

## Chapter 62

# Logistics for Global Automobile Manufacturing Industry

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### ABSTRACT

*The automotive industry is truly a global industry. Manufacturing plant of the company is set up in one corner of the earth, sourcing the automobile parts from many companies located all over the globes, and selling the final product in another country. This leads to complex supply chain. Production strategies like just-in-time (JIT) and just-in-sequence (JIS) creates testing times but presents opportunities for the logistics management. But currently, the industry is going through a rough phase. Manufacturing costs are increasing, rise in fuel prices is having its own affect on the industry, competitive landscape is changing, and globalization presents new political and economic challenges. Currently, the company needs to manage its supply chains efficiently, reduce cost and improve the accuracy of processes delivery. Today, the automobile industry is facing significant other challenges due to complex logistics. Logistics is about co-coordinating various activities like materials handling, storage, inventory management, freight transport and the related information flow and processing in a way that meets customer requirements at minimum cost. This paper will talk about the current challenges, opportunities, growth drivers and future strategies of the companies' logistics management. It will also cover how companies are adapting to the changing economic environment. The study is based on the qualitative analysis of secondary data. The challenges and opportunities for the companies exist from the current operations management and risks of globalization. Authors have looked at the challenges and opportunities in detail in this chapter. Improving the organization's performance and securing competitive advantage over others greatly depends on the supply chain management as it is seen that the competition is no longer between the organizations, rather they are amongst supply chains. From the research, it has been found that companies believe that for sustainable transportation and logistics, green supply chain is a must for long term sustainability of the company. Companies finds export compliance to the emerging markets as another major challenge. Transport and warehouse systems are, more or less, stabilized and companies are looking to get most out of them. Though there is connectivity between automobile companies and its suppliers but information is not available real time and hence it's difficult to collaborate. Visibility into logistics has come out as the biggest need for the companies.*

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## **INTRODUCTION**

In 1933, Harlow H. Curtice, president of General Motors had said- “General Motors has no bad years, only good years and better years.” General Motors ruled automobile industry for over 50 years. In 1980, Japan for the first time surpassed the United States as the leading automobile-producing nation in the world. What this means is that, there is always something which customers want and even the leaders of the industry fail to foresee. Ever since then, the world order for leadership in the automobile sector has changed. One of the important factors that led to this is logistics. Logistics management is the part of supply chain management that plans, implements, and controls the efficient, effective, forward, and reverse flow and storage of goods, services, and related information between the point of origin and the point of consumption in order to meet customer’s requirements.

Efficient and effective logistics management has become a survival factor for the automotive sector. As conditions of post-crisis impacts the automotive industry and due to strong competitive pressures of automakers in global market, the flexibility to manage of materials and information flow in automobile assembly plants are declared as the key specification to future growth (IBM, 2012). Automobile manufacturers must schedule the supply at few thousand sub-assemblies and components in vehicle, with billions of possible combinations to car outfit. Key trend in the automotive production is standardization of modules of construction to common platforms (Fathi 2011). Modules refer to groups of related components and systems serving for the same or connected tasks (e.g. the front/rear axle, complete front-section of a body or the steering system).

Automobile companies are looking for reducing total costs not just manufacturing cost or labor cost. There is a tremendous pressure on suppliers from emerging markets as total supply chain cost would increase when equipment parts are sourced from all over the world. Today, as Original Equipment Manufacturers (OEMs) design and build their vehicles globally, automotive industry supply chains have become increasingly complex (Fathi 2011). Automotive supply chains need to become more responsive and flexible to remain competitive. Automotive OEMs and suppliers require capability to manage shorter production lifecycles using processes such as Make-To-Order, Assemble-To-Order, and Configure-To-Order (PRTM Management Consultants, 2008). One of the important factors which changed the face of logistics management was Information Technology. But to the get maximum benefit out of the system, suppliers must cultivate a system which is easy to use, integrated with other systems, scalable for future use and secure to protect the data. Logistics has thus, gained a very importance place in today’s automobile supply chain.

This paper attempts to bring out the challenges faced by the global automobile industry related to the logistics management and also look at the industry growth drivers and opportunities for logistics management. This paper is based on studied opinions, published inputs, expert views available in public domain and authors own analysis. The information and data in this study about the supply chain management is collected from 30 global automobile organizations. This study will show the aspects of supply chain management in the automobile industry with focus on logistics management. It will also highlight the challenges faced in global logistics management, capabilities and the priorities for the next 2-3 years. While logistics management in global scenario is extremely complex, but organizations involved across the globe share many priorities — balance the availability of the inventory; control the costs and customer service. The idea behind the research has been to explore how all the stakeholders are managing these priorities and how are they changing in current times.

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