser along with quality products supplied by the supplier.

Secondary objectives:

- To understand how the supplier evaluation accomplished in the organization.
- To learn about strategic supplier relationships with the company.

IV. REVIEW OF LITERATURE

Martin Mukabi Shiati, Dr. Yusuf Kibet, Dr. Douglas Musiega (2014), stated that supplier selection is the process by which firms identify, evaluate, and contract with suppliers. During the last decades, there has been a growing realization of the vital contribution that suppliers can have on an organization’s performance. The questionnaire and the interview schedules were the primary research instruments used in data collection. The researcher then analyzed the data using Statistical Program for Social Scientists (SPSS), where descriptive statistics were generated in terms of frequencies, percentages, and means among others and the results were presented in cross-tabulation and frequency tables.

Kamlesh Nanaji*, Prof. Emeritus M. R. Apte (2015) stated that supplier selection is the purchasing function that forms the foundation for the success or failure of projects. Therefore supplier selection criteria should be well defined. Supplier selection is a multi-criteria decision-making problem that includes both qualitative and quantitative considerations. This paper presents a review of supplier selection processes and decision-making methods reported in academic and other literature related to the construction industry.

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V. RESEARCH METHODOLOGY

DATA COLLECTION

In the present study, both Primary and Secondary data are used for analysis. The study is classified as analytical in nature.

VI. TOOLS AND TECHNIQUES

Some of the techniques which are used to evaluate supplier performance are as follows,

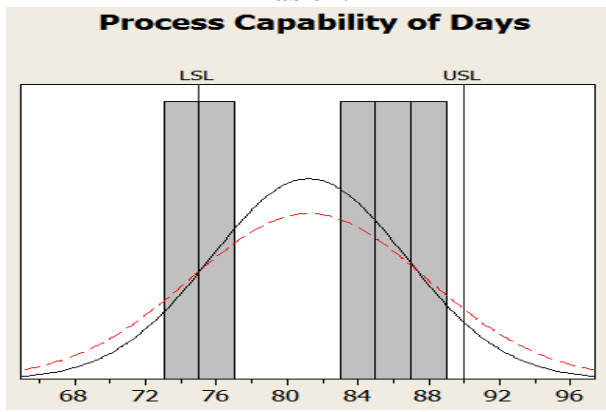
- Process Capability
- Pareto Analysis

VII. DATA ANALYSIS AND INTERPRETATION

$$Cp = (USL - LSL) / 6\sigma$$

Process Capability Ratio (Cp) for Glass Tubes

Table 1.1



Calculation

$$Cp = (USL - LSL) / (6 * S.D) \\ = (90 - 70) / (6 * 4.195) \\ = 0.79$$

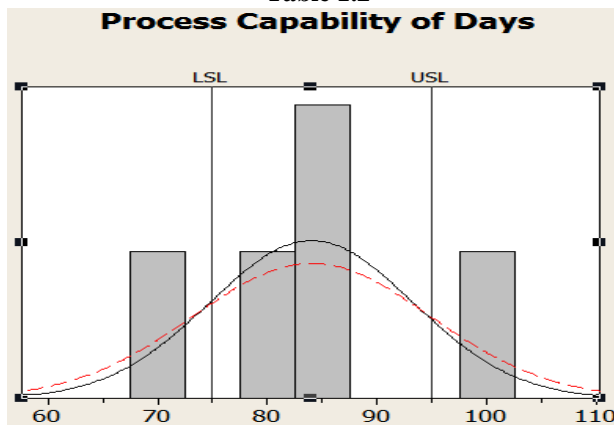
Interpretation

Order Cycle lead Time for entire purchasing process in the year 2012 - 2016 is 73, 86, 87, 84, 76 days and also founded that year 2012 lead time is quietly less than lower specification limit in the process capability.

Process Capability Ratio (Cp) for Nickel iron wires

It mostly measures some target values and acceptable limits of variation around the target. The upper specification limit is 95 days, and lower specification limit is 75 days. Process capability ratio Cp = 0.36.

Table 1.2



Calculation

$$Cp = (USL - LSL) / (6 * S.D) \\ = (95 - 75) / (6 * 6.43) \\ = 0.518$$

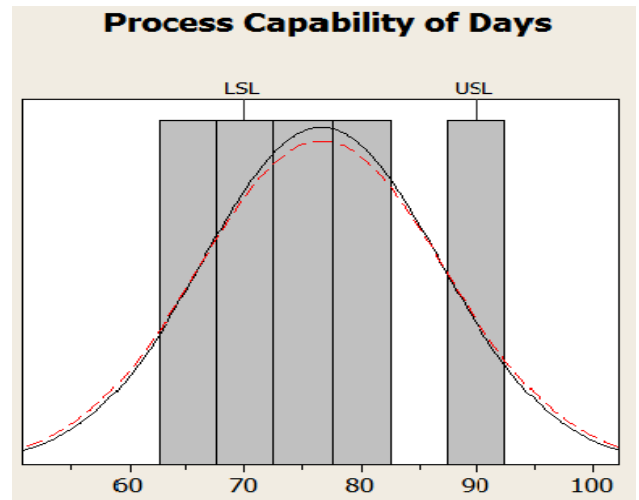
Interpretation

The Order Cycle lead Time for the entire purchasing process in the year 2012 - 2016 is 98,80,85,87,70 days and also founded that year 2016 lead time is quietly less than lower specification limit and year 2012 has more lead time in the process capability.

Process Capability Ratio (Cp) for chemicals

It mostly measures some target values and acceptable limits of variation around the target. The upper specification limit is 90 days, and lower specification limit is 70 days. The Process capability ratio is calculated as Cp = 0.55.

Table 1.3



Calculation

$$Cp = (USL - LSL) / (6 * S.D) \\ = (90 - 75) / (6 * 4.50) \\ = 0.55$$

Interpretation

The Order Cycle lead Time for the entire purchasing process in the year 2012 - 2016 is 80, 91, 72, 76, 64 days and also founded that year 2016 lead time is quietly less than lower specification limit and year 2013 has more lead time in the process capability.

VIII. PARETO ANALYSIS METHOD & RESULTS

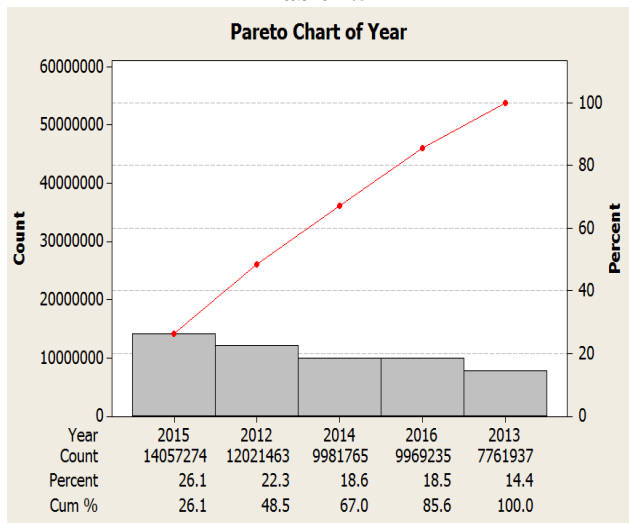
Pareto Analysis for Glass tubes

Table 1.4

Year	Received Quantity	Accepted %	Accepted Quantity
2012	12024950	0.99971	12021462.76
2013	7764810	0.99963	7761937.02
2014	9985260	0.99965	9981765.16
2015	14060930	0.99974	14057274.16
2016	9970930	0.99983	9969234.94



Table 1.5



Interpretation

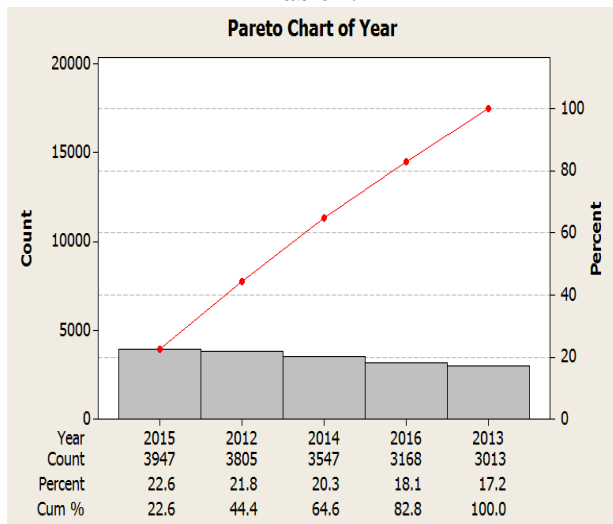
The Pareto analysis is used to organize data to show what significant factors make up the subject being analyzed. It is interpreted that glass tubes which are imported in the year 2015 have more defects than remaining years. In the year 2013 less number of damaged or defected glass tubes were introduced.

Pareto Analysis for nickel-iron wires

Table 1.6

Year	Received Quantity	Accepted %	Accepted Quantity
2012	3817	0.9969	3805.17
2013	3026	0.9956	3012.69
2014	3563	0.9955	3546.97
2015	3964	0.9957	3946.95
2016	3180	0.9961	3167.60

Table 1.7



Interpretation

The Pareto analysis is used to organize data to show what significant factors make up the subject being analyzed. It is interpreted that nickel-iron wires which are imported in the

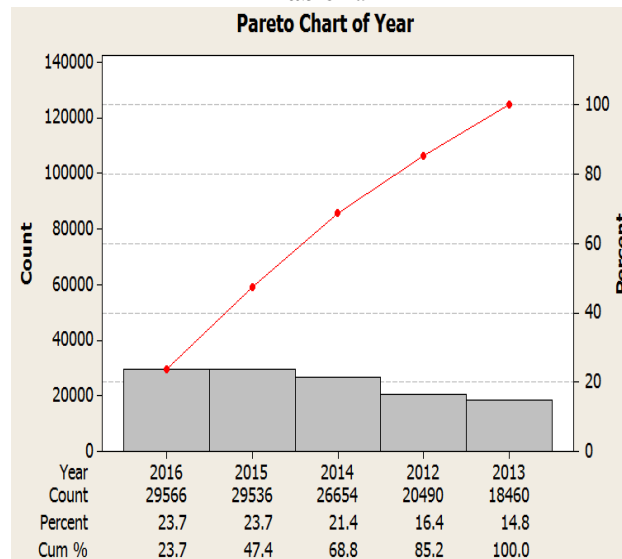
year 2015 have more defects than remaining years. In the year 2013 less number of damaged or defected glass tubes were introduced.

Pareto Analysis

Table 1.8

Year	Received Quantity	Accepted %	Accepted Quantity
2012	20515	0.9988	20490.38
2013	18480	0.9989	18459.67
2014	26678	0.9991	26653.99
2015	30512	0.968	29535.62
2016	29596	0.999	29566.40

Table 1.9



Interpretation

The Pareto analysis is used to organize data to show what significant factors make up the subject being analyzed. It is interpreted that chemical solutions which are imported in the year 2016 have more defects than remaining years. In the year 2013, less quantity of damaged or defected chemical solutions was introduced.

IX. CONCLUSION

The study is aimed mainly by understanding the supplier performance evaluation methods, which are carried utilizing importing suppliers of the organization. This study reveals that various factors can influence the supplier performance, and evaluation is done using the delivery time and quality of the purchased materials. This study identifies the multiple reasons that cause the delay in delivery time, such as poor communication between the purchaser and supplier, incomplete shipping procedures, poor capacity management by suppliers. This study concludes that by suggesting the



ways to increase ordering the materials more frequently employing economic order quantity (EOQ) in small amounts, by using management software such as Enterprise Resource Planning (ERP) to automate the transmission of information and optimize the network design and improve the supplier performance of the organization.

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