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## A theoretical study of the growth story of the automobile sector in India

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### Abstract

The auto industry saw some big changes in 2017 — but electric cars and autonomous vehicles were just hype. Industry execs agree the car business is undergoing unprecedented change. But some of that change is more meaningful than others. Several much-discussed "disruptions" are more speculative than for-real. Automobile manufacturers in India recorded a turnover of over 67 billion U.S. dollars in financial year 2017. This was about the same value in fiscal year 2013. Domestic sales saw a loss of 18 percent, while exports grew at nearly three percent. The present article is a theoretical account of the growth of the automobile sector in India in the year 2017.

**Keywords:** Automobiles, emission standards, sales

### Introduction

The Indian auto industry is one of the largest in the world. The industry accounts for 7.1 per cent of the country's Gross Domestic Product (GDP). As of FY 2014-15, around 31 per cent of small cars sold globally are manufactured in India. The Two Wheelers segment with 81 per cent market share is the leader of the Indian Automobile market owing to a growing middle class and a young population (R. Menaka and K. Ashath, 2015) <sup>[4]</sup>. A growing working population and an expanding middle-class have been the key demand drivers for automobiles in India. India has the second largest road network in the world at 4.7 million kilometers. Road development activity has gradually increased over the years with an improvement in connectivity between cities, towns, and villages in the country.

Notwithstanding its current position, the passenger car industry in India had witnessed a happy saga of non-stop growth for a long period. The last time when it experienced a contraction in sales was 2001-02, which is more than a decade ago. Post-2008 economic crisis, when most of the world economies experienced drastic falls in their car sales, the Indian market remained upbeat with positive growth in production and sales. This reflects versatility of the Indian industry which has undergone major restructuring since economic liberalization was initiated in the country in early 1990s. During the period of liberalization, many global automobile manufacturers like Ford, General Motors, Toyota, Honda, Hyundai, Volkswagen etc. have entered into Indian market and each one of them has set up its own manufacturing facilities within India.

The only foreign company that was operational prior to this was Suzuki Motor Company of Japan that entered into Indian territory in early eighties through a joint venture with a Government of India owned enterprise. These auto majors together are not only meeting bulk of local demand but also catering to various overseas markets from their bases in India. They are giving tough competition to indigenous car makers like Tata Motors, Mahindra & Mahindra and the like. The modern passenger car industry in India is characterized by intense competition among Indian and foreign players who are offering a large variety of products that are technologically sound, price competitive and meet various global standards on safety and environment. But it was a long journey for the industry to reach to this stage from a humble beginning in the late forties.

Even till 1980, there were only a few car manufacturers in India. The majority of market share was held by two domestic players, each one of whom was producing a limited number of models based on outdated technology acquired from their (respective) foreign partners. It was a predominantly sellers' market and the Indian consumers had very little choice before

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them because of limited options in the domestic market and prohibitively high cost of foreign vehicles due to excessive import duty. Indian market was protected from foreign competition and many regulatory measures prevailed in the domestic economy.

This coupled with limited demand for automobiles prevented any firm to go for expansion. The scene started changing only after large scale production of affordable cars was undertaken in the country from mid-eighties. Since then, the industry had made continuous progress and, in that process, it achieved many milestones. India is now a leading producer of automobiles and one of the fastest growing car markets in the world. The industry had many ups and downs in its long journey. But the last decade was quite remarkable for the Indian passenger car industry because during this period it made a steady progress in all fronts. The industry's global image also improved drastically.

In 2002, the government policy for the first time allowed 100 percent foreign direct investment (FDI) in automobiles through automatic route. This spurred higher growth in the sector through increased inflow of foreign investments. Besides being in a continuous growth trajectory in the face of global meltdown, Indian car industry emerged as the sixth largest producer in the world. Simultaneously, the

indigenous car industry made speedy progress and the cheapest car of the world was born in India in the form of Tata Nano (Utpal Chattopadhyay, 2013) [3].

**Automobile industry of India**

The Indian Automobile industry includes two-wheelers, trucks, cars, buses and three-wheelers which play a crucial role in growth of the Indian economy. India has emerged as Asia's fourth largest exporter of automobiles, behind Japan, South Korea and Thailand. The country is expected to top the world in car volumes with approximately 611 million vehicles on the nation's road by 2050.

The economic progress of this industry is indicated by the amount of goods and services produced which give the capacity for transportation and boost the sale of vehicles. There is a huge increase in automobile production with a catalyst effect by indirectly increasing the demand for a number of raw materials like steel, rubber, plastics, glass, paint, electronics and services. India is today well known as a potential emerging automobile market and jobs in the automobile industry are rising. India is expected to be the world's third-largest automotive market in terms of volume by 2026.

**Table 1:** SWOT Analysis of the Indian Automotive Industry

Strengths	Weakness
<ul style="list-style-type: none"> <li>• Investments by foreign car manufacturers</li> <li>• Increase in the export levels</li> <li>• Low cost and cheap labour</li> <li>• Rise in the working and middle class income</li> <li>• Increasing demand for European quality</li> <li>• Expert skills in producing small cars good for environment</li> <li>• Large pool of engineers</li> </ul>	<ul style="list-style-type: none"> <li>• Low quality compared to other automotive countries</li> <li>• Low labour productivity</li> <li>• High interest rate and overhead level</li> <li>• Production costs are generally higher than some other Asian states, such as China</li> <li>• Low investment in R&amp;D area</li> <li>• Local demand is still towards low cost vehicles, due to low income levels</li> </ul>
Opportunities	Threats
<ul style="list-style-type: none"> <li>• Growing population in the country</li> <li>• Focus from the government in improving the road infrastructure</li> <li>• Rising living standards</li> <li>• Increase in income level</li> <li>• Better car technology is demanded</li> <li>• Rising rural demand</li> <li>• The car is a status symbol</li> <li>• Women drivers have increased</li> </ul>	<ul style="list-style-type: none"> <li>• Less skilled labour</li> <li>• Lack of technologies for Indian companies</li> <li>• Increase in the import tariff and technology Cost</li> <li>• Imports of two wheelers from the Chinese market in India</li> <li>• Smaller players that do not fulfill international standards</li> <li>• Increased congestion in the urban area</li> </ul>

(Source: Dr. R. Menaka and K. Ashath. (2015) [4]. A study on role of automobile industry in india and its customers satisfaction. Shanlax International Journal of Management, 48-59.)

A well-developed transportation system plays a key role in the developments of an economy, and India is no exception to it. Automobile is one of the largest industries in the global market. Owing to its strong forward and backward linkages with several key segments of the economy. Automobile Sector occupies a prominent place in the fabric of Indian Economy. Automobile sector is leader in product and process technologies in the manufacturing sector. It has been recognized as one of the drivers of economic growth and the domestic automobile industry is believed to be the barometer of the economy. Such a belief is in line with

international trends since in most mature economies the automobile industry's performance is viewed as a reflection of the economy's health. This sector has emerged as sunrise sector in the Indian economy.

**Review of literature**

(Saon Ray, Smita Miglani, 2016) [5] deals with statistical study enlisting information about vigorous promotional activities on social media by different Automobile manufacturers. It focuses on how three different automobile companies with different origins practice Internet Marketing

for sales and promotions of their product. It shows the comparison between German manufacturer Volkswagen, South Korean manufacturer Hyundai and French manufacturer Renault. The main reason for choosing these companies is because of all the three having different origins.

So, to learn how the three different originating companies practice Internet Marketing in India, the German, French and South Korean Manufacturers were chosen. Moreover, these three companies are quite popular in India as a large volume of their vehicles can be seen on the roads. These companies' product is in a good demand too. Hence it was a good selection to find how three different nation-based companies use social media sites like Facebook, Twitter and Google+ and the data was collected first week of January 2014 to the end of second week of February 2014.

R. Menaka and K. Ashath, (2015) <sup>[4]</sup> observe that the increase in the demand for cars, and other vehicles, powered by the increase in the income is the primary growth driver of the automobile industry in India. The introduction of tailor-made finance schemes, easy repayment schemes has also helped the growth of the automobile sector. The automotive industry is a major industrial and economic force worldwide. It makes 60 million cars and trucks a year, and they are responsible for almost half the world's consumption of oil. The industry employs 4 million people directly, and many more indirectly. Despite the fact that many large companies have problems with overcapacity and low profitability, the automotive industry remains very strong influence and importance. The industry also provides well-paying jobs with good benefits, has heavy linkages with supplier industries (which gives it an oversized role in economic development), and has a strong political influence (R. Menaka and K. Ashath, 2015) <sup>[4]</sup>.

(Kanupriya and Sandeep Kumar) shows the trend of FDI inflows in automobile industry for the period of 2004-2014. The automobile industry is one of the key drivers that boost the economic growth of the country. Since the de-licensing of the sector in 1991 and the subsequent opening up of 100 percent FDI through automatic route, Indian automobile sector has come a long way. With the de – licensing and opening up of this sector to FDI, the sector has grown rapidly due to the entry of global players. Today, almost every global auto major has set up facilities in the country. The trend of production of automobiles shows the growth of automobile sector.

(Utpal Chattopadhyay, 2013) <sup>[3]</sup> identifies the major factors behind India's spectacular success. India growth story was identified to be the key. Other important factors include global shift in automobile industry, favorable policies of Indian governments and positive role of supporting industries like auto components, financial sector etc. The last decade (2002 to 2012) has been quite remarkable for the Indian passenger car industry because during this period it made steady progress in all fronts, production, domestic sales and exports. The era also saw industry's gradual ascent to global power. India now is the sixth largest producer of cars and one of the fastest growing automobile markets in the world. It is home to almost all major global automobile brands, which together contribute more than three-fourths of total production and domestic sales. The achievement of Indian industry is even more significant because it came at a time when the world automobile industry was grappling with crises.

(Madhuri Saripalle, 2012) <sup>[2]</sup> analyzes the role played by government policies in transforming the learning abilities of the firms and the markets with reference to the Indian automobile industry. It is well recognized in industrial organization theory and empirical literature that learning as a capability is a major factor in explaining interfirm performance differences. The success of newly industrialized countries (NICs), for example, has shown that technological progress is not merely guided by changes in relative prices, nor does competitiveness depend upon relative factor endowments. It is more than acquiring the technological blue prints and involves a learning process. This is more so in the context of late comers to industrialization, where governments have actively pursued industrial regulation and protection to allow firms to grow and learn to compete.

(Neelofar Kamal, 2017) <sup>[7]</sup> represents a comprehensive and unprecedented overhaul of outdated processes and policies. The Make in India program was launched by The Hon<sup>ble</sup> Prime Minister Mr. Modi in September 2014 as part of a wider set of nation -building initiatives. The programme has been devised to transform India into a global design and manufacturing hub. The automobile industry, along with the auto components industry, is one of the core industries in India. A well-developed transportation system plays a key role in the development of an economy, and India is no exception to it. Automobile is one of the largest industries in the global market. Owing to its strong forward and backward linkages with several key segments of the economy. Automobile Sector occupies a prominent place in the fabric of Indian Economy. Against the backdrop of this crisis, and quickly became a rallying cry for India's innumerable stakeholders and partners. It was a powerful, galvanizing call to action to India's citizens and business leaders, and an invitation to potential partners and investors around the world.

(M. Krishnaveni and R. Vidy, 2015) <sup>[8]</sup> revises the category wise production, sales and exports of Automobiles in India. In recent years India has been developing as a market potential for automobiles due to rise in demand and as a result there is an increased production to tap the growing demand both at home and in the foreign markets. This is reflected in the production figures of the industry especially remarkable in the passenger vehicle and three wheeler divisions, where production raised from 1,209,876 vehicles in the year 2004 2005 to 3,072,651 vehicles in the year 2013 2014. The sales figure of the industry states that sales of commercial vehicles have decreased. The analysis of the ten year data of the industry indicates that the sale of the industry is quite satisfactory. The exports of made in India rose by 31% in financial year 2004 2005 as passenger cars, two and three wheelers, commercial and multi utility vehicles continue to charm overseas buyers. A total of 1.2 million units were shipped during financial year 2007-2008 over 1 million units exported in the financial year 2006 2007.

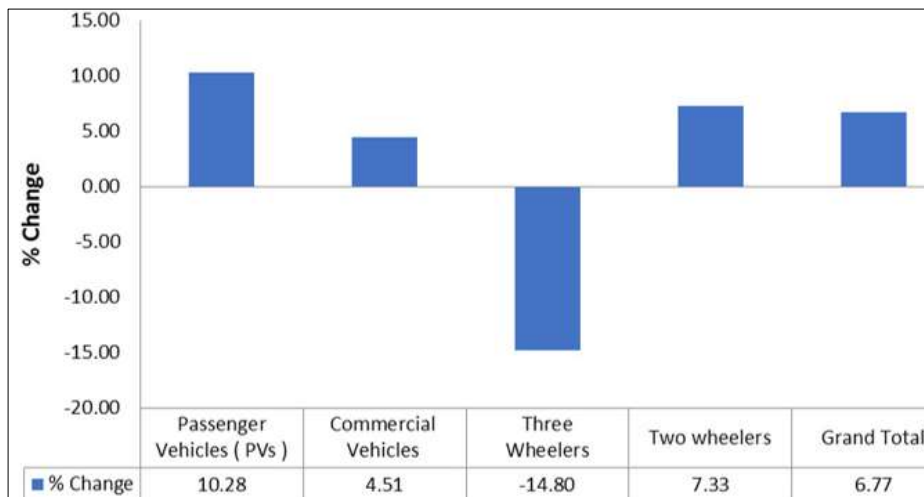
(Viswanathan Krishnan) For forty years since India's independence from the British in 1947, the Indian car market was dominated by two localized versions of ancient European designs -- the Morris Oxford, known as the Ambassador, and a old Fiat. This lack of product activity in the Indian market was mainly due to the Indian government's complex regulatory system that effectively banned foreign-owned operations. Within this system

(referred to informally as the "license raj"), any Indian firm that wanted to import technology or products needed a license/permit from the government. The difficulty of getting these licenses stifled automobile and component imports, creating a low volume high-cost car industry that was inefficient, unprofitable, and technologically obsolete.

**Indian automobile industry: FY 2016-17**

The Automobile Industry in India grew by 6.77 percent for April - December 2016 and sold 1, 92, 76, 447 vehicles both

Domestic and Export market. While the highest growth was registered by Utility vehicles at 34.95 percent mainly due to good show continued by Hyundai CRETA and Maruti Suzuki VITARA BREZZA, Mopeds also scored well with the sole model TVS XL Super registering 27 percent increase followed by scooters at 15.91 percent in overall sales. Three-Wheeler and Motorcycles export sales were down by -34.76 percent and -13.13 percent respectively resulting in decline of overall export by -7.37 percent.



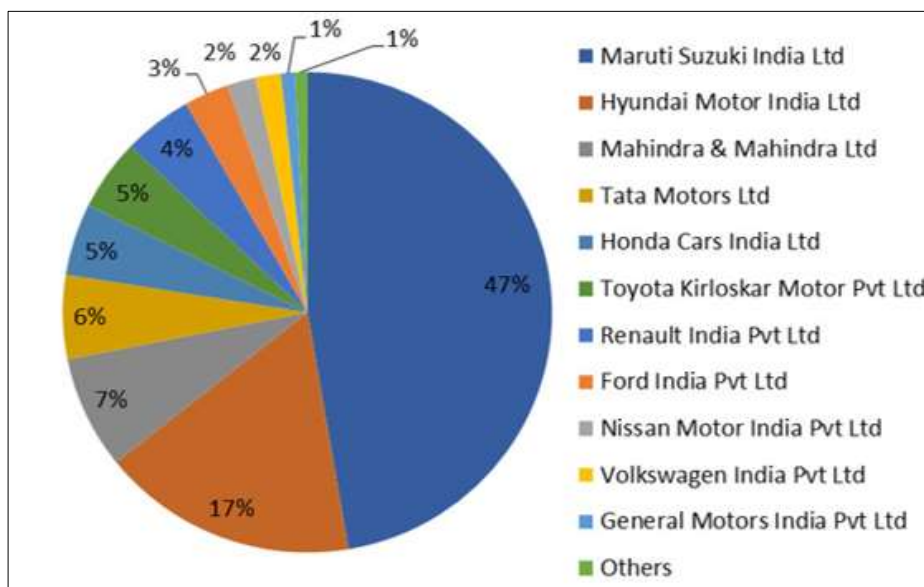
(Source: Kavya Mittal. (2017) <sup>[10]</sup>. indian-automobile-industry-fy-2016-17-nine-months-report-kavya-mittal. <https://www.linkedin.com/pulse/, 1-3.>)

**Fig 1:** % Auto Industry Growth Apr-Dec (2015-16 and 2016-17)

For Passenger Vehicles, the overall sales growth remained at 10.28 percent and industry sold 28, 19, 876 Cars, UV and Vans. Export lead the number at 17.4 percent with share of UVs sales increasing from 17% to 21% in export. Domestic Car sales saw an increase of 8.59 percent with entry level vehicles like Renault Kwid growing at whopping 360 percent.

Honda Cars needs to review its strategy with product launches since the sales is down by -35 percent for PVs,

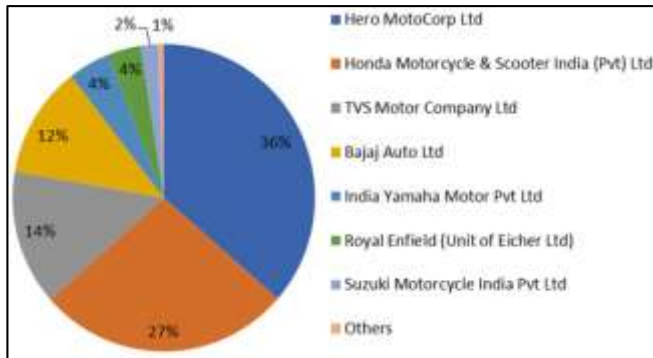
Tata Motors finally gained momentum with fresh launches of Zest, Bolt and Tiago and sold 100,900 in passenger vehicle segment. Maruti Suzuki sold 47,114 of Ciaz and SX4 w.r.t 38,160 in same period last year registering a growth of 23 percent in mid segment and 143 percent in UV segment. UVs looks to be the winning strategy as of now with one in every four car sold being a Utility Vehicles and all OEMs registering growth in this segment expect Nissan with its Terrano.



(Source: Kavya Mittal. (2017) <sup>[10]</sup>. indian-automobile-industry-fy-2016-17-nine-months-report-kavya-mittal. <https://www.linkedin.com/pulse/, 1-3.>)

**Fig 2:** Market Share (Domestic 4W Sales): FY Apr-Dec 2016-17

For Two Wheeler Industry, the industry saw an overall sales growth of 7.33 percent with 10.04 percent increase in domestic sales and a dip of -9.70 in exports mainly due to reduced number of export of motorcycles. Industry sold 42, 92, 320 of scooters for the period April to December 2017 against 37, 08, 770 for the same period last year in domestic market. While Hero MotoCorp maintained its Numero Uno position for motorcycle at 50.3 percent market share, Honda 2W dominates the scooters segment with 57.2 market share in domestic market. IYML and Piaggio looks strong with close to 50 percent growth rate in scooter segment.



(Source: Kavya Mittal. (2017)<sup>[10]</sup>. indian-automobile-industry-fy-2016-17-nine-months-report-kavya-mittal. <https://www.linkedin.com/pulse/>, 1-3.)

**Fig 3:** Market Share (Domestic 2W Sales): FY Apr-Dec 2016-17

Medium and Heavy Commercial Vehicles registered a negative growth of -1.82 percent in domestic market and overall flat growth of 1.35 percent in Apr-Dec 2016 when compared to last year same period. LCVs sold in the same period are 2, 94, 848 in domestic market and close to 3.46 lakhs in total. Overall, industry sold 5, 81, 836 commercial vehicles in both domestic and export market and registered a growth of 4.5 percent.

Though the Auto Industry is on healthy growth trajectory for most of the year, domestic Sales declines -18.66% in December on account of Demonetization and Year-end Impact (Kavya Mittal, 2017)<sup>[10]</sup>.

### Events that dominated Indian automobile industry in 2017

At a time when the industry was trying to recover from the shackles of demonetisation and continuous uproar over pollution, 2017 brought not much good news for the sector either. 2017 was a year of disruption for Indian automobile industry; the sector went through a lot of ups and downs. At a time when the industry was trying to recover from the shackles of demonetisation and continuous uproar over pollution, 2017 brought not much good news for the sector either.

Primarily, four events dominated the industry in 2017: BS-IV emission norms, Goods and Services Tax (GST), Focus on electric vehicles, and new entrants to the market.

#### 1. BS-IV Emission Norms

Supreme Court banned the sale of all Bharat Stage III (BS-III) vehicles starting April 1, 2017, thereby tremendously impacting two-wheeler and commercial vehicle manufacturers. The decision came as a shock to the industry as the losses mount to over Rs 12,000 crore.

According to ARAI (Automotive Research Association of India), the emission level for BS-III two-wheelers is restricted to 1.00 g/km, while the same for BS-IV compliant is not more than 0.75 g/km.

#### 2. Goods and Services Tax (GST)

A lot of commotion happened with regard to the allotment of taxes and cesses on luxury cars and electric/hybrid vehicles. While electric cars have been taxed under the bracket of 12 per cent, hybrid vehicles fall under a much higher 43 per cent. This did not go well with the manufacturers as higher GST will further hinder the adoption of such vehicles by consumers. When it comes to luxury cars and SUVs, government's move to increase cess rates on such vehicles disheartened the spirit of make in India. Manufacturers feared of getting lesser revenues, thereby thought of redrawing investment plans for the country.

#### 3. Focus on Electric Vehicles

The Indian government has charted out a long-term plan to electrify all vehicles across the nation by 2030. Recently, Minister of Road Transport and Highways Nitin Gadkari even warned the automakers to either switch to clean vehicles, or get bulldozed. However, automobile industry body SIAM said that all new vehicle sales in India to be pure electric is possible only by 2047.

To keep up with the trend, auto companies shared their plans for India. While Maruti Suzuki India has partnered with Toyota to roll out its first electric car by 2020, Mahindra & Mahindra joined hands with Uber and Ola to deploy such vehicles in the country. Tata Motors is also on its way to launch its first batch of electric Tigor for government in 2018. Meanwhile, two-wheeler maker Hero MotoCorp invested Rs 205 crore in electric start-up Ather energy to expedite R&D in the said sector.

#### 4. New Entrants to the market

The competition is further going to toughen as new players have announced their entry in the Indian automobile market. South Korea's second largest automobile manufacturer Kia Motors has started building its first manufacturing facility in the country in Anantapur District, Andhra Pradesh. The company is investing approximately \$1.1 billion, and the facility is expected to begin production in the second half of 2019 and produce up to approximately 300,000 units each year.

The iconic Ambassador maker Hindustan Motors was purchased by French auto major Peugeot for Rs 80 crore, and the company has initially planned an investment of Rs 700 crore in India. Even China's SAIC Motor will also be setting up a passenger car manufacturing plant in India with an investment of around Rs 2,000 crore. Toyota owned luxury brand Lexus entered Indian market in March 2017. However, here the automaker stands independently from the broader Toyota presence in India (Pooja Chatterjee, 2017)<sup>[9]</sup>.

#### Major government initiative under "Make in India" campaign for automobile industry

The Government of India allows 100 per cent FDI in the automotive industry through automatic route. According to this paper and the official website of Investment and

Technology Promotion Division, Ministry of External Affairs, Govt. of India

### Some of the major highlights of are

- The auto industry is encouraged by 5 years' extension of 200 per cent weighted deduction of R&D expenditure under Income Tax Act and also introduced the weighted deduction of 150 per cent for expenditure on skills development. These measures will help the industry improve its products and performance.
- The "Start Up India" program, there are immense opportunities in the Indian automobile industry for technological innovation and new solutions. The growing digitization in the country is driving innovation in advanced mobility (with initiatives such as technology-based cab aggregation and, ride sharing), vehicle and component retail, connected car, etc.
- The Automotive Mission Plan 2016-26 (AMP 2026) is one such initiative. It clearly lays out the government's collective vision on how the automotive sector should grow regarding size, contribution to national development, technological maturity, global competitiveness and institutional structure. It aims to make India among the top three automotive industries in the world and increase exports exponentially to reach 35-40% of overall output. It also intends to increase its contribution to the GDP to over 12%, generating 65 million more jobs as well as increasing the size to USD 300 billion by 2026.
- FAME Scheme - based on NEMMP (National electric mobility plan) 2020 road map, FAME (Faster adoption and manufacture of electric vehicles in India) scheme was launched by DHI, Go I with a capital outlay of INR 795 crore. It will cover all segments i.e. two, three wheelers, cars, LCVs, busses etc. and all forms of hybrid and pure electric vehicles
- The likely rollout of Goods and Services Tax (GST) would also help improve doing and establishing new businesses in the country. The tax reform is likely to change the transportation scenario, and industry players must start thinking about realigning their supply chain, specifically the distribution network, his single reform will impact vehicle pricing, sourcing strategies, distribution costs and dealer profitability
- The increase in customs duty on cars and multi-utility vehicles (MUVs) valued above US\$ 40,000 from 60 per cent to 75 per cent seems to be a step to encourage local manufacturing, value addition and employment.
- Also, the concessional import duty on specified parts of hybrid vehicles has been extended to lithium-ion batteries and other parts of Hybrid vehicles. This will help the industry to achieve better cost efficiency.
- With the emergence of 5 large automotive clusters in the country i.e. the Delhi-Gurgaon-Faridabad in the north, Sanand-Halol and Mumbai-Pune-Nasik-Aurangabad in the west, Chennai-Bengaluru- Hosur in the south and Jamshedpur -Kolkata in the east, India is fast on its way to becoming the primary global automobile manufacturer. The government of India is more than willing to lead this charge and assist this sector in every way to help it achieve its full potential.
- Mr Nitin Gadkari, Minister of Road Transport, Highways & Shipping has announced plans to set up a separate independent Department for Transport, comprising of experts from the automobile sector to resolve issues such as those related to fuel technology, motor body specifications and fuel emissions, apart from exports.
- Government of India aims to make automobiles manufacturing the main driver of „Make in India“ initiative, as it expects passenger vehicles market to triple to 9.4 million units by 2026, as highlighted in the Auto Mission Plan (AMP) 2016 -26.
- In the Union budget of 2015-16, the Government has announced to provide credit of Rs 850,000 crore (US\$ 124.71 billion) to farmers, which is expected to boost the tractors segment sales.
- The Government plans to promote eco -friendly cars in the country that is, CNG based vehicle, hybrid vehicle, and electric vehicle and also made mandatory of 5 per cent ethanol blending in petrol.
- The government has formulated a Scheme for Faster Adoption and Manufacturing of Electric and Hybrid Vehicles in India, under the National Electric Mobility Mission 2020 to encourage the progressive induction of reliable, affordable and efficient electric and hybrid vehicles in the country.
- The Automobile Mission Plan (AMP) for the period 2006–2016, designed by the government is aimed at accelerating and sustaining growth in this sector. Also, the well-established Regulatory Framework under the Ministry of Shipping, Road Transport and Highways, plays a part in providing a boost to this sector.
- The Automotive Mission Plan 2016-26 (AMP 2026) is the collective vision of the government of India and the automotive industry on where the industry should be after 10 years. AMP 2026 seeks to define the trajectory for the automotive ecosystem in India including the regulations and policies that govern research, design, technology, testing, manufacturing, etc. of automotive vehicles, components and services. The plan envisages that Indian automotive industry would grow 3.5-4 times in value from its current output and reach around INR 16, 16,000 crores by 2026
- Voluntary Vehicle Fleet Modernization programme (V -VMP) proposed by the Ministry of Road Transport and Highways that offers incentives worth 8-12% of the cost of a new vehicle for surrendering the old one. It would be able to generate steel scrap worth USD 1,728 million domestically every year with the set -up of organized shredding centers in addition to providing environmental and energy efficiency benefits (Neelofar Kamal , 2017) <sup>[7]</sup>.

### A brief introduction to the Indian component suppliers

Component suppliers are the backbone of an emerging automotive industry. By all accounts, the Indian component industry, based mostly in the southern city of Madras, is tiny. The auto component manufacturers association of India (ACMA) estimates that \$2.1 billion worth of car parts were produced in the financial year 1995, out of which exports amounted to \$228 million. To put this in perspective, the entire Indian industry's revenue is roughly one-tenth that of GM's component unit, Delphi automotive systems. But the component market has been growing rapidly at about 25% a year, and is expected to quadruple in size by the year 2000. This growth has not only been due to the growing demand for passenger vehicles, but also due to the increasing trend

by multi-national OEMs to resort to global sourcing to improve competitiveness. Leading automotive assemblers and component makers are increasingly turning to India for components. One of the now widely-cited examples of this trend is the Indian component firm, Sundaram Fasteners Limited (SFL), which the author has been studying for the last year. SFL became GM's largest supplier of radiator caps, and exports about 300,000 caps from its factories in Madras to GM plants around the world.

In 1992, when GM was planning to close one of its plants in UK., SFL took advantage of the liberalized economic environment in India, bought the machinery from GM, and relocated them to its plant in Madras. The company has continued to invest heavily in quality and productivity improvements, and a tour around SFL's suburban Madras Factory shows a world-class plant with minimal inventory and rework. The company's workers, trained in statistical tools and control charts, keep processes under statistical control due to which radiator cap rejection rate is less than

1% of annual production. The company also has a very skilled managerial and engineering workforce, which has helped it develop in-house product development capabilities. Using these resources and skills, the firm is now seeking to expand its supply to other manufacturers in Europe, US, and Asia, and also diversify into other components.

SFL exemplifies the Indian auto components industry, which although small and fragmented has the competitive advantages of a skilled workforce and low labor costs. It is estimated that components can be produced about 30% cheaper in India than in the west. (The top Indian assembler, Maruti, is able to price its cars at about \$5,500 because it sources 90% of its components from Indian suppliers.) Rapid growth and tie-ups with foreign firms will help Indian auto components suppliers further invest in capacity and automation and acquisition of the latest know-how, thereby closing the productivity gap with other world-class component makers (Viswanathan Krishnan).

**Table 3:** Discussion of the Strengths and Weaknesses of the Various Players

Group	Strengths	Weaknesses
Indian Assemblers	<ul style="list-style-type: none"> <li>Established distribution and after-sales networks, and supplier base.</li> <li>Understanding of the Indian market and ability to liaison with the government</li> </ul>	<ul style="list-style-type: none"> <li>Lack of product development capabilities (except TELCO)</li> <li>Brand image (especially HM and PAL).</li> </ul>
Multi-national Assemblers	<ul style="list-style-type: none"> <li>Lean production capability</li> <li>Ability to design products with differentiating features • Deep pockets, brand image.</li> </ul>	<ul style="list-style-type: none"> <li>Lack of experience with the Indian market, industry, and government.</li> <li>Small component supplier base and high import tariffs.</li> </ul>
Indian Component Suppliers	<ul style="list-style-type: none"> <li>Low cost, skilled workforce Learning From exports</li> </ul>	<ul style="list-style-type: none"> <li>Small Size, Fragmentation</li> <li>Lack of know-how in certain areas.</li> </ul>
Multi-national Component Suppliers	<ul style="list-style-type: none"> <li>Size, Deep pockets</li> <li>Experience and Know-how in technology.</li> </ul>	<ul style="list-style-type: none"> <li>Import tariffs, currency exchange rate fluctuations.</li> <li>Inexperience with Indian workforce.</li> </ul>

(Source: Viswanathan Krishnan. (n.d.). Indian Automotive Industry: Opportunities and Challenges Posed By Recent Developments. 1-8.)

## Conclusion

Easier and faster mobility of people and goods across the regions, countries and continents is a cherished yearning of mankind. The automobile industry's potential for facilitating this mobility is enormous. Wheels of development across the globe would have to be powered by this industry. However, a seamless development of this industry across countries and continents alone will help in realization of this objective. For such seamless and barrier-free development of the sector, countries will have to come together and develop better understanding. Industry across countries will have to meet challenges of newer technologies, alternative fuels and affordability of automobiles by people at large through constructive cooperation. The industry has recorded phenomenon growth during the last decade. A market trend is growing at a faster rate. The opening of the Indian automobile market for foreign companies the competition is expected to enhance further. The opportunities can be grabbed through the diversification of export basket in untouched foreign destinations. Thus strict quality standards, services and use of latest technology can provide an edge over competitors across the globe (M. Krishnaveni and R. Vidy, 2015) [8].

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