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# **Influence of Quality Management in Supply Chain of Manufacturing Industry: A STUDY**

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**ABSTRACT** : In recent years, many organizations have looked over unremitting perfection and total quality management (TQM) within manufacturing as the means by which they could maintain a competitive edge. Now, only manufacturing is not responsible for success of any company but it is a matter of complete supply chain. The supply chain in manufacturing is a unified set of business functions covering all proceedings from raw material procurement to final customer supply. Although plentiful devotion has been given to the supply chain management (SCM) models in recent years but its connection with the quality management viewpoint is frequently inadequate in nature. Whereas the significance of quality management is comprehensively accepted and the hypothetical investigators needs much dedicated tactic in assessing quality management disputes within the total supply chain perspectives. Consequently, in this study all the critical factors of supply chain in a world leading automotive OEM is well discussed and analyzed. The critical factors and their sub factors of quality management in supply chain also discussed and prioritized.

## **I. INTRODUCTION**

The focus on management of supply chain is increasing with the years. Supply chain management is a holistic and a strategic tactic to request, procedures, obtaining, and logistics process management (Kuei et al., 2001). Traditionally, the emphasis of supply chains was on precise functionalities like purchasing, manufacturing, and shipping to support logistics operations. The competitive environment requires the delivery of cost, efficiency, high service levels, rapid response, and high quality of products and services. The effective management of quality is the key to increased quality and heightened economical situation in today's universal atmosphere. Kuei et al. (2001) suggest that quality management agreement should be distinguished from supply chain management. Over the last fifteen years, supply chain management (SCM) has occupied a diversity of guidelines with opposing results. One of the well-known experts in the real world wrote that SCM planning had not formed the anticipated fallouts (Tompkins, J.A. 2000). Since then, many academic research papers have appeared in various outlets with interesting findings. Fynes and Voss, (2002) write about the impact of quality management on supply chain enactment. Based on their empirical study, the authors claim that with business environments becoming more intensive. It is imperative to realize that stronger relationship quality is a must to achieve superior supply chain performance. In additional article, Campbell and Sankaran, (2005) discussed the integration issues in supply chains for minor and middling size enterprises. The researchers formed a framework to facilitate such an integration process for use and analysis by practitioner and researchers alike. The author analyses the problem of changes in customer preferences requiring characterization of products under such circumstances can assist in improving quality in supply chain performance. This paper also analyzes strategic issues for automotive industry supply chains and quality management. Even though precise to an discrete arcade place, this article carries out crucial SCM issues, and proposes numerous hypotheses that must be investigated by upcoming lessons involved in the area of global supply chains. Based on an extensive experimental investigation, the authors accomplished that there is a durable relationship between quality management and supply management that affects business performance. The main objective of this study lies right at the integration of these two highly topical concepts, quality management and SCM. Fundamentally, It is asked whether a company involved in quality management mends its SCM. Evidently, the response has to be in favor; else this would not be interpreting quality management in its widest and most precise manner. Though, in the current commercial weather, in which most firms has begun the quality management in supply chain and starts with quality guarantee, which in practice means getting the ISO 9000 standard certificate, Does the same thing happen? In other word, when a company gets the ISO 9000 certificate, does its SCM improve? In this case, the question is no longer answer till this certification is not taken at supplier and as well as dealer ends. For this



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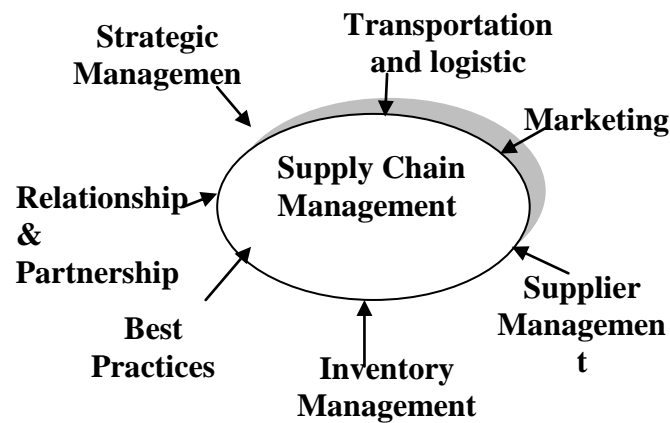
cause, a statistics base learning is accepted out in this study and crucial aspects and sub factors of quality management are analyzed.

## II. QUALITY MANAGEMENT IN SCM

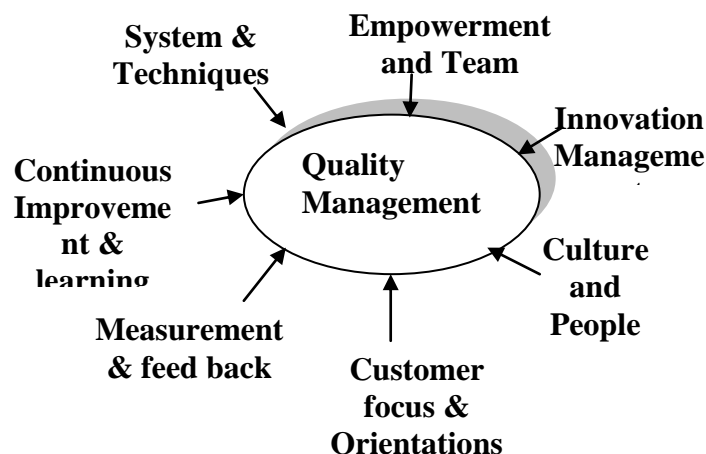
Several research studies considered some aspect of quality management within a supply chain perspective. The research domain for this study spans across journals primarily consisting of leading journals from the field of critical factors of TQM such as Journal of Operations Management, International Journal of Operations and Production Management, Production and Operations Management, International Journal of Production Economics, Decision Sciences, Omega, International Journal of Production Research and European Journal of Operational Research. Other journals included in this review include Interfaces, International Journal of Physical Distribution and Logistics Management, Total Quality Management, Journal of Supply Chain Management and Integrated Manufacturing Systems. The absorbed purpose of this investigation is to recognize those articles that lie on the juncture of quality and supply chain issues, so that we can emphasis upon and observes quality research positioned strictly in the supply chain context. Each article selected encompasses a theme or body of knowledge relevant and helpful to understanding a topic. It is found that even though the philosophies of quality management and SCM have been researched extensively in the literature, few studies examine these agendas jointly. Rather, the theme of quality management in the supply chain is mainly disjointed and discrete across many other restraints such as dealer-purchaser events, tactical organization, industrial performs, and procedure incorporation. Thus it is associate our opinion that investigation about quality management in the supply chain is extremely rambling and absence action as an important element of SCM. The basic elements of QM are customer focus, strategic planning and leadership, continuous improvement and learning, and empowerment and teamwork. In addition, Mehra et al. (2001) compiled an extensive review of QM research and suggested that there are at least 45 elements that affect QM implementation categorizing these topics into the five key areas of culture & people, measurement and feedback, innovation management, system and techniques and customer orientation. Similarly, various lecture reviews and analysis of SCM literature reveal that this evolving body of knowledge stems from the research restraints of physical scattering, shipping and interacted system of materials logistic and transportation, best practices, organizing and relation and partnership (Croom et al., 2000; Tan, et al, 2001). The principle components in the study reflect the background of quality management and supply chain research. As a result of the integration of these binary forms of information, we consider that the fusion of quality management and SCM viewpoints necessitates some type of definition so that it may be observed upon as an emergent and feasible area of research. For the purposes of this paper, the definition of quality management in supply chain perspective, below which builds upon the related definition by Ross, (1997) and spreads it additional into the practice centric opinion of quality management and supply chain that is inspected throughout this learning. QM & SC is the formal organization and incorporation of business processes involving all partner organizations in the supply channel to measure, analyze and continually improve products, services, and processes in order to create value and achieve gratification of transitional and final clienteles in the marketplace. The comprehensive review of extant literature is used and this definition to provide an agenda for the future study of quality management and supply chain principles. This study is also a understanding of these principles through live experience of working with an actual company in an automotive OEM supply chain.

Supply chain management is defined as the systemic, strategic co-ordination of the traditional business functions within a particular company and across businesses within the supply chain, for the purposes of improving the long-term performance of the individual companies and the supply chain as a whole. XYZ Ltd has set up a Supply Chain Management (SCM) Group with the objective of aggregating the purchase requirements of all Group Companies and making cost-effective bulk purchases. XYZ Ltd's supply chain management has focused on reducing procurement costs and achieving economies of scale in procurement. In order to minimize the inventory carrying cost, the SCM Group started working with an experienced and reputed logistics partner, who could effectively coordinate with XYZ Ltd's suppliers, and will help XYZ Ltd to make its supply chain more efficient and reduce its inventory. Over the years, the company has reduced the number of vendors and has entered into more competitive purchase contracts with the reduced vendor base, which has enabled it to optimize procurement efficiencies. XYZ Ltd also lays emphasis on just-in-time delivery and on scientifically and professionally managed inventory. Besides as a part of its strategy, XYZ Ltd has decided that its investments and emphasis will be more on developing design capabilities and expertise, and that it will outsource more and more component manufacturing to its vendors. In such a scenario, managing the supply chain will become even more significant. The company strengthened its supply chain by adding a few robust suppliers.

Transfer of best practices from the company to suppliers is a regular feature. Zero defects, TPM and JIT clusters have provided significant benefits. Product training centers established at key locations help in timely and frequent training of dealer personnel on sales and service aspects. During 2006-07, the company plans to further extend its network in 100 towns. The customer loyalty programme - Miles and Smiles, launched during last few years, has found an overwhelming response with more than 125,000 members already enrolled. The company has a network of more than 700 main dealers and over 1,800 service dealers across the country. During the current year, while 52 new dealers were appointed. This addition of 52 dealers is the largest network expansion in the automobile sector during the year under review. Around 1,250 rural outlets were created in towns with population of 25,000 and below. These are small and exclusive service centres manned by young engineers at various neighborhoods. Around 100 outlets are already in operation at various locations. In the coming years, this concept will be fully extended across the country. The components of SCM and QM are following:



**Fig: 1 Principal components of Supply Chain Management**



**Fig: 2 Critical Factors of Quality Management**

### III. CONCLUSION

As the XYZ Ltd is facing tough competition due to others two wheeler OEMs are continuously reducing price of their product and doing proliferation in product. To be remained most competitive the two wheeler manufacturer is giving priorities in cultural and people development and measurement and feed back to reduce product cost and enhance



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quality. For staying in competitive market an organization must have continuous improvement throughout the organization with innovative plan to improve its supply chain. This study has demonstrated that evens an automotive OEM organization, facing tough competitions due to globalization of markets and can maintain good quality management at supplier end. For this it is essential that organizations should not target only end results but should develop its quality system in all area of supply chain.

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