

Impact of Quality Matrix on Supply Chain Management Process

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Abstract - The quality matrix helps the system for improving business process using the supply chain management and arranging it by quality driver. The quality deliver are generally utilized in order get competitive advantages, receive greater Market power and to get organization revenue. Focuses of the quality matrixes is to managed and arranged supply chain process, inventory system, facility, enhance sourcing and pricing. Information technology of the organization is used to transfer the information of the organization. Every driver of quality matrix has its own important to get goal of organization. This research focuses on supply chain management process improvement by using quality driver that is facility, inventory, information technology and pricing.

Keywords - Supply Chain Management, Inventor, Facility, Information Technology and Pricing.

I. INTRODUCTION

Supply chain consist flow of stuff and functions, compromised the transformation, storage of basic goods, work in process inventory, and final materials from initial step to point of usage. Supply chain will include of steps that are involved in satisfying user demand. Supply chain management is the arrangement of supply chain activities so to get maximum consumer demand and to get organization revenue (. Buurman, J.2002) It has been critically considered that supply chain step will include as supplier, manufacturer, distributors, retailer and customer. Each aspect of supply chain stages has its own important to control and develop quality matrix.(Beamon, B. M. 1999) Quality drivers are generally utilized in order to get competitive advantages, receive greater market power and to get organization revenue. (Baramichai, M., Zimmers Jr, E. W., & Marangos, C. A. 2007).

Theme of research is to arrange supply chain process and control them with respect to organization goals. Secondly,

study the supply chain driver which as inventory, facility, information technology and pricing to improve system revenue.

II. LITERATURE REVIEW

Inventory Inventory can be raw materials, work in process, finished good. Product which holds their value for longer period of time we can keep high **inventory** of it. Product whose value cannot maintain for longer period of time we cannot keep their high inventory. Mean reason for holding inventory is demand can never match with supply. Inventory is to fulfill the customer the future demand. Objectives of inventory are to minimized investment in inventory. If there is increase in demand to meet this we needed inventory. When there is optimum inventory it means there is no breakdown i-e there is smooth production (Baker, P. 2007).

Presently, **mostly** companies are using the upstream and downstream ways by inventory visibility in supply chain to

complete business project goals. (Scheibe, Kevin , & Jennifer , 2018)

The perception of inventory is known as current asset of an organization (Geoff & Craig , 2011). Presently, inventory plays a lively part in **milieu** for better run of business internal and external operations to satisfied consumer's standards. Inventory is always concerned as group techniques in facility to effectively manage business production. Importance of inventory management is mostly affected by contribution of customer's that required in the form of service level to measure quantities and generate order. Management should need to work in the area of cost keep at minimum variety reduction, measure economic lot sizes and well perform analysis of costs that incurred in command to obtain inventory to fulfilled consumer's expectations (Atieh & Anas, 2016).

Facility Facility is the actual physical location in supply chain network system where we can store product, assembled them, fabricate them, **manufactured** them.

Facility is of two type 1) Manufacturing facility 2) storage facility

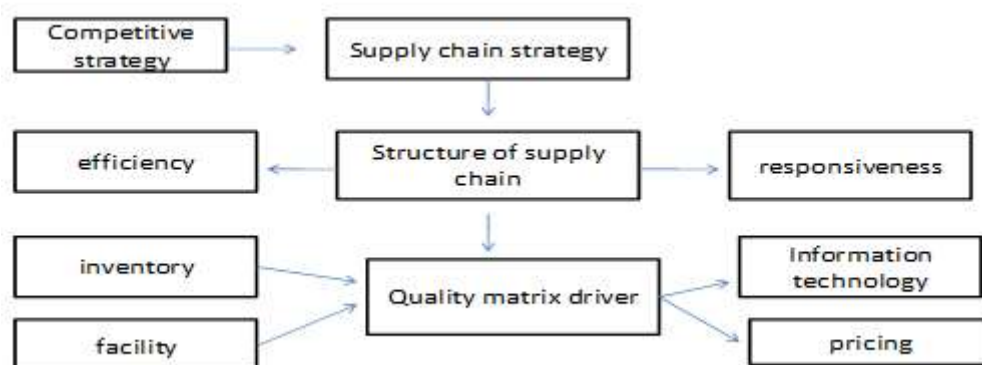
Manufacturing **facility** are those where we can manufacture product and storage facility are those where we stored the product i.e. warehouse. If company is doing well then they should improve responsiveness and increase the number of facility. If company is not doing well they should decreases number of facility to more efficient but it the cost of responsiveness (Melo, M. T., Nickel, S., & Saldanha-Da-Gama, F. 2009)

Philosophy of facility theaters an active role is in context of supply chain network. Facilities are known as the term in facility to degree physical location that directly concerned with regards to supply chain network (Barraclough & Katherine, 2017).

Information technology Business that share good information technology across supply chain structure is successful. If they have good information technology this mean they should reduces inventory significantly. Supply chain coordination involved sharing information in such a way that total profitability of supply chain is maximized. If there is a lake of coordination and information sharing across supply chain structure this will create a lot of difficulties and reduces supply chain profit significantly. For example if the design of product is changes then the supplier related to that particular product should known this information quickly. So that they should stop production with old production and move on to produced with new design.(Kim, D., Tamer Cavusgil, S., & Calantone, R. J. 2005) and (Wu, F., Yenyiyurt, S., Kim, D., & Cavusgil, S. T. 2006)

Pricing Pricing is process by which company can decide how much they should charge for customer for their product. Pricing can be used as toll to be matched with demand by providing discount by price. If anybody wants the product soon then they should pay for it. And if products are purchased in bulk then they will be less expensive than they are purchased individually. For example if full loaded truck is deliver to only one location it should be much cheaper then it deliver to many location. Pricing have direct impact on revenue. It has impact on inventory and facility also. (Schiele, H., Veldman, J., & Hüttinger, L. 2011) and (Lancioni, R. A., Smith, M. F., & Oliva, T. A. 2000)

Supply chain Process Company starts with competitive strategy then they decide what should be there strategy supply chain and there focus should match efficiency and responsiveness of the organization. Basically supply chain using four quality drivers that should help in order to get organization revenue.



III. PROCESS OF SUPPLY CHAIN

Data collection In order to get data primary source of information is used which consist of questionnaires technique. Questionnaires technique consists of 24 questions of 4 variables. We distributed 200 questionnaires in FF steel different branch in Pakistan that manufacture different type of steel and 150 completely filled questionnaires are used for regression analysis.

Results Regression analysis is used to get result. Here focus to known about the affect of independent variable on dependent variable. From regression model we know the value of R square=0.66, F statistics F= 55.76 and P value P=0.00 all are valided and good for research. These values show that all the impendent variable inventory, facility, information technology and pricing have positive impact on supply chain management. Regression model is given is:

Table 1 Regression model

Model	B	Std. error	T statistics	Sig.	R square	F statistics	P value
Constant	2.45	2.33	6.400	0.00	0.66	55.76	.000
Inventory	.132	.085	1.107	0.045			
Facility	.443	.134	3.145	0.003			
Information technology	.695	.114	6.532	0.001			
Pricing	.122	.88	1.600	0.044			

Constant Inventory, Facility, Information technology, pricing

Dependent variable supply chain process

From regression table we can also get result that first important predictor is information technology because of greater value of B= 0.695 second important predictor is facility with B value is 0.443. Third predictor is inventory with B=0.132. Forth predictor is pricing with B=0.122

IV. CONCLUSIONS

From regression analysis we can conclude that independent variable have positive effect on dependent variable. So we get that these independent variable gives us best result in manufacturing industry of Pakistan that is FF steel that manufacture different type of steel. The different company of Pakistan that uses supply chain network and manufacturing company of Pakistan like FF steel could achieve best result by supply chain performance through the best arrangement of factor that is inventory, facility, information technology and pricing which is identified in the research.

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