CHAPTER - 3

ROLE OF B2B AND B2C E-COMMERCE IN INDIAN AUTOMOBILE INDUSTRY & PROFILE OF AUTOMOBILE MANUFACTURING COMPANIES IN KARNATAKA

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CHAPTER - 3

ROLE OF B2B AND B2C E-COMMERCE IN INDIAN AUTOMOBILE INDUSTRY & PROFILE OF AUTOMOBILE MANUFACTURING COMPANIES IN KARNATAKA

3.1 Introduction to B2B E-COMMERCE

“One of the goals of E-Commerce is to motivate suppliers to drive costs down and, of course, continue the flow of cost-savings to the assembler” said Cunningham.

It is still necessary for assemblers and suppliers alike to recognize and exploit the E-Commerce trend: first-to-market definitely applies. It is imperative that players enter the game early and strategically to create competitive advantage."

Automotive Companies are currently faced with the two critical challenges:

Car Manufacturing Companies (Original Equipment Manufacturers) have to achieve the right balance of harmonizing complex supply chains and sophisticated business process to achieve optimum interaction with the suppliers, services partners, dealerships and service centers which is a B2B E-commerce challenge and

Secondly, achieving Long-term brand loyalty by providing seamless service with a consistent brand experience across all available touch points – from initial contact through to after-sale service which of course is a B2C E-Commerce challenge. There remains a felt need for the Companies to remain competitive and respond more effectively to an increasingly dynamic market.

Across all the various automotive sectors in India, whether it is two, three or four wheelers, tractors or construction equipment, one of the biggest growth areas common to all these sectors is the component supply industry. Not just for the domestic market but the global export market as well. In 2011 the component supply market according to Automotive Component Manufacturers Association of India (ACMA), was worth nearly $ 40 billion and by 2020, it will be worth $ 113 billion, so significant growth is forecast by ACMA. The single biggest growth area in the component supply sector is in the supply of engine parts. The reason for this is that engine parts such as crank shafts, engine blocks, pistons and cylinder heads are
extremely labour intensive components to produce and many of the world’s car manufacturers will utilise the Indian component industry for these parts because they know that they can get them produced to a high quality and for a relatively low cost when compared to other regions of the world. The component exports are likely to grow from $ 5.2 billion in 2011 to $ 29 billion 2020 as more and more western car manufacturers establish sourcing hubs in India.

3.2 Factors that make India a favourite investment destination for Automobile Manufacturing :

Proximity to markets

• Proximity to other Asian economies, Proximity to the emerging markets such as Africa
• Shipments to Europe cheaper than those from Brazil and Thailand

High quality standards

• 11 Indian component manufacturers have won the Deming award for quality
• Most leading component manufacturers are QS and ISO certified

Competitive manufacturing cost

• Skilled labour costs amongst the lowest in India

Export potential

• Total value of exports by 2015 expected to reach US$ 8 billion to US$ 10 billion for vehicles and US$ 20 billion to US$ 25 billion for components

Availability of manpower

• Four lakh engineering graduates every year
• Seven million enter workforce every year

Large and growing domestic demand
• Demand growth of 14 per cent CAGR makes India one of the fastest growing markets

Stable economic policies
• Continuity in economic reforms and policies related to investments
Proven product developmental capabilities

- More than 125 Fortune 500 (including large auto companies) have R&D centres in India
- Companies can leverage India’s acknowledged leadership in the IT industry


Indian auto industry has evolved around three major clusters …

There are a large number of both domestic and foreign owned car manufacturing plants across India and Automotive hubs have been established in the North, South, East and Western parts of the country. The major auto-clusters in India are:

- Mumbai-Pune-Nashik-Aurangabad (West);
- Chennai-Bangalore-Hosur (South); and
- Delhi-Gurgaon-Faridabad (North).
- Jamshedpur-Kolkata(East)

Diagram3.1: Showing the Major automotive clusters in India

Major cluster- South : Automobile Manufacturers in South India

- Ashok Leyland • Ford • TVS Motors • Hyundai • Toyota Kirloskar Motor
- Brake India • Fenner • RaneGroup
- Visteon • Sundaram Fasteners • Delphi TVS • India Nippon • TI Group • Lucas-TV • UCAL • Royal Enfield • Volvo

The present study concentrates on the Car Manufacturing Companies hereinafter mentioned as Original Equipment Manufacturers (OEMs) of the Southern India cluster. The present study highlights the Car Manufacturers in Karnataka State and their major component suppliers spread across the country, which is the locale of the study.

3.3 The prerogative of outsourcing:

The complexity of designing and producing a motor vehicle is forcing OEMs to identify key first-tier suppliers and give them more responsibilities. A typical motor vehicle consists of approximately 15,000 parts and accessories that must be designed to be compatible and integrated. Hence, instead of having multiple suppliers for the production of a dashboard, OEMs are asking first-tier suppliers to produce and assemble the dashboard (sub-assembly) to certain specifications. With the effervescent growth of E-Commerce, customers have been given the possibility of customizing products to their liking. This form of commerce is called direct-selling through the web and has been most publicized by Dell's computer sales model. The automotive companies are now following the same path, but as Mark T. Hogan, head of GM’s new online division (e-GM), puts it: “Direct-selling involves moving at Internet speed in the back end of the business.” Toyota and other Japanese car-makers have pioneered the five-day car concept, which lets customers choose from a menu of onscreen options and then send specifications for their preferred customized vehicle directly to the factory. For this to be possible, dealers need to adjust: for example, Internet terminals have been in Toyota’s showrooms in Japan since 1995.
Top ten reasons why companies outsource

- Reduce and control operating costs
- Improve company focus
- Gain access to world-class capabilities
- Free internal resources for other purposes
- Resources not available internally
- Accelerate reengineering benefits
- Function difficult to manage or out of control
- Make capital funds available
- Share risks
- Cash infusion

Source: Automotive Manufacturing and Production

Table 3.1: Automotive production by selected countries 2007 to 2010.

<table>
<thead>
<tr>
<th>Countries</th>
<th>2007</th>
<th>Total (%)</th>
<th>2008</th>
<th>Total (%)</th>
<th>2009</th>
<th>Total (%)</th>
<th>2010</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brazil</td>
<td>2,977,150</td>
<td>4.06</td>
<td>3,215,976</td>
<td>4.56</td>
<td>3,182,923</td>
<td>5.15</td>
<td>3,648,358</td>
<td>4.69</td>
</tr>
<tr>
<td>China</td>
<td>8,882,456</td>
<td>12.12</td>
<td>9,299,180</td>
<td>13.19</td>
<td>13,790,994</td>
<td>22.32</td>
<td>18,264,667</td>
<td>23.46</td>
</tr>
<tr>
<td>India</td>
<td>2,253,729</td>
<td>3.08</td>
<td>2,332,328</td>
<td>3.31</td>
<td>2,641,550</td>
<td>4.27</td>
<td>3,536,783</td>
<td>4.54</td>
</tr>
<tr>
<td>South Africa</td>
<td>534,490</td>
<td>0.73</td>
<td>562,965</td>
<td>0.80</td>
<td>373,923</td>
<td>0.61</td>
<td>472,049</td>
<td>0.61</td>
</tr>
<tr>
<td>South Korea</td>
<td>4,086,308</td>
<td>5.58</td>
<td>3,826,682</td>
<td>5.43</td>
<td>3,512,926</td>
<td>5.69</td>
<td>4,271,941</td>
<td>5.49</td>
</tr>
<tr>
<td>Germany</td>
<td>6,213,460</td>
<td>8.48</td>
<td>6,045,730</td>
<td>8.57</td>
<td>5,209,857</td>
<td>8.43</td>
<td>5,905,985</td>
<td>7.59</td>
</tr>
<tr>
<td>Japan</td>
<td>11,596,327</td>
<td>15.83</td>
<td>11,545,644</td>
<td>16.37</td>
<td>7,934,057</td>
<td>12.84</td>
<td>9,625,940</td>
<td>12.36</td>
</tr>
<tr>
<td>USA</td>
<td>10,780,729</td>
<td>14.71</td>
<td>8,693,541</td>
<td>12.33</td>
<td>5,731,397</td>
<td>9.28</td>
<td>7,761,443</td>
<td>9.97</td>
</tr>
<tr>
<td>Total</td>
<td>73,266,061</td>
<td>100.00</td>
<td>70,520,493</td>
<td>100.00</td>
<td>61,791,868</td>
<td>100.00</td>
<td>77,857,705</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Table 3.2 : Showing Motor vehicle production in selected countries, 1996 to 2006, in 000 units and in % for growth rate.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>1,240</td>
<td>1,628</td>
<td>2,009</td>
<td>3,251</td>
<td>5,071</td>
<td>7,272</td>
<td>19.3</td>
</tr>
<tr>
<td>India</td>
<td>541</td>
<td>535</td>
<td>867</td>
<td>892</td>
<td>1,511</td>
<td>1,876</td>
<td>13.2</td>
</tr>
<tr>
<td>Republic of Korea</td>
<td>2,354</td>
<td>1,787</td>
<td>2,858</td>
<td>3,148</td>
<td>3,469</td>
<td>3,840</td>
<td>5.0</td>
</tr>
<tr>
<td>France</td>
<td>2,359</td>
<td>2,923</td>
<td>3,352</td>
<td>3,693</td>
<td>3,666</td>
<td>3,164</td>
<td>3.0</td>
</tr>
<tr>
<td>Brazil</td>
<td>1,813</td>
<td>1,547</td>
<td>1,671</td>
<td>1,793</td>
<td>2,210</td>
<td>2,597</td>
<td>3.6</td>
</tr>
<tr>
<td>Mexico</td>
<td>1,222</td>
<td>1,460</td>
<td>1,923</td>
<td>1,805</td>
<td>1,555</td>
<td>2,043</td>
<td>5.3</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>1,029</td>
<td>1,021</td>
<td>1,203</td>
<td>1,220</td>
<td>1,388</td>
<td>1,495</td>
<td>3.8</td>
</tr>
<tr>
<td>Germany</td>
<td>4,843</td>
<td>5,727</td>
<td>5,527</td>
<td>5,145</td>
<td>5,570</td>
<td>5,818</td>
<td>1.8</td>
</tr>
<tr>
<td>Spain</td>
<td>2,412</td>
<td>2,826</td>
<td>3,033</td>
<td>2,855</td>
<td>3,012</td>
<td>2,776</td>
<td>1.4</td>
</tr>
<tr>
<td>Canada</td>
<td>2,397</td>
<td>2,570</td>
<td>2,962</td>
<td>2,629</td>
<td>2,712</td>
<td>2,544</td>
<td>0.6</td>
</tr>
<tr>
<td>Japan</td>
<td>10,346</td>
<td>10,050</td>
<td>10,141</td>
<td>10,258</td>
<td>10,512</td>
<td>11,484</td>
<td>1.0</td>
</tr>
<tr>
<td>United States</td>
<td>11,832</td>
<td>12,003</td>
<td>12,774</td>
<td>12,280</td>
<td>11,988</td>
<td>11,351</td>
<td>-0.4</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>1,924</td>
<td>1,976</td>
<td>1,814</td>
<td>1,821</td>
<td>1,856</td>
<td>1,650</td>
<td>-1.5</td>
</tr>
<tr>
<td>Italy</td>
<td>1,545</td>
<td>1,693</td>
<td>1,738</td>
<td>1,427</td>
<td>1,142</td>
<td>1,212</td>
<td>-2.4</td>
</tr>
</tbody>
</table>

Table 3.3: Showing Strengths and Weaknesses of the Different players in the Indian Auto Industry

<table>
<thead>
<tr>
<th>Group</th>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indian Assemblers</td>
<td>Established distribution and after-sales networks, and Supplier base.</td>
<td>Lack of product development capabilities (except TELCO).</td>
</tr>
<tr>
<td></td>
<td>Understanding of the Indian market and ability to liaison with the government.</td>
<td>Brand image (especially HM and PAL).</td>
</tr>
<tr>
<td>Multi-national Assemblers</td>
<td>Lean production capability. Ability to design products with differentiating features. Deep pockets, brand image.</td>
<td>Lack of experience with the Indian market, industry, and Government. Small component supplier base and high import tariffs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lack of know-how in certain areas.</td>
</tr>
</tbody>
</table>

The Indian component industry is small and fragmented, but is growing and learning fast due to exports. It is also estimated to hold a 20-40% cost advantage over multinational component suppliers who are much larger and are themselves opening up units in India to take advantage of the lower-cost, skilled workforce. The Indian component industry needs to invest in capacity and research and development to stay abreast of competition, when the wage gap closes over time.

It is likely that some of the multi-national assemblers or component makers might buy some of the small but niche component makers with a reputation for quality. Interestingly from an EDI perspective, there is hardly any use of EDI technology across the component supply industry, except across some of the western suppliers such as Bosch and Continental that have brought their own EDI standards and tools with them into the country. So the component industry suffers from; having to use lots of manual based processes at the moment and for those companies that have implemented an IT system such as an ERP platform there is the perception that they can do everything they need in ERP without ever having to use EDI. Now from a global trade perspective this clearly will not work and this is a key reason why ACMA
is keen to understand how EDI can be deployed across its member companies and therefore allow these companies to compete on a more equal footing on the global automotive stage (Mark Morley, 2012)

3.4 Understanding Automotive Supplier Performance

A. Focus of the Study (The Asian perspective)

A study of the automotive industry in Asia should primarily focus on evaluating the capabilities of the local components firms and identifying future development paths for these firms. With OEMs increasingly dominated by multinationals, and relying more heavily on their suppliers for engineering and manufacturing, the development of the auto sector in any of the countries of the region will primarily depend on the strength of the local supply chain. Therefore, it is crucial to promote a good understanding of the Asian auto components sector and to derive appropriate policies for its development.

The automotive supply chain: Global trends

The evolution of the auto industry in the Asian region will mostly depend on the development of the auto parts sector. The OEM trend to increase outsourcing means that location decisions will be conditioned by the availability of local suppliers of low-cost quality parts, which are also able to take responsibility for development. Therefore, upgrading the local auto parts industry should be at the core of the policy of any of the Asian governments. This is precisely the reason why the proposed study should focus on evaluating the capabilities of the local firms and identifying future development paths in the region. The analysis may have two levels: first tier suppliers / integrators and component suppliers.

B. Evaluating Manufacturing Excellence

Manufacturing companies compete on a set of dimensions that are well understood and characterized in business and industrial engineering literature. Some of the critical ones are cost (price), logistics, quality, flexibility, and development. Depending on the positioning strategy toward their clients, firms will place more or less emphasis on each of these capabilities, and organize their internal structure and
infrastructure to better respond to the chosen strategy. It is certainly different to be a supplier of generic injection moulded parts for multiple clients or the manufacturer of complete steering columns. Therefore, there exists a challenge to cover a clear identification of the position of the companies in the automotive market, the strategy they wish to pursue, as well as their perception on relative strengths and weaknesses in the face of the chosen path. Figure 3.2 highlights the set of aspects that can be considered when analyzing the capabilities of manufacturing firms.

In the just-in-time world of today’s auto industry, that is expected to become even more so with the advent of the Internet, logistics capabilities are a major concern. There are a number of issues that OEMs value in terms of logistics and it is not uncommon for suppliers to face dozens of questions regarding their logistics systems. Two indicators, nevertheless, have become ubiquitous in the auto industry: order lead time (the time between final order and delivery at the client) and on-time delivery.

**Diagram 3.2: A Model for Assessing Manufacturing Capabilities**

![Diagram](image)


**The supplier revolution**

During the last 10 to 15 years, the increased downsizing trend coupled with the spread of a truly global economy has led more and more companies to lean on suppliers to gain competitive edge. The ‘C’- title executives are usually more
interested in return on investment than relationships, which is often the reason why they use suppliers in the first place for cutting down costs. Outsourcing manufacturing operations to suppliers, when done successfully, can help businesses increase profit, time-to-market, and customer satisfaction, while decreasing costs and keeping up with consumer demand.

For Toyota and Honda, in particular, suppliers have been key to their innovation and success. Indeed, the two companies source about 70 to 80 percent of their manufacturing costs from outside suppliers. And suppliers return the favour: For example, many of the cost-cutting ideas that made Accord and Camry so successful came from suppliers, reports Choi (2005). Of course, with such great reliance on suppliers comes a great need to manage and build relationships with those suppliers and that is where the two Japanese automakers far outpace their American rivals. Though keiretsu was briefly in vogue with American business in the 1980s, its prominence was short-lived. "American companies decided the immediate benefits of low-wage costs outweighed the benefits of investing in relationships," says Choi. It might be fair to assume the "cheaper, faster, better" American culture makes the concept of building deep supplier relationships alien to our way of conducting business. But Choi is quick to challenge that. Company culture, he says, is far more important.

3.5 Emergence of Indian Suppliers in the Global Market

Indian auto component manufacturing is gradually expanding capacities and automation levels in-line with the requirements of end users and introduction of new models and variants. This offers vehicle and component manufacturers various challenges to the manufacturing capabilities and economies of scale forcing the industry to maintain lean and efficient manufacturing systems. The Indian auto component manufacturers have made a mark in the domestic market and are establishing their presence in the global arena for increased growth. The Indian auto component industry is targeting a bigger share of the export market and is in the process of ramping up its manufacturing capabilities to meet the capacity and quality requirements. The sector is increasingly drawing global attention and is using a combination of global expansion, domestic consolidation and quality management to gain acceptance both at home and abroad.
Today, a number of them have also secured various quality certifications and even the coveted Deming Awards and the Japan Quality Medal. Today, the quality movement in India’s auto component sector has made it easier for Indian companies to penetrate the overseas markets. Also, by investing in quality, local component manufacturers have become part of the global sourcing systems of some of the international automotive companies who have put up manufacturing facilities in India.

3.6 India’s Potential to become Epicentre of High-end R&D

The increasing use of High-end software in automobile design and R&D has made Indian auto majors leverage the country’s software prowess and gain an edge over their European and American competitors. Most are expanding their research and design services either organically or by acquisitions, which will enable them to launch newer models in the market quickly and efficiently in the coming years. In June 2009, the $6 billion Mahindra & Mahindra group (M&M) had opened its new $116 million (nearly 460 Crores) automobile design and development facility called Mahindra Research Valley (MRV) spread over 150 acres in Mahindra World City in Chennai. Primarily this R&D facility will cater to M&M’s design needs and later may consider doing similar high-end work for other OEMs. Tata Motors has six R&D Centres that span India, South Korea, Spain and the UK. In 2006, the Tata’s acquired INCAT- now an arm of Tata Technologies – that conducts specialized R&D work for the Tata Group and others. Recently, Tata Motors bought a minority stake in an Italian design firm, Pininfarina, which has designed some landmark Ferraris.

Currently, India enjoys a reputation as provider of low-end research work that revolves around small cars. The current challenge is to change that perception. The country has had a reputation for low end design work. Setting up of the Mahindra Research Valley will demonstrate India’s capability to become the epicentre of engineering design and development for high-end work also.

Analyzing Innovation Capabilities

During recent years, development capability emerged as the critical issue differentiating supplier roles. Product proliferation and the incorporation of more technology in the car generated the need to disperse development effort throughout the supply chain. As a result, OEMs and first tier suppliers make a detailed assessment of
the development responsibilities that smaller suppliers are capable of accepting. This means that they inquire the supplier on aspects such as the number and qualification of the workers involved in development, the number of CAD stations and their software, the characteristics of the testing and prototyping facilities, as well as the knowledge of design methods and tools (e.g., FMEA, DFA, and QFD). Collaboration with outside organizations in technology sourcing is also valued by OEMs.

Table 3.4: Product Complexity and Development Effort

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Job master Screwdriver</th>
<th>Rollerblades</th>
<th>Microfilm Case</th>
<th>DeskJet Printer</th>
<th>Mid-Size Car</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Unique Parts</td>
<td>3</td>
<td>35</td>
<td>35</td>
<td>200</td>
<td>10,000</td>
</tr>
<tr>
<td>Development Time</td>
<td>1 year</td>
<td>2 year</td>
<td>1 year</td>
<td>1.5 years</td>
<td>3.5 years</td>
</tr>
<tr>
<td>Size of Team for Development</td>
<td>2 people</td>
<td>3 people</td>
<td>10 people</td>
<td>65 people</td>
<td>500 people</td>
</tr>
<tr>
<td>Engineering Hours</td>
<td>1800 h</td>
<td>8500 h</td>
<td>14000 h</td>
<td>14000 h</td>
<td>2.5 million h</td>
</tr>
<tr>
<td>Development Cost</td>
<td>$150,000</td>
<td>$750,000</td>
<td>$1.5 million</td>
<td>$50 million</td>
<td>$1 billion</td>
</tr>
</tbody>
</table>


To understand how firms rank in development capabilities, levels of complexity in terms of product and process development can be used (disregarding products like a whole car). For example, one can consider:

(i) Simple products: Total of 1,500 hours of engineering
(ii) Fair complexity product: Total of 8,000 hours of engineering
(iii) Average complexity product: Total of 20,000 hours of engineering
(iv) Very complex product: Total of 150,000 hours of engineering

This indicator, together with information on the systems and development practices, including cooperative efforts may provide very important insights in what concerns the development and innovation capabilities of the Asian suppliers and provide valuable information to trace meaningful development paths. The evolution of Full extended Enterprise model with cutting edge technology and the evolution of
supply chain capabilities over the past two decades can be discerned from the following Table:

Table 3.5: The projected evolution of supply chain management best practices.

<table>
<thead>
<tr>
<th></th>
<th>1990 Higher-Level Corporate Model</th>
<th>2000 Extended Enterprise Model</th>
<th>2010 Fully Extended Enterprise Model</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Supply-chain strategic orientation</strong></td>
<td>Management focus on integrated physical distribution and customer service sides of supply chain.</td>
<td>Management focus on building extended Transactions/communications Platforms to integrate global physical, service, and information flows between key value chain actors.</td>
<td>Management focus on exploiting the highly intelligent IT-enabled global value chain, with emphasis on continuous exchange of not only data sets but also dynamic knowledge flows about market events and customer drivers.</td>
</tr>
<tr>
<td></td>
<td>Interest in mapping and costing supply-chain network activities to exert real strategic control over the extended enterprise for the first time.</td>
<td>Interest in optimizing physical/electronic value chains based on cost/benefit analyses of total costs of asset ownership on each step of the value chain and outsourcing.</td>
<td>Interest in the direct substitution of information for physical assets and the deployment of massive global bandwidth to create new global supply-chain capabilities.</td>
</tr>
<tr>
<td><strong>Leadership structure</strong></td>
<td>Higher-level executive (Chief Logistics Officer) seeks to compress cycle times to customer and provide efficient cross-functional operational handoffs.</td>
<td>VP for the “All Channels Supply Chain” manages internal/external assets and physical/informational transactions as one seamless web.</td>
<td>Chief Executive Officer leads formalization of knowledge capture/management systems across the extended supply chain.</td>
</tr>
<tr>
<td></td>
<td>Director of electronic commerce is creating information infrastructure for the extended enterprise and is emerging as a key corporate opinion maker in supply-chain management.</td>
<td>Director of logistics (Physical Channels) and director of (Electronic Channels) report to VP of an “All-Channels Supply Chain.”</td>
<td>The Supply-Chain Change Group acts as the hub of knowledge to intelligently capture, classify, analyze, summarize, and route knowledge to its most appropriate users.</td>
</tr>
<tr>
<td></td>
<td>Internal units aggregate purchasing, shipment, and information system requirements to lower transaction costs and gain leverage over vendors.</td>
<td>An “All Channels Supply-Chain Change Group” composed of people drawn from across the extended enterprise, from distributors/suppliers/carriers.</td>
<td>Management of multi-channel global customer order interfaces: enabled Web sites/phone order systems and wholesale/retail outlets.</td>
</tr>
<tr>
<td>Nature of relationships</td>
<td>Shift to core long-range strategic alliances with carriers, suppliers, and distributors; emphasis is on operational cost reduction.</td>
<td>Shift to wider sourcing of services and products; emphasis is on reliability and reduction of volatility to deliver better customer service in a globalizing marketplace.</td>
<td>Shift to optimizing global supply chains; emphasis is on systematic evaluation of the universe of global sourcing options for products and services at every step of the supply chain.</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Core distributors/suppliers/carriers moving to real-time operations connectivity over private corporate networks or over emerging Internet-based networks.</td>
<td>Core distributors/suppliers/carriers moving to real-time connectivity for collaborative forecasting and planning; shift to knowledge management.</td>
<td>Core distributors/suppliers/carriers moving to high-level synchronization of knowledge, actions, and schedules across globally distributed supply chains.</td>
</tr>
<tr>
<td></td>
<td>Extranet data backbone enables “real time windows” on internal operations to open to core suppliers and distributors.</td>
<td>First use of global online bidding/sourcing systems on the Internet for both core suppliers as well as spot suppliers to slash order cycle time.</td>
<td>Real-time dynamic supply chain- wide coordination in response to external events. The realization of the IT-enabled supply chain.</td>
</tr>
<tr>
<td>Priority technology applications</td>
<td>Intelligent agents and automated “decision tools” utilize incoming data flows to evaluate inventory levels across the value chain and act to optimize held versus in-transit inventory.</td>
<td>Wholesale shift to the Internet. Major integration efforts aimed at using open Internet front ends and secure EDI back-ends in corporate networks, particularly in the order management/customer service area.</td>
<td>Faster switching times and greater multimedia capacity of the Internet enable faster flow-through times in supply-chain pipelines, greater velocity of assets and transactions</td>
</tr>
<tr>
<td></td>
<td>Attempt to make supply-chain network modelling software more dynamic, less reliant on batched, slow information transfers.</td>
<td>Electronic messaging enables real-time use of data in supply-chain network modelling.</td>
<td>More extensive and systematic fusing of data and information into “true” supply-chain knowledge. Increased capability to launch real-time optimizing actions across the supply chain.</td>
</tr>
</tbody>
</table>

Source: Boyson, et.al. 1999, logistics and the extended enterprise

### 3.7 Perspective of Indian Automotive Supply Chain: KPMG

The Global Automotive Executive Survey 2011, conducted by KPMG has envisaged the current state and future prospects of the worldwide automotive industry. The survey has assessed the auto industry by interviewing 200 senior executives from the world’s leading automotive companies, including automakers, suppliers and dealers. The survey results show the focus of Automobile dealers on Sales, Service and increased investment in Information Technology.
As some of the survey findings suggest, the automotive industry is heading for a new business model, dealers may be able to play a role in providing mobility solutions, or get more involved in financing, leasing and full service provision over a car’s lifetime. The survey results show dealers have relatively less interest in expanding organically or through acquisitions, either domestically or overseas, which reflects the largely fragmented, regional structure of the dealership market. However, if integrated mobility concepts expand, dealers may have to re-think their horizons and incorporate customers’ cross-border travel needs.

SOURCE: Global Automotive Executive Survey 2011
3.8 Introduction:

The online search behaviour of consumers mirrors the offline world, as query volumes on Google search see a 46% increase over first half of the year as Indian consumers tend to make auto purchases during the festive season (2013 to 2014). Indians are also more research oriented when it comes to auto related purchases, with 65% Indians using the Internet as the first place to do their research before deciding on the vehicle of their choice. This is ahead of consumers in mature markets like US and Europe where only 62% of users use Internet as their first stop. In cars, entry and mid segment cars in the price range of (2 lakhs upto 6 lakhs), the highest selling car category by volumes in India, was also the most-searched category registering over 50% year on year growth in query volumes. In terms of type of queries, vehicle-shopping queries accounted for over 49% of all cars related queries. Interestingly, in-spite of the choices available in fuel efficient small cars category, Diesel cars queries saw a huge jump in query volumes registering 105% growth in 2014. Rising petrol prices weighed on car buyers mind as diesel car queries saw a jump of 52% in the period of April 2014 to May 2014 when petrol prices increased.

3.9 Age Profile of Indian Online users by type of interaction with the internet

The survey conducted by search engine, Google reveals that three fourth of the audience (36%+38%=74%) that searches for information about Cars online is in the 25-29 and 30-39 years age bracket, which has the highest leverage in terms of disposable income in India, which reflects the sporadic surge in the growth of the urban middle class which can be evidenced from the following diagram:
Diagram 3.4: Age Profile of Online Users By Type Of Interaction With The Internet

Source: Google online survey 2011

In a survey conducted by Yahoo India Technology group, there was a high incidence of customers who searched for car related information published in the various websites of Automobile manufacturers. This demonstrates internet as a dynamic and potent medium for creating a seamless interface with the customers online and promoting B2C E-commerce in the Indian sub-continent. This is evidenced from the following diagram:
Diagram 3.5: Showing top 10 websites for search on information for cars

Top 10 websites to look for information on cars
- By car segment

<table>
<thead>
<tr>
<th>Website</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>marutiudyog.com</td>
<td>38%</td>
</tr>
<tr>
<td>google</td>
<td>34%</td>
</tr>
<tr>
<td>Yahoo!</td>
<td>31%</td>
</tr>
<tr>
<td>autocarindia.com</td>
<td>25%</td>
</tr>
<tr>
<td>indiatimes</td>
<td>24%</td>
</tr>
<tr>
<td>hyundai.co.in</td>
<td>18%</td>
</tr>
<tr>
<td>rediff</td>
<td>16%</td>
</tr>
<tr>
<td>automobile.com</td>
<td>12%</td>
</tr>
<tr>
<td>automartindia.com</td>
<td>8%</td>
</tr>
<tr>
<td>msn</td>
<td>6%</td>
</tr>
</tbody>
</table>

Source: Yahoo India and Technology Group

Online customer satisfaction is an important dimension to measure the efficacy of the Car Manufacturers websites. Measuring the satisfaction level of online visitors for car related information on the internet not only aids the companies to know the response of customer but also helps them to match up to the user expectations. The Search query trend of Yahoo research shows majority of the online users (63% of users) are ‘somewhat satisfied’ with the Internet as a source of information on cars.
There is a great deal of responsibility on the Car Manufacturers to design and update their websites to create a seamless informative website to retain their brand value. This can be evidenced from the following diagram:

**Diagram 3.6 : Showing Customers’ satisfaction with Internet**

Source : Yahoo India and Technology Group

Some of the important parameters for the high satisfaction levels of online customers searching for car related information are: Relevance of information, Ease of searching
information, Latest information, Number of models featured, Quality of data, Authenticity and so on. Online users feel that Internet is the original place to get specific information. This can be seen from the following diagram:

Diagram 3.7: Showing Customer Satisfaction with specific parameters related to Internet

Source: Yahoo online survey
In a recent survey Google India releases auto industry report based on the search query trends, which states:

Google India released a report on the auto sector in India, providing deep insights into consumer search trends in the sector (By CarDekho Team 09 Aug, 2011 at 2:07:52 PM). A compilation of consumer search behavior in the auto category (Cars & Bikes) in the last two years (‘09 & ‘10), the “Google India Auto Report”, underlines how Indian consumers are increasingly relying on the Internet to make important buying decisions.

Most searched car launches/variants from Jan 2010 to May 2011 are, Maruti Alto K10, Ford Figo, Hyundai i10 - next gen, Maruti Kizashi, Chevrolet Beat, Nissan Micra, New Hyundai Verna Fluidic, VW Polo, Toyota Etios and Maruti SX4 Diesel. The list again reflects price sensitive nature of the Indian market with newer brands and launches capturing user’s attention. Most searched auto brands from Jan 2010 to May 2011 are Maruti, Honda, Hyundai, General Motors, Tata Motors, Toyota, Ford, Volkswagen and Fiat.

3.10 Sales Experience of Indian Car Buyers

Sales experience of Indian car buyers is clearly reflected in the India Sales Satisfaction Index Study held by J.D. Power Asia, an international association that conducts research and surveys to help car manufacturers improve their sale and service. The survey is based on the car owners’ satisfaction with respect to the sales and delivery process. According to the study, there are seven factors that contribute to the satisfaction level at the time of purchase. These factors include delivery process, delivery timing, salesperson, sales initiation, dealer facility, paperwork and deal.

In a recent survey conducted by J.D.Power Asia, the Highlights of 2015 India Sales Satisfaction Index Study are:

As per the recent survey, Toyota and Mahindra Rank Highest in a Tie in Sales Satisfaction among Mass Market Brands in India. The study was fielded from March to July 2015.

The study examines seven factors that contribute to new-vehicle owners’ overall satisfaction with their sales experience (listed in order of importance): delivery
process, delivery timing, salesperson, sales initiation, dealer facility, paperwork and deal. Satisfaction is calculated on a 1,000-point scale. Overall sales satisfaction in the mass market segment is 851, a 6 point decline from 2014. Nearly one in five (18%) customers is dissatisfied with several critical aspects of the purchase process, including negotiations for their new vehicle, delivery commitments and the overall delivery process.

**Highlights of 2008 India Sales Satisfaction Index Study**

J.D. Power Asia Pacific 2008 India Sales Satisfaction Index (SSI) Study is the ninth study that finds out the level of satisfaction across the industry. On a scale of 1,000 point, the satisfaction level averages to about 767. Six out of 10 vehicle manufacturers included in the study ranks above average and Skoda ranks the highest with a top score of 799.

**Highlights of 2007 India Sales Satisfaction Index Study**

According to the survey held in 2007, Skoda ranks the highest in overall sales satisfaction of new-vehicle owner. On a scale of 1,000 point, the satisfaction level averages to about 773. Six out of nine vehicle manufacturers included in the study positioned above average and Skoda ranks the highest with a top score of 797.

**Following are the interesting trends that have emerged from the survey conducted by Gaadi.com:**

- Over 46% of the women respondents look for Sedans as their first car

- For over 45% of the Indian buyers, style and comfort are the most important parameters while purchasing a car over mileage

- Over 55% Indians state that they are keen on purchasing a Sedan over a hatchback without keeping the hurdles of traffic jams in mind

- Respondents under the age of 30 are willing to spend almost twice their annual income to buy their first car

- People in an annual income bracket of Rs.3L-9L are willing to spend their entire annual income on a new car purchase
3.11 Challenges for the Automobile Manufacturers and feasible solutions for satisfying Customers

There are Seven Tips to Make the Business Irresistible to Online Shoppers

Challenge #1: Customers are attracted by added value and fun.
Solution: Provide tools and information that are fun and will aid the purchases.

Challenge #2: Customer service is supreme.
Solution: The consumer wants to be catered to, communicated with, and most of all, respected and involved.

Challenge #3: Today, more and more, people are looking for a more personalized experience.
Solution: Identify with, personalize, customize and interact with the consumer.

The bottom line

It is a well acknowledged fact that no matter the size of a company’s business, the consumer is the very lifeblood, the reason for the company’s existence, the company’s future, the company’s income, the company’s longevity, and the company’s survival is based on consumer loyalty and long-term relations. Service and Socializing with the Customer is the ‘mantra’ for success. Companies have to do everything possible to keep the consumer engaged, entertained, and satisfied if they want to be successful and stick around for a while. If the fingers that rock the Smartphone, the I Pad, the email, the SMS, the socials -- aren’t treated fast and well -- they’ll quickly “disconnect”. On the other hand, if the companies help them in each and every step, they’ll happily promote, treasure, love the services, and keep coming…, back for more.
3.12 General Classification of Automobile companies in Karnataka:

For the present study it is important to throw light on the General classification of Automobile Industry in Karnataka. It is an upcoming state with a progressive outlook and has a vibrant Automobile Industry which is second to I.T sector in terms of growth. The following Table illustrates the number of Automobile Companies, ancillaries, SME’s, Dealers and Service Centres in Karnataka of which there are three OEMs, (Original Equipment Manufacturers) namely Toyota Kirloskar Motors Pvt. Ltd., Volvo India Pvt. Ltd., and Mahindra Reva Electric Vehicles Pvt. Ltd. Are situated in Karnataka State. All the three car manufacturing Companies come under the Private Sector well established in the State for more than a decade. For the purpose of this research, their Case study is being thoroughly analysed for the E-Commerce adoption and diagnosed for the real problems of the entire automotive supply chain in India and specifically Karnataka state which is the locale of the present study.
Table 3.6: General Classification of Automobile Companies/Ancillaries established in Karnataka State

<table>
<thead>
<tr>
<th>TYPE OF COMPANY.</th>
<th>Sub total</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi National Corporation (MNC)</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td><strong>INDIA’S TOP 500</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Auto ancillary</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><strong>INDIA’S 501-1000</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Auto ancillary</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td><strong>INDUSTRY BEST</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Auto ancillary</td>
<td></td>
<td>16</td>
</tr>
<tr>
<td>b) Dealers</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>23</td>
</tr>
<tr>
<td><strong>SMEs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Auto ancillary</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>b) Dealers</td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>23</td>
</tr>
<tr>
<td><strong>DEALERS, SERVICE CENTRES</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Industry best</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>b) SMEs</td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td><strong>Grand total</strong></td>
<td></td>
<td>90</td>
</tr>
</tbody>
</table>

Source: Society of Indian Automobile Manufacturers (SIAM)

The above table shows the classification of Automobile Companies in Karnataka and Automobile ancillaries totaling 90 in number. They can be further classified into:

a) *Multi National Corporation (MNC) segment* - 18 Companies,

b) *India’s Top 500* – 1 Auto ancillary,

c) *India’s Top 501-1000* - 5 Auto ancillaries,

d) *India’s Industry Best* – 7 Dealers and 16 Auto ancillaries,

e) *SME segment* – 13 Dealers and 10 Auto ancillaries,

f) *Dealers & Service centres* – 7 Industry best and 13 SMEs.
3.13 Case Study of Toyota:

Toyota Manufacturing companies in Asia and Toyota India Operations:

Toyota Kirloskar Motor Private Ltd has established its manufacturing plants as (Original Equipment Manufacturer) in the Southern Indian state of Karnataka at Bidadi Industrial area, Ramanagar taluk approximately 35 kms, from Bangalore. Toyota Kirloskar Motor Pvt Ltd is a subsidiary of Toyota Motor Corporation of Japan, for the manufacture and sales of Toyota cars in India. It is currently the 4th largest car maker in India after Maruti Suzuki, Hyundai, and Mahindra.

**Toyota Kirloskar Motors Pvt Ltd (Kirloskar)**

<table>
<thead>
<tr>
<th>Address</th>
<th>Plot No 1, Bidadi Industrial Area, Ram Nagar Taluk</th>
</tr>
</thead>
<tbody>
<tr>
<td>City</td>
<td>Bangalore / Bengaluru</td>
</tr>
<tr>
<td>State</td>
<td>Karnataka</td>
</tr>
<tr>
<td>Pin</td>
<td>562109</td>
</tr>
<tr>
<td>Phone No</td>
<td>[click to view number]</td>
</tr>
<tr>
<td>Industry</td>
<td>Automobile, Auto Ancillaries</td>
</tr>
<tr>
<td>Company Type</td>
<td>MNC</td>
</tr>
<tr>
<td>Est. Total Turnover</td>
<td>5000+ Crs</td>
</tr>
<tr>
<td>Est. No. of Emp.</td>
<td>5001 &amp; above</td>
</tr>
<tr>
<td>Sector</td>
<td>Private Sector</td>
</tr>
</tbody>
</table>

The plants established by Toyota are:

- Toyota Kirloskar Motor Private Ltd (TKM) Established - Dec. 1999
- Toyota Kirloskar Auto Parts Private Ltd (TKAP) Established - July 2002
Toyota is a great company that has been very successful over the past couple of decades. Toyota was founded in 1926 by Sakichi Toyoda, and in 2006, 8.5 million vehicles had been produced. Toyota has surpassed Ford and is on its way on surpassing General Motors.

Toyota's Vision and Mission statements are:

**Vision**

1. Delight our customers through innovative products, by utilising advanced technologies and services.

2. Ensure growth to become a major player in the Indian auto industry and contribute to the Indian economy by all stakeholders.

3. Become the most admired and respected company in India by following the Toyota Way.

4. Be a core company in global Toyota operations.

**Mission**

1. Practise ethics and transparency in all our business operations.

2. Touch the hearts of our customers by providing products and services of superior quality at a competitive price.

3. Cultivate a lean and flexible business model throughout the value chain by continuous improvement.

4. Lead the Toyota global operations for the emerging mass market.

5. Create a challenging workplace which promotes a sense of pride, ownership, mutual trust and teamwork.


THROUGH THESE ACTIVITIES TOYOTA ENVISAGES TO ESTABLISH A SUPERIOR BRAND IMAGE IN INDIA.

Toyota still has its challenges and that is what the SWOT and Porter’s Five Force Analysis will show. Starting off with the SWOT Analysis for Toyota is strengths are that in 2005 Toyota’s factories in the US and China saw profits rise. The net profits rose from 8% to $11 billion. This is because the company has the right mix of
products for the market that it is in. In 2003, Toyota moved ahead of Ford to become the world’s second largest carmaker.

The weaknesses for Toyota are being able to figure out what customers want. Toyota has to take inconsideration the economy of the U.S., which is one of its biggest clients. The must figure out what people are going to want to buy in the sense of cars.

Toyota must keep producing cars to stay in control of what they are doing. If the market goes down then it would be bad for Toyota to have a bunch of made cars sitting around. But, if the market is going well, then Toyota must have the right amount of cars so it can make sales and not lose money.

The opportunities for Toyota are the new fuel efficient cars that they are producing. With the oil prices reaching record highs, Toyota has the advantage over other car manufactures with their more fuel efficient cars. This is one of their keys to success right now. Toyota is also producing cars that are targeted towards the younger generation of drivers.

Key Principles of The Toyota Way 2001

In order to carry out the Guiding Principles at Toyota Motor Corporation, in April 2001 Toyota adopted the Toyota Way 2001, an expression of the values and conduct guidelines that all employees should embrace. In order to promote the development of Global Toyota and the transfer of authority to local entities, Toyota's management philosophies, values and business methods, that previously had been implicit in Toyota's tradition, were codified. Based on the dual pillars of "Respect for
People" and "Continuous Improvement," the following five key principles sum up the Toyota employee conduct guidelines: Challenge, Kaizen (improvement), Genchi Genbutsu (go and see), Respect, and Teamwork. In 2002, these policies were advanced further with the adoption of the Toyota Way for individual functions, including overseas sales, domestic sales, human resources, accounting, procurement, etc.

**Economic Performance :**

In order to achieve "compatibility between the environment and the economy," "fulfil responsibility towards society," and gain the trust of all stakeholders, including shareholders, local communities, customers, suppliers and employees, long-term stable growth is an indispensable factor. Representative economic performance indicators for Toyota are shown below:

**Table: Showing Sales Status (April 2002 - March 2003)**

(Rounded to the nearest 100 million yen)

<table>
<thead>
<tr>
<th></th>
<th>Unconsolidated Base</th>
<th>Financially Consolidated Base</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net sales</td>
<td>8,739.3 billion yen</td>
<td>15,054.2 billion yen</td>
</tr>
<tr>
<td>Operating income</td>
<td>851.3 billion yen</td>
<td>1,353.5 billion yen</td>
</tr>
<tr>
<td>Ordinary income</td>
<td>892.5 billion yen</td>
<td>1,414.0 billion yen</td>
</tr>
<tr>
<td>Net income</td>
<td>534.0 billion yen</td>
<td>944.5 billion yen</td>
</tr>
<tr>
<td>Total assets*</td>
<td>8,592.8 billion yen</td>
<td>20,742.3 billion yen</td>
</tr>
<tr>
<td>Shareholders' equity*</td>
<td>5,703.3 billion yen</td>
<td>7,450.2 billion yen</td>
</tr>
<tr>
<td>Return on equity (ROE)</td>
<td>11.2%</td>
<td>12.8%</td>
</tr>
<tr>
<td>Net income per share</td>
<td>173.12 yen</td>
<td>272.75 yen</td>
</tr>
<tr>
<td>Net equity per share*</td>
<td>1,552.15 yen</td>
<td>2,225.34 yen</td>
</tr>
<tr>
<td>Capital investment</td>
<td>259.3 billion yen</td>
<td>993.5 billion yen</td>
</tr>
<tr>
<td>R&amp;D expenses</td>
<td>561.2 billion yen</td>
<td>671.5 billion yen</td>
</tr>
<tr>
<td>Number of vehicles produced</td>
<td>3,513,887 vehicles</td>
<td>5,982,995 vehicles</td>
</tr>
<tr>
<td>Number of vehicles sold</td>
<td>3,559,825 vehicles</td>
<td>5,246,155 vehicles</td>
</tr>
<tr>
<td>Number of employees*</td>
<td>55,551</td>
<td>254,095</td>
</tr>
</tbody>
</table>

*As of the end of March 2003.
Consolidated Performance Highlights of Toyota Motor Corporation
(U.S. GAAP)
(Figures in Millions of yen and % change) Fiscal years ended March 31, 2013 vs. 2014

<table>
<thead>
<tr>
<th>Particulars</th>
<th>2013</th>
<th>2014</th>
<th>Percentage change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Revenues:</td>
<td>22,064,192</td>
<td>25,691,911</td>
<td>+16.4</td>
</tr>
<tr>
<td>Automotive:</td>
<td>20,419,100</td>
<td>23,781,404</td>
<td>+16.5</td>
</tr>
<tr>
<td>Financial Services:</td>
<td>1,170,670</td>
<td>1,421,047</td>
<td>+21.4</td>
</tr>
<tr>
<td>All Other :</td>
<td>1,066,461</td>
<td>1,151,280</td>
<td>+8.0</td>
</tr>
<tr>
<td>Operating Income:</td>
<td>1,320,888</td>
<td>2,292,112</td>
<td>+73.5</td>
</tr>
<tr>
<td>Automotive:</td>
<td>944,704</td>
<td>1,938,778</td>
<td>+105.2</td>
</tr>
<tr>
<td>Financial Services:</td>
<td>315,820</td>
<td>294,891</td>
<td>–6.6</td>
</tr>
<tr>
<td>All Other :</td>
<td>53,616</td>
<td>64,270</td>
<td>+19.9</td>
</tr>
<tr>
<td>Total Assets:</td>
<td>35,483,317</td>
<td>41,437,473</td>
<td>+16.8</td>
</tr>
<tr>
<td>Shareholders’ Equity:</td>
<td>12,148,035</td>
<td>14,469,148</td>
<td>+19.1</td>
</tr>
<tr>
<td>Short-Term Debt, Including Current Portion of Long-Term Debt :</td>
<td>6,793,956</td>
<td>7,780,483</td>
<td>+14.5</td>
</tr>
<tr>
<td>Long-Term Debt, less Current Portion:</td>
<td>7,337,824</td>
<td>8,546,910</td>
<td>+16.5</td>
</tr>
<tr>
<td>ROE</td>
<td>8.5%</td>
<td>13.7%</td>
<td></td>
</tr>
<tr>
<td>ROA</td>
<td>2.9%</td>
<td>4.7%</td>
<td></td>
</tr>
</tbody>
</table>

When compared to the year 2003 Net sales figures of 16,054.20 billion yen, the corresponding Net sales figures for 2013 is 22,064.19 billion yen shows an increase of revenue to the extent of 6010 billion yen for the decade 2003-2013 with a growth of (38 %) keeping 2003 as base.
Toyota Motor Corporation’s E-Commerce Initiatives

Toyota Goes E-Commerce Alone:

Toyota Motor Corp. (Paul, 2000) had announced its intention to remain independent in its business-to-consumer (B2C) E-Commerce efforts, rather than affiliate itself with a major portal. Unlike Ford Motor Company and General Motors, which recently announced deals with Yahoo! and America Online, respectively, Toyota will use other means to promote its products.

"We are going it alone," said Kosuke Yamamoto, executive vice-president in charge of Toyota’s E-Commerce division. "This is not a strategy that's just for the time being, but it's what we intend to do." Going it alone for Toyota means further development of its gazoo.com Web site, a Japanese and English language portal that offers product information on Toyota cars, as well as a service that directs potential customers to dealerships in their area.

Toyota’s Plans to Expand the Website Gazoo.com

Gazoo.com offers an array of such products as stationery, food, gift items, fashions, furniture and other consumables. Current plans call for the expansion of Gazoo.com into an online brokerage and a financial mall, as well as the addition of books, CDs, DVDs and videos to its online offerings. Many observers believe that Toyota's strong financial condition and loyal customer base render the company ideally situated to raise the capital needed to launch a financial services venture. Although plans have not been finalized, it is likely that the company will offer financing and insurance products for its vehicles as a start. In the year 2000 the company reports that 13.6 percent of consumers who access Gazoo.com for prices and information on Toyota cars buy them from their dealers within six months of referral.

It was reported that Gazoo.com gathers useful data on potential customers by offering a free membership to the site in exchange for some information about the consumer. At the end of year 2000, Toyota said that the site had 430,000 members, and had projected a membership of one million at the end of 2001. Additionally, Toyota witnessed the figures quadrupled in 2003, with projected E-Commerce revenues in excess of $5 billion (US$).
Toyotas Strategic Move to Retain Market Share

Toyota finds itself in the enviable position of not needing other Internet companies to market its products. In Japan, Toyota commands 40 percent of the automobile market, a dominant share that has remained constant for some time. Because of its widespread acceptance among the Japanese people, and its consistently strong sales figures, the company enjoys great influence over its dealerships. With that power, Toyota has chosen not to align itself with middlemen on the Internet, such as Autobytel.com or MSN’s CarPoint. However, both of those organizations are now operating in Japan, and it is likely that individual Toyota dealerships will sign up to test the waters of an expanded Internet presence.

Toyota consolidates E-Commerce activities.

Toyota Motor Sales U.S.A. Inc. has unveiled an ambitious plan to help dealers sell cars over the Internet. Through its new Office of the Web, Toyota has centralized its E-Commerce activities. Its mission: Entrench the company in the virtual marketplace and head off third-party rivals - without alienating Toyota and Lexus dealers. As part of the program, Toyota is preparing to launch a national Web-based system to funnel sales leads to local dealers. The company also is working with one of its regional dealer associations on a pilot Web-based selling program. The company has repeatedly said it doesn't want to get into the retail business because its dealers are better at it.

TOYOTA: DRIVING CONSUMERS TO A SUPER-CHARGED PROMOTIONAL WEBSITE

Toyota’s Get Your Stubs campaign used Eyeblaster ads to deliver their audience to a website filled with awareness-building online content and free downloads.

The Get Your Stubs Campaign over view :

To raise the exposure of the Toyota Corolla brand among the 18-34-year-old African-American customer segment, ImagineThat media agency implemented the Get Your Stubs campaign. Get Your Stubs gave people who clicked through the banners a
virtual backstage pass to information about the Toyota Corolla, as well as free music and ringtone downloads, exclusive content and a downloadable application that dynamically changed users’ desktop wallpaper on a weekly basis. Using new creative each week, the ads encouraged users to visit the promotional website multiple times. This five-week online advertising campaign utilized Eyeblaster’s (www.eyeblaster.com) Advertising Campaign Manager (ACM) for trafficking both standard banner and rich media ad units.

Toyota Case Study Analysis in 2009:

A case study entitled “The Origin and Evolution of the World’s Leading Automobile Manufacturer” was conducted by Professor Hill (2009) which includes several interesting items for consideration. Among the most notable is the difference between Toyota’s manufacturing processes and those in use by the majority of the automotive industry, including the large automobile manufacturers in the United States. There are several important items that are integral to Toyota’s manufacturing system, just-in-time inventory, and long-term partnership agreements with major suppliers, team-based production, and a focus on identifying issues/defects at as early a point in the process as possible.

By developing a team –based approach Toyota eliminated the need for several levels of intermediate management.

Relations with customers

Toysatas Customer first policy:

Since its founding, Toyota has carried out corporate activities based on the concept of "the customer always comes first." This concept was declared in "The Toyoda Precepts" (established in 1935) which has been handed down as the Toyota Group's guiding philosophy. Toyota, including its dealers, makes a company-wide effort to build relations with its customers, and all employees keep the "customer first" policy in mind in all aspects of their jobs.
**Toyota’s Approach to Customer Satisfaction**

Customers' evaluations and opinions are an expression of their expectations of Toyota, so Toyota receives them sincerely and responds in good faith, in the belief that making use of them in its corporate activities will lead to customer satisfaction. Toyota always tries to grasp shifts in customer demands, constantly checking for conformity with its standards, and acting swiftly to resolve any discrepancies. The voice of the customer is quickly relayed to all related departments and divisions in development, production and sales, where they are helpful to product planning, raising product quality and improving Toyota’s corporate activities.

**Toyota’s Wide-Ranging Information Gathering and Reflection in Development of New Vehicles**

Toyota collects customer evaluation data through wide-ranging information collection activities, including directly through consultations with customers, complaints from customers, and also through quality reports from dealers and questionnaires given to purchasers of new cars, as well as from the results of studies by third party institutions such as J.D. Power.* Furthermore, Toyota collects information indirectly from dealers and suppliers within the Toyota Group. In order to
have the results of data analysis reflected as soon as possible in vehicle production, Toyota is strengthening internal coordination with research and development-related divisions.

The Customer Relations Division is "the division within the company in direct contact with customers’ needs." The staffs place an emphasis on the voices of individual customers, through consulting with them and handling their complaints, striving to improve customer satisfaction. The Customer Assistance Centre acts as a contact point within the company for customers and have consulted with or handled complaints from about 200,000 people this fiscal year. Toyota is in contact with its dealers throughout Japan to handle customer complaints, and makes a sincere effort to gain customer trust and satisfaction, striving to maintain and increase the number of Toyota fans. The Customer relations Division also makes direct proposals to sales, research and development, and production divisions and holds discussion meetings with them, so that customers’ voices can be useful in improving the company's products and corporate activities. Looking overseas, Toyota is supporting efforts at its distributors worldwide to strengthen and improve their systems for dealing with customers, as evidenced by the establishment of a Customer Assistance Centre in TMCI, China.

**Stakeholder Dialog Program**

[Diagram of Stakeholder Dialog Program showing different segments and a flowchart of discussion groups, participants, and report process]
Stakeholder Dialog Program Summary

**Chairperson**
Professor Masaharu Yagishita  
(Graduate School of Environmental Studies, Nagoya University)

**Participants**
A total of 31 persons, including eight members from NPOs, three from government agencies, nine from industry, seven from universities/research institutes, and four from Toyota.

**Program**
1. **Keynote Address**
   “Is it possible to achieve a green market?”
   — Presenting issues —

2. **Raising issues:**
   A joint illusion called green market

3. **Raising issues:**
   Is a green market achievable?  
   From the perspective of consumers

4. **Raising issues:**
   Is a green market achievable?  
   From the perspective of business model creation

5. **Three discussion group meetings**

6. **Plenary meeting**  
   (open discussion, conclusion)

Source: Adapted from Toyota Motor Corporation

Toyota will continue to implement such dialogs in the future, searching for ways to make them more effective, meaningful and imbued with a sense of Japan's culture, while expanding their scope to encompass a greater variety of stakeholders.

**Dealer Network of Toyota:**

Toyota sells automobiles and provides after-sales service to customers in Japan through a network of 308 car dealers and approximately 5,800 vehicle sales outlets. Since the establishment of a Toyota dealer in 1935 through the use of local capital, Toyota has developed a sales structure for Toyota vehicles based on the principles of independence and responsibility that emphasizes local capital, and has made every effort to fulfill its responsibilities in a system of mutual trust. Today, of 308 dealers, approximately 290 dealers are being managed with entirely local capital. In its relationship with dealers, Toyota has since its foundation respected the standpoint of its dealers, as exemplified by the following statement of Honorary Advisor Eiji
Toyoda and Honorary Chairman Shoichiro Toyoda made at the time of the merger of Toyota Motor Co., Ltd. and Toyota Motor Sales Co., Ltd.: "Manufacture products with an awareness of the difficulty in selling them, and make every possible effort to sell those products." Thus, Toyota and its dealers are in a relationship of reciprocal hard work.

Dealer Policies

Shotaro Kamiya (1935) of Toyota described Toyota's sales philosophy in the following way: "Customer first, dealer second, manufacturer third." In other words, "The order of persons benefiting from the sales of Toyota vehicles is first the customer, second the dealer, and last the manufacturer. This stance is the best means of securing the confidence of both customers and Toyota dealers, and the results will ultimately benefit Toyota." To this day, Toyota promotes sales activities based on this concept. Toyota believes that it is important to achieve the greatest overall effect by respecting the independence of its dealers and enabling them to realize their individual strengths. Also, in order to build relationships between Toyota as a manufacturer and dealers based on mutual benefit, Toyota engages in extensive communications and builds trusting relationships. The prosperity of its dealers leads directly to Toyota's prosperity, and Toyota believes that mutual benefit is the ideal stance for its relationship with its dealers. As a result, since its foundation Toyota has striven to create relationships based on mutual benefit.

Basic Contract with Dealers

Toyota concludes a Toyota Dealer Agreement with each of its dealers which specifies the mutual rights, obligations and responsibilities of both Toyota and the dealer. The basic contract is renewed once every three years following adequate consultation between Toyota and the dealers, taking into account changes in the business climate. For example, in its 2001 revision, provisions concerning consideration for the global environment were incorporated in the items for mutual responsibility. In the future, Toyota plans to make other appropriate changes to reflect other changes in the business environment.
*Overseas, vehicle sales and after-sales service are conducted by distributors. The relationship between Toyota and overseas distributors is based on the same principles as the relationship between Toyota and Japanese dealers.

In July 2003 *Toyota National Dealers' Advisory Council was formed. It is an organization of 467 Toyota dealers that facilitates smooth communication between dealers and Toyota.

**Supplier Policies of Toyota**

Supplier involvement: One of the 7 principles of TPS (Toyota Production System) is Supplier involvement wherein Suppliers are trained in ways to reduce setup times, inventories; defects, machine breakdowns etc., and take responsibility to deliver their best possible parts.

**Toyota's Mission of Purchasing**

Toyota seeks to contribute to the "creation of a prosperous society through automobiles." Toyota also seeks to contribute to society by providing customers with the most attractive products in the timeliest manner. In order to achieve these objectives, the task of Purchasing is to ensure "long-term and stable procurement of the best products at the lowest price in the most speedy and timely manner." To do this efficiently, Purchasing needs to build the world's No.1 supply base. This is achieved by cultivating and deepening ties with suppliers who share the commitment for creating quality products for customers.

**Toyota's Basic Purchasing Policy**

The first policy is "Fair competition based on an open door policy." Toyota is open to any and all suppliers, regardless of nationality, size, or whether they have done business with Toyota before. Toyota's choice of suppliers is on the basis of purely business considerations. Toyota evaluates the overall strengths of prospective suppliers, including their quality, cost, technological capabilities, and reliability in delivering the required quantities on time, as well as their potential strengths, as evidenced in such ways as their amenability to continuing kaizen (improvements).
The second policy is "Mutual benefit based on mutual trust." Toyota believes in developing mutually beneficial, long-term relationships based on mutual trust. To foster that trust, Toyota pursues close and wide-ranging communication with suppliers.

The third policy is "Contribution to local economic vitality through localization: good corporate citizenship." As Toyota moves to globalize its operations, production outside Japan is increasing rapidly. Toyota will work to make an economic and industrial contribution that is fully commensurate with its market presence in each region. That includes purchasing parts and materials from local suppliers which could be seen from the JIT manufacturing system of Toyota.

**Toyotas Environmental Actions Taken in Collaboration with Suppliers**

The following actions are underway in accordance with the Third Toyota Environmental Action Plan.

1. Provision of the Purchasing Guidelines to Japanese and overseas suppliers and follow-ups (promotion of ISO 14001 certification, management of substances of environmental concern, and provision of data).
2. Briefings and informational activities for suppliers in Japan concerning compliance with the EU ELV directive.
3. Promotion of green purchasing (office supplies and equipment, work uniforms, etc.).

Guidelines are issued for different countries and regions
CASE STUDY OF VOLVO INDIA PVT. LTD.

3.14 Case study of Volvo India

Volvo India Pvt Ltd

Address: No.66/1, Lake View Bldg, Level 3, A Blk, Baghmane Tech Park, C V Raman Nagar, Bangalore.

City: Bangalore / Bengaluru  
Industry: Automobile, Auto Ancillaries

State: Karnataka  
Company Type: MNC

Pin: 560093  
Est. Total Turnover: 1000-2500 Crs

Phone No:  
click to view number  
Est. No. of Emp.: 2501-5000

Website: [http://www.volvo.com/](http://www.volvo.com/)  
Sector: Private Sector
INTRODUCTION TO VOLVO INDIA

Volvo Car Corporation starts selling cars in India

"Volvo Cars is now starting up operations in India, a country with huge potential. “We are proud to be able to offer two of our top car models to our Indian customers” saya Paul de Voijs MD for Volvo Car India. Volvo Car India is opening its sales programme with the Volvo S80 luxury sedan and the Volvo XC90 Sports Utility Vehicle. Both models will be offered with three different engine alternatives: the 4.4 litre petrol V8, the 3.2 litre petrol in-line six-cylinder and the 2.4 litre turbocharged diesel in-line five-cylinder, the D5. The cars would be sold through three dealerships in the cities of New Delhi, Mumbai and Chandigarh. The dealerships were opened in autumn 2007. Volvo Car India's recently inaugurated headquarters is situated in New Delhi. The office was opened in line with Indian tradition. The opening ceremony was headed by the Minister of Transport of the Haryana Government, Mr. Rao Dan Singh, the Ambassador of Sweden in India, Mr. Lars-Olof Lindgren and Mr. Fredrik Fexe, Swedish Trade Commissioner.

Volvo Car Corporation will begin selling cars in India

Volvo Car Corporation has decided to introduce its cars in India, with sales scheduled to start during the fourth quarter of 2006. The new subsidiary, Volvo Car India, will have its head office in Delhi. Volvo Cars will start its product introduction with the Volvo S80 and the Volvo XC90 and the plan is to introduce more models on the Indian market in due course.

Volvo Car Corporation, with headquarters in Gothenburg, Sweden and global sales of approximately 450,000 cars, has approximately 27,000 employees globally. Volvo Car Corporation has been a subsidiary of Ford Motor Company since 1999. The company has operations in more than 100 markets.

Volvo XC90 first appearance in India

Volvo XC90 R-Design makes its first appearance in Bollywood with 3 Idiots starring Aamir Khan and Kareena Kapoor. "We are delighted to be a part of a big
banner Bollywood movie. Bollywood is a cult in India," said Paul De Voijs, Managing Director, Volvo Auto India.

**Facts about Volvo Auto India**

Volvo Auto India is a new operator in India, a gigantic, fast-growing market and one of the most competitive in the world. Volvo established a presence in India just over seven years ago and has since then worked intensively to market the Swedish brand. With a corporate office in Gurgaon, Volvo Cars opened its first dealership in Chandigarh in March 2008 and currently markets its products through its dealerships in New Delhi, Mumbai, Chandigarh, Hyderabad, Kochi and Pune.

So far Volvo Auto India has chosen to launch two models, the Volvo XC90 and Volvo S80 but the coming years they are lining up more new models. The first one was launched during 2010 was the Volvo XC60. The focus is on positioning the brand in the luxury car segment. During 2012, India was the world's sixth largest car market.

**Aftermarket solutions, integrated E-Commerce solution of Volvo**

Boost after-market sales and increase customer loyalty through an E-Commerce solution specifically developed for Volvo partners. Volvo Information Technology provides the Volvo Group, Volvo Car Corporation and selected customers with specialised skill and cost-effective solutions for all areas of industrial IT, including superior data centre operations and infrastructure.

**Benefits of choosing Team-Place**

Team-Place is designed for projects and small working groups. Users can easily customize its structure. Collaboration is possible regardless of time and place; discussion forums, announcements, tasks and contact lists can all be shared in one secured part of the web.

**Requirements for E-Commerce use**

Team-Place is run on a Windows 2000 web server. You must have Internet Explorer version 5 or 6 installed on your desktop and a connection to the enterprise intranet.
Volvo IT provides specialist skills and cost-effective solutions for all areas of industrial IT, from product development to sales and the aftermarket. Volvo’s range includes superior data centre operations and IT infrastructure. Volvo IT is a global organization and part of the Volvo Group.

VOLVO Aftermarket solutions Integrated solution

Boost after-market sales and increase customer loyalty through a solution specifically developed for Volvo partners.

Boost sales on the web

Our solution makes it easy to set up and maintain a webshop on the dealer network level. The webshop can be seamlessly integrated with existing websites, product databases, parts catalogues and supplier systems.

Customised for each E-Commerce customer

A vital key to generating higher sales is diversified offers, tailored to the specific needs of different customer groups. For that reason, the E-Commerce solution includes tools for creating sales-campaigns, exclusive offers and discount structures for individual customers or groups, on a global or local dealer level.

A Volvo Standard E-Commerce solution

The E-Commerce solution is developed by Volvo IT with the long-term goals and day-to-day requirements of the Volvo Group’s partners in mind. Therefore, the solution is integrated into the backbone of Volvo’s parts logistics systems. This ensures stable and reliable integration with the systems and databases used by Business Areas and Units, as well as their suppliers. As it’s based on Microsoft Commerce Server, it’s also a good platform for future expansions and features while being a cost-effective solution from day one.

Supported around the clock

The interface and administration of the E-Commerce solution are designed to be user-friendly with a minimum of maintenance. Users on every level enjoy around the clock support from Global Retail Support in 12 languages for any queries.
The E-Commerce solution in brief:-

- Boost sales through a web-based sales channel
- Create customised campaigns for B2B and B2C customers
- Secure payment solution through VeriSign
- Developed for Volvo BA/BU standards
- Supported by GRS 24/7

At Volvo Penta, we see the E-Commerce as a new solution to communicate with the end consumers and also with small businesses who are working in the marine or industrial business. Volvo also believes that with this new tool it will be able to expand the business into new areas, but also make it easy for present customers to get information about its products. This is also a way to strengthen the Volvo Penta brand. Together with Volvo Penta Centres Volvo will be able to build up a bank of knowledge which can be used in a more direct B2C communication.

It was found that Volvo Car India appointed IdeazInc, as its partner to strengthen its communication in digital space on July 24, 2009 (Free-Press-Release.com) - Commenting on the appointment, Mr. Paul de Voijs, Managing Director, Volvo Car India said, “Volvo Cars have been in the forefront of exploring new media and Volvo sees digital media as a very good platform for engaging with its customers and prospects. Volvo believes that Ideaz Inc., has the required capabilities to assist the company in achieving its business objectives. The strong process assurance, research based planning and understanding of Volvo’s strategic and tactical goals have differentiated its proposal.” Ideaz Inc. will handle the current portfolio of Volvo Cars in India, Luxury Sedan – Volvo S80 and the Luxury SUV – Volvo XC90.

About Volvo Car India

Volvo Car India develops, manufactures and sells Volvo cars in India. Volvo Car India has launched Volvo XC90 and Volvo S80 IN India. In 2008 about 375,000 Volvo cars were sold all across the globe. Volvo Cars is represented in approximately 100 countries globally.
End user services

Volvo’s end user services are developed for all managers and employees in business, from the morning log-on to end of day shut-down. Their services span desktop to training, via telephony, email and messaging, content management for web publishing and document management. All parts of their portfolio derive from a product, either developed in-house or from a third party supplier.

Collaboration workplace

Volvo is at the forefront when it comes to utilizing collaboration solutions. With Collaboration Workplace Volvo intends to go even further. In order to succeed, they know that they not only need precision tools but they need precision in the way they communicate with each other in their daily work.

Sales and market

The Ideaz Inc. which is a design and full-service communication agency based in New Delhi, exhorts about Volvo that their experience in supporting Volvo companies in sales, customer contact and deal follow-up has resulted in a wider competence in the area of customer care and sales support. In collaboration with some of the leading global software firms, Volvo IT offers complete solutions for effective E-Commerce and customer follow-up. The Ideaz Inc. solutions are used by thousands of dealers worldwide.

Volvo IT also provides services for restoring passwords etc.

With over 150 dealers and an additional 50 rental franchisees, Volvo Construction Equipment has a dealer base that spans across North America, Latin America, Europe, Asia, and International regions. Volvo CE’s Volvo Dealer Network (VDN) portal allows the company to provide dealers with a direct connection to the systems and information they need. Leading the way in the Volvo Group, Volvo CE first developed a dealer extranet portal in 2001. Volvo CE was in need of a more flexible and scalable extranet solution.
A Global Communications Channel

To provide Volvo CE with a more agile environment, Volvo IT and Volvo CE migrated the original Volvo Dealer Network to Volvo’s common extranet solution. Based on the VeBiz2 platform, VDN 2.0 utilizes Microsoft technology, such as Microsoft CMS and SharePoint, allowing for tighter integration with Volvo CE’s public Internet and Dealer Sitebuilder environments and making it easier to target the company’s key audiences.

“With the Volvo Dealer Network, Volvo has one communications channel that drives a consistent message to their dealers around the world.” It provides a single entry point for business conducted between the manufacturer and distribution. Dealers use the VDN 2.0 portal to access applications, order parts and machines; download important material, review reports, and process information. There are over 50 applications globally in the portal that dealers use to assist in running their business.

Improved Publishing Environment

Launched in January of 2005, VDN 2.0 has delivered a number of improvements to Volvo CE on the administrative side. The addition of centralized publishing tools, standardized content management deployment and an advanced document management solution have made it easier and faster to publish information on local, regional, and global levels. With the 2.0 release, Volvo CE users are able to edit content in multiple languages from a single page, as well as to publish multi-lingual content to one or many regional sites at a time. This has enabled Volvo CE to more efficiently communicate with dealers in Asian and Latin American markets. Volvo now has more dealers using the Volvo Dealer Network from both Latin America and Asia. VDN 2.0 supports Korean & Chinese characters, allowing Volvo to increase its connection with emerging markets.

Enhanced Personalization for Dealers

New features in the portal, such as enhanced personalization and single-sign on for a number of: sales & market solutions Volvo IT provides specialist skills and cost-effective solutions for all areas of industrial IT, from product development to sales and the aftermarket.
A Flexible Solution

With VDN 2.0, Volvo CE has gained a more scalable and flexible portal. Migrating to Volvo’s extranet platform has not only provided improvements for Volvo CE and its dealers, but also has enabled Volvo CE to expand the portal concept to target additional partners.

Volvo VDN at a Glance

- Single channel for collaboration with dealers worldwide
- Centralized content editing for multiple languages
- Enhanced personalization from Microsoft Active Directory
- Advanced document management based on Microsoft Sharepoint
- Scalable & flexible environment for future growth

### VOLVO CORPORATION

Table showing The Awards won by Volvo Corporation

<table>
<thead>
<tr>
<th>Award</th>
<th>Awarded By</th>
<th>Year</th>
<th>Country</th>
<th>Model</th>
<th>Category</th>
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<tbody>
<tr>
<td><strong>Best Safety - (Volvo Car India)</strong></td>
<td>Auto India Best Brand Awards 2011</td>
<td>2011</td>
<td>India</td>
<td>XC60</td>
<td>Safety</td>
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<td><strong>Import SUV of the Year, India</strong></td>
<td>NDTV Car &amp; Bike Awards 2011</td>
<td>2011</td>
<td>India</td>
<td>XC60</td>
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<td><strong>Volvo XC60 - Import SUV of the year, India</strong></td>
<td>Car India Awards 2011</td>
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<td><strong>Technology &amp; Innovation of the Year 2011, India</strong></td>
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<td>Amity Leadership Award – 2009</td>
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<td>India</td>
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<td>Environment</td>
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<td><strong>Car of the Year for Best Safety Technology</strong></td>
<td>Indian TV channel NDTV</td>
<td>2008</td>
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<td>XC90</td>
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<td><strong>XC90 - &quot;Car of the Year for Best Safety Technology&quot;</strong></td>
<td>Indian TV channel NDTV</td>
<td>2008</td>
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<td>Safety</td>
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Source: Volvo Car Corporation
3.15 Case study of Mahindra Reva Electric vehicles Pvt. Ltd.

**Mahindra Reva Electric Vehicles Pvt Ltd**

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<th>Address</th>
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<td>Private Sector</td>
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</table>

Source: Mahindra Reva Pvt. Ltd.

**INTRODUCTION TO REVA ELECTRIC CAR COMPANY**

A National Mission for Hybrid and Electric Vehicles would enable the electric vehicle (EV) industry clock numbers. At present, Electric Vehicle sales are less than one per cent of the petrol two-wheelers sold in India (Economic Times). "The category will now grow strategically. After a market research to identify the needs of the consumer, the Centre will formulate policies to promote EVs. and will have 10 cities promoted as model Electric Vehicle cities," (Sohinder Gill) CEO-Hero Electric and director (Corporate Affairs) of Society of Manufacturers of Electric Vehicles (SMEV). E-bikes expect a 25-50% growth in two years.

Electrotherm and Hero Electric are key players in the two-wheeler EV category while Mahindra Reva Electric Vehicles Pvt Ltd manufactures Electric-cars. Lucknow, Haridwar, Kanpur, Agra and other tourist and wild life destinations will be promoted as EV cities.
India’s fastest-growing fully integrated auto eCommerce portal from the country’s largest eCommerce company, mjunction services limited (a JV between TATA Steel and SAIL), has entered into a strategic partnership with The Telegraph, the largest circulated English daily in Eastern India.

In this unique association, autojunction.in will provide The Telegraph with contents for an exclusive co-branded supplement covering all aspects of the automotive world. This four-page, full colour supplement will include car reviews, comparison tests, and interviews with renowned industry personalities, travel features, technology features, motorsport and extensive details on upcoming cars in India. This supplement will feature interactive segments like User Review and Ask an Expert column.

This strategic alliance leverages the in-depth expertise of autojunction.in and the large reach of The Telegraph to offer diverse, informative, and expert contents to the readers. The first edition of the supplement is slated to be published on the first week of December. About www.autojunction.in autojunction, a business unit of mjunction services limited was launched in 2006. It forayed into online sale of new cars for the first time in India with the sale of Reva electric car.

In February 2010, autojunction announced its partnership with Electrotherm India Ltd (auto division) to sell India’s largest-selling electric two wheeler – Yobykes online at autojunction.in. A bouquet of value added services benefiting consumers such as road test reviews, national and international news on automobiles, ‘Affordability calculator’, personalized car buying suggestions, online booking of test drives, loan and insurance quotes and many more are being added to make autojunction, India’s online automobile destination. It offers a horde of auto accessories ranging from car care products to GPS and navigation tools. autojunction.in is being developed into India’s first fully integrated auto ecommerce portal catering to segments B2C & C2C by offering separate and specialised auto ecommerce services such as e-Classifieds, e-Retailing and e-Referral services.
Consumers are more open to buying electric vehicles now but are grappling with issues of price and after-sales service. At its Bangalore showroom, Mahindra & Mahindra's electric car Reva got 400 enquires in a week following the Rs 5 hike in petrol prices recently. A recent report, Gaining Traction: Will Consumers Ride the Electric Vehicle (EV Wave by Deloitte) Touche Tohmatsu Ltd., clearly points out that the new breed of consumers, particularly educated urbanites are willing to consider purchasing EVs as a practical commuting option. The survey, covering 13,500 respondents and spanning 17 countries, noted that a little over 70 per cent of the respondents in India were willing to consider purchasing EVs if the fuel price crossed Rs 85 per litre. “On a typical usage of 60 km per day, our scooters save more than Rs 12,000 per year compared to a petrol-driven scooter,” says Ayush Lohia, CEO, Lohia Auto Industries, which manufactures electric bikes brands such as Fame, Oma Star and Oma Star DX.

The demand for its vehicles has nearly doubled, from approximately 500 units sold between April and June 2010 to more than 1,000, during the corresponding period this year. In some markets such as Delhi and Lucknow, sales have increased threefold. With demand fuelled by helpful subsidies from the Government (the Ministry of New and Renewable Energy gives 20 per cent subsidy of the vehicle cost to EVs), more players are entering the segment. The major players in the bike segment include Hero Electric, Yo bikes, Lohia Auto Industries, and TI Cycles' BSA Motors. Mahindra Reva is the only domestic electric car brand.

**Customer perspective on Electric Vehicles**

Customer buy-in also depends on how close the nearest recharging station is. An electric vehicle needs eight hours to fully recharge and carries range anxiety, fear of battery running out. A plug-in hybrid vehicle electric range, such as Chevrolet by GM, would offer 64 km of electric range and 800 km per gasoline engine! “Studies to get consumer insights in the US and Britain clearly showed that buyers were unwilling to pay more for an electric car,” informs M. Anand, Professor (Strategic Marketing), Faculty of Management Studies, Delhi. Interestingly enough, in China acceptance is high. China, which has the world's largest number of charging stations, plans to have 20 to 30 per cent of its on-road vehicles converted to EVs by 2030 and has already invested $15 billion for promotion of the concept. “The target may appear to be...
ambitious but is based on thorough consumer research. An average city dweller in China does not travel more than 80 km per day and his intercity travel is limited. Besides it has planned to provide charging facilities at more than 10 million electric charging stations. It is worth noting that China has already 100 million light electric bikes and scooters,” elaborates Prof Anand.

Sustainability issues of electric vehicles

This is probably the third coming of the electric vehicle. During the late 19th and early 20th century people in the UK travelled by electricity-driven vehicles. The development of the internal combustion engine killed the industry overnight. The petrol-driven vehicles were cheaper and offered unlimited range and easy fuelling and service at umpteen gas stations. The sudden jump in oil prices during the ’70s and ’80s once again created interest in electric vehicles but it was short-lived. Now, riding on the back of fuel price hikes, electric vehicles are revving up again.

A conventional vehicle creates 2.5 gm pollutant per km, while a 100 per cent efficient electric vehicle generates 1.2 gm of pollution. Thermal plants which are used to generate electricity for charging are not located in congested areas. So an electric vehicle definitely improves the local city environment. With much strong logic going for it, the industry is hoping consumer purchase would see a sharp surge.

Mahindra takes control of Reva:

M&M continues strategy of growing through acquisitions, bets on rapid growth in electric vehicles -- Mahindra and Mahindra Ltd (M&M), India's largest maker of sport utility vehicles, acquired a controlling stake in Reva Electric Car Co., putting it in a position to take advantage of the rapid pace at which the electric vehicle market is expected to grow over the next decade as governments push for stricter emission norms globally. The company, which will buy out the promoters' stake and make a Rs45 crore infusion of fresh equity, declined to disclose the total value of the transaction in which it will get a 55.2% stake in the Bangalore-based firm, which will be renamed Mahindra Reva Electric Vehicle Co. Ltd. Surjit Arora, analyst at Prabhudas Lilladher, estimates the price for M&M's stake at around Rs330 crore. "This is based on the assumption that Reva's enterprise value is around Rs500 crore,"
Reva gears up for global electric-car market

The battery-charged vehicle benefits from govt. incentives in countries such as Italy, Norway, Sri Lanka, etc. Nearly 2,000 of these zero-polluting city commuters have been put on the roads in India and Europe, including 600 in London, in the six years since Reva Electric Car Co. turned commercial. The test-marketing phase is now over, and the Reva, as the electric car is known, is ready to leap into the mass market for environment-friendly vehicles (Chetan Maini), Deputy Chairman and Chief Technical Officer.

“Technology is available now at a cost that makes sense,” said the second-generation entrepreneur, who has more than 14 years’ experience with electric vehicles. “A non-polluting electric car costs the equivalent of a small petrol car and the operating costs are much less.” The company last month launched a new Reva model, which can seat two adults and two children, billed as the most advanced electric car in the global market. It can reach a speed of 80km an hour, up from a previous best of 65kmph. It also covers 80km on a single charge of electricity that translates into a cost of about 41 paise per km, a tenth that of a petrol model. The car has improved torque—up to 40% more than the earlier model—for better hill climbing.

The Reva has better prospects of finding success abroad than in price-sensitive India, where manufacturers are planning to launch a slew of petrol models priced as low as $3,000 (Rs123,300), one third of the Reva’s price tag. Already marketed in Britain, Spain, Norway, Italy, Malta, Sri Lanka, Cyprus and Greece, the car benefits from incentives offered to non-polluting vehicles by governments there.

India’s iconic electric car gets energized

Electric vehicles are particularly suited for Indian cities because of shorter distances and lower average speed. Long before “green” cars became trendy in other parts of the world, a boxy electric two-seater began rolling out of a small factory in Bangalore, which was then emerging as a software services hub.

Electric vehicles are particularly suited for Indian cities, says Maini, because of shorter distances and lower average speeds. A top speed of 40-60km/h and a range of
50-80km would meet “over 90% of the city mobility requirements in India”, he said. Maini is building more powerful cars, with a range of 200km and top speed of 120km/h. Other, bigger Indian carmakers are not waiting, either. Tata Motors Ltd, which is launching the ultra low-cost Nano this year, has developed electric variants of its Indica hatchback car and Ace mini truck, while the Hero Group is also building electric vehicles. “Maini didn’t capitalize on the first-mover advantage, but he will be seen as a pioneer, now that everyone is getting into it,” said Mohit Arora, Senior Director at JD Power and Associates. “History is on his side.” (Amrit Raj, 2011)

Electric vehicle market to touch five million units by 2020: Amrit Raj (2011) 
amrit.r@livemint.com Demand for electric and hybrid vehicles in India, the world’s second fastest growing automobile market, is estimated to increase 50-fold to 5 million units by 2020, according to two people involved in a study funded by the government. “They have found that while in other countries people pay a small premium to buy an electric vehicle, in India people’s desire to buy an electric vehicle revolves around the cost of ownership.” Around 100,000 electric vehicles were sold in the country in 2009-10, according to the latest numbers available with the Society of Manufacturers of Electric Vehicles.

The study expects demand for electric two-wheelers and buses to rise sharply. “A major chunk of these five million vehicles would come from motorcycles and buses. It was also found that consumers are very skeptical about battery operation. So, the government has to do the needful as far as the infrastructure is concerned,” said the first person cited in the report. The study proposes that the government provide incentives to companies to develop the technology locally and help the industry with proper policy, while the industry will have to put in the investments to make this project a success.

The policy is aimed at removing hurdles such as the need to obtain the consent of all concerned ministries for various measures. Setting up a charging station, for instance, requires the approval of the roads and power ministries among others. “The idea is to have a strong political will to implement a uniform tax structure and infrastructure plans across the country,” said the government official cited above. “He intends to see at least eight lakh electric vehicles on Indian roads by 2015. They would be introducing it as a pilot project in some of the major cities. In November, the
ministry of new and renewable energy offered incentives to electric vehicle makers in the current and the next fiscal years to boost sales of the vehicles. Delhi provides the best incentive with a rebate on value added tax amounting to a 29.5% reduction in price. The ex-factory price of electric two-wheelers ranges from Rs.26,000 to Rs.43,000, while electric cars made by Mahindra Reva Electric Vehicles Pvt. Ltd, India’s only maker of such vehicles, start at Rs.3.5 lakh.

Autojunction.in introduces for the first time in India, a complete end-to-end car buying experience over the internet autojunction.in brings in tremendous cost and distribution efficiencies for the auto manufacturers and convenience to the car buyers through its auto e-Retailing venture in India. Reva i (the electric car) is the first car brand in India to be sold through auto e-Retailing. It is a complete end-to-end car selling process at www.autojunction.in, the auto division of India’s largest e-Commerce company – mjunction services limited. It is a 50:50 joint venture of Tata Steel and SAIL, had recently announced the path-breaking venture into ‘auto e-Retailing’.

Introduced for the very first time in India, the initiative - autojunction.in, brings in a complete end-to-end car buying experience over the Internet for buyers of new cars in India. New cars can now be bought over the Internet at any time of the day or night, from the comfort of one's home, complete with selected accessories, insurance, finance and all other such requirements that go along with any car-buying process in a typical car dealership. autojunction is set to bring in a revolution in the selling supply chain of the auto majors in India through its customised auto e-Retailing solutions.

Autojunction.in announced Reva Car Electric Company (RECC) as its first auto e-Retail partner to sell the Reva i electric car through a customised version of its auto e-Retailing model. Chetan Kumaar Maini, Deputy Chairman and Chief Technical Officer, REVA Electric Car Company Pvt Ltd, said, Reva was pleased to be associated with mjunction. This is the first time that a virtual showroom is being set-up by mjunction to sell vehicles online. Reva is confident that this venture would add value to their customers in Kolkata and soon in the rest of the country. Reva looks forward to the partnership and likes to see this as a new chapter for REVA and marketing of advanced electric vehicles in India through new media.
Prior to the launching of its auto e-Retailing venture, autojunction had been selling used vehicles over the Internet on "as-is-where-is" basis through its online auto auctions. Most of the leading banks & NBFCs across India are using this online auto auction service from autojunction for the last almost two years to dispose their stock of Repossessed Vehicles transparently, efficiently and conveniently to the used car dealers and traders' community across India.

autojunction has re-launched its new integrated website www.autojunction.in, to provide access to its auto e-Retailing services, online auto auction services and its all other service modules for the auto industry that it plans to launch in the near future. The new look website will be seamlessly connected and will continue to provide access to all such present and future services from autojunction targeting their respective B2B and B2C communities.

The growth potential of auto eRetailing is immense in India. Auto eRetailing started in the US markets, and the actual selling of automobiles over the Internet began as a percentage of total automobile sales gained rather steadily from 9.2 per cent in 2002-03 to 20 per cent in 2004-05 in US. In volume terms it stood at US$351 billion in FY ’04-05. The Indian Internet population rose from 38 million in 2004-05 to 100 million in 2008, while 66 per cent or 19 million Indians shopped online during FY ’06-07.

autojunction’s auto e-Retailing model can be customised to the need of individual car manufacturers and can either provide a stand-alone exclusive channel to sell their cars online or can successfully co-exist along with their existing dealership network supplementing each other’s operations synergistically. With auto e-Retailing, car manufacturers can benefit tremendously by increasing their distribution reach, bringing down their distribution cost, advertising and promoting the brand online, getting real-time customer MIS, better car financing terms for its customers through power of aggregation and many such benefits. As per autojunction estimates, the cost of selling a car can be reduced by 40 to 45 per cent of its present distribution cost through this Auto e-Retailing service. This may result in savings of anywhere between Rs12,000 to Rs14,000 on the ex-showroom price for any of the present day compact hatchback models being sold in India.
The car buyers benefit from autojunction’s auto e-Retail services on account of flexi shopping facility (24x7 operations), convenience of home shopping and hassle-free fulfillment services from this one-stop online car shop providing onsite car financing, insurance, accessories, spare parts, service contracts etc. Studies show that in the Indian market, the time and money involvement in procuring ancillary services which goes along with buying a car is very high and hassle prone. www.autojunction.in is now set to change that scenario for the Indian car buyers.

Hence, the present study thoroughly analyses the adoption levels of e-commerce in all the three Original Equipment Manufacturers (OEM’s) and it is found that these Companies have been actively involved in promoting both Business to Business(B2B) and Business to Consumer(B2C) E-commerce in India during the past decade. Their Supply Chain Management practices has been a benchmark in the Automobile Industry in India with greater degree of adaptability to the changing technologies and they have been able to build a great brand value proposition in the eyes of the ‘Customer’ on the E-commerce platform. By using the cutting edge Internet technologies in the Indian Automobile Industry they have expanded their business to the nook and corner of the country.