

Changes in Toyota Motors' operation managements

Introduction

Toyota Production System (TPS) is the mechanism used by Toyota to improve the productivity of their operation. Later other manufacturing companies also successfully adopted TPS to their operation in all over the world. Later Toyota motors started to modify some aspects of its after saw its success as a production system. A main reason was these changes was that it became hard to recruit and retain workers after economic recession in late 1980 decades. These study was based on the data gathered from three Toyota factories “Takaoka”, Daihatsu- Ikeda” and Toyota Kyushu.

The classical TPS model

The two key principle of classic TPS model has been described briefly below.

1. Only products which are sold are produced.
2. Smooth flows which arrive “Just in Time” to be processed.

Production line was designed to minimize all kind of waste and in process stocks are also considered as a waste. Toyota used Kaizen as a tool to promote continuous improvement and it encourage employees to come up with suggestions for improvements.

While Toyota motors financially preforms extremely well its employees were also believed that they are working under high pressure. In all production lines, physical working condition were tough and assembly lines, workers operated under tight time schedule and performed repetitive tasks at a high space. This led to company experienced difficulty to recruit and retain assembly staff.

Concept of the change

One of the strategy which tried by Toyota was adopting high technology to reduce the employee level in production line as much as possible. But this demanded substantial investment and also company needed to recruit expertise to establish and maintain these machines. Therefore this investment had to be covered by increasing production volume. Since collapse of car market in 1992, Toyota couldn't increase the volume. Therefore Toyota had to find alternative option.

Then Toyota came up with alternative concept “an automobile assembly line where people play the main role”. But the new lines were developed in worker friendly environment. This concept has several elements.

1. Segmented line, build around functions.
In this concept, Toyota developed principle called “completing processes autonomously”, while keeping the line layout as same, created rounded- off modules of tasks. In new method, one module assemble as a one system which previously assembled at various work station spread over the line.
2. Ergonomic measures, including a newly developed ergonomic assessment method and various devices to improve the physical working environment.
This helped to complete assembly tasks with a reasonable degree of comfort. First Toyota identified stressful and physically demanding tasks and then developed various devices and

machines to eliminate those tasks. This helped to workers to easily access different places in working unit and eliminate unnecessary walking.

3. Automation of specific assembly tasks.

Rather than using high tech automation routes, Toyota tried to automate selected tasks by relatively simple machineries. Mainly these equipment aimed heavy assembly tasks such as tyre assembling.

4. Changed concept of Kaizen.

In Kaizen, workers take part in quality control circles where development of various natures are discussed and worked out. Revised policy emphasized on improving individual capabilities and self-development. This self-development is not only considered work related development it is also considered other skills such as language skills and IT skills.

5. Supporting personal policies.

This one mainly focused on HR policies so it is not connected with operation strategy.

Result of the change

Toyota management and engineers conducted monthly meetings in three factories to measure the improvement after implement the changes. After the study, it is identified the results of implementation of new changes. Toyota Kayushu factory has successfully adopted to the new changes and they have able achieve below improvements.

1. Employee turnover was reduced and Toyota found easy to recruit new staff.
2. Daily production volume has improved.
3. An average number of improvement suggestion has been improved.
4. Working environment of the factories has improved by using brighter light, air conditioned environment.

On the other hand, Toyota Takaoka has achieved improvements in some areas such as improve the working condition of the assembly line by introducing new devices. But in some areas, this factory couldn't achieve significant change. Some changes had been failed due to some of assemble units became bulky and it became difficult to handle them.

On the other hand Daihatsu Ikeda which has ownership for both Daihatsu and Toyota. Daihatsu management appealed that recent changes of TPS are hard to realize to their operation due to limited space in plants and short assembly lines.

Conclusion

This study analysis the issues of classical TPS model and the alternative option which was provided by Toyota management. These new changes has successfully implemented in some

places and also sometime it has failed. Therefore it is indicated that proper monitoring system need to be established to successfully implement these changes. And also technical research need to be conducted to identify whether new changes are suitable for current infrastructure and operation process.

References

Bendors, J. Morita, M (2004) "Changes in Toyota Motors' operations management" Taylor and Francis group

CONTI, R. and WARNER, M., 1993, Taylorism, new technology and just-in-time systems in Japanese manufacturing. New Technology, Work and Employment

ECCLES, R. G. and NOHRIA, N., 1992, Beyond the Hype; Rediscovering the Essence of Management (Boston: Harvard Business School Press