

# The Auto Industry in Mexico : A SWOT analysis

経済学研究科経済学専攻博士後期課程在学

ペレス デブランド ファン マヌエル

**Juan Manuel Perez Debrand**

## **Abstract**

The auto industry is one of the key industries in Mexico, and it has been growing remarkably in the last decade. This paper looks into the public policies that helped to develop the industry from its conception as well as identify the role the policies played. In addition, the paper assesses the current strengths, weaknesses, opportunities and threats of the auto industry in Mexico. The paper concludes that key strengths helped and is continuously contributing to attract foreign direct investment (FDI) into the country, but fundamental areas remain as important threats to the future of the industry. Thus, whether the growth observed in past decades can be sustained remains as a fundamental question.

Keywords: Automobile Industry, Mexico, Public Policies, SWOT,

## **I. Introduction**

The auto industry in emerging countries, similar to other important industries, has been benefited by public policies that promote local growth. Whether infant industries require government intervention is a constant debate. Despite the development strategy, the growth of the automobile industry creates important economic, social benefits and even drawbacks to its society. The benefits of localizing manufacturing tend to outweigh the drawbacks; it creates, thus, it incentivizes governments to create and implement public policies to encourage the growth of the auto industry.

There are two fundamental ways to create policies to encourage the development of industries. One approach relates with policies to protect the target industry from foreign competition, helping the industry to follow a more natural and organic growth path. The other approach associates less government intervention and more related with free competition.

These two approaches are not mutually exclusive, but there is a strong tendency that countries that implemented protectionist policies have shifted towards free competition policies. The latter shift towards free competition tends to occur after the local industry reaches a mature stage in which it can contend against international competition.

In order to structure the paper, empirical data was collected via 15 semi-structured interviews with MNEs officials, scholars and officials of automobile industry associations in Mexico during March 2014. Secondary data is utilized to enhance and to further confirm and expand the information collected from the interviews.

The aim of this paper is to understand the public policies implemented to help develop the auto industry in Mexico. Then, it assesses the strengths, weaknesses, opportunities, and threats of the auto industry in Mexico. This paper focuses on answering role of the public policies and the effects of the development path to the current state of the auto industry.

## **II. Industrial Development literature**

Traditional policies that promote competitiveness in national industries lie in two approaches. 1) Import substitution policies to protect local production. 2) Policies to encourage local and foreign competition that allows flows of foreign direct investment (FDI) and exports. Stiglitz (1987) explained that the latter development strategy tends to be towards “free market and export oriented policies”, while the former development strategy tends to be a “natural path of development” often associated with interventionist trade and import substitution policies.

### **1) Import Substitution**

In early stages of development, many industries need some type of protection from foreign competition. This is the case of, among others, Japanese’s automobile industry, and USA’s semiconductors, to mention a few.

Import substitution policies are created to protect locally produced products from import products. Within those policies, common scenario is common that the products that were imported pass to be produced locally. Some of the objectives of these policies are to create and protect local industries and generate employment.

## The Auto Industry in Mexico : A SWOT analysis

In general development can be defined based on the area of study. In the economics area: development is often referred to as:

A classic industry development model integrates economic and social side, and is usually explained by the cycle of the economic benefits helping the creation of jobs. Economic development leads to industrial development. It is also common that industrial growth leads to economic development as well.

There are signs that the traditional development models have reached a limit. Thus, it is no longer certain that the automobile industry will create the same amount of jobs as before. This could lead to a new development model, perhaps a sustainable one that includes a stakeholder approach. The sustainability aspects of development policies are creating an important wave of discussions and policy initiatives across different governments.

### **III. Public Policies in the auto industry in Mexico**

The auto industry developed in Mexico thanks to FDI. At the beginning the majority of the FDI came from USA, currently however, the continuous growth of the industries is attracting more FDI from diverse sources such as Europe and Asia (VW, Nissan, Mazda and Honda). In the case of the Japanese companies, they have increased their investment by taking advantage of the strong Yen valuation.

The development path of the auto industry in Mexico has three main stages of public policies strategies; import substitution policies, liberalization policies, and export oriented policies.

#### 1) Import Substitution

The auto industry in Mexico began in 1925 with the establishment of the first automobile plant by Ford in Mexico City to assemble the Ford model T. with 295 employees, followed by General Motors in 1937. Automex, later became Chrysler, was established in 1938. Falling behind the abovementioned companies, Volkswagen and Datsun made their arrivals in 1962 and 1966.

During the 1960s and mid 1970s all government policies were in the category of Import Substitution Industrialisation (ISI). For instance, import taxes and local content requirements are implemented. Around that time, this was a common trend in most Latin American countries

(Gereffi, 2008).

In 1962 a presidential decree was passed to establish a 60 per cent local content requirement to all the automobiles manufactured in Mexico. From this decree 60 per cent of the value of the automobile needed to be outsourced from parts and components made in Mexico (Bennett, 1986). In 1972 a second presidential decree was passed. This new decree established that all new parts and components suppliers must have a Mexican ownership of at least 60 per cent (Bennett, 1986).

## 2) Liberalization

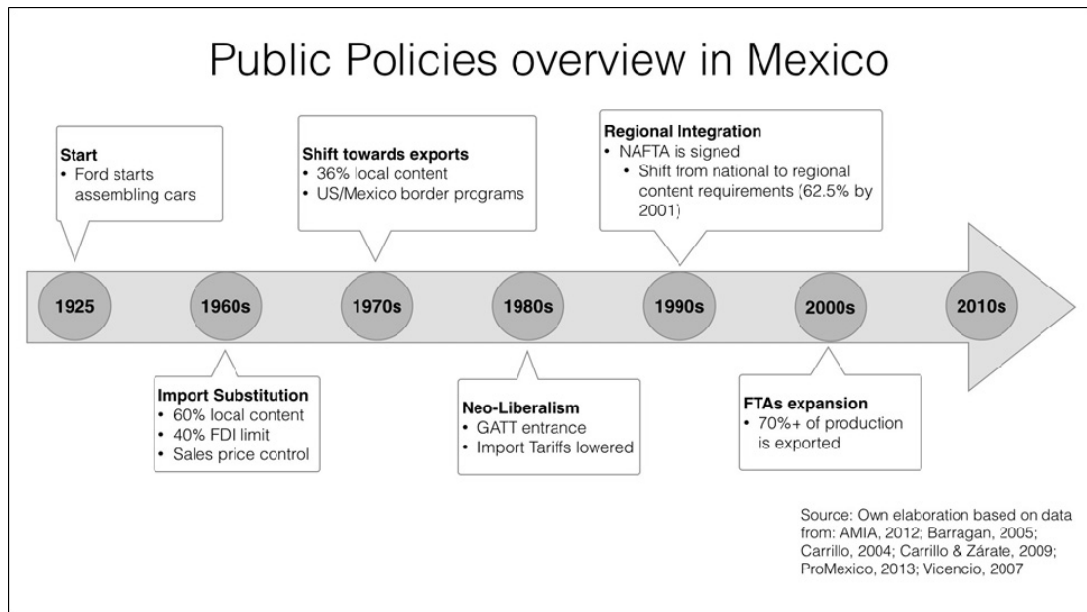
After 1977, government policies were restructured towards neoliberalism. For instance, import barriers were eliminated and imports were liberalized. However, local requirements were reduced to 36 per cent to increase quality and encourage exports. Foreign ownership was also allowed, but only to suppliers that will export (Barragan, 2005),

## 3) Free Trade Agreements (FTAs)

In 1994, NAFTA started and marked the shift towards trade agreements and regional integration. Besides NAFTA, there are more than 40 trade agreements. One of the most important agreements is with the European Union and MERCOSUR due to the preferential access to European and largest Latin American markets. Before 1994, only Ford, VW, Nissan, and Chrysler had production operations in Mexico (Barragan, 2005). After the NAFTA agreement other automakers, such as Honda, Toyota, and Mazda, have established manufacturing facilities in Mexico.

The auto industry in Mexico increased its growth path and international competitiveness after encouraging local and foreign competition in the 90s. Mexican government played a less interventionist role in the development of the auto industry, showing its best results at the end of 2000s.

Fig. # 1 Public Policies Overview in Mexico



#### IV. Current Status of the Auto Industry in Mexico

This section assesses the key strengths, weaknesses, opportunities and threats (SWOT) of the auto industry in Mexico.

##### 1. Strengths

###### (1) Location Advantage

Mexico is located in a very strategic geographic position. It can easily export from and import to North and South America because the land has access to both Pacific and Atlantic Oceans via the Gulf of Mexico. This privileged location has served Mexico as its main advantage since the first production investment by Ford. Mexican government started to develop more specific policies to attract FDI to localize production capabilities close to the border with the US from the 1970s.

###### (2) Free Trade Agreements

Since joining the North American Free Trade Agreement “NAFTA” in 1994, Mexico has been expanding the regional and bilateral trade agreements. Currently, Mexico has 12 free trade agreements with 44 countries. The most relevant agreements to the auto industry are signed with NAFTA, MERCOSUR and the European Union. Mexican location advantage, in combination with these trade agreements tailored for the auto industry, represents the two most important reasons

for foreign companies to investment in Mexico. As a result, more than 70% of the production is exported every year.

Table 1: Production and Exports in Mexico

Table 1 : Production and Exports in Mexico

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Production	1,935,527	1,841,008	1,804,670	1,575,447	1,577,159	1,684,238	2,045,518	2,095,245	2,167,944	1,561,052	2,342,282	2,680,037	3,001,974	3,052,395
Exports	1,434,000	1,404,000	1,326,000	1,170,147	1,094,831	1,186,346	1,536,768	1,613,313	1,625,406	1,223,333	1,859,185	2,143,883	2,355,564	2,423,084
%	74%	76%	73%	74%	69%	70%	75%	77%	75%	78%	79%	80%	78%	79%

Source: OICA & AMIA

### (3) Increasing Attraction of FDI

The increasing amount of FDI pushed Mexico to be a production hub for the auto industry. At the same time, FDI is helping to create the parts and components network infrastructure that many of the manufactures need to keep attracting more FDI.

All these positive characteristics have helped Mexico to increase its local production and exports figures remarkably in the last decade. As notice in the 2009, production and exports were noticeable affected by the global financial crisis and the recession in the United States. After the financial crisis, policy makers and auto industry related entities realized the risk of the high per cent of dependency the auto industry has to the United States.

## 2. Weakness

### (1) Internal Market

Due to many macro-economic reasons the local sales of new vehicles are at the same level as they were 10 years ago. At the same time, the growing number of imports from the United States reinforces used car sales. Vehicles can be imported to Mexico from North America relatively easily because of NAFTA. The government is increasing the barriers for old vehicles imports by implementing new policies that prevent imports of high pollution vehicles. Nevertheless, the government intention is difficult to be achieved due to the NAFTA trade agreements.

Table 2: Production and Exports in Mexico

Table 2 : Sales in Mexico

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Mexico	853,775	918,835	977,558	977,870	1,095,796	1,131,768	1,139,718	1,099,866	1,025,520	754,918	834,024	905,886	987,747	1,063,363

Source: AMIA

**(2) High Dependence on Exports**

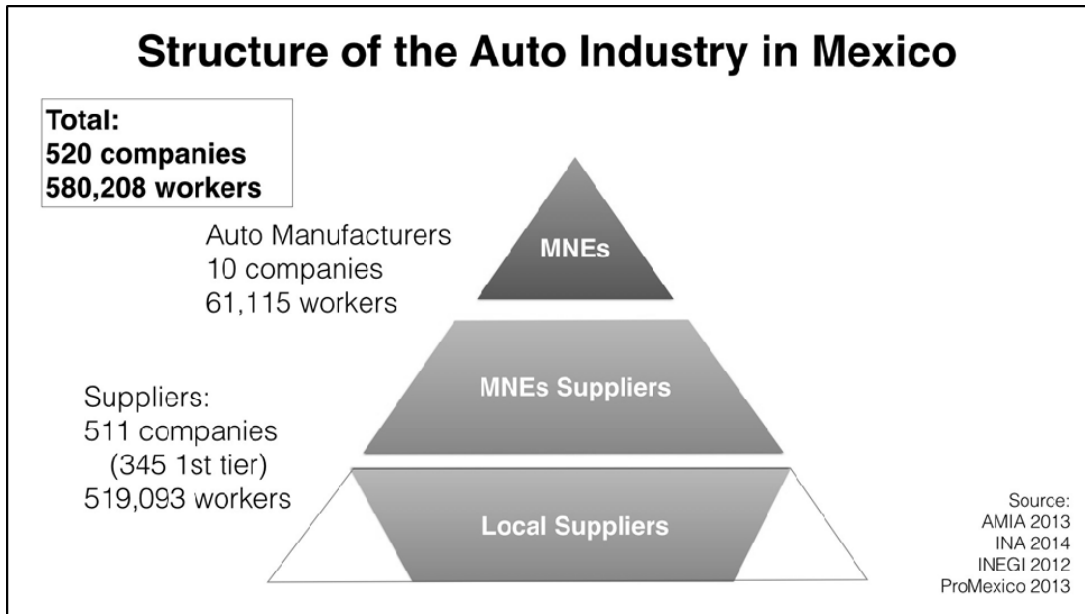
Close to 80% of the local production was exported in 2013. All of the mayor manufacturers have an export strategy, to take advantage of the geographical position and free trades agreements that Mexico advantages. For instance, at the beginning of 2014, Mazda and Honda indicated that the main reason that they opened new factories in Mexico was to be able to export to North and South America with preferential access by taking advantage of the suppliers' network and relatively low labour cost.

**(3) Weak Indigenous Companies**

The auto industry has relatively high entry barriers for new companies. The industry requires high number of investments in human, machinery, and infrastructure resources that only tend to be recuperated after many years. In the past decades, the American company Tesla is one of the few successful examples of new entrance in the industry. The entry barriers are more noticeable in the case of an emerging country such as Mexico in which foreign companies dominate the local auto industry, combined with the lack of local capital that is available for indigenous companies. As other countries have done, such as Thailand, they began to promote investments towards the second and third tier companies that could supply components and services to the first tier foreign suppliers.

The process of creating and nurturing indigenous companies in an industry opened for foreign competition is very complicated. There is a very thin silver line between friendly attraction of FDI and protection of indigenous companies. Nevertheless, that should not be an excuse to threaten the long-term development of the industry in Mexico.

Fig. # 2 Structure of the Auto Industry in Mexico



### 3. Opportunities

#### (1) Young Demographic

According to statistics from World Bank (2014), 46 per cent (56.2 million) of Mexican population is under 25 years old. This represents an important opportunity in many areas for Mexico. One of these areas is the possibility to have a large pool of skilled labourers. At the same time this represents an opportunity to have a larger local market. Nonetheless this could be a onetime opportunity because if missed, it can be difficult to revert.

#### (2) Network of Suppliers

Appreciating the increasing attraction of FDI, many parts and components suppliers are building factories in the country. This is an ideal situation that creates a snowball effect by attracting even more FDI. Of course, a large network of suppliers alone is not enough incentive for foreign companies to invest in Mexico, but due to the high complexity of the auto industry and thousands of components that automobile requires, it is a very important factor.

#### (3) Industry Link with Academic Institutions

The communication of the auto industry with academic institutions is fundamental to provide the appropriate type of human resources that are required. Mexico's leading universities already



provide courses that are related with the industry. Nevertheless, manufacturers do not have any direct communication with academic institutions regarding courses and training programs. Thus, this represents an important opportunity for academic institutions, universities, and technical schools to provide training tailored for the specific needs of the companies established in Mexico.

#### **(4) Sustainable Development of Competitive Advantages**

The main opportunity that Mexico has is to develop its competitive advantage. Since Mexico started to develop the auto industry through FDI, the country utilized its location advantage as one of the main factors to differentiate from other countries. In the present, it has combined its location advantage with privileged access to key markets; as a result, the strategy was successful to convert Mexico into a powerful production hub.

Despite those key advantages, Mexico should start to put more attention to processes with higher added value. One of the key areas that are still not being localized is activity related with R&D and design of autos. These activities tend to remain highly concentrated in developed markets and home markets (Cullino et al., 2012). However in recent years, emerging countries such as India, China, Brazil and Thailand are starting to receive investments related with these activities. This resulted because auto manufacturers see the high potential of the local and regional markets around these countries.

#### **4. Threats**

##### **(1) Dependence on Multinational Companies**

Although functioning as a powerful production hub, Mexico does not have a national automobile manufacturer. All of the relevant automobile manufacturers and most of the parts and components companies are foreign companies. This indicates a long-term risk for the overall auto industry in Mexico. Multinational companies could stop operating in the country any time when they decided a major shift on their international strategy. As Shioji (2012) argued, countries with local auto production from foreign companies are to be less competitive than countries with their indigenous local auto industry companies.

##### **(2) Dependence on United States**

After the 2009 recession, the auto industry in Mexico recognized the need to diversify their export markets. To this date, the United States represents more than 50 per cent of the total

exports. Despite efforts to increase the exports to other markets, the geographical proximity to the second biggest market in the world (the United States), becomes an important advantage for most companies. To counteract the dependence on the US, companies can implement a parallel strategy to focus on the type of products that better suit the needs of emerging and developing countries. This could localize more R&D and design efforts into Mexico and take advantage of local expertise and local supplier networks.

### **(3) Skilled Workers**

The high demand for skilled workers versus the low number of candidates runs the risk of making skilled workers a high cost asset, thus increasing the overall labour cost of activity in Mexico. The rationale behind this is based on the fundamental law of supply and demand effects on price. Since the number of skilled labourers is less than the demand, this could create a wages and remuneration race to attract the best talent, also resulting in intensive labour poaching. Already there are efforts to curve this trend and companies are being more careful not to poach talent from other companies; instead their increasing the internal training programs offered, matched with attractive remuneration package in order to retained talent.

### **(4) Autos for Developed Countries**

Since most of the production of Mexico is exported to developed markets, these products are tailored and designed to the needs of these markets. As a result, these products might be priced too expensive for most of the consumers in the local Mexican market and other developing markets. The threat is that Mexico will have fewer possibilities to discover home country's specific characteristic that could lead to competitive advantages in specific product segments targeted for developing countries.

A good example is the case of the auto industry in Thailand, in which multinationals manufactures are focusing on manufacturing nationally products that are targeted to the Thai market and other neighbouring markets with similar conditions. As a result, Thailand has been able to identify a segment of products, small size pick-up trucks, which now have global production leadership. In addition, Thailand has been implementing new public policies to attract new FDI to locally produce "green cars". Thailand defines "green cars" as cars with certain CO2 emissions and safety standards (TAI, 2012).

### **(5) Low Local Value Added**

Due to the high dependence of multinationals FDI and government focus to keep attracting FDI to increase production capacity, Mexico has the threat to remain keep only having local activities in the low range of the value chain of the industry.

Being out of the three main areas of the value added processes: R&D, manufacturing, and market distribution, Mexico already has activities in the latter two activities (manufacturing and market distribution) but lacks significant activities in the R&D area (Fujimoto, 2007).

Despite this situation, many Mexican universities are increasing and creating new training programs focusing on creating human resources who are capable to contribute to converting this threat into an opportunity. To good instances are the Metropolitan Autonomous University and the Monterrey Institute of Technology.

## **V. Conclusions**

The public policies that are implemented from the beginning of the development of the auto industry served as one of the key factors that shaped the current state. Starting from the import substitution strategies of the 1960s, the policies to develop and attract FDI to the border area of the US and Mexico, as well as the shift of local content requirements to regional requirements with creation of NAFTA.

The same policies that contributed positively to the development process also contributed to create the current weaknesses and threats identified in the forth section of this paper. Among the identified weaknesses, the high dependence on exports and the lack of indigenous companies emerged as the most important factors creating the lack of products targeted toward emerging countries and high value added activities.

Due to the primary focus of increasing its export shares to developed markets, Mexico is depending on importing technological capabilities from developed markets. This situation is hampering Mexican capabilities from discovering its local market needs and characteristics and contributing to the reduction of opportunities for indigenous suppliers to compete, which could lead to develop native and local innovation capabilities. In the long-term Mexico runs the risk of only remaining with local activities in the lower side of the global value chain of the industry.

## VI. References

- Amia (2014), "Estadísticas", available at: <http://www.amia.com.mx/index.html> (Accessed 11 June 2014)
- Banuri, T. (2013). Sustainable Development is the New Economic Paradigm. *Development*, 56(2), 208-217.
- Barbier, E.B. (1987). The Concept of Sustainable Economic Development. *Environmental Conservation*, 14, pp 101-110. doi:10.1017/S0376892900011449.
- Barragan, S. (2005). Assessing the power of Porters' diamond model in the automobile industry in Mexico after ten years of NAFTA. Lethbridge, Alta.: University of Lethbridge, Faculty of Management, 2005.
- Barragán, S., & Usher, J. (2009). The role of multinationals in the host country: spillover effects from the presence of auto car makers in Mexico. *Contaduría y Administración*, (228), 83-104.
- Bennett, M. (1986). Public policy and industrial development: the case of the Mexican auto parts industry. Boulder: Westview Press.
- Carrillo, J. V. (2004). NAFTA: The process of regional integration of motor vehicle production. *Cars, Carriers of Regionalism*, 104-117.
- Carrillo, J., & Zárate, R. (2009). The evolution of maquiladora best practices: 1965–2008. *Journal of Business Ethics*, 88(2), 335-348.
- Contreras, O. F., Carrillo, J., & Alonso, J. (2012). Local entrepreneurship within global value chains: a case study in the Mexican automotive industry. *World Development*, 40(5), 1013-1023. Chicago
- Cullino, R., Fabrizi, C., Linarello, A., and Orame, A., (2012), Innovation in the Automotive Industry, Workshop on Innovation in Italy
- Fujimoto, T., & Miller, B. (2007). Competing to Be Really, Really Good: the behind-the-scenes drama of capability-building competition in the automobile industry (Vol. 22). International House of Japan.
- Gereffi, G. (2008), Development Models and Industrial Upgrading in China and Mexico. *European Sociological Review* (2009) 25 (1): 37-51 first published online July 7, 2008. doi:10.1093/esr/jcn034
- Gereffi, G. (2009). Development models and industrial upgrading in China and Mexico. *European Sociological Review*, 25(1), 37-51.
- Kumaran, G. B. (2008). Role of Multinational Corporations in Automobile Industries: A Comparative Study Between India and Mexico. *Portes: Revista Mexicana de Estudios Sobre la Cuenca del Pacifico*, 2(3).
- Miranda, A. V. (2007). La industria automotriz en México: Antecedentes, situación actual y perspectivas. *Contaduría y administración*, (221), 209-246.
- OCIA (2014), "Production Statistics", available at: <http://www.oica.net/category/production-statistics/> (Accessed 11 June 2014)
- Shioji, H. (2012). Competitiveness of the Japanese, Korean, and Chinese Automobile Industries. *The Kyoto Economic Review*, 81(1), 48-63.
- Stiglitz, J. E. (1987). Learning to learn, localized learning and technological progress. *Economic policy and technological performance*, 125-153.
- TAI (2012), Thailand Automotive Institute
- World Bank (2014), "Mexico", available at: <http://www.worldbank.org/en/country/mexico> (Accessed 13 June 2014)