
PERFORMANCE OF THE MEXICAN MANUFACTURING AND ASSEMBLERS TO OPENING MARKETS, THE VIEW CONTEMPORARY

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ABSTRACT

The policies which were implemented to support manufacturing and assemblers in Mexico intensified since the nineties. The idea was of turning them into one of the nodal support activities of the Mexican economy, however, with the full opening of national borders the competition in this sector was bolstered in 1990, so the expected results for the country were limited, since significant fluctuations appeared affecting their performance and competitiveness at national and international levels, with consequent effects presenting a multisectoral drag that it still persists and affects some branches of manufacturing industry and national assemblers.

Keywords: Mexico, manufacturing, assemblers, economy, industry

1. INTRODUCTION

The policies, which were implemented by the government to generate the development of Mexican industry intensified with the conviction to turn the country into an industrialized economy. As a matter of fact, it was considered that industrialization would produce a modernization in the country by improving the living conditions of the Mexican population and strengthening the economic independence of the nation (Aguilar, 1993). Unfortunately, the commercial opening and an increasing of international competition had taken place; by this reason the national industrial development has not always been stable since the ups and downs diffused into the basic structures of the manufacturing sector, affecting their performance and competitiveness at national and international level.

This article describes the behavior that manufacturing and national assemblers experimented in the years 2000-2010. The selected period is due to the intensification of the commercial opening that was held broadly. Evidence has shown that despite having very unstable behaviors over time, the various national and international economic trends remain as a major source of exports and income for Mexican economy.

2. METHOD AND ANALYSIS

2.1 CONTEMPORARY HISTORY

In the early 30's, the industrial development of Mexico began with the implementation of the import-substitution model (especially within manufactured goods), which was aimed at promoting industrialization through a series of economic policies such as private participation and a lesser extent of foreign inclusion. Along the process of industrialization, this was supported by the expansive commercial-fiscal policies combined altogether. An economical stability atmosphere allowed a long period of economic expansion among all sectors of the country. With this model, the domestic market was privileged and protected as a consequence of giving less importance to the external market this sector fell down over the next years (Ramirez, 2007).

During 40's and 60's decades, *the agricultural miracle* appeared; it was characterized by a high and sustained growth of this sector, a situation that totally changed in the 70's decade. From those years to now, the agricultural sector went on an undercapitalization process and agricultural labor migrated to other sectors. Meanwhile, the economy experimented a long period of growth between the 40's and 60's decades, the 70's growth showed signs of depletion combined with budgetary imbalances.

Notwithstanding the perceived signs of depletion with the imports-substitution model, new mechanisms to boost the economy got on to fruition until the 80's decade. Such signs were an observed qualitative change in government spending, it also prevailed the mislead application of economic policies, additionally to this; the economy had an adverse external environment and exchange rate volatility.

The transition years became difficult where several undesirable economic episodes reflected imbalances in key macroeconomic variables. This macroeconomic instability with inflation and devaluations processes were the perfect scenario in which a new economic model unfolded, the economic and commercial liberalization to promote the export of manufactured goods was adopted by the Mexican authorities.

As a result of the structural reforms of the eighties, which included an economical openness. This contemporary situation led to a free market scenario where agrarian producers had to face a different context; since they had been operating for decades in a closed and protected economy. Therefore deepening this internal and external competition with the signing of the North American Free Trade Agreement (NAFTA), where the agricultural sector obtained a reduction in tariff reduction in a relatively long period. In the course of the second half of the 90's the Mexican economy encountered a high economical growth caused by the free trade, an expansion of services to a larger population. However, in the early twenty-first century economic growth was moderated. Meanwhile in the present we faced a profound withdrawal during the international economic downturn and international financial crisis era (2008-2009).

2.2 OPENING MARKETS

The economic and productive disorders generated by the model of imports-substitution were crucial to its depletion, because of the excessive protection in the industry undermined their endogenous capacity to growth, falling into a state of stagnation, with a decrease in competitiveness along the international markets.

Regarding to this, the Mexican government opted to rethink their policies, allowing companies to move freely in the local and international markets through an industrial release as a basic strategy to promote efficiency and manufacturing exports by removing restrictions that had defined the protectionist policy on exports.

The first attempts were held in late 1977, replacing the trade protection actions. The negotiations started for Mexico joining the General Agreement on Tariffs and Trade (GATT) and it was during the 1982-1988 period when companies started moving rapidly towards market opening and trade liberalization, despite the economic problems that arose in 1982 with the economic crisis (Tello, 2007).

Even though the Mexican economy suffered imbalances that caused that the opening markets and manufacturing exports were necessary to stabilize them, specifically the price index and inflation, in order to have a similar behavior of other economies, otherwise export efforts were doomed to failure towards to its harmful effects on competitiveness and orientation of external supply (Millan, 1998).

Amid these imbalances and economic difficulties, GDP growth was also very erratic from 1983 to 1988, which was the lowest growth rate shown in our article investigation, with an annual average of just 0.13%, while the following years, although it improved, it continued to display major ups and downs until 2008, as shown in Table 1.

**Table 1. National and Manufacturing GDP 1983-2010
(Annual growth rate- Average)**

Item	Years								
	1983	1985	1990	1995	2000	2005	2008	2009	2010
Total GDP	(4.2)	2.5	4.4	(6.2)	6.9	3.0	3.2	3.4	3.5
Manufacturing GDP	6.4	2.04	2.3	(1.2)	2.3	7.7	10.6	10.6	10.7

GDP Data from 1983 to 1995 are held the INEGI, 2005. From 2000 to the present are held in INEGI, 2008.

Concerning the manufacturing GDP, even though it experienced some similar inertia to the Mexican economy, the slowdown was minimal, despite the fact that in 1983 when the overall economy did not grow, the manufacturing industry reacted in a positive manner at a rate of 6.4 % over the previous year. Due to the investment made by foreign investors among different branches of industry and the increase in exports of these products, however, as the shocks were accentuating the brunt of the economic crisis, the industrial performance was marginally damaged.

A fully recover had not been held in the economy and economic sectors, when in late 1994 and following years it arose an economic situation that soon became a crisis, which dramatically hit all sectors; in the industry its growth fell down, but taking advantage of the some programs promoted by the federal government, the opportunities opened up by the external market and limited foreign investment flows arrived to help the industry, which could recover gradually to regain his course in production by the year 2000. With this openness of the internal market, consumer goods reduced their growth rates to 1.25%, while the intermediate goods continued to experience growing because of the closed links that ties the direct investments and the orientation of economic policies to encourage such activities. As a matter of fact the industrial goods were one of the branches that kept increasing trends along the national industrialization, but not for the consumer and capital goods, which did the economical issues of the Mexican economy affect.

Furthermore the oil exports held the leadership in the Mexican economy, by the second half of the 80's they represented the largest source of revenues with 6.300 USD millions in 1983 compared with the 14.787 USD millions generated last year. Even this favorable scenario did not take too long to finish, since they were only aimed by the fall in the oil international prices that overshadow its results, compared with the non-oil exports experienced an account of 12.000 USD millions in 1986.

Table 2 shows that manufacturing exports had negative growth rates in 1983-84; by the following years they had a remarkable recovery, placing it as one of the most important activities supporting the Mexican economical growth. Moreover the relevance of this activity represented over the 50% of the total exports account, replacing the external sales of primary goods and oil products.

**Table 2. Mexican manufacturing exports 1983-2010
(Nominal MXN pesos - millions)**

Item	Year						
	1983	1985	1990	1995	2000	2005	2010
Total Exports	(31,582,320)	(31,582,320)	137,440,795	558,798,482	170,094,7682	271,329,6502	2,280,508,154
Manufacturing Exports	(17,105,360)	11,551,969	83,195,291	427,528,424	1,388,924,743	2,120,150,668	3,003,866,228

Manufacturing data from 1983 to 1995 are held the INEGI, 2005. From 2000 to the present are held in INEGI, 2008.

The asymmetries among economic growth and industrial growth extended since 1983 was an indicator of the contractive policy, which generated a producer surplus was likely to be exported. It also existed the price discrimination on national products derived from the exchange rate decrease and the deterioration of real wages that weren't observed at all during the previous years (Huerta, 1992)

Although this trend, we could assume that in order to stabilize and strengthen the manufacturing industry to be the national support of the economy, we ought to encourage the internal demand throughout the effectiveness import substitution. Likewise to adjust the investments, to influence the exports channels, to stimulate the idle capacity in the industry, not only but also to protect the national structure, which had to face a new market openness in order to declare that Mexico had a real international export industry (Villareal, 1998).

These measures allowed Mexico to enter this forced restructuring and modernization of the whole industry system that was arousing worldwide. If Mexico intended to continue participating and competing in international markets it had no choice but to rethink their policies of economic and industrial development towards a greater industrial competitiveness.

President Miguel De la Madrid (1982-1988) launched the PRONAFICE in this years 1984-1988 that was a national program for industrial development and foreign trade whose aim was to

restructure industrial production, through a technological upgrading and thus make it a competitive and efficient sector worldwide.

2.3 TRADE LIBERALIZATION AND MANUFACTURED EXPORTS

The commercial liberalization was one of the main policies adopted by Mexico via the opening and globalization of markets, as it allowed the import of production inputs in exporting branches to achieve higher levels of productivity and thus make the most efficient productive and competitive industries alongside in local and international markets.

Mexican government then decided to release foreign trade and lowered tariffs to restructure and modernize the national output. In order to increase productivity and enable the export sector to overcome the problems that they ran into because of the substitution model what's more to influence imports and promote a constant economical. This commercial release was not only the result of Mexico's internal conditions, but the pressures exerted the world's economy and international agencies on the country economy, i.e. Mexico had to choose this option in order to receive reciprocal treatment as an accepting countries to the GATT, nowadays knows as the World Trade Organization (WTO), and avoid the obstacles that prevented local protection that will expand their markets (Huerta, 1992).

The implementation of trade liberalization and manufactured exports responded to the demands that were made by the stabilization programs stemmed from international financial organizations. Rather than worry about whether domestic production conditions were able to boost export dynamics to face global competition, the economical borders were opened only to expand markets, mainly produced from the developed to the underdeveloped countries. Under these circumstances, it was assumed that the opening of the Mexican economy would restructure and modernize industrial production output, to expand manufacturing exports and facing up with external imbalances; to reduce inflationary pressures originated by the productiveness failure and internal monopoly-like practices.

Trade openness results were not entirely beneficial for the Mexican economy, as government did not take into account production and internal industrial conditions, prompting immediate effects on different sectors of the economy, particularly the agricultural and industrial, which quickly were displaced for external companies and products. Since, an economy that decides to open their borders into the dynamics of international competition, it is needed to exhibit certain economic conditions, mainly the competitiveness of its industrial machinery, a totally robust public finance system to ensure price stability and exchange rate variations, some vigorous

economical policies to generate the precise development programs, among the most relevant issues to accomplish for a country (Huerta, 1992).

But if a country does not provide this conditions, openness and economic liberalization can be dangerous because it generates a greater economic instability, it depresses production and investment, undermines the growth of specific productive sectors and does not allow expansion and robustness of the national output. This was the result from 1994, when Mexico signed the Free Trade Agreement with the United States and Canada. With the inclusion of our country to this slightly planned and unorganized dynamic of free markets Mexican economy ensured its own inability to create a wider good and services liquidity, in such a great extent national goods were only exported to the USA provoking a vast vulnerability upon Mexican economy confronted by the American and Canadian markets (Carrillo, et. al., 2007).

On the assumption that a recession process was about to be presented; and a sharp increase of the productive and financial costs, which acted against the modernization process that took place to maintain domestic production output. Furthermore macro economical imbalances were latent accentuating the levels of centralization and foreign ownership of production. Another result of this was a continuous unemployment level and the deterioration of wages, i.e. Regardless integrating the industry, it was internally dismantled derived from excessive inflows of foreign capital based on the idea of industrial competitive efficiency, through easy access on imported inputs and capital goods which were needed to modernize the industry (Calva, 2000).

This meant that Mexican economy and the productive sector, mainly related to industry had not yet necessary conditions to successfully meet the release process and manufacturing exports and thereby restores economic growth. Nevertheless, conditions in the whole economy became more vulnerable a propos of the external sector. Accelerating the relevance acquired by the external demand to stimulate domestic production, such as the availability of foreign currency necessary to maintain or boost economic dynamics. In the early years of trade liberalization, manufacturing production for the domestic market grew 12.2%, on the contrary, the foreign market fell 9.7%, despite having shown a net growth of this sector by 6% between 1982 and 1989.

Even the share of manufactured imports in the manufacturing GDP increased from 24.4% in 1982 to 31.6% in 1989, despite the national manufacturing GDP grew at an average annual rate of 1.3 1982-1989%. In the following years, this scenario was reversed, however, the export sector performance was not significant, as the frequent domestic and international circumstances (such as the crisis of the Mexican economy in 1994 and U.S. in 2008) infringed the domestic production system. Despite manufacturing exports increased from 10,427 million in 1987 to 94,055 million in 1997, even over other export sectors such as oil, agriculture and mining, that

throw put was not observed as it was expected. Prior to the American crisis of 2008, the contractions in exports were more than evident, as shown in Table 3.

Table 3. Mexican manufacturing exports 1997-2010

Years	Exports ranged by activities				
	Total	Manufacturing	Oil	Agricultural	Extractive
1997	110,432	85	10	4	0
1998	117,539	90	6	4	0
1999	136,362	89	7	3	0
2000	166,121	87	10	3	0
2001	158,780	89	8	3	0
2002	161,046	88	9	3	0
2003	164,766	85	11	3	0
2004	187,999	84	13	3	0
2005	213,711	82	15	3	1
2006	241,493	79	17	2.7	0.6
2007	269,275	77	19	2.6	0.6
2008	297,058	76	21	2.4	0.6
2009	327,707	75	23	2.4	0.6
2010	358,357	75.5	24	2.3	0.5

Notice: Total exports are presented in USD millions. Exports ranged by activities are a portion from the total. INEGI, 2008.

Even with this downward trend, manufacturing exports became the axis of contemporary national economic development. Table 4 shows that the assemblers industry was one of the most dynamic branches of this sector, since its total in manufacturing exports, this represented more than fifty percent throughout the period of trade liberalization, even including the total exports, these accounted for over 40% above the oil, agricultural and mining sales altogether.

Table 4. Mexican manufacturing and assemblers exports 1997-2010

Years	Total Exports	Manufacturing Exports		Assemblers Exports	
		Absolute Value	%XM*	%XMq**	%XM
1997	110,432	94,055	85	41	48
1998	117,539	195,449	90	45	50
1999	136,362	121,515	89	47	53
2000	166,121	144,725	87	48	55
2001	158,780	140,749	89	48	55
2002	161,046	141,635	88	48	55
2003	164,766	140,632	85	47	55
2004	187,999	157,747	84	46	55
2005	213,711	174,521	82	45	55
2006	241,493	191,973	79	44	56
2007	269,275	209,425	77	43	56
2008	297,058	226,877	76	43	56
2009	327,707	245,783	76	44	56
2010	358,357	264,689	77	44	56

Notice: Total and manufacturing exports absolute values are presented in USD millions.

* Component from manufacturing exports regarding total exports

** Component from assemblers exports regarding total exports

%XM. Component from assemblers' exports regarding manufacturing exports

INEGI, 2008.

Such behavior, we could assure that the inclusion of Mexican assembling in international markets was a vital part of the domestic economy, in turn out to be the main source of foreign exchange. It had contributed in more than 45% of national exports and generated about 40% of manufacturing employment, being the automotive, basic petrochemicals, beer and malt, glass and electronics, the most important branches since the 300 companies that make up the 60% manufacturing exports consolidation (Arcineaga and Donoso, 2008).

By 2005, the assembler export sectors that generated more jobs were those of, electrical and electronic materials and textiles and apparel, transportation equipment regarded as the most dynamic, explained by concentrating the leading amount of foreign investment.

The gross assemblers productivity did not have a very positive outlook on their performance from the 2000's decade, as the aroused international financial recession in the second half of 2007 in the American economy which in 2008 became an international crisis affected severely the demand for Mexican assemblers products, owing to the fact of the presence of significant declines in measured productivity indices for performance, as shown in Table 5.

Table 5. Productivity Index related to Mexican assemblers 1997-2010

Years	Index
1997	97.6
1998	97.1
1999	96.8
2000	97.5
2001	94.5
2002	95.4
2003	96.3
2004	97.2
2005	98.1
2006	97.0
2007	97.1
2008	96.5
2009	96.3
2010	96.3

To calculate the index we need this equation

$$IPM_q = \frac{PIBM_q + XM_q}{PIBM + XM}$$

M_q represents assembler industry; X represents exports y M represents manufacturing.

2008 index was estimated with previous years data.

INEGI, 2008.

When China massively involved the global market, the Mexican export and productive sectors were affected. Since Chinese products invaded the American market, given the large-scale production and their low costs in production. In this sense, China then became the main competitor in the Mexican assemblers manufacturing even also in the international market, especially because 81% of Mexican sales were precisely manufactured products (Blázquez, Rodríguez and Santiso, 2006).

CONCLUSION

From an economic liberalization perspective, regions and localities became a fundamental gap, on the one hand the application of specific industrial policies to strengthen and depth production process, on the other hand, it aimed at greater efficiency and competitiveness in international markets. This refocusing local and regional companies, questioned the advantage role of industrial decentralization policy, far from encouraging environments regional industry convergence difference among regions with available industry expanded. Those lacking an industrial region suffered this phenomenon, which was conceived as a result of trade liberalization, increasingly limiting the national economy (Carrillo, et.al. 2007).

According to this the economical policies performed in this similar way, as some of the policy measures taken by the government, it was the implementation of an Industrial and Foreign Trade Policy Program during 1995-2000, The objectives were (Méndez, 2001: 148)

- Increasing the international competitiveness of domestic industry.
- Enhancing a training program for the workforce.
- Renovating and modernizing the technology of the industrial sector.
- Promoting the integration of production chains into value-added goods produced.
- Continuing to support the assemblers export industry.

Therefore, to keep a role in these open markets, it is necessary to design industrial policies commensurate to the resources of society and external conditions. In order to promptly react to vulnerabilities as they are presented in the contemporary economy, seeking to protect and to stimulate industrial production structure as well as remain competitive in international markets. Furthermore, Mexican government must create more integrated, developed and organized industrial environments to harness and create economies of scale. Generate proper spillovers to emerging companies looking to add more value to goods and services exported.

If economist take no notice of that Mexican economy have ventured into international markets 30 years ago, by the same toke it has a greater internal dislocation and inequality in the development of industrial branches and it has completely lost its links along the production chain due to a swift growth of imports. The growing disconnection with the common industry contrasting by exercising a domino effect on the domestic economy, permeates their multiplier effects on output, investment and employment abroad tending to become now a quasi assembler industry or an enclave economy deepening technological and productivity gap along industries (Calva, 2000).

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