Chapter 14
Supply Chain Management Practices of Indian Automobile Industry

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ABSTRACT
The automobile industry is a major contributor to India’s economy. The Indian automobile manufacturers face stiff international competition in the wake of all major US and European car manufacturers entering the Indian market. In the contemporary scenario, supply chain management practices can be adopted to improve operational efficiency and profits. This paper presents the current status of Indian automotive supply chains. For this, data was collected by conducting a nationwide survey. The paper highlights some major problems plaguing the Indian automotive supply chains and finally, presents some recommendations that are potentially useful to bring Indian automotive supply chains at par with global industry leaders.

INTRODUCTION
Indian automobile industry has in recent years, flourished and displayed extra-ordinary growth capabilities. This has become possible mainly because of improvement in living standards of Indian middle class and increase in their disposable income. The liberalization steps initiated by the Government of India, such as reduction of tariffs on imports, and refining the banking policies, have played an equally important role in bringing the Indian Automotive industry to greater heights. According to Automotive Components Manufacturers Association (ACMA), today, India
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is forth largest and fastest growing passenger car market in Asia, second largest two-wheeler market and the largest three-wheeler market in the world.

The export boom in automobile sector has largely been possible due to improved performance of auto components segment. In the component industry, the top rung manufacturers made desperate attempt to overcome depressed domestic market of late 90s by tapping the export market and making efforts to improve quality and competitive potential. Exports also earned them higher margins. ACMA reports that the component exports crossed US 1.8 billion dollar mark in 2005. It is expected to touch US 6 billion dollar mark by 2010 and 25 billion by 2015. Some companies are also vigorously trying to build global supplier capabilities through acquisitions as shown in Table 1. Such acquisitions protect the companies from fluctuations in the demand in various geographical regions.

ACMA reports that out of 498 members, 456 are ISO certified. The suppliers are embracing modern shop floor practices such as 5S, Kaizen, TQM, TPM, Six sigma and lean manufacturing. Table 2 gives accomplishments of its members.

The prospective production of world’s cheapest small car NANO is an indicator of evolving supply chain models in the country. Many foreign players are also setting their small car manufacturing facilities in India not only to address the need of local market but for exporting as well. But this does not mean that everything has been achieved. According to the Draft automotive mission plan, issued by Government of India in September 2006, for the period 2006-2016, the industry not only needs to think big in terms of scales but also needs to:

1. Invest in R&D and technology
2. Have commitment towards skill development and education
3. Benchmark their performance against the best in the industry
4. Adopt best manufacturing practices and production techniques
5. Deliver on globally accepted quality levels

Supply chain management (SCM) practices, which aim to streamline and optimize the processes involved in acquiring input from suppliers; converting these inputs into finished products, and delivering these products to the customers, can be used to improve operational efficiency and profits. SCM can be referred as management of the integrated network of raw material suppliers, production sites, distribution facilities as well as the customers such that each operation or process in the network is optimized. Traditionally, the Indian automobile supply chains were organized into a multi-tier system, in which the first tier suppliers supplied components or sub-assemblies to the original equipment manufacturers (OEMs) as per the designs provided by OEMs and were placed closest to the OEMs. The second tier suppliers were responsible for supplying components or the raw material to the first tier. Third tier suppliers were responsible for supplying parts or other material to the second tier and so on. Though a huge population of over one billion and a rising middle-income group has made India one of the most promising markets but there are still many problems that plague the Indian automobile

<table>
<thead>
<tr>
<th>Company</th>
<th>Acquisitions Made</th>
</tr>
</thead>
<tbody>
<tr>
<td>TATA Motors</td>
<td>Daewoo commercial vehicle plant, S. Korea, Ford U.K.</td>
</tr>
<tr>
<td>Bharat Forge</td>
<td>Scottish stamping ltd., Scotland</td>
</tr>
<tr>
<td></td>
<td>Federal Forge, USA, Imatra Kilsta AB, Sweden,</td>
</tr>
<tr>
<td></td>
<td>Aluminiumtechnik, Germany</td>
</tr>
<tr>
<td>Mahindra and Mahindra</td>
<td>Sar Auto products ltd., Jianglang Motor company, China</td>
</tr>
<tr>
<td>Sundram Fasteners</td>
<td>Cramlington Forge, UK, Greenfield plant, China, Precision forging, UK</td>
</tr>
<tr>
<td>TVS Group</td>
<td>CJ components UK, RBI autoparts, Malaysia</td>
</tr>
</tbody>
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