

LEAN & RELATIONSHIP MANAGEMENT

Satish Kumar Sharma *

Sunil Dhull *

ABSTRACT

Up to now lean is supposed to concern with management of internal relationships of different persons and operations in organization but now the real challenge for the companies turns out to be the adoption of innovative practices which concerns the management of external relationships with customers and suppliers. Organizations are moving from operations management to relationships management. A lot of studies show that involvement of supplier and customer in organizational activities as well as production activities affects the performance of an organization as a lean organization. Leanness in relationship with supplier and customer depends upon various internal as well as external factors like- with suppliers- structure and size of the company, complexity of the product, delivery performance, fluctuation in delivery schedule and with customers- new dimension of customer service, appropriate path to introduce service capabilities in manufacturing organization, servicing of complex product etc. This paper reviews the factors of relationship management with suppliers and customers which are necessary to making an organization leaner.

* Assistant Professor, Department of Mechanical Engineering, Panipat Institute of Engineering & Technology, Panipat.

INTRODUCTION

In the age of globalization, most of the companies have implemented the lean manufacturing to compete in the global market because it provides the better quality, more reliability, reduced expenditure, just in time production and on-time delivery of the products and many other factors. The ultimate goal of a lean organisation is to create a smooth, high quality organisation that is able to produce finished products at the rate of customer demands with no waste. The Lean manufacturing helps the manufacturers to minimize the time and the assets used for the manufacturing processes and the other activities of the industries, which give stress on eradicate all the form of wastes during the manufacturing. (Womack and Jones, 1996). Thus lean manufacturing now a day proved to be a valuable aid to take the competitive advantage from their manufacturing rival that helps in survival in this global competitive environment, identify the nature of the product and the character of the enterprises (monopoly, oligopoly, and duopoly), and optimizing policies should be determined (Alam and Khalifa, 2009); It depends on crucial factors like, quality, perception, price, values, network of exposure and availability (Ali et al., 2010); however there are limited number of manufactures that have implemented a truly Lean system is still limited. However, in reality, many organizations are not able to transform themselves to lean manufacturing organisations towards creating world-class companies. Many researchers have argued that the transition from traditional to lean environment requires relationship management in the organisation with changing the manufacturing or technical issues.

The new age of manufacturing is in the midst of volatile change witnessing rapidly changing market environment, volatile equity markets, reconstructed supply chains and new worldwide entrant. And customers themselves are changing – natural customer reliability is a thing of past. Little wonder then, the concept of customer and supplier relationship has taken center stage in the business world for sustainable business advantage and play a very important role in implementation of lean manufacturing system. Long-term success requires a great customer as well as supplier relationship. A technology-enabled customer strategy to meet customer-focused objectives involves the vast majority of any organization's activity.

No doubt about that customer and supplier relationship (C&SR) has become a top priority for companies seeking to gain competitive advantage in today's stormy economy. However, confusion reigns about exactly what C&SR is, how to best implement it, or even what role it should play in enhancing customer and supplier interaction.

LEAN MANUFACTURING

Lean Manufacturing is a mixed socio-technical system whose main objectives are to eliminate waste and reduce the variability of suppliers, customers, and internal resources and processes (Shah and Ward, 2003). Lean Manufacturing can reduce waste and increase value for customers (Ko, 2010). In other words, Lean Manufacturing is a philosophy of production that places emphasis on the minimization of the amount of all the resources used in the various activities of an enterprise. It involves recognizing and eliminating non-value-adding activities in design, the production process, and in the management of customers and the supply chain. Lean Manufacturing provides adaptability to market evolution, active involvement of versatile human resources, and the ability to establish subcontracting relations (Ale et al., 2010).

The “lean” philosophy is applicable when market demand is predictable and buyers’ decisions are highly dependent on the lowest price criterion (Ambe and Badenhorst- Weiss, 2010). Lean Manufacturing encompasses such practices as employee involvement in worker teams, problem solving, integrated product designs, statistical process control, reengineering setups, cellular manufacturing, pull production, supplier information sharing and partnership, supply base rationalization, in-house designed technology, and customer requirements integration (Olsen, 2004).

Fundamental Lean Manufacturing tools and techniques include cellular manufacturing, people training, team decision making, visual control/management (Panizzolo, 1998); pull systems, Kanban, supermarket, production leveling, flow, mistake proof (Wan et al., 2008); manufacturing layout, quality, and continuous improvement (Hook and Stehn, 2008). Hence, “lean” cannot work with isolated tools (Shingo, 1989; Sanchez and Perez, 2001; Elliott, 2001; Rea, 2001; Meier, 2001; Liker, 2004), and it should be implemented based on a path to “leanness”. The five primary elements to consider when implementing Lean Manufacturing are manufacturing flow, organization, process control, metrics, and logistics (Feld, 2003). These elements represent the variety of aspects needed to sustain a successful Lean Manufacturing implementation program. As a result, the Lean Manufacturing program may be, mistakenly, viewed as a failure in the early stages of implementation (Cunningham and Fium, 2003). The more successful the implementation, the more rapid the reduction rate of waste (David and Kumar, 2006). LM focuses on getting the ‘right things’ to the ‘right place’ at the ‘right time’ in the ‘right quantity’ to achieve perfect work flow, while minimizing

waste and being flexible and able to change, leading to satisfied managers, workers, suppliers, customers, and stakeholders (Moutabian, 2010).

CUSTOMER RELATIONSHIP MANAGEMENT IN LEAN MANUFACTURING SYSTEM

Manufacturers practicing continued process improvements have made (or are in the process of making) the transition to a demand-driven business model which integrates sales, marketing, and service processes, becoming significantly more customer-centric. lean manufacturing is a pull systems that depends on customers requirement, Kanban, supermarket, production leveling, flow, mistake proof (Wan et al., 2008); Customer relationship management (CRM) technology for manufacturers requires industry-specific solutions that meet the complex needs of the sector, while eliminating waste and providing a competitive advantage.

- i. Customers Acquisition: this is refers to find out the new customers for their product by the organization or the manufacturing firm. This means they are required to develop a new approach to focus on potential customers to procure the product. The cost of attracting a new customer is estimated to be five times the cost of keeping a current customer happy (Kotler, 1997).
- ii. Customer's Retention: this is the primary motive of the organisations to focus on existing customers in order to make certain that they continue purchasing and continue supporting the product. Organisations can increase their profitability by between 20% and 125% if they enhance their customer retention tempo by 5 percent (Peck, Payne, Christopher & Clark, 2004).
- iii. Profitability: Customer prosperity reflects the monetary performance of customers with respect to all the costs related with a transaction (Gordon, 1998).
- iv. In the case of CRM profitability is determined in the radiance of the lifetime value of the customer to the organization, taking account the income and expenses associated with each customer and their respective transactions over time (Gordon, 1998).

The ability to capture, analyze, and act on customer intelligence, allows manufacturers to aggregate and analyze information across the lean manufacturing, providing insight to guide effective decision-making and more easily adapt to changing market requirements While CRM technology solutions provide "electronic" connections and profound data analysis and reporting capabilities, a Value Stream Mapping (VSM) process prior to the CRM technology investment, will often achieve more significant results and helps the manufacturer to adopt

lean manufacturing system. Rationale for this methodological lean approach derives specific operational and organizational benefits.

- i. Apply the principles of lean manufacturing, total quality management (TQM), and value stream analysis (VSA) to advance customer interface operations
- ii. Customer relationship can be improved by integrating the processes concurrently with customer relationship management.
- iii. Plan and execute organizational and value stream process improvements, eliminating waste in quantifiable terms, time and costs.
- iv. By improving the efficiency and satisfaction of staff, the enterprise culture, and organizational issues.

(Caretsky) suggested that another advantage of sector specific CRM is, “The ability improve demand management with sales pipeline visibility allows manufacturers to implement a sales forecasting process that delivers objective insights on sales activity, rather than subjective guessing.” Decreased client response times are also achieved when there is heightened visibility to manufacturing order status, inventory quantities, and current pricing; this empowers customer service staff with critical customer information.

SUPPLIER INVOLVEMENT IN LEAN MANUFACTURING SYSTEM

The manufacturer to adopt lean manufacturing, supplier association is the prior concern which requires at every stage of integration. As the supply chain of the manufacturing organization is unswervingly connected with the leanness in terms of supplier and its related activities of that organization because supply chain associated with the streamline flow of materials, information, payments and services from the raw material as well as finished products suppliers, through the stockroom and factories. Major businesses in India across the world, have been trying to incorporate its suppliers to give better performance. Performance in terms of cost reduction through and just in time production and better quality product depends on the capability of the supplier. Supplier selection, supplier integration and supplier development are the major output of the initiatives taken by these industries to become leaner and these initiatives proved to give more benefits & competence in market (Satish Kumar Sharma et al. 2011). It has been observed that such industries are inherently more concentrated to short term benefits and mass production. So they think in short period or contractual association with its suppliers. Some studies are proving supplier's role worthy and include some supplier related issues in developing an index for measuring the leanness of an enterprise. For example, Singh et al. (2010) and Shah & Ward (2007) involves supplier

issues in developing a lean measuring index. Some more studies on manufacturer- supplier relationship, like Lettice et al. (2010), Li et al. (2010), Goffin et al. (2006), Droge et al. (2004), show that their relationship depends upon some supplier related issues like supplier integration in product development, in quality program, long term relationship, on time delivery, frequency of schedule changes, extent & mode of information interchange etc. These studies show the effect and extent of application of these issues in different nations but still in already established big organizations and industries consumer [Sharma et al. (2010)].

DISCUSSION AND CONCLUSION

The global economy is becoming boundary less and integrated, determined by customer, global technological forces, global competitive price and macro-economic forces. The integrated world economy and global competitive arena is changing the way in which companies traditionally operated shifting lean manufacturing. There is also a customer, functional and supplier integration, which gives a truly global playing field to the companies and results in lean manufacturing. Lean manufacturing is playing vital role in Global competitiveness.

Lean is about producing with the minimum amount of materials, equipment, labor, and space regarding the customers', suppliers', stakeholders', workers', and managers' satisfaction. The goal of an enterprise that adopts "lean" is to make each process as efficient and effective as possible, and to connect those processes in a stream or continuous chain that is focused on maximizing customer value. A roadmap is needed to provide sequencing for transforming an enterprise from non-"lean" to "lean". A "lean" roadmap focuses on a vigorous supplier as well as customer relation, "lean" knowledge, objectives, and strategic planning with customer and supplier related issues, and it provides an organizing framework for better lean implementation.

Consequently, the understanding of who, what, where, when, why and how in Lean transformation attempts is increased. The first objective of this research was to investigate the factors of customer and supplier relation issues "lean" and their chain of events. To meet this objective, we defined lean manufacturing in terms of customer and supplier relation, and discussed "lean" approaches and their implementation.

REFERENCES

1. Balle, M., "Lean attitude - Lean application often fail to deliver the expected benefits but could the missing link for successful implementations be attitude?," *Manufacturing Engineer*, vol. 84, pp. 14-19, 2005.

2. Droge, C., Jayaram, J., Vickery, S.K., 2004. The effects of internal versus external integration practices on time-based performance and overall firm performance. *Journal of Operations Management* 22, 557–573.
3. Ghodsypour, S. H., & O'Brien, C., 1998. A decision support system for supplier selection using an integrated analytic hierarchy process and linear programming. *International Journal of Production Economics.*, 56–57(1–3), 199–212.
4. Goffin, K., Lemke, F., Szwejczewski, M., 2006. An exploratory study of 'close' supplier manufacturer relationships, *Journal of Operations Management* 24, 189–209.
5. Hall, W.R, and Mark, E.I., 1992. *Just-in-Time Certification Review Course Student Guide*. Falls Church, VA: American Production and Inventory Control Society.
6. Humphreys, P., Shiu, W.K., Lo, V.H.Y., 2003. Buyer–supplier relationship: perspectives between Hong Kong and the United Kingdom. *Journal of Materials Processing Technology* 138, 236–242.
7. Karlsson, C., Ahlstrom, P., 1996. Assessing changes towards lean production. *International Journal of Operations and Production Management* 16 (2), 24–41.
8. Lettice, F., Wyatt, C., Evans, S., (2010). Buyer–supplier partnerships during product design and development in the global automotive sector: Who invests, in what and when? *Int. J. Production Economics* 127, 309–319.
9. Li, Y., Xie, E., Teo, H.H., Peng, M.W., (2010). Formal control and social control in domestic and international buyer–supplier relationships. *Journal of Operations Management* 28, 333–344.
10. Shah, R. and Ward, P.T., (2007). Defining and developing measures of lean production. *Journal of Operations Management* 25, 785- 805.
11. Sharma, S.K., Singh, B., Gupta, R.D., 2010. Significance of Supplier's Management in Lean Implementation. 2nd International Conference on Production and Industrial Engineering, CPIE-2010. 457-63.
12. Simchi-Levi, D., P. Kaminsky, P., and Simchi-Levi, E., 2000. *Designing and Managing the Supply Chain, "Concepts Strategies, and Case Studies"*. McGraw-Hill.
13. Singh, B., Garg, S.K., and Sharma, S.K., 2010. Development of index for measuring leanness: study of an Indian auto component industry. *Measuring business excellence* j vol. 14 no. 2, pp. 46-53.
14. Sawhney, R. and Chason, S., "Human behavior based exploratory model for successful implementation of lean enterprise in industry," in *Performance Improvement Quarterly*. vol. 18, 2005, pp. 76-96.

15. Sharma Satish et al. "Supplier Issues for Lean Implementation" *International Journal of Engineering Science and Technology (IJEST)*, 3900-3905, 2011
16. Womack, J.P., Jones, D.T. and Ross, D., *The Machine That Changed The World*. Macmillan Publishing Company, Canada, 1990.