Just in time and logistics strategy management essay

INTRODUCTION

Logistics Strategy is defined as the knowledge of finding out the most efficient way to distribute products to the market place, also accomplishing the aims of service level of organization. The logistics strategy used by the companies can be either product-oriented, client-oriented, or even location-specific. The supply chain of each companies are energetic, self-motivated and growing. The logistics strategy implemented by a company or organization describes the different service levels at which the logistics used by the company is most successful and price efficient. The logistics strategy discussed here include Porter’s value chain model and generic strategies, Fisher’s supply chain matrix, Ansoff growth matrix, SWOT analysis, the McKinsey 7 S framework, MRP strategy, JIT strategy and lean strategies.

Case study – the research paper I have taken for the purpose of identifying the strategic position of the company in a logistics context is Milk-Run logistics by Japanese automobile manufacturers in Thailand. The case study has been conducted on the automobile manufacturers in Thailand. The study showed that Milk-Run logistics has been implemented in the automobile manufacturers in Thailand. Milk-run logistics helps in manag, ing the process of obtaining the resources and materials in an efficient manner. This results in the developments of traffic circumstances in the town areas, by minimizing the number of trucks sending off the goods and products.

Logistic strategy used in the chosen case study

The Just-in-time is the most important logistic strategy used in the case study Milk-Run logistics by Japanese automobile manufacturers in Thailand.

JIT

Just in Time (JIT) is a strategy used in the organizations, to minimize the costs and obtain greater profitability, by involving management of stock efficiently. JIT helps in increasing the efficiency, value and competition of the organization in the marketplace. It is the most influential tool for the companies, if executed well. JIT is an approach in improving overall yield and eliminating waste. It also includes production at a cheaper rate and delivers the essential parts at an apt time and place with an efficient quality while minimizing the use of amenities, tools, and resources. It depends upon the balanced state between the suppliers and the user’s flexibility which is achieved through total involvement of employees and group work.

JIT strategy is one of the most crucial strategies implemented in the Toyota Production System (TPS). In JIT, the products are created according to the clients requests and demands and only then produced, instead of providing the clients with the goods already manufactured and available in stock. Just – in – time system gives prime attention to providing the customers with the required quantity, and at the needed time. JIT, as a result, minimizes the amount of waste that can occur in the business due to stocking of manufactured products, imperfect products or parts, and also products queuing in the assembly lines. In Just – in – time , the amount of supply of products to be manufactured queuing in the production line can be reduced, by manufacturing only the required quantities in small loads and delivered to the production lines for manufacturing process. This system or method will be able to reduce the amount of imperfect parts manufactured.

Some Key Elements of JIT

1. Stabilize and level the Master Production Schedule (MPS) with uniform plant load : all the work areas are given the same amount of work load through stable daily production and almost the same mixture of products are produced at the assembly lines. It helps to effectively manage the stock available at the assembly lines by the usage of a uniform production plan.

2. Reduce or eliminate setup times: the setup times required for production can be reduced to a single digit, that is less than 10 minutes. It is possible through efficient planning of processes, process redesign and manufactured goods redesign.

3. Reduce lot sizes (manufacturing and purchase): the advantage of minimizing the setup time is cost-effective production of smaller loads of products or parts. In order to achieve the minimization in load sizes, the essential requirement is close collaboration with the sellers, as additional recurrent deliveries will be needed.

4. Reduce lead times (production and delivery): the work locations performing adjacent tasks can be moved next to each other, the concept of cellular manufacturing and group technology can be applied, minimizing the amount of works queuing at the machines, and also by better synchronization between succeeding processes, helps in reducing the manufacture lead times. Close collaboration with the sellers, by suggesting them to position near to the factory , minimizes the delivery times.

5. Preventive maintenance: the collapsing and wearing out of the equipments and machines used can be prevented by taking into account the

value of the employees and machines break time. During this period, the equipments can be switched off to prevent wearing out.

6. Flexible work force: the workers performing the work should be capable, authorized and responsible for the job, and be provided with sufficient training to operate the equipments. A high-quality connection need to be maintained between the employees and management in the Toyota Production System.

7. Require supplier quality assurance and implement a zero defects quality program: the workers performing the job must take individual responsibility for the quality of the work done, and power to prevent the manufacturing process when problems are identified, which can be carried out by conducting a quality program (jidoka) at the source.

8. Smallâ€‘ lot (single unit) conveyance: in most of the organizations, the Materials requirement planning strategy (MRP) is also implemented along with the JIT strategy, although it is not necessary. A kanban card can be implemented as a system to control and suggest parts or portions of work between the work units in little amounts.

KEY CHARACTERISTICS OF JIT:

In the production process, the flow from one stage to another is pulled by ‘ demand’ from previous stage.

Simple cards, tokens or empty squares are used to regulate the pull between stages, in order to activate actions and production. The end result is clear, visual and transparent control.

Decentralized decision making is done for production management and planned decisions are taken based on computer-based information processing.

The JIT is programmed as ‘ rate-based’ that is interpreted as output of a portion per unit of time, instead of ‘ volume-based’ which is calculated as total number of parts to be produced in a given day or week.

Resource flexibility and reduced production times are assumed in the process of JIT.

The scheduling and management concept of JIT takes up only one part of an advanced and explicit JIT philosophy of actions.

The techniques of JIT:

The techniques which are usually associated with JIT are as follows:

Developing ‘ basic working practices’ which support waste elimination and continuous improvement.

Design for manufacture.

Focused operations which reduce complexity.

Using simple, small machines which are robust and flexible.

Rearranging layout and flow to enhance simplicity of flow.

Employing total productive maintenance to encourage reliability.

Reducing setup and changeover times to enhance flexibility.

Involving all staff in the improvement of the operation.

Making problems visible to all staff.

BENEFITS OF JIT:

The JIT system provides a number of benefits, out of which major importance is given to the boost in the efficiency of the production of the organisations. This is obtained due to the reduction obtained in the costs due to stocking of raw materials, which is obtained due to the minimization in the stacking of resources, wastage of time and other assets . The following benefits are achieved on implementing JIT:

There is a considerable increase in the quality of products manufactured.

The employees are given the responsibility to take the authority of the work done and so importance is given to the quality of the employees.

There is a minimization in the amount of defective parts manufactured.

even flow of manufacturing process.

reduction in the cost.

Greater efficiency and production.

Greater involvement of the employees.

highly trained employees, enthusiastic to change jobs undertaken.

Close collaboration with the suppliers.

Additional logistics strategy that can be used – Lean Strategies

Lean strategies is another system that can be implemented by the automobile manufacturers in Thailand. Lean strategies aims in offering excellent client service, which is obtained through minimizing the amount of waste produced. In order for the throughput of the production process to be equal to the demands of the clients, the production process must be carried out in high coordination with the orders of the clients and the production plans. The employees must be responsible for the job done, ensuring high quality and also minimization in the number of wastes produced, as the employees are able to identify and solve problems efficiently. The main aim of attention of the production process must be on obtaining the constant quantity of products required, for which a steady manufacturing structure is needed.

Takt time is defined as the occurrence of customer orders and the main aim is to make the occurrence of customer orders equal to the frequency at which the products are manufactured. Wastes are produced, if the amount of parts manufactured is higher than the customer’s demands. Low service times occur, if the demand of customer’s is higher than the rate at which the parts are manufactured. The automobile manufacturers, on perfect implementation of the lean strategies will be able to ensure even manufacture of products and also increase the capability of the organisation.

Problems associated with implementing lean strategies within the automobile industry

The implementation of lean strategies offers many advantages. It is hard and requires a huge amount of cost to implement lean strategy, and many drawbacks can occur if not implemented properly.

Requirement of full support

After the implementation of the lean strategy, all the workers, including the managers and leaders must fully support the entire operation. The employees might be unwilling to change, as the implementation of lean strategy is a completely different approach. The benefits of lean strategy will be not achieved, if proper support from the employees and the leaders is not available, and the system can fail.

Additional Training

Extra training and support must be given to the employees during the execution of lean strategy. Supplementary expense will occur, as the employees will have to study the methods, which will need overtime. There can also be a loss of business and clients will be dissatisfied, as the manufacture of the parts will be reduced during the learning process.

Need for Team Leaders

Strong forefront leaders must be appointed, in order to support the employees along with the management. Most of the workers are already used to the olden method of production, and so will be highly dissatisfied and frustrated on implementing lean strategy. The team leaders selected should support the employees, and must be aware of the new processes

being implemented. in some cases, the leaders appointed might also not be willing to acknowledge the challenge.

Supplier Issues

The main aim of lean strategy is the minimization of the waste and inventory. So the lean processes involves minimum availability of resources at the site. In some cases, the parts supplied by the sellers could be imperfect and defective, which results in the clients receiving a low-grade or no product at all. So a close collaboration must be maintained with the suppliers, which is most important in implementing lean strategy.

Cost of Failure

In some worst scenarios, everlasting harm can occur in the organisation as it might be difficult to successfully execute lean strategy. This might result in loss of clients due to poor service and reduction in close collaboration with the suppliers. This results in the eventual crash of the company, as it may be difficult to revert back to the old way of managing business.

Significance of new technology developments and business trends in automotive industry

The automotive industry is a very self-motivated and energetic environment in which change is always is seen in the industry. The constant changes in the services and products creates a high demand for the customers. This results in the increase in the overall efficiency and production of the automobile industry.

The automobile industry undergoes a number of complex processes that is necessary for the production process and logistics required for the running of

the company. A number of improvements and solutions to the problems are being used by the current automotive industry, in order to cope up with the improvements in technology and also the competitions offered in the current market place of automobile industries. The improvements have to be made in the quality of the products manufactured, and also reduce the cost required for manufacturing.

CONCLUSION

Logistics is a part of supply chain process that plots, executes and is used manage the efficient and effective flow and storage of resources, services and associated information from the point of start till the utilization, in order to meet customers' requirements. Logistics Strategy is defined as the knowledge of finding out the most efficient way to distribute products to the market place, also accomplishing the aims of service level of organization.

The research paper I have chosen for identifying the logistics strategy used is Milk-Run logistics by Japanese automobile manufacturers in Thailand. The logistics strategy used by the automobile industry is Just-in-time (JIT) as described in the chosen case study. The elements, benefits of JIT has been illustrated. A detailed analysis of the chosen case study has led me to the conclusion that the company can also be benefited by implementing lean strategies. The methods, benefits, and problems associated with implementing lean manufacturing have been listed. The effects of new technology developments and business trends on future logistic strategies on the chosen case study has also been identified.