

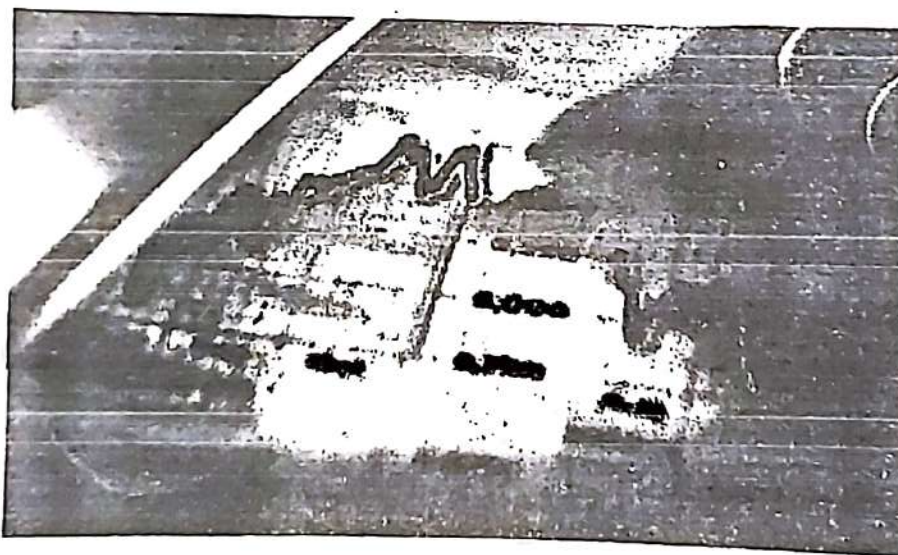
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**Leveraging the Best Contemporary Management
Practices in Business Management**



In association with
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(Under Quality Improvement Programme)

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In association with

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Study of Supply Chain Management Practices in Toyota Production System and Ford Production System

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Abstract


This paper helps to understand the Supply Chain Management Practices of Toyota company and Ford company. These world class manufacturers developed contemporary supply chain management strategies and required actions in order to improve the design, development and management process of supply chain system.

Toyota is more hands on and more driven to improving their own systems and then showing how that improves a supplier. Toyota will do things like level their production systems to make easier on supplier side. On the commercial side Toyota is very hands on. Toyota people will go to supplier site and measure and work to get cost out of the system. Every supplier has an opportunity to make profit by accepting its offer as being a supplier. Auto industry supplier consistently report that Toyota as they're the best customer and also the toughest. In Toyota's case it means they have very high standards of excellence and expect all partners to rise to those standards.

Keywords: Supply Chain Management, Auto Industry and Toyota Production System.

Introduction:

Toyota is more hands on and more driven to improving their own systems and then showing how that improves a supplier. Toyota will do things like level their production systems to make easier on supplier side. On the commercial side Toyota is very hands on. Toyota people will go to supplier site and measure and work to get cost out of the system. Every supplier has an opportunity to make profit by accepting its offer as being a supplier. Auto industry supplier consistently report that Toyota as they're the best customer and also the toughest. In Toyota's case it means they have very high standards of excellence and expect all partners to rise to those standards.


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In 1999, one of the big three U.S. auto companies which were known as American Auto decided that they want to make its supplier relationships the best in the industry. American auto was tired of hearing how great Toyota and Honda were at teaching their suppliers to be lean. For years, American Auto had worked to improve its relationships with suppliers but when suppliers were asked who the leaders were in supplier development; it was uniformly Toyota and Honda. Their goal was to develop a supplier development center that would become the global benchmark for American auto. The main message from the supplier interviews was very clear and consistent. They said that American Auto should not waste their money building big expensive building to train suppliers but instead to get their own house in order so they can be capable and reliable partner with American Auto. They need to fix their broken product development process and should implement lean manufacturing internally.

Methodology:

This paper has used Secondary data for analysis. Secondary type of data is used to understand the supply chain practices adopted by Toyota Production System and Ford Motor Production System. Qualitative data from various supply chain journals and supply chain magazines is taken to understand their practices. Data from various supply Chain Management reference books and internet based website was also considered.

Objectives of the Paper:

- 1) To study Toyota's approach in managing SC with their partners.
- 2) To bring forth the unique characteristics of Ford Production System in managing their SC.
- 3) To develop model for SC hierarchy.

Practices adopted by Toyota Motor Company to build suppliers network

Toyota has been rewarded time and time again for its serious investment in building a network of highly capable suppliers that is truly integrated into Toyota's extended lean enterprise. Much of the award winning quality that distinguished Toyota and Lexus results from the excellence in innovation, engineering, manufacturing and overall reliability of Toyota's suppliers. Toyota's suppliers are integral to the JIT philosophy both when it is working smoothly and when there is breakdown in the system.

While many companies would abandon JIT when the first crisis hits, Toyota works its way through the rare crises working hand in hand with suppliers. In February 1, 1997, a fire in Aisin factory. It was the sole source for p-valve which is an essential brake part used in all Toyota's vehicles worldwide. At that time around 32,500 per day. Toyota vaunted JIT system meant only two days of inventory was available in total supply chain. Two days and disaster would strike. Instead of faltering 200 suppliers self-organized to get p-valve part production started within 2 days.

Toyota always believes in finding solid partners and growing together to mutual benefit in the long term. When Toyota started building automobiles, it did not have any capital or equipment for building the myriad of components that go into the car. They used to find out high quality parts suppliers that Toyota could partner with. At that time they did not have any volume to give the business to suppliers. Sometimes they did not assemble any vehicles due


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to unavailability of quality parts in the plant. So Toyota understood importance finding of quality parts suppliers. All that Toyota could offer was the opportunity for all partners to grow the business together and mutually benefit in the long term. So like the associates who work inside the Toyota suppliers became important part of the extended family who grew and learned the Toyota Production System.

Even when the Toyota became global powerhouse it maintained the early principle of partnership

. It views new suppliers cautiously and gives only very small orders. They must prove their sincerity and commitment to Toyota's high performance standards for Quality, Cost and Delivery. If they for early orders, they will get increasingly large orders. The Toyota will teach them the Toyota way and adopt them into the family. Toyota always believes that it is important to give challenges to our own people for their improvement. Supplier development includes a series of aggressive targets and challenges to meet those stretch targets. Suppliers want to work for Toyota because they knew that they will get better and develop respect among their peers and other customers. From Toyota's perspective, having high expectations for their suppliers and then treating them is the definition of respect. Treating them softly or beating them up without teaching would be very disrespectful. Simply switching supplier sources because another supplier is a few percentage points cheaper would be unthinkable. Achievement of business performance by the parent company through bullying suppliers is totally alien to the spirit of TPS.

For Toyota company, Cross Dock was an extension of assembly line. Cross dock allowed efficient pick up of parts from suppliers and for JIT delivery to the assembly plant. Cross Docks are common in many industries.

Ford Production System

Initially focus of the Ford Company was on implementation of production system inside the four walls of the plant but later they began to focus on "Synchronous Material Flow" outside the plant- mainly getting parts to the plant JIT in small lots with frequent deliveries. So Ford did what many large U.S. companies do in this situation. Later some time Ford hired a third party executive to perform logistics work for the company. The executive they hired had worked with logistics for General Motors and had some exposure to NUMMI. He fit the Ford model of an aggressive, hard driving leader who issues orders and expects action or heads to roll. He recognized that he had to change the way the assembly plants were set up to accept JIT deliveries and deliver parts in small quantities so he hired a large group of experts on Pull systems in the factory to straighten out Ford's internal logistics.

The Ford executive issued machine orders with slogan that "Every part every day". He meant he want every part currently delivered weekly or monthly to the assembly plants to be delivered at least once every day. The project called as Nirvana. Ford stood to save hundreds of millions of dollars in transportation and inventory costs. But at the end many things went wrong for Ford Company. The list was long. Ford executive made all logistics decision based on his own vision. The hired executive did not understand the Ford way and had only superficial understanding of how to get to a JIT logistics network. The executive handed over the amazing amount of responsibility to outside vendor with which Ford was not having strong partnership. The outside vendor was purely a logistics management company and did not have any real expertise in the Ford Production System. The outside vendor never understood or believed in the mission of Nirvana and thought Ford was making a mistake that

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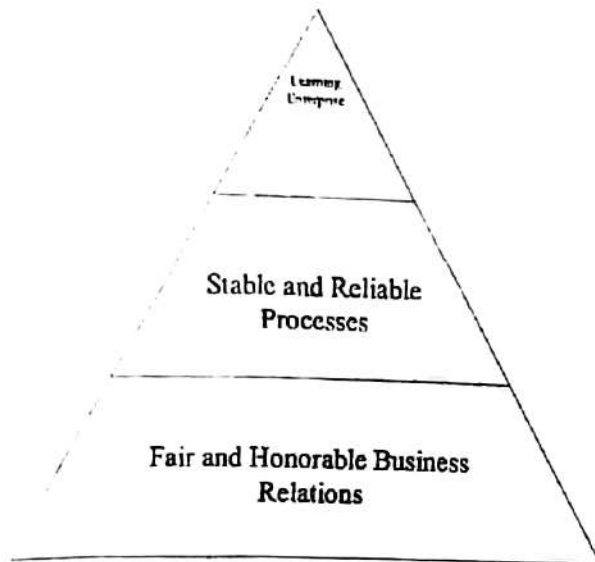
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could only lead to higher costs. Ford put an outside company between its plants and the logistics network, guaranteeing political battles between different functions that want to sub optimize for their own benefit.

Supply Chain Need Hierarchy Model

Supply Chain Need Hierarchy Model consists of different elements like Fair and honorable business relations, Stable and Reliable Processes and Learning enterprise.



Fair and honorable business relations help suppliers and auto ancillary suppliers to build their own business and long term association with manufacturer. Stable and reliable processes help all the employees to have clear understandings about processes. Finally Learning Enterprises helps to improve their current performances to the next level.

Findings

Toyota achieved its goal of JIT deliveries despite the great distances. Toyota achieved its goal of reduction in transportation costs after the cross docking system. FPS was complete failure.

Conclusion

This paper concludes that Toyota and Ford have modified their supply chain management strategies according to business environment. Contemporary supply chain management practices have helped Toyota not only to reduce inventory level but also increase in service level. In future more use of TPS will become an integral part to manage supply chain efficiently.

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