

## Trends in the Global Automotive Sector

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### ABSTRACT

*Automakers everywhere in the world are pinning their hopes on rising demand in the developing nations. Although customers in mature markets are downscaling to fuel – efficient basic cars, a sizeable proportion of consumers in the BRIC (Brazil, Russia, India, and China) markets still aspire to own bigger cars, such as SUVs. With demand for vehicles deteriorating in most established marketplaces in the aspect of the world-widest agnation, high fuel costs and metropolitan pouring limitations, the industry is turning its consideration even extra powerfully towards the increasing middle classes in the new power houses of China, India, Brazil, Russia and other growing nations. In this context a study has been conducted to know the trends of automotive industry globally. The study is equipped grounded on primary facts and secondary statistics. The primary data has collected through oral interview from stalwarts of automotive industry. The secondary facts is composed from the information of international conference of automotive industry and all existing literature has collected also from internet automotive websites, auto business magazines, e-auto journals etc. findings out the study reveals that there is growing demand for car in future at global level . Finally suggestions have been framed and conclusions have been drawn for the study.*

**Keywords:** *Automotive Industry, Global, Trends, International Automotive Conference*

**Type:** *Research Paper*

### 1. INTRODUCTION

Automotive Industry “all those corporations and events elaborate in the production of motor vehicles, including most components, such as engines and bodies, but excluding tires, batteries, and fuel. Automotive industry is a symbol of technical marvel by human kind. Being one of the fastest mounting segments in the world its active progress stages are enlightened by nature of competition, product life cycle and consumer demand. Original equipment manufacturer or OEM describes a replacement part made by the manufacturer of the original part. As most cars are initially accumulated with parts made by corporations other than the one whose badge seems on the vehicle, it may occur that a car corporation sells OEM extra parts without demanding to have manufactured the part itself. An automobile part may convey the description OEM if it is made by the similar producer and is the innovative fragment used when building and marketing the product. Automakers around the world are pinning their hopes on rising demand in the developing nations. Although customers in mature markets are downscaling to fuel – efficient basic cars, a sizeable proportion of consumers in the BRIC (Brazil, Russia, India, and China) markets still aspire to own bigger cars, such as SUVs. With demand for vehicles declining in most mature markets in the face of the global recession, high fuel costs and urban driving restrictions, the industry is turning its attention even more strongly towards the expanding middle classes in the new power houses of China, India, Brazil, Russia and other growing nations. A view shared by auto executives from both the TRIAD (Japan, Western Europe and North America) markets and the BRICS feels market growth in emerging nations is an important trend. Issues such as innovative vehicle design, mobility-as-a-service (MaaS) and connected car technologies are all measured immensely additional significant. Despite moderately little car proprietorship, developing markets are correspondingly if not more eager than their developed counter parts to address the needs of the 21<sup>st</sup> century urban occupant. The Automotive Industry is being moulded by the increase of the emerging markets, e-mobility and the altering urban environment. Vehicle purchase decisions appear to be driven more by hard-headed financial factors than a desire to be green. The rate of fuel efficiency as the number one priority for consumers over the next 5 years, reflecting the rising cost of filling the tanks of their cars. Drivers from all over the world have growing opportunities of safety and are challenging more comfortable,

ergonomically progressive vehicles. And with vehicle designing becoming less serious, it appears that practicality is captivating the day over design and luxury. Consumers from the BRICs reflect luxury to be an significant feature, signifying an ambitious aspiration to trade up from elementary cars. When buying electric vehicles, buyers are again worried about their wallets. Supplementary drivers are observing for longer-lasting e-vehicles, motioning an essential for developed and maintainable Technologies. A battery makes up a significant portion of the inclusive price of an e-car, and actual or prospective owners are still undefined how long the vehicle/ battery will last and at what percentage it will decrease the value. Of the various e-technologies, plug-in hybrids are thought to have the utmost sales potential by 2018, soaring a head of predictable hybrids, which were the number one high-quality, BRIC automakers have much superior assurance in fuel cells than their counterparts in the TRIAD markets. In such a case a study has been conducted to know the trends of automotive industry at global level.

#### 1.1. Need and Significance of the Study:-

Technology enlargements by the automobile industry, buyer preferences for vehicle presentation, and societal forces on vehicle competence will safeguard that there will be a continuous placement of lower-mass vehicle perceptions in new vehicles at global level. This mass-reduction technology deployment occurs with the piece-by-piece introduction of new reduced-mass parts, the use of innovative resources in stronger strategies, and the redesign of vehicle models that analytically enhance the use of materials and design in a more comprehensive manner. There is a need and significant to study about the trends of automotive industry at global level.

#### 1.2. Objectives of the Study: -

- i). To Analyse the Trends in growth of car sharing at Global level.
- ii). To Examine the Trends towards optimizing smaller number of platforms for a much larger number of vehicles at global level.

#### 1.3. Scope of the Study:-

The study covers the limited countries of international to the extent of automotive industries, with special emphasis on knowledge of automotive of only international countries.

#### 1.4. Limitations of the Study:-

The study of trends in the global automotive sector is prepared based on secondary data and the secondary data was limited to the extent of the few nations' automotive industry only.

## 2. PREVIOUS STUDIES

- 2.1. According to Kulekci (2008)<sup>1</sup> opined that, Other than augmented usage of high-strength steel and aluminium, there are also considerable snowballing trends for the use of magnesium. Magnesium is least dense of the primary automotive metals, at about 30% lower density than aluminium and 75% lower density than steel and is therefore seen as a encouraging prospective sub ordinate quantity metal auxiliary.
- 2.2. U.S. Department of Energy (U.S. DOE), (2006)<sup>2</sup> reported that, Automobiles operate a wide assortment of plastic sorts, including polypropylenes, polyesters, and vinyl esters. These possessions are operated in accesses, coverings, inner boards, appliance boards, and hundreds of other portions. Never the less principally substituting non-structural vehicle apparatuses, plastics have sustained to make in-roads in plentiful schemes and in amalgamated beam presentations, and a number of trainings have originate possible to succeed mechanical rays and mount constituents.
- 2.3. According to Brooke and Evans, (2009)<sup>3</sup> dealt that, Abundant of the complete automobile structure change in the direction of aluminium has originate with snowballing use of aluminium in appliance container heads and blocks, programme fragments, and helms. Aluminium has gone from about 5% of light duty vehicles in the late 1980s to about 9%, or over 325 lbs per vehicle today.
- 2.4. According to Caceres, (2007)<sup>4</sup> stated that, laterally with engine cylinders heads and blocks, aluminium is challenging to substitute numerous old-fashioned steel constituents in vehicles, counting regulator shelters, rotation converter and programme coverings, crankcases, control arms, suspension links, cradles, steering wheels, door frames, dashboards, sheet panels (e.g., roof, door, hood), and beams.
- 2.5. Keith(2010)<sup>5</sup> said that, relatively new areas being explored for aluminium include all aluminium bodies, bumpers, crash management systems, and anybody construction.
- 2.6. Schultz and Abraham (2009)<sup>6</sup> revealed that, looking at automaker-by-automaker average material composition, there are substantial variances in the use of high-strength steels. Equated to the regular 2009 practice of about 14%, some automakers have superior than 20% AHSS while others have less than 10% AHSS.

- 2.7. According to Simpson, (2006)<sup>7</sup> said that the greatest cylinder heads are aluminium, and now engine blocks completed from aluminium in U.S. light duty vehicles approved 50%, outstanding steel in this area for the first time.
- 2.8. Friedrich and Schumann (2001)<sup>8</sup> stated that, Volkswagen engineers suggest that 60 kg magnesium per vehicle is accurate and 100 kg per vehicle of magnesium is imaginable in the 2010-2020 timeframe.
- 2.9. Bandivadekar et al, (2008)<sup>9</sup> stated that, there is also possible for automobile mass lessening with the extended use of plastics and polymer combinations. These plastic materials are substantially fewer dense than all the automotive metals deliberated overhead, and, up to now, these materials have tended to fill many of the non-structural purposes of vehicles for example in numerous internal constituents. To demonstrate their low density associated to the rest of the vehicles' materials, modern vehicles are about 8% plastic by mass, but 50% plastic by capacity.
- 2.10. Gerard (2008)<sup>10</sup> said that ,Some early magnesium submissions are seen in roof frames, cross beams, internal modules like the appliance section, steering column, steering wheel, and engine cradle .

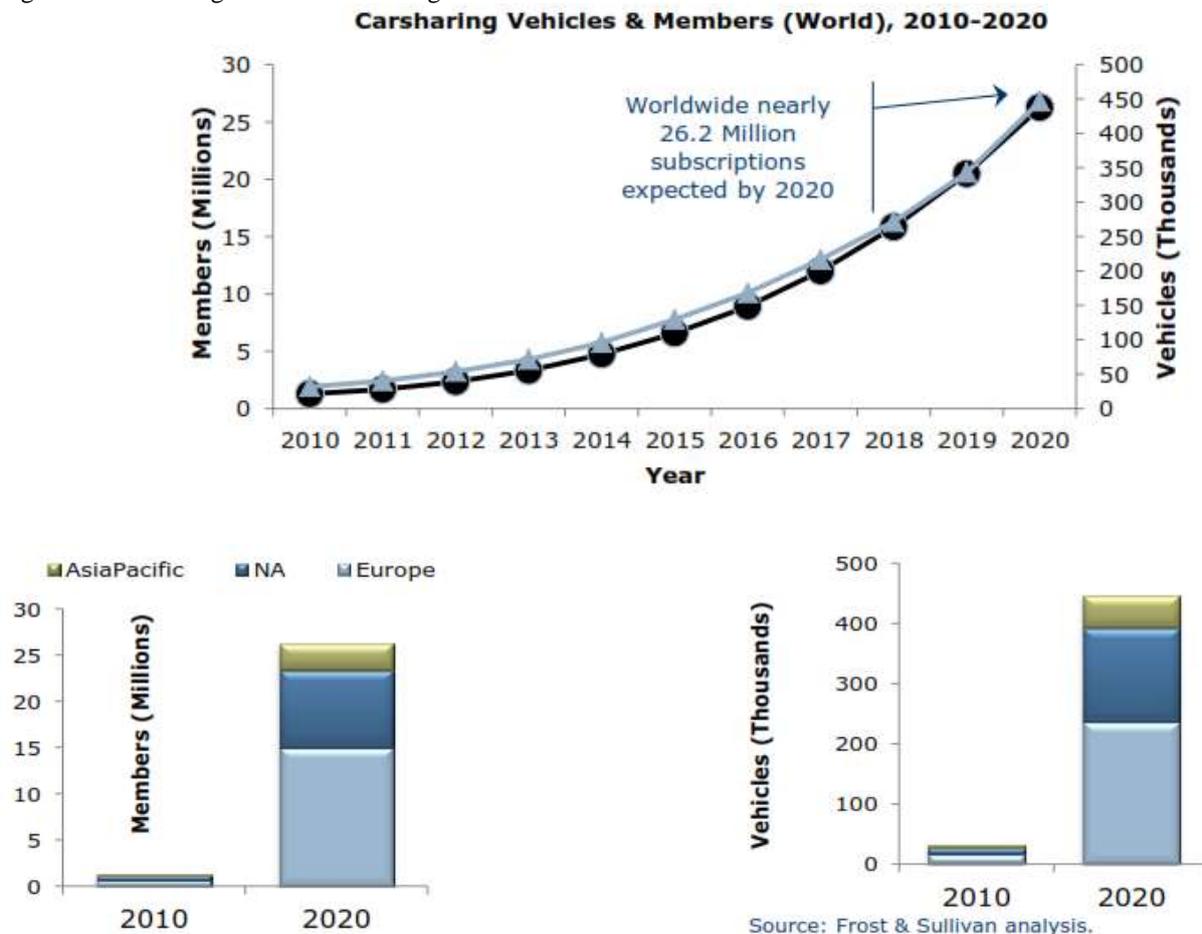
**3. RESEARCH METHODOLOGY**

**Sources of Data:** The validity of any research dependent on the systematic method of data collection sources and its analysis. The study is equipped grounded on primary facts and secondary statistics. The primary facts has collected through oral interview from stalwarts of automotive industry. The secondary statistics has collected from the reports of international conferences of automotive industry and all existing literature has obtained from internet automotive websites, auto business magazines, and e-auto journals.

**Exploration of Data:** In exploration of data, to display the occurrence or nonappearance of precise features and to associate and compare facts standards or features midst connected matters with numerous joint features or variables, figures have been equipped and figures are influential communiqué tools—it provides text the concentration of readers, and professionally existent great volumes of composite evidence.

**4. RESULTS AND DISCUSSION**

Figure .1.Trends in growth of car sharing at Global level.

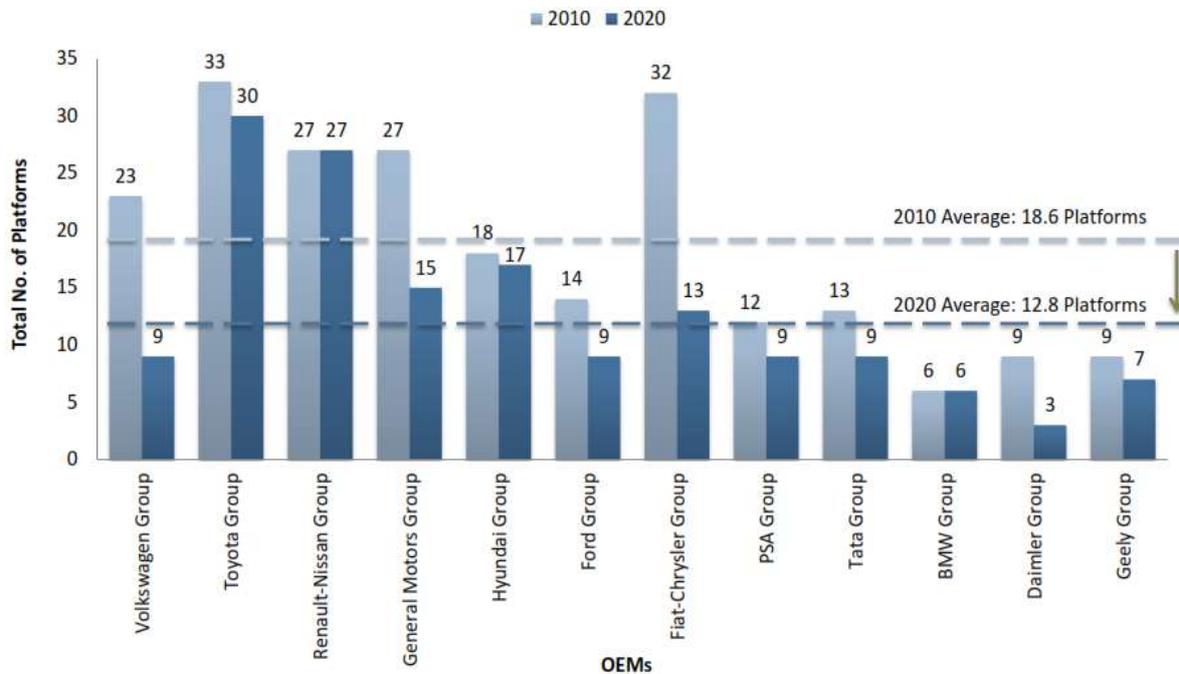


Source: ASEAN Automotive Conference report 2013.

Above figure .1. represents the data about the trends in growth in car sharing at Global level. It shows the trend of rising of 26 million members all over world with 5, 00,000 cars in fleet giving more preference for combined consumption and rejection of car proprietorship is far-reaching the developed markets and crowded cities from the year 2010 up to 2020.

Therefore, it can be concluded that there is growing demand for car in future at global level.

Figure.2. Trends towards optimizing smaller number of platforms for a much larger number of vehicles.



Source: ASEAN Automotive Conference report 2013.

Above figure.2. denotes about the trends of smaller number of stages for a more number of passenger vehicles. Out of total 12 Original Equipment Manufacturer (OEMs) from the above figure Japan’s Toyota Group is the first highest plat form of vehicles globally and Italy’s Fiat Chrysler Automobiles reach the second highest an ambitious platform of vehicles for the brand and will test the world’s seventh-largest auto group’s ability to compete globally compared to other Original Equipment Manufacturer (OEMs) .

Therefore it can be concluded that, OEMs are mounting additional alarmed with enlightening the enactment of their providers in relations of value, superiority, distribution, and elasticity, with specific importance on falling lead times.

**Suggestions:**

1. Finding out the research study discloses that there is mounting demand of more vehicles at global level, in such a case Original Equipment Manufacturer (OEMs) of automotive in world countries should emphasis on consumer preference vehicles , because currently consumers are looking for more efficient , longer lasting cars , primarily to save costs. Drivers from all over the world have rising expectations of safety and are demanding more comfortable, ergonomically advanced vehicles.Besides , new innovative auto products and technologies are the key to growth further and expand the existing auto market in future.

**5. CONCLUSION**

Therefore it can be concluded that in the automotive industry, technical necessity, political sensitivities and market variation have kept final vehicle assembly, and by extension much of parts production, close to end markets. Powerful lead firms and industry associations, large-scale employment and relatively high rates of unionisation, and the iconic status of motor vehicles in the minds of consumers (and policy-makers) in many countries increase the political clout of the automotive industry. So even where import tariffs and local content rules are not present or are scheduled to decline under WTO rules, foreign assemblers have chosen to

'voluntarily' restrict exports and set up local production to forestall political backlash. As a result, regional and national production structures remain surprisingly strong and coherent in comparison to other volume good producing industries where global sourcing of parts and materials is the norm and worldwide demand for finished goods can be met from a handful of giant production clusters. As a result, political pressures go a long way toward explaining patterns of direct investment in the automotive industry.

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