

MODELS DEVELOPED ON LEAN MANUFACTURING PRACTICES IN INDIAN AUTOMOBILE INDUSTRY

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ABSTRACT

India has established itself as a manufacturing hub with a good number of multinational automobile organizations preferring India as their export base and is mainly because of quality principles adopted by the manufacturing companies in India. The Indian automobile industry is flourishing with high growth in the domestic as well in the export market. To remain continue with this phenomenal growth, the manufacturers need to be competitive simultaneously maintaining the quality standards which may be possible with implementing lean techniques in their operation. Lean Manufacturing uses less of everything and attains its set objectives by excellent teamwork, communication, and competent use of available resources & continuous Improvement.

In the present scenario, Lean Manufacturing has become a worldwide phenomenon. It is quite successful in drawing the attention of companies of all sizes. A large number of organizations are following Lean technologies and experiencing vast improvements in quality, production, customer service, and profitability. Lean Manufacturing is a systematic approach to identifying and eliminating waste through continuous improvement. The manufacturing industry in India must also look to leverage its advantages, its large domestic market, good conditions in terms of raw materials and skilled labor, and the quality focus. In India at the state level, there are few companies that are implementing Lean manufacturing techniques. In Faridabad city, the industrial town of Haryana, some of the automobile companies are vigorously following the Lean manufacturing techniques to eliminate waste and downsize the cost. Hence, all these factors prompted the researchers to analyze and study to develop model on the implication of Lean Manufacturing Practices in Automobile Industries. .

At the backdrop of this, the presented paper is an attempt to develop models on Lean Manufacturing Practices in Automobile Industry. The present paper is an attempt to study & develop model on employee’s perception towards lean manufacturing systems in automobile industry.

Keywords: Lean, Waste, Production, Cost, Improvement, Industry, Automobile. Manufacturing, Techniques, Organizations.

PRINCIPLES, ELIMINATION.

The following models are proposed for developing Lean Manufacturing Practices in Indian Automobile Industry with special reference to selected organizations of Faridabad region

locating in NCR Delhi. These are being suggested only and may have certain practical limitations, but in due course of time, this can be modified as per the requirements of the industry

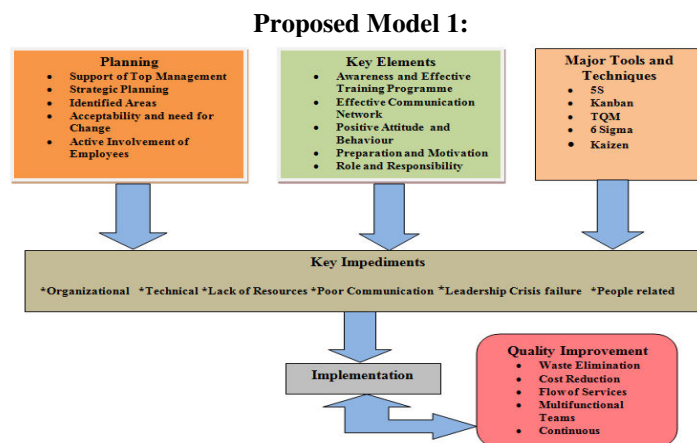


Figure 5.1
Effective Lean Manufacturing Practices

Source: Model Developed on the Basis of Findings and Review of Literature

The first proposed model deals with effective Lean Manufacturing Practices in selected organizations. Planning is the first and foremost important step in achieving the optimum benefits by implementing LMS. Support of top level management play a very vital role in planning strategic policies and identifying the areas where application of appropriate Lean tools and techniques could lead to a phenomenal growth of the organizations. At the same time, it is also very necessary that the all the employees and other stakeholders should have willingness for change and actively contribute their assigned role and responsibility.

Change needs to be communicated to the rest of the organization. It is responsibility of the management to ensure that employees not only see it, but also understand it. It is not enough to just change – if employees don’t understand it, they will not know how to emulate it. There should be awareness among employees and other stakeholders about LMS. Awareness Training and Education Programme can be designed to introduce the concepts of LMS. Training is invaluable tools for developing Lean Manufacturing Practices organizations communicate the importance of Training and

Education Programmes. Key success elements that enhance the implementation process are identified - human resource practices, management style, organizational strategic vision, organizational culture, external partnerships.

Communication is an important aspect of lean process in order to successfully implement lean manufacturing. There is a need for everyone to be aware and understand the lean concept and the process of implementation. This is where the communication process plays a crucial role in ensuring the successful implementation of leanness. The management should understand and emphasize the importance of communication to successfully implement lean practice in their respective organizations. Management as well all the employees of the organizations should have a positive attitude and behavior towards application, follow-up and outcome of LMS. It is a very stimulating stage for the organizations to select appropriate quality improvement tools and techniques for effective implementation of LMS and to identify and overcome any barrier that may hamper the process of successful lean implementation. Once the implementation begins smoothly, the organizations can achieve their set objectives by reducing their cost and elimination of waste. This may enhance scope for continuous quality improvement and flow of services can be regulated accordingly.

Proposed Model 2

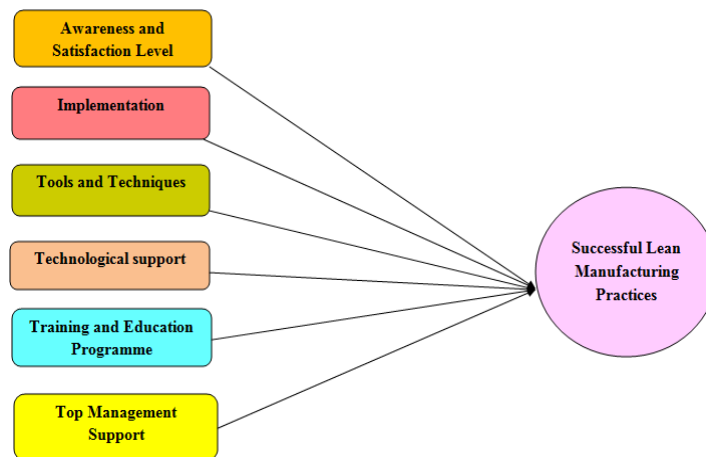


Figure 5.2
Key Factors Influencing Lean Manufacturing Practices

Source: Model Developed on the Basis of Findings and Review of Literature

The second proposed model highlights factors that influence Lean Manufacturing Practices in the selected organizations. The present study revealed that these factors are interlinked as well as independent in nature. Out of these six factors, the

most prominent factor is of Awareness and Satisfaction Level. Employees should be familiar with Lean quality principles and be adept at employing the tools necessary for ensuring quality. Undoubtedly, lean improves satisfaction level of employees. Stabilizing the work environment through the implementation of lean may result into substantial performance and quality improvement. The implementation of Lean Design &

Manufacturing techniques requires that all the wastes are identified and eliminated from the systems.

Lean tools and techniques may help to eliminate operational variations in the process. Technological support like Robots can enhance a lean manufacturing environment. Robots offer speed and accuracy that can't be achieved with human labor. IT can help Automobile industry through automation and by increasing the speed with which information is accessed and processed. Training program should become an important vehicle for communicating lean values and principles as well

as a means for providing employees with requisite new job skills. Training of employees via eLearning may be an effective way to build awareness and understanding across a broad base. Most importantly, it can serve as a vehicle for rapid change within the organization. Implementing lean practices is a managed process that requires support of management, a defined plan, coordination of resources, and robust support systems to assure transformation. It is quite essential to achieve long term success in pursuing lean as a strategic initiative.

Proposed Model 3

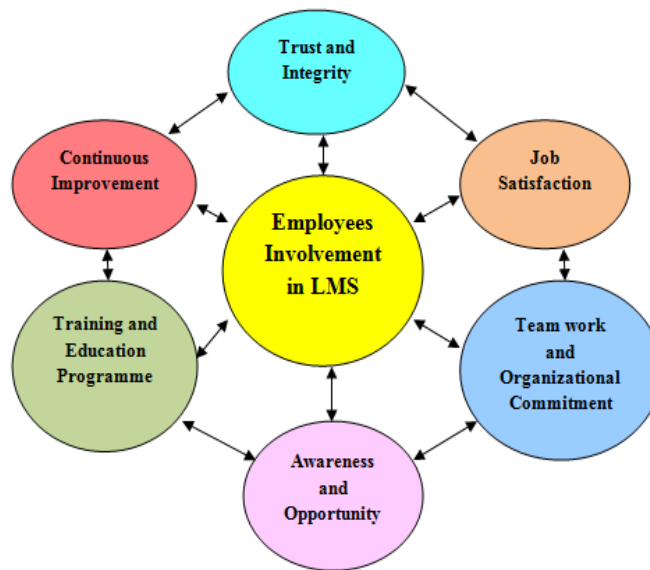


Figure 5.3
Ensuring Employees Involvement

Source: Model Developed on the Basis of Findings and Review of Literature

The third model elucidates employees' involvement in making Lean Manufacturing Practices successful ones. Lean is a commitment to achieve a totally waste-free operation. Hence, it is very obvious that it does not like to waste human labor, potentials, skills and knowledge. By ensuring a high level of employee involvement, the selected organization can Help their employees to reduce mistakes and can enriches their overall work experience. It is essential that they be involved in planning and implementations.

Employees should have trust, loyalty and integrity towards their respective organizations. They should have a sense of job satisfaction so that they can take their assigned job as a new challenge and keep enjoying their work. Basic elements of

motivation are challenge, achievement, recognition, responsibility and advancement. All of these elements can be united in the design of a successful professional career. Employees should be encouraged by opportunity, not material rewards.

The organizations should have faith in their ability to train, challenge and promote. The employee must have faith that the company values them. Lean is all about team work so employees should ensure that team spirit and organizational commitment is a key factor in achieving success of LMS. Encouraging personal growth is one of the most powerful fundamental acts which the organizations can follow easily. Not only it will help the lean implementations, but it also will elevate the passion and loyalty of the employees to the organizations. The organizations need the employees to not just understand lean, but to believe in it.

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