

## Overview of Production and Sales of

# **Automobiles and Auto Parts in N**

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# I. Development of Mexican Automotive Industry (a) An Overview

In Mexico, the automotive industry is the biggest and most promising industry in its manufacturing sector. As of now. Mexico ranks the 7th in the world in terms of automotive manufacturing and the 4th in the world in terms of automotive export. Its main export destination is the US and its exports to Latin American countries have been on the rise. In 2014, its automotive industry comprised 4% of its GDP and 20% of its manufacturing sector's production output. In 2014, 3.365 million lightweight vehicles were manufactured in Mexico (2.189 million or 65.1% of them were exported); 172,000 heavyweight vehicles were manufactured in Mexico (131,000 or 76.2% of them were exported). Since 2013, Mexico has overtaken S. Korea to become the 5th largest country in the world in terms of auto parts manufacturing. According to the statistics of its auto parts association, in 2014, the monetary value of auto parts manufactured in Mexico reached US\$ 81.54 billion and the monetary value of auto parts exported from Mexico reached US\$ 64.83 billion.

## (b) Scope and Distribution of Its Automotive Industry

As of now, there are 19 automobile manufacturers in Mexico which are located in 11 states in its central and northern regions. These automobile manufacturers carry out auto assembly and the production of engine castings and stamped components. For the time being, 48 models of passenger cars and lightweight trucks are manufactured in Mexico. The two leading automakers in North America are situated in Mexico: VW (located in Puebla) and Nissan (located in Aguascalientes).

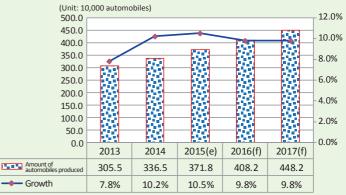
There are about 600 auto parts suppliers/ manufacturers in Mexico. 230 of them are foreign invested factories and 250 of them are 0EM auto parts manufacturers, which supply auto parts mainly to the auto assembly factories located in Mexico. The rest are of mid-size and small-size auto parts manufacturers.

#### II. Overview of Automotive Sales in Mexico

Thanks to the NAFTA signed by Mexico, Canada and the US, in 2014, due to the economic recovery of the US, the amount of automobiles manufactured in Mexico reached 3.365 million, exceeding that of Brazil, whose

economic conditions had been sluggish since 2002. Automobile production of Mexico has exhibited a steadily increasing pattern. In 2015, with the stable economic conditions in North America and the increase in automobile demand in Central and South Americas, it is estimated that 3.718 million automobiles (a growth of 10.5% as compared to 2014) will be made in Mexico in 2015. *Fig. 1* is a bar chart illustrating the predicted amounts of automobiles that will be made in Mexico in 2015, 2016, and 2017.

Fig. 1 Amounts of Automobiles Produced in Mexico with Projections

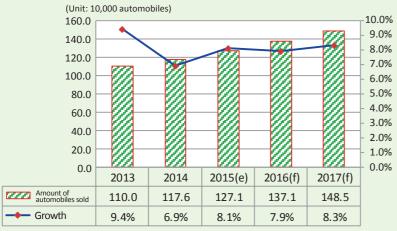


Data sources: Industria Nacional De Autopartes, A.C. and IEK of the ITRI (2015/04)

In 2014, 1.176 million units of automobiles (a growth of 6.9% as compared to that of 2013) were sold in Mexico. In 2015, it is expected that automobile sales in Mexico will reach 1.271 million units(a growth of 8.1%) because the economic conditions in Mexico will continue to grow and the demand for passenger and commercial vehicles will continue to grow. *Fig. 2* is a bar chart illustrating the predicted amounts of automobiles that will be sold in Mexico in 2015, 2016 and 2017.

Thanks to the NAFTA resulting in lower customs tariffs and cheaper labor cost, 76.4% (or 2.57 million units of automobiles of all automobiles made in Mexico were exported to North American countries; 12.2% (or 0.411 million units of automobiles) were exported to Central and South American countries; 9.6% (or 0.323 million units of automobiles) were exported to European countries; the remaining 1.8% (or 0.06 million units of automobiles) were exported to Asian countries and other regions. *Fig. 3* is a pie chart illustrating the export destination regions as percentages of all automobiles made in Mexico in 2014.

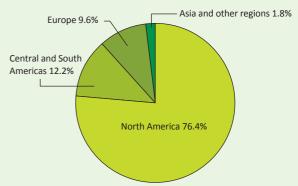
Fig. 2 Amounts of Automobiles Sold in Mexico with Projections



Data sources: Industria Nacional De Autopartes, A.C. and IEK of the ITRI (2015/04)

In 2014, 3.193 million units of automobiles were manufactured in Mexico and may be classified into 3 types: passenger cars, small-size commercial vehicles, and light-weight trucks. Automobiles made by Nissan comprised 25.4% (0.811 million units of automobiles) of them; GM comprised 21.0% (0.67 million units of automobiles); FCA comprised 15.6% (0.498 million units of automobiles); VW comprised 14.9% (0.476 million units of automobiles); Ford comprised 14.0% (0.447 million units of automobiles); Honda comprised 4.1% (0.131 million units of automobiles); Mazda comprised 2.8% (0.09 million units of automobiles); Toyota comprised 2.2% (0.07 million units of automobiles). *Fig. 4* is a pie chart illustrating the automakers in Mexico and their outputs as percentages of all automobiles made in Mexico in 2014.

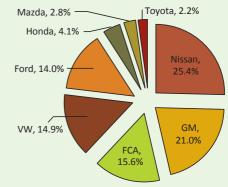
Fig. 3 Export Destinations as Percentages of Automobiles Produced in Mexico in 2014



Data sources: Industria Nacional De Autopartes, A.C. and IEK of the ITRI (2015/04)

Fig. 4 Automakers in Mexico and Their Outputs as
Percentages of Automobiles Produced in Mexico in 2014

(Total Amount of Passenger and Small-size Commercial Vehicles Manufactured in Mexico: 3.193 million automobiles)



Data sources: Industria Nacional De Autopartes, A.C. and IEK of the ITRI (2015/04)

#### III. Current Operations of Main Automakers in Mexico

#### (a) GM May Relocate Some Production to Mexico

GM plans to move the production of its SUV Equinox from Spring Hill of Tennessee (the US) to Ramos Arizpe of Coahuila (Mexico) in 2017 and in the mean time, Equinox's appearance will be changed. Also, the production of the next-generation Cadillac SRX will be moved from Mexico back to the US.

#### (b) Ford Will Erect an Engine Factory in Mexico

Ford once talked to the government of Ontario (Canada) about its intention to erect an engine factory there, but no agreement was reached. Therefore, Ford turned its focus on setting up a factory in Mexico. Ford will erect its new engine factory in Chihuahua state of Mexico and will produce 0.45 million gasoline engines and 60,000 diesel engines per year.

#### (c) Mazda Plans to Reinforce Capacity in Mexico

Mazda announced in 2014 that its production capacity in Mexico will be increased to 0.25 million units of automobiles per year from 0.14 million units of automobiles per year. Mazda and Sumitomo Corp. jointly founded Mazda de Mexico Vehicle Operation ("MMVO") in 2011. Mazda de Mexico Vehicle Operation started to manufacture Mazda 3 (also known as Axela) in January 2014. The MMVO also produces more Mazda 2 (also known as Demio), whose assembly plant commenced its assembly operation in October 2014. In addition, the

MMVO will start to assist Toyota in production in the summer of 2015 and the corresponding expenses will be paid by Toyota.

#### (d) Toyota Plans to Increase Capacity in Mexico

Toyota announced that it will increase the production capacity of its automobile factory located in Baja California by 40% to 89,000 automobiles per year before April 2015. The factory will add 300 more workers and the current two shifts per day will be changed to three shifts per day. The factory has been producing Tacoma (64,000 Tacomas were produced in 2013), which has been sold to North America.

#### (e) Kia Will Erect a New Factory in Mexico

In September 2014, Kia announced that it will erect a new factory in Mexico in 2016. It will spend US\$ 1 billion to erect a factory in Nuevo Leon, which abuts the US. The new factory will be able to produce 0.3 million cars per year.

#### (f) Daimler Chrysler and BMW Jointly Established a Parts Supply System

In November 2014, Daimler Chrysler and BMW agreed to jointly establish a parts supply system.

Daimler Chrysler will spend US\$ 1 billion to purchase manufacturing equipment at a Nissan factory located in Aguascalientes, Mexico. It will use the manufacturing equipment to manufacture compact passenger cars starting from 2018. On the other hand, BMW will spend US\$ 1 billion to erect a new factory in San Luis Potosi, Mexico. The factory will start to manufacture automobiles in 2019. According to the agreement, the purchasing costs of parts will be slashed by 10%.

## IV. Overview of Mexican Auto Parts Industry

The automotive industry of Mexico has been quite vibrant thanks to the NAFTA. Many multinational automakers have erected one or more factories in Mexico and the increased demand from them for more auto parts has in turn assisted the development of auto parts suppliers in Mexico. In 2013, the monetary value of auto parts production reached US\$ 76.8 billion, exhibiting a growth for 4 straight years. The value of auto parts imports of Mexico was US\$ 38.9 billion, which comprised 50.5% of its auto parts production and has also exhibited a growing pattern. Many key parts still have to be imported into Mexico from other countries. The INA of Mexico has announced that its intention to lower auto parts imports to US\$ 25 billion in order to lower the dependency on these imports, assist the development of Mexican auto parts suppliers, and attract foreign investment. The Mexican government has adopted several measures to attract foreign investment including provision of land, expansion of infrastructures, reduction of fixed asset tax and real estate acquisition tax, reduction of tax on wages, subsidies and several preferential treatments. Mexico has adopted an export encouragement plan for goods processed and exported within Mexico (the IMMEX): Auto parts manufacturers may enjoy preferential import VAT relief for the imported goods that these manufacturers import for the first time.

The auto parts industry of Mexico has undergone structural changes due to several policies of the Mexican government. Most of Tier 1 auto parts suppliers of the world have established some operations in Mexico: 89 out of the top 100 auto parts suppliers of the world have erected one or more factories in Mexico and most of these 89 suppliers intend to increase their production capacity. To facilitate

manufacturing for the automakers, Tier 2 auto parts suppliers are ready to follow suit. The suppliers are located in regions abutting the US; some large-scale factories or assembly factories are situated in Bajio (located in the central region of Mexico); Nissan is located in Aguascalientes; Honda and Mazda are situated in Guanajuato. Many Japanese auto parts suppliers have established some operations in Mexico.

There are about 1,500 auto parts suppliers located in Mexico and 70% of them are foreign owned. In terms of country, 31% of them are Japanese, 26% are from the US and 23% are from Germany. Most of the newly erected factories are located in Bajio. In addition, as of 2013, 53.6% of them are located in regions abutting the US: Baja California, Sonora, Chihuaua, Coahuia, Nuvo Leon and Tamaulipas; 26.0% of them are situated in the Bajio region: including Guanajuato, Queretaro, Aguascalientes, Jalisco and San Luis Potosi. Recently, factories erected in the Bajio have attracted a lot of attention: many Japanese automakers and parts suppliers have erected one or more factories in Guanajuato or Aguascalientes. A cluster has formed in Aguascalientes: There are 70 Japanese firms (some of them are logistic firms) in Aguascalientes, which is geographically close to Manzanillo (a harbor by the Pacific Ocean) and Altamira (a harbor by the Mexican Gulf).

#### V. The Auto Parts Market of Mexico

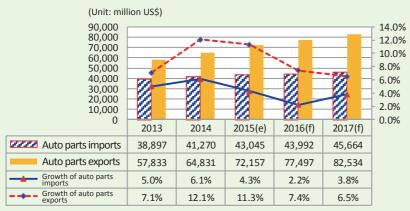
In 2014, US\$ 41.27 billion of auto parts were imported into Mexico and US\$ 64.83 billion of auto parts were exported from Mexico mainly to North America and Europe. Regarding the auto parts imported into Mexico, the category of "stamped sheet metal" ranked the top with the value of US\$ 14.1 billion, followed by "cast items" with the value of US\$ 12.3 billion, "machined items" with the value of US\$ 11.8 billion, "forged parts" with the value of US\$ 11.4 billion, "injection molding plastic items" with the value of US\$ 8.0 billion, "die-casting items" with the value of US\$ 4.7 billion, "other types of metallic fasteners and miscellaneous items" with the value of US\$ 4 billion, "interior parts (such as seats)" with the value of US\$ 3.1 billion, "automotive Electronic Components" with the value of US\$ 3.1 billion, "electrical wires and cables" with the value of US\$ 2.8 billion, etc. It is estimated that the monetary value of auto parts imported into Mexico will reach US\$ 43.05 billion (a growth of 4.3% as compared to 2014) and the monetary value of auto parts exported from Mexico will reach US\$ 72.16 billion (a growth of 11.3% as compared to 2014).



Fig. 5 Auto Parts Production in Mexico with Projections

Data sources: Industria Nacional De Autopartes, A.C. and IEK of the ITRI (2015/04)

Fig. 6 Auto Parts Imports and Exports in Mexico with Projections



Data sources: Industria Nacional De Autopartes, A.C. and IEK of the ITRI (2015/04)

The value of the auto parts production in Mexico in 2014 reached US\$ 81.54 billion. Because of North America's continuous strong demand for auto parts, it is estimated that the value of the auto parts production in Mexico in 2015 will reach US\$ 86.23 billion, a growth of 5.8%. Fig. 5 and *Fig.* 6 above are a bar charts illustrating the predicted auto parts production outputs in Mexico in 2015, 2016, and 2017, and the predicted auto parts imports and exports in Mexico in 2015, 2016, and 2017.

#### VI. Business Opportunities Posed by Mexico for Taiwan

invitation

With the limited domestic automotive market, the demand for automobiles in Taiwan has been stagnant and overcapacity has emerged. In addition, the fact that free trade agreements have been signed by and among different countries has caused greater impact on the auto parts suppliers/manufacturers rather than on the automobile manufacturers in Taiwan, because most of the former are export oriented. Taiwanese auto parts manufacturers, confronted and challenged by the current demand for automobiles with lower prices offered by other emerging markets, auto parts with higher quality, and higher prices offered by the advanced industrial countries, compact cars and vehicles using new energy, should develop towards international integration and establish a system of labor division in Taiwan, in order to maintain their competitive advantage.

As of now, in order to increase their sales, these auto parts manufacturers of Taiwan aim at the emerging markets including China, India, Mexico, Brazil, Central European countries, Eastern European countries, and Russia. The future trends for these auto parts manufacturers include digital manufacturing, conversion to modular units, making costs reasonable, the increase in production scale, the development of key technologies, and strengthening of modular components.

With regard to auto parts manufacturing, Taiwan has a complete Industry cluster. Their products can meet the international standards; with complete sophisticated testing equipment and qualified testing staff; parts and components are able to pass the corresponding tests or functional requirements. In addition, these auto parts manufacturers of Taiwan have accumulated a wealth of experience in high-precision machining, metallic fasteners fabricated by stamping, high-precision injection molding, fast forming process, design and development in reverse engineering, flexible production management, production of a variety of products in small quantities and high conforming rates and meeting highprecision requirements of the leading auto parts manufacturers. To increase their profit level, the auto parts manufacturers of Taiwan should acquire certificates from multinational automakers, continue to excel in production technologies and in product quality, and actively enter the global auto parts market.

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