

ANALYZING THE FITNESS OF AN ORGANIZATION FOR THE ADAPTATION OF LEAN THINKING

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Abstract- The purpose of this paper is to check the philosophy and principles of lean thinking (LT), on the basis of graph theoretic approaches (GTA). Mathematical approach towards LT can help in solving problems through calculations, thus giving out the exact or the approximate result. Any organization needs to have organizational behaviour, organizational readiness and organizational analysis for successful lean implementation. Through statistical or graphical approach an organization will come to know its production level and the major defects in the output of total production. Thus, ultimately the target is to enhance the production to its maximum level without any delays through LT.

Keywords: Organizational behaviour, Organizational readiness, Organizational analysis, GTA

1. INTRODUCTION

Basically, Lean Thinking is gradually spreading out at the global level, adopted by various organizations. But the fact that was found out was that every organization was adopting lean thinking but not adopting it as a whole. Organizations inculcate lean thinking according to their convenience and comfort ability. For Example Adaptation of going lean can be of less than 50% or it can be less than 20%. Actually organizations pass through variety of changes like change in strategies, brings up new technology, products, internal functions, people, etc. Organizational Analysis tries to concentrate on these aspects of change management as its bit of strategic planning activities. It was analyzed that Lean Manufacturing concepts have become more popular as it is implemented in number of ever growing companies.

2. LITERATURE REVIEW

Lean manufacturing is not new in Automobile industry where actually it born. After sudden success of Toyota in 1980's over the big three (Ford, General Motors and Chrysler) and other Automobile industries, the other industries started implementation to reap the benefits seen in Toyota. Piercy and Rich (2009) discussed the evidences of successful lean implementation in service environment; in call service center to achieve reducing costs and improving quality. Meier and Forrester (2002) found that lean production practices can be successfully applied to tableware sector characterized by craft manufacturing. Abdulmalek and Rajgopal (2007) argue the frequent application of lean approach to discrete manufacturing than in the continuous/process sector. Lean manufacturing has been applied within the process industries, most notably chemicals and pharmaceuticals sectors, to great effect (Melton, 2005). Sullivan et al. (2002) discussed an equipment replacement decision problem within the context of lean manufacturing for inventory saving, floor space reduction, and high quality. The LM tools have a sequential set of methods to be implemented, application of a selected bundle of tools and their sequence must be taken in a particular situation lying upon outside and inside operating conditions (S. S Mahapatra and S. R. Mohanty). The allocation of chemical, electronics assembly, textile, pharmaceuticals, and FMCG industries are grouped around the outskirts of Mumbai. Various industries of casting, metal extraction are allocated in the eastern part of India. The analysis went through by visiting various CM and DM industries. As LM is known to implement for a defect free product (S. S Mahapatra and S. R. Mohanty). According to J. M. Rohani and S. M. Zharaee, the production analysis through value stream mapping in color industry, extract waste through group members, selection of product or product design and keep in mind the delivery of product on the right time. And use the some lean techniques change over time and 5s and decreased lead time from 8.5 days to 6 days and value aided time decrease from 68 minutes to 37 minutes.

3. METHODOLOGY

The survey of implementation of Lean Manufacturing goes through a questionnaire prepared for industries. The questionnaire consists of several questions about the perceptions regarding LM implementation. The survey needs to be done by taking interview of the higher authorities from the production department of the organization. The perception of them would tell about implementation of LM. The open ended and semi structured questionnaire should be utilized to gain insights regarding the status of LM implementation in any organization. S. S Mahapatra and S. R. Mohanty, has described some of points. These questionnaires have made them describable;

[1] Company's Background information (The year of production, ownership etc.).

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- [2] Lean Manufacturing Perception.
- [3] The inculcation of Lean Manufacturing

In order to find out the perception of companies towards LM implementation from this a number of questions that should be asked for examining the status of Lean Manufacturing as shown in table 1 and table 2. These were some questions that should be asked to the authorities of the organization to know their view point about LM. These questions actually predict the future of an organization if answered honestly, because LM implementation in an organization refers to cooperation, honesty, discipline, unity, etc. which enhance the organization.

Table 1 Information About Organization

Organization's Name	
Organization's Address	
Respondent's Name and Designation	
Respondent's Contact No. / E-mail Address	
Primary Product(s) of the Organization	
Type of Company (Small, Medium and Large Scale)	
Type of Production System	(Job order / Continuous / Batch / Mass)

Table 2 General Questions For Survey

	GENERAL QUESTIONS	(1)	(2)	(3)
1.	Upto how much percent do your company follow LM?	Near 100%	Near 50%	Near 25%
2.	In your company, the supply chain concept originated in what discipline?	Marketing	Production	Logistics
3.	Which of the following statements is true of LEAN?	Lean principles focus on advanced statistical methods	Lean principles are separate body of knowledge	Lean principles include reducing waste.
4.	Which of the following functions is not a core function of your organisation?	The Product/Service Dev.Function	The Operations Function	The Marketing (Including Sales) Function
5.	According to the manufacturing of your company how do you define quality?	Quality is the degree of excellence at an acceptable price and the control of variability at an acceptable cost	Quality depends on how well the product fits patterns of consumer preferences even though quality cannot be defined, you know what it is	Quality is the degree to which a specific product conforms to standards

3.1 Impact of Lean Manufacturing

LM implementation plays a vital role in manufacturing sector. If applied with proper understanding LM tools appear to give a positive result of total process flow. The key factor to reduction is WIP (work in process/progress) whether it would be raw material, product and a business of operations in implementation of LM. The attributes like maintenance, product development and design are not much affected by implementation of LM. They are to be dealt in a different perspective. Potential benefits of LM are improved manufacturing flexibility followed by improvement on JIT delivery and reduced cost. Customer satisfaction improvement also an important part derived out of LM implementation. The experts do not consider 6sigma for initializing of LM in any organizational setup.

4. CONCLUSION

Ultimately there is a need of implementation of the word lean to match the other competitions of the world. It is very much important to have LM implementation in organizations due to its excellent output regarding production management. Every organization has a different mindset regarding LM. The quality of product needs to be taken care of avoiding the wastage and through the implementation of LM tools. Continuous improvement in any organization takes it to a higher level. LM unfortunately is treated as the bundle of techniques', strategies and importantly, identification of areas for continuous improvement efforts. Experience in the rooling mill indicates that opportunity exist for improvement in the form of space utilization, pace in operation and flexibility. Accordingly the philosophy suggests that division of labour into various departments to have discipline and better output. Technology up-gradation is not considered as a viabal strategy atleast in the

present scenario. The study clearly indicates that the market factors specially customer satisfaction at shortest possible time, trigger adoption of LM in any organizational setup.

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