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# Indian Streams Research Journal



## “EVALUATION OF SUPPLY CHAIN MANAGEMENT WITH RESPECT TO KHUTALE ENGINEERING PVT. LTD. SATARA.”



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### ABSTRACT

**R**esearch study focuses on the supply chain management (SCM) elements of the organization. It evaluates the current SCM with the standard one and find out loopholes in it. By knowing the loopholes organization can remove it and standard SCM can implemented in it thus competitive advantage can be gained by the organization by effective procurement, manufacturing and physical distribution.

**KEYWORDS** :Supply Chain Management, Competitive Advantage, Procurement, Manufacturing, Physical Distribution.

### INTRODUCTION

Supply chain management is an essential aspect of business today. The idea is to apply a total system approach to managing the entire flow of information, materials and services from raw material suppliers through factories and warehouse to the end customers. Consider how materials might flow from a company's operations and then on to its customers. An increasingly popular perspective today is to view the flow of materials from suppliers all the way to customers as a system to be managed. This perspective is commonly referred to as supply chain management.

A supply chain is a sequence of suppliers, transporters, warehouse, manufacturers, wholesalers/distributors, retail outlets and final customers. Different companies may have different supply chain due to the nature of their operations and whether they are primarily a manufacturing

operation or a service operation.

Every management face various problems in different area of operation, in this project analysis of supply chain management survey have been done with reference to Khutale Engineering Pvt. Ltd. Organization mainly distributes their products in Shirval, Mumbai, Bhosari, regions. This study focuses on supply chain management of organization. Management of organization unable to streamline flow and information of material from point of origin to the point of consumption i.e. supply chain management operations. So they want to evaluate present operations under it so as to know problems in it for redesigning the operations to assure efficient supply chain management. Study focuses on evaluating all operations under supply chain management so title of the study is “Evaluation of Supply Chain Management with respect to Khutale Engineering Pvt. Ltd. Satara.”

#### **LITERATURE REVIEW:**

Arawati (2011) analyzed the importance of incorporating SCM in Malaysian manufacturing companies. The result suggests that SCM has significant correlations with supply chain flexibility and business performance. Specifically, supply chain flexibility and business performance have high correlations with SCM comprising programs such as ‘strategic supplier partnership’, ‘lean production’, ‘postponement concept’ and ‘technology and innovation’. Marasini al (2008) tried to identify ways of removing the barriers for SMEs and the change approaches used by SMEs to implement internet and information technologies. The study suggests that SMEs tend to favour the improvisational model of technology adoption over the classic change model. The reasons might be the alignment of technology, the organizational context and the change model used. Meehan and Muir (2008) studied SCM practice in small to medium-sized enterprises (SMEs) in Merseyside, UK. The results reveal the perceived benefits of SCM to SMEs, which centres on SCM as a means to improve customer responsiveness. It also expresses concerns over SMEs’ ability to adapt to these new working relationships and therefore gain the desired benefits. Analysis of barriers highlights that they reside at the individual, relational and organizational level, thus increasing the complexity of adapting to SCM. Hong and Jeong (2006) made a study to identify the impact of SMEs on supply chain performance. They take the role of suppliers, producers, distributors, and customers. Large firms and SMEs are compared in terms of strategic and operational choices. (Prof. Subhash Wadhwa, Year : 2006) focuses on the knowledge, knowledge sharing, and decisions to study the impact of the decision flexibility, DKS and delays on the performance of the flexible supply chains. It is important because of relationship between control decisions and availability of knowledge in any DKS based FSCs. There is further a need to evolve a judicious use of decision flexibility at selected chain stages. Thus, a careful analysis of the chain with a focus on integrated decision is useful to ensure success. This paper presents this endeavor and highlights the key insights. (Rajesh K Mohana Krishna V, 22-24 Dec 2008) Supply Chain Management (SCM) is the key to success in today’s competitive global environment for any business organisation. The company was started in China and spread across the globe with a strong logistics control. Other than exploring implementation of the Logistics and SCM of TCL Consumer Electronics, this paper explores the current market channels of distribution of goods from the supplier’s supplier to the customer’s customer and focuses on the TV segment. Choi and Rungtusanatham (2011) compared the implementation of QM practices across three levels in the supply chain 1) Final assemblers 2) top-tier supplier and 3) tertiary-tier supplier. The study found no statistical difference in the level of QM practices across the supply chains. The only difference areas the industries was the implementation of strategic planning. Noori investigated the implementation of continuous collaborative improvement activities in the supply chain of Canadian industries including the automotive, electronics and aerospace sectors. Zhang et.al.

analyzed effect of product structure on supply chain quality control decision.

## RESEARCH METHODOLOGY

The nature of this research study is descriptive. Objectives behind the study are

- 1.To study various supply chain elements of the organization.
- 2.To evaluate current supply chain management of the organization.
- 3.To know the problems in current supply chain management.

The geographical scope of this study is confined to all elements of supply chain management of “Khutale Engineering Pvt. Ltd., Satara.” Conceptual scope of the study is focused on the concept of the Supply chain management and its elements.

Analytical scope of the study is limited to use of comparative study of standard and actual Supply chain management of the organization.

The data required for study is related to vendors, procurement, materials planning, master production schedule, physical distribution charts, demand planning and processing reports etc. also conceptual background related to supply chain management is required. The said data is generated from vendor development manual, procurement reports, production manuals; physical distribution manuals also company profile and its related information about supply chain management from website. Researcher has analyzed the data using various simple tools like such as charts and tables etc.

## DATA ANALYSIS AND INTERPRETATION:

**Table 4.2.1 Lead Time:**  
Following table shows the Lead Time of various Materials.

Material Name	Expected lead Time (Days)	Actual Lead Time (Days)
<b>Raw Materials</b>	18	23
<u>GPSP Sheets</u> 0.250*548*574 0.250*548*913 0.250*548*1008 0.250*548*1148.5		
2) <u>GPSP Sheets</u> 0.8*392*622.7 0.8*1250*2500 1.0*1250*2500 0.45*1250*2000 2.3*1250*2500	15	18
3) <u>GPSP Coil</u> 0.45*91.7 0.45*85.5	15	18
4) <u>CRCA Sheets</u> 1*1250*1475 1*1250*1780 2*1250*1830 2*1250*1525 3*1250*2500	5	5
5) <u>CRCA Sheets</u> 25*25*6000 25*50*6000 25*50*5950	15	20
6) PIPES/BARS	15	20
7) CARTON	5	5

(Source-Secondary Data)

The above table shows that though actual lead time of the three products is equal to expected lead time, some of the products i.e. GPSP sheet, CRCA sheets, GPSP coil, Pipes/Bars having actual lead time more than expected lead time.

**Table 2 Vendor Rating and Development**

**Following table shows the status of Vendor Rating and Vendor Development of various suppliers.**

Supplier Name	Vendor Rating	Vendor Development status
<b><u>GPSP Sheets</u></b>		
Uttam Garva Steel Ltd. Mumbai	B	Not Developed
Posco India Processing Center Pvt. Ltd Pune.	B	Not Developed
<b><u>CRCA Sheets</u></b>		
Naresh Steel Ltd. Mumbai.	A	Not Required
Posco India Processing Center Pvt. Ltd Pune.	A	Not Required
Silver Bright Steel Ltd. Kolhapur.		
Green Star Ltd.	A	Not Required
1.6 Precifab Shirval.	A	Not Required
	A	Not Required
<b><u>Pipes&amp;Bars</u></b>		
Bushan Steel Ltd. Pune.	B	Not Developed
Shankara Steel Ltd.	A	Not Developed
Prabhat Steel Ltd.Satara.	A	Not Developed
Silver Bright Steel Ltd. Kolhapur.	A	Not Developed
<b><u>Carton</u></b>		
Gajanan Pack wale Pvt. Ltd.	B	Not Developed
Aswini Industry	A	Not Required
<b><u>Packing Material/Safety Equipments</u></b>		
Shivam enterprises Ltd.	B	Not Developed
Doshi enterprises Ltd.	B	Not Developed
Sadguru enterprises	B	Not Developed

(Source-Secondary Data)

Above table shows the Vendor Rating according to their performance. All the vendors having lower grade are not developed. Organization has 9 vendors having “A” grade, 7 vendors having “B” grade.

**Table No 3: Procurement Methodology:**  
**Following table shows the Procurement Methodology.**

Standard Steps In Purchasing Cycle	Actual Steps In Purchasing Cycle
Organization should establish the proper system for establishing the need for procurement.	Organization has the Standard Operating Procedure to recognize the need for the procurement, determination of requirement and communicating requirement to purchase department.
Proper scrutiny of Purchase Indent should be done for checking completeness of requirement.	Purchase department scrutinize the Material Requisition Slip.
Market research should be done so as to assure scientific purchasing.	Market research activity is not streamlined in the department, focus is given on traditional purchasing.
Purchase order should be given with scrutiny of Quotations and with negotiation.	Purchase order is given as per standard i.e. Scrutiny of Quotation and with negotiation.
Pre-delivery follow up and shortage chasing should be done by the organization.	Proper follow up is done but personal visits to the suppliers are not organized.
Receiving and inspection should be done with proper Quantity certification method and with Goods Received Receipt.	For receiving and inspection organizations have Material Inward Inspection Report for proper quantity certification.
Storage and record keeping is done with selective inventory control technique.	Storage and record keeping is done but selective inventory control is not done.
Invoice and payment to supplier should be done with the help of GRR information.	Invoice and payment to suppliers is done by Referring the receipt note in ERP system.

From above comparative study it shows that organization is following standard purchasing cycle for most of the elements but there is gap with respect to purchase research and scientific inventory control technique and personal visit in follow-up.

**Table No. 4 Production Scheduling:**  
**Following table shows the Production scheduling.**

Product Name	Production Schedule (Monthly in No)	Actual Production
1) TP/BTM Horizontal strip NPD	30000	36000
2) Shield plate	7800	8580
3) Mounting plate FR	3500	3150
4) Protect plate	3800	3420
5) Cabinet stiffener	3400	3060
6) TP/BTM Horizontal strip 190	29950	38935
7) Top hinge bracket 190-210	3000	3150
8) Cabinet back piece 190	7250	7612
9) Cabinet back for 240 edge pro	800	800
10) Cabinet back piece 210	1100	1155
11) Cabinet bottom piece	15850	17435
12) Squadro Queen Bed	80	80
13) Fiesta King Bed	60	60
14) Wange Bed	150	150
15) Viva King Bed	30	30
16) Florid Bed	100	100

(Source-Secondary Data)

The above table shows the status of actual production as compared to schedule... Production of 6 products is as per schedule, production of 3 products is less than schedule and production of 7 products is greater than schedule of production.

**Table No. 5 JIT Inventory System:**  
Following table shows the status of JIT inventory system.

Standard	Actual
JIT inventory system expects few numbers of Suppliers.	Organization have a many suppliers
JIT inventory system requires proximity to suppliers.	Few suppliers are at large distance from organization.
In JIT inventory system frequent & small Lot purchasing required.	Organization purchases material in bulk Quantity and as per Stock level.
JIT inventory system involves virtually zero inventory.	Company keeps the optimum stock of raw material.

From above comparative study it shows that JIT implementation is not feasible in the organization.

**Table No. 6 'Flexible Manufacturing System - FMS'**  
Following table shows Flexible Manufacturing System.

Standard	Actual
FMS has ability to process more than one product style simultaneously.	Organizations have not such manufacturing system to produce more than one product simultaneously.
FMS can make changes in production schedule in order to meet the demands on different products.	Organization can make changes in production schedule in order to meet demand of customers.
An automatic material handling subsystem links machines in the system and provides for automatic interchange of work pieces in each machine.	However Organization using automated material handling system by using Electronic Crain (SWIFT make SWL 3mt), Hydraulics pallet, Hydraulics staker, Chain pallets, wheeled trolleys, etc.
Complete control of the manufacturing system by the host computer.	Manufacturing system is controlled Manually in the Organization.

From above comparative study it shows that FMS is not implemented fully in the organization.

**Table No. 7 Responsiveness:**

**Following table shows responsiveness of the organization towards customers need for new products.**

Customer Name	Requirement	Responsiveness
Godrej Appliances Division	Freezer Drawer	Not Fulfilled
	Medical Refrigerator 50/100L	Fulfilled
	Spin	In process
	Shelf Bin50/100L	In process
Hindustan Mills Ltd.	Ring	Fulfilled
Creative Display	Creative Display	Not Fulfilled
Godrej Prima Division	2CVM Eco	Not Fulfilled
Godrej Interio Division	Enlighten	In process
	Fiesta Bed	Fulfilled
	Hanging Rod	In process
	Extension frame connection strip	In process
	Partition Height	Not Fulfilled
	Shooting Bolt	Not Fulfilled
	Slide arm connecting rod	Not Fulfilled

(Secondary Source)

The above table shows response of the organization towards customers need for new product. Organization fulfills wants of 3 customers. Organization is not fulfilling need of 6 customers demand with respect to Slide arm connecting rod, Shooting Bolt, Partition Height, 2CVM Eco, Creative Display, and Freezer Drawer. Responsiveness for 5 products is in process i.e. Spin, Shelf Bin50/100L, Enlighten, Hanging Rod, Extension frame connection strip etc.

## **FINDINGS**

- 1)Actual lead-time of 3 products is equal to expected lead time, 5 products having actual lead time is more than expected lead time. (Table No. 1)
- 2)All lower rating vendors are not developed. (Table No. 2)
- 3)Organization is following the standard purchasing cycle for most of elements but there is gap with respect to purchase research and scientific inventory control technique. (Table No. 3)
- 4) Production of 6 products is as per schedule, production of 3 products is less than schedule and production of 7 products is greater than schedule. (Table No. 4)
- 5)The JIT implementation is not feasible in the organization.(Table No. 5)
- 6)The FMS is not implemented fully in the organization.(Table No.6)
- 7)Organization is fulfilling need of 3 customers’ demand. Organization is not fulfilling need of 6 customers. Organization is in process to fulfill demand of 5 products. (Table No. 7)

## SUGGESTION

- 1)Vendors are vital supply chain partners so organization should start vendor Development Programmes to streamline the activity.
- 2)Efficient inventory management techniques should be implemented by the organization to have a continuous flow of material.
- 3)Production planning and control activities should be redesigned to have the production quantities with right no.
- 4)Organization should give importance to the new product development activities as the customer is important supply chain partners and response has to be given to their demand.
- 5)Proper roadmap should be created by organization for implementation of Flexible manufacturing system.

## CONCLUSION

From the research study it can be concluded that study was focused on streamlining all operation under supply chain management. By evaluating it is clear that problem exists in follow up and development of vendors, inefficient inventory management, production planning and control, new product development and roadmap to words FMS. If corrective measures as suggested taken then supply chain management operations can be streamlined and efficient supply chain management can be possible.

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