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INDIAN AUTOMOTIVE INDUSTRY: GLOBAL AND INDIAN SCENARIO

[1]SAURABH MOHAN SAXENA & [2]R.K. SHUKLA

1Research Scholar Deptt. of Management NIMS University, Jaipur.

2Director, Bhalchandra Institute of Education and Management, Lucknow (Uttar Pradesh)

ABSTRACT

The automotive industry is increasingly becoming the cynosure of the manufacturing sector across the globe. The attention and importance to the automotive industry in the economic development and planning policies of Government and its agencies has also witnessed significant up rise. The industry has been evolving over the years, meeting up with challenges as diverse as transitions, consolidations and restructuring, and thereby adapting to the new market conditions. In this paper we aim to through some light on Global and Indian Scenario of Indian Automotive Industry.

KEYWORDS : Indian Automobile, Supply Chain Management, Global Automobile.

INTRODUCTION

India ranks just behind China with the world's second largest population at over 1 billion people[1]. Less than 1 percent of the population currently owns automobiles, which is a much smaller proportion than the rest of the Southeast Asia region. For example, the regional average of ownership is 16.45 percent. Nonetheless, sales of passenger vehicles in India have more than doubled since 2001 to over 1.5 million units. India also has one of the fastest growing economies, and many U.S. companies view India as a potentially lucrative market. It is expected that the automotive industry will play an important role in helping the economy to continue this growth. Not only are domestic sales expected to grow dramatically, but India will play a significant role in the global automotive market. The world's top manufacturers, General Motors, Ford, Toyota, Honda, and others, have a significant share of already established manufacturing bases. These manufacturers hope to not only capture an emerging market, but also to use these bases as export hubs to serve the region and the global market. As can be seen in the Table, exports of passenger vehicles have more than quadrupled since 2001.

In the last few years, the world automotive industry has changed its location preferences due to various reasons. Earlier, the automotive industry was largely confined to the triad - North America, Europe and Japan; however, with the emergence of some vibrant developing economies, like Brazil, India and China, the global automotive industry has been considering a different growth perspective, and has been relocating the operations[2]. These growing developing economies has been evolving as the manufacturing hub, as also the newfound markets, for the global majors like Ford, General Motors,

Chrysler, Toyota, Honda, Nissan and BMW, who are competing to enhance their market share in these markets. Increasing growth in GDP and the growing disposable income has catapulted these emerging economies as market for automotives, while the low cost of operations and skills in design and R&D made them as destinations for investment and manufacturing operations.

The entry of global auto-majors into India has significantly altered the automobile-manufacturing scenario in the country. The changes in design and adaptation of international technologies have enabled the Indian automotive industry to compete globally, and thus are also exposed to global challenges. Alongside the challenges, the trend also presents a plethora of opportunities to Indian automotive industry, which needs to be capitalized, so as to emerge as a successful global player.

GLOBAL SCENARIO

In the initial years, most of the manufacturing activities were concentrated in the USA and in some of the European countries. Though, these countries still account for a significant share in the production, more and more volume of production comes from other parts of the world, like China, Japan and Korea. Around three-fourths of the global production is being carried out in top 10 producing countries, in 2007. Of these, Japan, USA and China, cumulatively constitute over 40% of global production[3].

The last decade has experienced a growing level of motorization, as reflected by the production of automobiles. According to OICA, Japan is the largest producer of cars in the world followed by China, Germany, USA, South Korea and France. India ranks 9th in the production of cars in the world ahead of UK, Canada, Russia and Mexico. USA is the largest producer of commercial vehicles; close competitors in production of commercial vehicles are China, Japan, Canada, Thailand and Mexico. India ranks 8th in the production of commercial vehicles and is ahead of countries like Brazil, Germany, France and Turkey[4].

Select Trends in Global Automotive Industry

Addressing the Challenge of Volatility in Fuel Prices. One of the major challenges of the world automotive industry is the volatile oil prices. The year 2008 witnessed crude oil prices breaching the US $ 140 mark per barrel, and thereafter slipped below US $ 40, in the later part of the year. The volatility in oil prices does not directly affect the growth in automotive industry; however, volatility in oil prices is one of the influential factors in automobile demand. In order to address the challenge of volatility in oil prices, the automotive industry is innovating new technologies and inventing usage of alternative energy. Hydrogen cars, driven either by a combination of fuel cells and an electric motor; hybrid electric technology; electric vehicles with rechargeable batteries; or alternatively, compressed air technology to drive the pistons in a specially designed engine, are thought to be replacing fossil fuel- powered motors in the decades to come[5].

Emergence of New Generation Automobiles

Innovation is expected to drive the automotive industry in future as the producers are involved in differentiating their products and services. There are already growing interface of electronics and IT in the automotive functionalities, such as entertainment, navigation and safety. According to a survey, conducted by IBM across the auto- majors, majority of them felt that by 2020 the level of innovation would be greater in software and electrical systems of automobiles. It is also expected that by 2020 the vehicles may become another node on internet, connecting with other vehicles, the transportation infrastructure, homes and businesses. However, there are challenges associated with this trend, with regard to consumer acceptance, technological development and adoption of standards[5].

Supply Chain Management in the World of Global Sourcing

Global auto-component firms are giving greater level of thrust in supply chain management to address the challenge of cost pressures. This is particularly important in the context of global sourcing. Though there is a perceived belief that global sourcing helps in reduction of cost of components, there are logistical challenges. Thus, it is being recognized that collaboration between the OEMs and component producers are crucial to develop capabilities and solve the challenges associated with global delivery, especially in the areas of inventory management, scheduling, and timely delivery. In addition, both OEMs and suppliers view that the collaborative efforts in supply chain management enhances the capacity and performance visibility[6].

Customer Management Systems

Earlier, automotive manufacturers had to get feedback from the customers through intermediaries, such as vendors or service workshops. This trend has been changing with the introduction of customer management systems through ICT interface. Even vehicle buyers are also browsing the net to know the features of a new model, evaluate them with the existing models, and compare the prices. IT firms are developing customer relationship management (CRM) tools that help the manufacturers to realise and optimize individual customer value, increase the post-warranty service retention, predict model demand and provide supply chain solutions.

Growing Small Car Segment

The volatility in crude oil prises witnessed during the year 2008 re-emphasized the need for small and fuel-efficient vehicles. Some of the automobile majors have plans to hike their R & D budget for designing of small and fuel efficient vehicles. Added to this is the need for reduction in prices to target the middle income groups of population /new buyers, especially in developing countries like India, where the vehicle penetration is low as compared to the population. An auto research firm CSM Worldwide Inc. has estimated that global demand for small cars would grow by 30% per annum to 27 million vehicles a year by 2013. The fast- growing small cars market has encouraged several global auto-majors (such as Renault, Toyota, and Nissan) to plan for launch of small cars[8].

Green Motoring

Automobile manufacturers are increasing the thrust on fuel efficiency than before; the initiatives are mainly through improvements in technology and introduction of new fuel variants, thereby reducing toxic emissions. It may be mentioned that China, the EU, Japan and the USA have already established fuel economy rules or agreements of varying stringency. The FIA's declaration for green motoring has set a fuel economy target of 140 gCO2/km for passenger cars. Such a global fuel economy target could be used as an international benchmark to assess progress in the fuel efficiency of the global fleet of new motor vehicles. Some countries are also undertaking 'Green Rating' of automobiles[7].

Cross Border M&A Deals

The global automotive industry is increasingly getting more active in cross border mergers and acquisition (M&A) deals. On a global basis, the number of cross- border deals has grown in the past few years, and this trend is expected to continue after the recovery of economic activity in the world. The expansion outside the home markets of some of the major automotive companies from traditional low-cost countries, such as China and India, is bringing in new capital and a fresh look at certain sectors of the automotive market. With the recession in the US market and its consequent impact in other markets, automotive assets in developed countries are becoming attractive to buyers from emerging economies, as well.

Entry of Private Equity Players

The traditional funding model in the automotive industry is slowly being replaced with aggressive funding structures. There has been a structural change in the automotive industry with the entry of private equity players in the past. Traditional and family-owned businesses were taken over by the private equity players and hedge funds, which are expecting more profit or investment realization from the industry. Though the business activities of private equity players have come down, following the financial market meltdown, this is expected to be revived soon, either when the market sentiments improve or once consolidation happens among the private equity players[9].

Growing Collaboration for Technology Enhancement

Technology-enhancing collaboration in the automotive sector helps in preserving design integrity, despite minor engineering adjustments. There are also software/ programmes that make the global data sharing possible among designers, engineers, suppliers, partners and even customers. Such better and faster integration of design / engineering ideas help in necessary adjustments and adaptations in designs to suit the requirements.

Trendy Cars, Shorter Life-spans

An automobile is a highly- engineered collection of complex components, each of which has its own lifespan and longevity characteristics. While some components require frequent replacement, others that are relatively expensive are expected to have longer lifespan to justify the economics of a vehicle

buyer. However, change in fashion and design trends may outweigh the pure economics, which may lead to planned obsolescence. In the world of changing fashion trends, auto manufacturers are developing new designs meeting the changing consumer preferences. More frequently the new models are introduced, the shorter will be the life span of the old models.

Preserving Brand Identity

With growing mergers and takeovers in automobile industry, players are carefully devising strategies to strengthen the backroom operational synergies, in terms of common logistics and supply chain management, but avoid losing the brand identities. A group owning different brands prefers not to use the same platform that has same kind of technology, management, and designers to preserve the brand identity. In this sense, the automobile sector is different from monolythic branding strategies of consumer goods.

Design for Recycling

It is being increasingly realized that natural resources of the earth are depleting fast. Hence, there is a growing concern amongst manufacturers as also the consumers to conserve the resources; one such way is through recycling. The automobile industry is one of the pioneers in usage of recyclable materials. Also, the rising input prices are making the automobile manufacturers to design the vehicles that can be easily recycled.

Emergence of Design Studios

As efficiency in design and manufacturing improves, vehicle manufacturers across the world are focusing on making models for niche market, though the sale would be in lower volume. This is in contrast to the earlier strategy of designing models for mass consumption. With the increase in number of models to be designed and developed, auto majors are outsourcing the designing jobs to independent design studios who take care of the design and execution of the process management in the value chain.

Outsourcing

Stiff competition to enhance the market share forces the OEMs in developed countries to outsource their engineering requirements to low cost countries like India. Global auto-majors such as General Motors, Ford, Toyota, BMW are increasingly outsourcing the vehicle design and engineering services to developing countries such as India, either through their captive centers or through third-party vendors. Long term trends indicate that global auto-component outsourcing from the US is expected to reach US $ 25 billion by 2015, and India, China and Mexico are likely to benefit the most from such trend. An online survey conducted by A T Kearney, revealed that around one-fourth of global auto-majors have considered India as a favorable destination for automobile-engineering outsourcing.

Advanced RFID Practices in Auto Manufacturing

RFID has been in use in the automotive industry for several years, though to a limited extent. The trend is changing now with adoption of technology in wide variety of applications, the dominant

being vehicle entry and security. According to a study by ABI Research, 40% of new cars manufactured in North America are equipped with RFID immobilizers and the worldwide revenue generated by this application alone was estimated to be US $ 3.7 billion. In addition, RFID solutions are increasingly being used in automobile manufacturing processes and supply chain applications.

THE INDIAN SCENARIO

Indian automobile and auto- components industry, barring downtrends in few years, was on a growth trajectory, aided by robust economic activity and infrastructure development; growing middle-class population with disposable income; and growing consumer demand. The Indian automobile and auto components industry produces a wide range of models and products. The industry has witnessed high sales turnover, in the last few years, and the exports too have surged over the years. The industry has also started establishing manufacturing and marketing bases abroad. However, the recessionary trends in world market and financial sector meltdown has affected the growth trend of the industry during 2011-12.

The norms for foreign investment and import of technology have also been progressively liberalized over the years for manufacturing of vehicles, including passenger cars, in order to make this sector globally competitive. With the gradual liberalization of the automobile sector, since 1991, the number of manufacturing facilities in India has grown progressively. At present there are about 15 manufacturers of passenger cars & multi utility vehicles, around 10 manufacturers of commercial vehicles, around 15 manufacturers of 2/3 wheelers, besides 5 manufacturers of engines.

It is estimated that the Indian automotive industry contributes more than 5% of the national GDP, and tax contribution of the sector to the exchequer is estimated to be Rs. 25,000 crores. The industry provides direct and indirect employment to over 1.3 crore people. The turnover of the automobile industry was estimated to be around US $ 35 billion and that for components industry was at US $ 18 billion in 2007-08. The investment in automotive industry, comprising of the automobile and the auto component sectors, which was estimated to be at Rs. 50,000 crore in 2002-03, has gone upto Rs. 80,000 crore by the year 2007-08. With the saturation of traditional automobile markets, such as EU, USA and Japan, the growth opportunities for emerging markets such as India have been increasing. India is aggressively looking forward to take advantage of its inherent strengths in automotive design and manufacturing capabilities and position itself as an export base for vehicles as well as components.

Current State of the Indian Auto Market

The Indian auto market is currently small with potential for dramatic growth. While the regional average is for 16.45 percent of the population to own a car, less than 1 percent of the Indian population owns one. Given the large size of the middle class with increasing purchasing power and the youthful population (over half the population is less than 25 years of age and India has the highest proportion of population below 35), there is the potential to penetrate a largely untapped market. Also,

given the availability of cheap, skilled labor, India has the potential to serve as a regional export hub for manufacturers in the Asia-Pacific region.

Small Vehicle Market

The Indian market is dominated by small, low-cost vehicles (two wheelers such as scooters and motorcycles make up about 75 percent of the market share). Approximately 75 percent of passenger car sales in India are small cars. Tata Motors has introduced the Nano, which is both fuel-efficient (about 50 miles per gallon) and cheap ($2,500). Tata launched sales of the Nano in 2008. A number of other manufacturers have already announced plans to develop small cars in a similar price range in order to compete effectively in this market.

Indian Exports and Top Manufacturers

Currently, Asia and Africa are India's largest export markets, but the European market has seen recent growth as well. Exports of passenger vehicles nearly tripled from 72,005 in 2002-03 to 198,478 units in 2006-07.10 According to the Society of Indian Automotive Manufacturers (SIAM), approximately 1.4 million passenger vehicles were sold in FY06/07. The top India manufacturers, in descending order, are Maruti Suzuki, Hyundai, Tata Motors, Honda, Ford India, General Motors India, Hindustan Motors, Skoda Auto India, Toyota Kirloskar Motor, and Fiat India. Most of these manufacturers are already calculating how to further expand production and sales in India. For example, Maruti plans to produce 1 million cars annually by 2010. Nissan, in a joint venture with Renault and Mahindra & Mahindra, plans to open a plant in 2009 with a 400,000 unit production capacity. By the end of 2008, Honda will double its production capacity to 100,000 units, with a second factory set to open in 2009. Toyota has also announced plans to invest $340 million in a second production plant near Bangalore to produce small, affordable cars. Production at this new plant is scheduled to begin in 2010 with a production capacity of 100,000 units. With India's goal to be a major regional export hub, coupled with manufacturers' increased investments, it can be expected that the number of exports from India will continue to rise significantly.

Auto Components Industry

India is estimated to have the potential to become one of the top auto component economies by 2020, according to a study by IBM. According to another study, the auto component industry in India has potential to grow at a CAGR of 13% to reach US $ 40 billion by 2015. India's share in world auto components would thus grow from around 1%, at present, to over 2.5% by 2015. Domestic market is projected to grow at around 8-10% per annum in the next 10 years. Exports are projected to grow at over 30% per annum in the long term.

The automotive market in India has grown significantly owing to the growth in income and in the living standards of the middle class population, and a significant increase in their disposable incomes. However, there has been a slowdown in demand for vehicles, in 2008-09, which is impacting the auto-component industry adversely. Responding to emerging scenario, Indian auto component sector has

shown great advances in recent years in terms of quality, spread, absorption of newer technologies and flexibility. Availability of skilled manpower, reasonably priced workforce, together with the strengths gained by the country in IT and electronics, have built-up an environment for significant leap in the auto component industry.

India has been emerging as a significant exporter of auto components since the last decade. From a level of US $ 330 million in 1997-98, exports of auto- components have reached to over US $ 3.6 billion in 2007-08. Export orientation of Indian auto-component industry has also increased from a level of 11% in 1997-98 to over 20% in 2011-12. Export of auto components have grown at a CAGR of 24% during this period. India exports its auto components to almost every part of the world, the major markets being developed countries such as USA, Germany and UK. Some of the important Asian markets for auto-components include Bangladesh, Sri Lanka and Nepal. According to ACMA, the export potential of auto components industry is expected to post a CAGR of around 24% to reach US $ 20-22 billion by 2015.

AUTOMOTIVE MISSION PLAN 2006-2016

India's Automotive Mission Plan (AMP) 2006-2016 is a collaborative effort between the Indian government, the automotive industry, and academia.11 The stated vision of AMP is for India "to emerge as the destination of choice in the world for design and manufacture of automobiles and auto components with output reaching a level of U.S. $145 billion accounting for more than 10 percent of the GDP and providing additional employment to 25 million people by 2016."12 India is currently the eleventh largest passenger car market in the world and aims to be the seventh largest market by 2016. While the auto industry has experienced strong growth over the past decade, it still plays a small role in the global industry. According to AMP, India has about 2.37 percent of the world production of passenger and commercial vehicles and exports from India contribute approximately 0.3 percent of the global auto trade.

The AMP makes a number of suggestions for actions to be taken by both the government and industry in order for India to fulfill the goals laid out in the plan. For example, they estimate an investment of approximately $35-40 billion in the auto sector over the 2006-2016 time period will be required to implement AMP. The government's responsibility would be to "facilitate infrastructure creation, promote the country's capabilities, create a favourable and predictable business environment, attract investments and promote R&D." 13 Industry's responsibility concerns issues such as designing and manufacturing quality products, improving productivity, maintaining costs, among others. AMP also calls for the formation of an appropriate development policy; improving road, rail, port, and energy infrastructure; expanding demand for automobiles domestically; and, developing a roadmap to address environmental and safety concerns.

CONCLUSIONS

Given the large population and growing middle class, India has the potential to develop into a significant market for automobile manufacturers. With a large, English speaking, relatively low- cost labor pool, India could eventually serve as a major regional export hub throughout Asia, Africa, and Europe. Mahindra & Mahindra, in fact, is already developing plans to begin selling automobiles in the United States.

However, there are a number of factors that must be overcome in order for India, along with automobile manufacturers, to fully realize the potential in the Indian market. In particular, logistical transportation infrastructure capabilities will need to be improved to meet domestic and export needs. Based simply on the amount of investments by GM and Ford alone, it is clear that foreign vehicle manufacturers view India as a crucial player in the future of the automotive industry as a regional export hub, and as a supplier of automobiles and automotive parts globally.

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