### AUTOMOTIVE INDUSTRY TODAY AND ITS DEVELOPMENT TRENDS

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#### **ABSTRACT**

The value and prospects of automotive industry development are mainly determined by the vehicles position in the transport and energy infrastructure and its overall roll in the national economy of any country. Nowadays automotive-leading countries are standing only top positions in international economy; automotive industry directly affects the technological advance, describes the population solvency and consequently standards of living better than many other statistic indexes.

# I. HINDSIGHT OF AUTOMOTIVE INDUSTRY

To start with, it is important to determine what automotive industry is and how it arose. The automotive industry is the industry which designs, develops, manufactures, markets and sells motor vehicles, and it is one of the world's most important economic sectors by revenue. The term automotive industry usually does not include industries connected with vehicles after delivery to the customer, such as repair shops and motor fuel filling stations. [1]

1769 is considered to be the starting point of automotive industry (vehicles) when Nicolas J. Cugnot, the French engineer, invented the first automobile to run on roads. This vehicle was a self-powered, three-wheeled, military tractor that made the use of a steam engine, it could only run for fifteen minutes. In addition, these automobiles were not fit for the roads as the steam engines made them very heavy and large, and required ample starting time. Oliver Evans was the first to design a steam engine driven automobile in the USA.

In 1885 Karl Benz created the first "real" automobile with a petrol engine in Germany. On January 29, 1886 Benz was granted a patent for his automobile, and began the first production of chevy automobiles.

The Automobile Industry finally came of age with Henry Ford in 1914 for the bulk production of cars. This lead to the development of the industry and it first began in the assembly lines of his car factory. The

several methods adopted by Ford, made the new invention popular amongst the rich as well as the masses. [2] As a consequence, the USA pioneered the automobile markets (with no notable competition) for almost half a century. Nevertheless, after the Second World War, the automotive industry of other technologically advanced nations (for example, Japan and several European nations) began flourishing and within a very short period the U.S automotive industry was glutted with foreign vehicles, especially from Japan and Germany.

## II. AUTOMOTIVE INDUSTRY AS THE WORLD LEADING INDUSTRY

Automotive industry is the leading industry of mechanical engineering in the technologically developed countries. There are wide range of reasons for it:

- 1. First of all, as the population of the world is growing (certainly, not in all countries) and the population welfare is increasing, demand on cars is increasing as well, so that more and more cars are needed to be produced.
- 2. Secondly, automotive industry is a high-tech industry. It just pulls many other industries which enterprises fill its orders. Innovations implemented into automotive industry inevitably make other industries develop their production. As there is a big amount of such industries, there is the whole industry improvement and, consequently, improvement of economy in tote.
- 3. Thirdly, in all developed countries automotive industry is considered to be the most profitable one (among other industries of national economy) as it favors the increase of turnover and yields a good return to the government by its sales on domestic and international markets.
- 4. Fourthly, automotive industry is an important strategic industry. Its development makes the country economically strong and, consequently, more independent. Extensive use of the best vehicles in army improves the defense power of any country.

## III. WORLD AUTOMOTIVE INDUSTRY LEADERS

Nowadays three separate markets can be defined as the world automotive industry leaders:

- 1. The USA. The U.S. automotive industry is represented by General Motors (GM), Ford Motor Co and the Chrysler Group.
- 2. Europe Europe is represented by German car manufactures (Daimler-Benz AG, Volkswagen AG, BMW, Porsche), French ones (The PSA Peugeot Citroën, Renault), Italian ones (Fiat Auto), Sweden ones (Saab Automobile and Volvo CarAB).
- 3. Asia. The Asian car market is represented by Japan (Honda, Mitsubishi Motors, Subaru, Mazda, Suzuki, Toyota Motor Co, Nissan Motor Co), The Republic of Korea (Hyundai Motors, Kia Motor, Daewoo) and China (Geely, FAW, ZXAuto).

Table 1. 2009 cars vehicles production statistics

Country	Cars	Commercial vehicles	Total	Change,
China	10,383,831	3,407,163	13,790,994	48.3
Czech Rep.	967,760	6,809	974,569	3.0
France	1,819462	228,196	2,047,658	-20.3
Germany	4,964,523	245,334	5,209,857	-13.8
India	2,166,238	466,456	2,632,694	12.9
Italy	661,100	182,139	843,239	-17.6
Japan	6,862,161	1,072,355	7,934,516	-31.5
Poland	819,000	65,133	884,133	-7.1
Russia	595,839	126,592	722,431	-59.6
S.Korea	3,158,417	354,509	3,512,926	-8.2
Spain	1,812,688	357,390	2,170,078	-14.6
Sweden	128,738	27,600	156,338	-49.3
Taiwan	183,986	42,370	226,356	23.7
UK	999,460	90,679	1,090,139	-33.9
USA	2,246,470	3,462,382	5,708,852	-34.3
Suppl.	302,450	110,109	412,559	-22.4
Total	47,952,995	13,761,694	61,714,689	-12.8

Source: The International Organization of Motor Vehicles Manufacturers [3]

According to the Table 1 it is undoubtedly that nowadays most cars are produced in Asian countries (China is the leader) and there can be several reasons for it. First of all, manufacturing costs is Asian contras are less, so that Asian cars are the cheapest ones. Secondly, European countries as well as the USA prefer to construct their plants in Asian countries because of the costs. Another thing to mention is that because of the economic crises started in 2008 the number of produced cars has fallen while consumers prefer to buy cheaper ones with smaller engines and less useless devises.

In 2010 British publishing house "Auto Express" announced the best selling cars in the world [4]. Here is the list of 5 cars with tens millions sales:

- Toyota Corolla;
- Ford F-Series;
- Volkswagen Golf;
- Volkswagen Beetle;
- Ford Escort.

The tendency is that people nowadays prefer to buy small cars (except Ford F-Series) because of their smaller price, less expenses on petrol and easiness with parking.

# IV. AUTOMOTIVE INDUSTRY DEVELOPMENT TRENDS

Nowadays several trands can be named as the world ones.

- 1. Changing in the world vehicles market geography:
- a) Changing of American, European and Asian automaking transnational companies positions on international vehicles markets.

In conditions of acute competition only Japanese and Korean (The Republic of Korea) automaking transnational companies increase their influence on American and European vehiclemarkets. In the USA and European countries there is constant growth of Japanese and Korean vehicle sales which main advantages are safety and efficiency. The situation with European suppliers is aggravated by European commission tough requirements to reduce harmful atmospheric emissions and trade unions' opposition to the industry restructing programs. Thereby in this decade the "oligopoly collapse" process is completing, the U.S. Market is becoming the market controlled by about 9 companies.

b) BRIC countries (Brazil, Russia, India, China) are considered to be the main center of automaking development. The market volumes are supposed to be doubled during next decade. The ASEAN counties are also considered to increase production volumes.

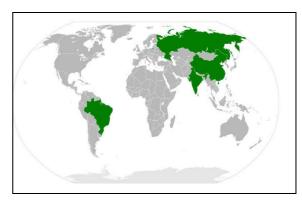


Fig. 1. The BRIC countries

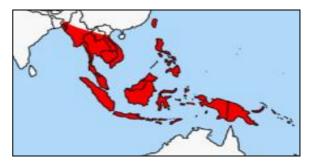


Fig. 2. The ASEAN countries

- c) China is supposed to become one of the world automaking leaders (even now it is developing special vehicles for European and the U.S. markets).
- d) Increase of production volumes of such countries as Czech Republic, Slovakia, Hungary, Poland and etc. The reasons for such tendency are "cheep", skilled manpower, advantageous geographical location and favorable investment legislation.
- 2. Changing in the world automaking industry structure. The main tendency of modern automaking is that industrialized countries prefer the small batch production of big range of cars to large-scale release of one or several auto models. Another thing to mention is that nowadays world automakers try to restructure their units all around the world.
- 3. Changing in marketing approaches of transnational companies on the world vehicles market:
- a) Globalization of the world vehicles market. Modern vehicles market is characterized by the market oversaturation stage, possible overproduction crisis and decrease of demand growth rate on markets of industrialized countries. Globalization is mainly characterized by increasing role of external factors and formation of single world market without national hassles and creating common legal environment for all countries. Thereby globalization process affects the necessity of certain approaches to be used while developing standardized marketing complex, in other words globalization makes manufactures use common marketing approaches and techniques for different markets of different countries.
- b) In spite of market globalization it is necessary to remember that each country (or region) is unique and the consumers of this country have their own unique tastes. Thereby it is necessary to use common marketing approaches, however, adjusted for peculiarity of consumers perception on vehicles markets of different countries.

- c) The struggle for safety becomes very significant for world automakers and as a result consumer-oriented marketing is required. Nowadays Japan cars such as Honda, for example, are leaders in this category.
- d) Environmental marketing is also becoming very popular. People all over the world become environment-friendly and it is vital for them to buy ecological cars which were produced with the little harm to the nature, so this aspect is a significant factor of competitiveness of world automakers (transnational companies).
  - e) The trend of the car innovativeness.
- f) The exterior and interior factors are still significant for consumers. For example, cars with options listed below are sold better (than without them): combination of car classes/series (off-road and estate vehicles), interior multifunctionality(combination of vehicles for work and holidays), extra facilities (for example, extra glove compartement).

### V. CONCLUSION

Automotive industry is one of the most significant world industries which affects people lives and economic situation in the world. Thereby what automotive industry will be like in the future is what the whole world will be like then.

### REFERENCES

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