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THE TRANSFORMATION OF THE TEXTILE AND APPAREL SECTOR IN MEXICO AFTER NAFTA

ABSTRACT

Based on the preparation of a database that estimates production output numbers, working hours, and their ratios for 5 branches and 27 categories of economic activity, this article analyzes the evolution of the textile and apparel industry in Mexico in the 1994-2008 period. A shift-share type methodology reveals that the incipient process of upgrading following the signing of NAFTA has had mixed results and was not based on a generalized technological transformation, while the use of ECLAC's Competitive Analysis of Nations methodology for the top twenty export products in 2008 showed a sharp loss of competitiveness in the 2001-2008 period.

Key Words: Textile industry, Mexico, global value chains, competitiveness, productivity, NAFTA.

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INTRODUCTION

The textile and apparel sector has traditionally played a key role in growth strategies in developing countries (Adhikari and Weeratunge, 2006). Articulated around activities with low fixed costs and centered on labour-intensive tasks that are poorly paid, the industry has historically had a significant capacity to generate jobs. As a result, its initial growth and strengthening have been conceived from different perspectives, as being a first step on the road to long range industrialization, whereby a country gradually increases its capacity to generate goods and services as well as their content in terms of value added, thus achieving higher levels of economic autonomy.

However, in the recent context of a globalization process marked by the segmentation of the productive process and the subsequent relocation of activity offshore, the forms of national and international organization of the textile and apparel sector, as well as the potential benefits of its growth in terms of a long-range local development project, have undergone profound changes. These changes have intensified due to the elimination of the Agreement on Textiles and Clothing (ATC)¹, which signified the end of strict regulations on international flows of goods through a policy of discriminatory quotas on the entry of such products into the main markets. In short, a geographical reconfiguration of the production and trade in textile products has occurred alongside the restructuring of the strategies of the large transnational corporations (TNCs) seeking to realign and streamline the operation of their manufacturing networks (Rasmussen, 2008; Tewari, 2006).

In the case of Mexico, these changes in the global framework have deepened the structural problems such as low productivity growth, deindustrialization in some activity branches, and a competitiveness performance highly dependent on low wages of a sector whose main catalyst was to be the North American Free Trade Agreement (NAFTA). Based on these factors, this study seeks to analyse the evolution of this sector in Mexico between 1994 and 2008, focusing in particular on the effects of the insertion of its main activities in global value chains (GVC) and levels of productivity and competitiveness. The main hypothesis is then, that in the recent international context, the upgrading process

¹ Established by the World Trade Organization (WTO). Designed to replace the Multi-fiber Agreement (1974-1994), it was in effect from 1995 to 2004 and as such was considered to be part of the transition period toward the full liberalization of the sector.

initiated under NAFTA in 1994 failed due to the lack of a sustainable technological change.

The first section examines the relevance of the GVC approach for the study of recent transformations in the international context of the textile and apparel industry. The second part discusses the historical evolution of the sector in Mexico, including a review of structural trends in terms of production value and working hours during the 1994-2008 period by using a database prepared for 5 branches and 27 categories of industrial activity. The third section, by using the same source, studies the phenomenon of structural heterogeneity by estimating a labour productivity indicator. The fourth part of this paper tackles the issue of de-industrialization, distinguishing between two periods (1994-2001 and 2001-2008) through the use of a generic shift-share type methodology. The fifth section offers an in-depth study of the evolution of sectorial competitiveness based on the Competitive Analysis of Nations (CAN) methodology developed by the Economic Commission for Latin America and the Caribbean (ECLAC). Finally, the main conclusions from the study are presented.

GLOBAL VALUE CHAINS AND THE SECTOR'S INTERNATIONAL CONTEXT

The global value chain approach

Broadly speaking, the textile and clothing industry can be divided into two categories, manufactured input products (cloth and fabrics) and apparel (clothing production). The latter tends to be distinguished from the former for being more organizationally fragmented and less technologically sophisticated, and as the final link in the chain also faces low entry barriers and flexibility in determining production scales, making it especially accessible to less developed countries (Rivera, 2004). However, by its very nature, clothing manufacturing makes difficult to reduce direct labour costs, a determining factor in the global implementation of flexible production methods that rely on the application of information technology.

Meanwhile, the trend towards flexible production on an international scale consists of increasing degrees of specialization, standardization of individual operations, and flexibility in production processes that alter the relationship between scale and cost of production, and allow for smaller manufacturing volumes, greater variety in the products offered, and important changes in labour organization. The application of these trends

results from the formation of complex global production networks that are dynamically transformed following a variety of strategies established by large TNCs (Dicken, 2007). It also signifies an international division of labour whereby the design and high value added functions are performed in countries with high income levels, while assembly and other manufacturing activities are carried out in developing nations.

The specificities of the textile and apparel sector have resulted in the empirical analysis of the industry being one of the main areas of theoretical elaboration of authors involved in the study of global value chains.² This organizational type approach centred on the concept of networks (Gereffi, 1994, 1999; Gereffi, Humphrey, and Sturgeon, 2005; Gibbon, 2000; Kaplinsky, 2000; Morrison, Pietrobelli, and Rabellotti, 2006) enables us to understand how the evolution, operation, and use of activities of sophisticated worldwide manufacturing networks by parent companies, determines the degree of concentration, articulation, and efficiency of the productive structures of less developed nations such as Mexico (ECLAC, 2002, 2004).

García de León (2008) points out that one of the main purposes of this approach is to identify “... *those activities and relationships that represent strategic points in generating value ... (as well as) important features of the hierarchical, heterogeneous, and changing architecture of the new forms of global organization of production and trade in clothing*” (García de León, 2008: 63-4). Of particular relevance in the analysis of GVC is the concept of governance³, the role played by the companies that control these networks, distributors, trademark holders, and large manufacturing enterprises that are located in the segments of the chain with the greatest entry barriers and higher value added and profitability (Kaplinsky, 2000).

Governance decides what is produced and in what quantities in different locations, resulting in an uneven distribution of profits among the participants (Minian, 2009). The control elements then change, depending on the nature of the linkages and range from possession of certain technological assets, product specification, availability of distribution channels, the pricing of goods and inputs that are sold in the different markets, and among the companies comprising the integrated system, to aspects such as financing and the various management capabilities (ECLAC, 2008).

² Kaplinsky (2000: 124) defines the concept of global value chains as *the full range of activities that are required to bring a product (or a service) from conception through the different phases of production to delivery to final consumers and disposal after use.*

³ The same author describes governance as the *role of coordination and associated roles of identifying dynamic rent opportunities and apportioning roles to key players in the production process* (Kaplinsky, 2000: 124).

From the decisions, made centrally by these companies, concerning production, distribution, and sale, a hierarchy can then be established in relations and contracts between the economic agents involved. The degrees of subordination and dependence of each player are amplified as one moves down the hierarchy of industry outsourcing, with greater control and supervision by the leaders of the chain over the lower links in terms of the creation of value added (Campbell and Parisotto, 1995).

Generally located in less technologically advanced production facilities in developing countries, the lower supplier nodes tend to be involved in the manufacturing of clothing; their function is to keep wages low, as costs are the main competitive variable. These low-level suppliers interact with the entire GVC through hierarchical or quasi-hierarchical type relationships with the client, the coordinating company. Lacking confidence in their level of competence, coordinating companies take direct ownership of operations in the country (a hierarchical relationship) or exercise a high degree of control over these low-level suppliers (a quasi-hierarchical relationship) (Humphrey and Schmitz, 2000).

From this notion of hierarchy, the analytical framework of GVC utilizes a typology for classifying the series of activities undertaken throughout the segments of the chain in terms of their technological content and value added. An initial role—Cut, Make, Trim (CMT) tasks, which are labour intensive and low in training—consists of manufacturing clothing based on imported inputs and strict specifications established by the buyer. In the Original Equipment Manufacturing (OEM) business model, the contracting company has the capacity to manufacture the final good as well as to provide all associated services (finishing and packaging), based on established designs and often using raw materials supplied by the client. Finally, in the Original Design Manufacturing (ODM) and Original Brand Manufacturing (OBM) models, the capabilities extend to the design and the establishment of brand names and trademarks, respectively (Gereffi and Frederick, 2010).

Changes in the international organization of the sector

This analytical framework has been particularly useful given the changes in the sector's international context as a result of its total trade liberalization in 2005. The elimination of the quota system considerably strengthened competition, particularly among countries with low costs whose industries were created and developed under these systems. This has thus translated into overproduction in the sector and increasing demands in terms of capacities for the suppliers of the GVC. Cárdenas and Dussel (2007), for example, point

out that “... *the quality, speed of delivery, access to inputs and transportation, the capacity to design and the adaptation of new technologies, among others, play a crucial—and in some of the most important segments, greater role than labour costs*” (Cárdenas and Dussel, 2007: 534).

At the same time, the industry has experienced such strengthening of the sales and distribution segments—with the resulting empowerment within these networks of large global buyers (retailers, trademark holders, and major manufacturers)—that purchasing operations are highly centralized even though the production and sale of clothing is fragmented into separate markets internationally. The concentration of the business in the hands of a few corporations hampers the survival of small- and medium-sized manufacturing enterprises in less developed countries because the outsourcing strategy of the leading companies has shifted to long-term commercial relations with a few large suppliers possessing high technological and financial capacities (Gereffi and Frederick, 2010).

In conclusion, through mergers, acquisitions and bankruptcies, a few sales and distribution channels with little knowledge of the production process have increased their market share and replaced the big manufacturers in the leadership of networks. Furthermore, in order to reduce costs and increase their flexibility and capacity to respond rapidly to demand, they have transferred responsibility for the complete set of manufacturing related tasks to the high capacity outsources under the OEM model. As a way to concentrate and retain profits, these chains have also intensified the trend towards the valorisation of tertiary activities and activities unrelated with the manufacturing segments (design, management, marketing, etc.). In this process, they appropriate the value generated in the different locations.

Unlike the pre- and post-production activities, the garment industry is much more fragmented into small manufacturing units that use little technology and are located in developing countries. It is thus more geographically mobile due to its lower dependence on the surrounding conditions (Canto, 2011). The trend towards global concentration of activity, thus assumes that, to maintain their role in the GVC, the companies in these nations and segments must have an increased capacity to invest in technology and organizational processes, even if doing so does not necessarily imply higher profits.

A significant example is the transformation of the corporate strategy followed by Levi Strauss. As a result of a prolonged slump in the sales of jeans, in 1998 the company decided to close its production facilities in the United States (US), make its operations less

vertical, and outsource all of its production abroad, mainly under the OEM model. With the understanding that the structure of global power in the sector is shifting towards controlling distribution and sales, the company opened new marketing channels and segmented its brands (in 2002, Wal-Mart began selling Levi Strauss Signature). García de León (2009) summarizes this process as follows:

Levi's new business profile, whereby it has ceased being strictly a manufacturer in order to start managing its brands, has created a new supply model that deems the geographical origin of its suppliers irrelevant. It is key to have a base of highly qualified outsources that meet the requirements of costs, quality, flexibility, and faster response times to the market, and are capable of providing full package service (2009: 122-3).

EVOLUTION OF THE TEXTILE AND APPAREL SECTOR IN MEXICO, 1994-2008

From the assembly of low value-added products towards de-industrialization

During the so-called Industrialization through Import Substitution strategy, a strong textile industry arose in Mexico, and, along with it, the capacity to manufacture all the products that the domestic market required. This was done by purchasing few items abroad (except machinery), which the textile industry depended on. Textiles was essentially a sector with low productivity and deficiencies in workplace organization (Márquez, 1994). Though heterogeneous in nature, most of the clothing industry consisted of micro and small family-run enterprises (Montoya, 1993). Nevertheless, through State financing since the 1970s large, highly modernized chemical fibre companies emerged in the field of input production (Portos, 1994).

Since the second half of the 1980s, the implementation of the new model of indiscriminate economic liberalization and deregulation, resulted in a clothing export industry based on northern Mexico maquiladora plants manufacturing for the United States market. At first, the export dynamism of the 1990s derived from static competitive advantages related to low wages and the geographical proximity to the United States, and was part of a strategy to reduce overhead on the part of large American TNCs. Evidence of this is the sudden entry of huge amounts of foreign investment in the sector:

Between January 1994 and September 2001, foreign direct investment in the textile and apparel industry totalled almost 1.79 billion dollars ... foreign capital flows to the textile industry came mainly from the United States, whose share of total foreign investment during that period was more than 80%... Between 1993 and 2000, total textile and clothing exports grew at an average annual rate of 24%, from 2.77 billion dollars to 12.50 billion dollars, and the trade balance for this category of goods is no longer negative since 1995 (García de León, 2008: 263-5).

As the Mexican textile industry gradually inserted in the networks of these large TNCs, innovations to processes, products, and organizational schemes were incorporated (Taboada, 2000). This resulted in an upgrading of capacities towards OEM type business models that incorporated diverse tasks, from the manufacturing of fabric to packaging and distribution. The first stage (1994-2001) even saw the emergence of successful industrial complexes, like those in the Laguna region, which was rapidly becoming the capital of denim. Simultaneously, and much more discreetly, small- and medium-sized companies were entering bankruptcy proceedings and going under, or in the best of cases, making a transition towards the informal economy by dispersing their production in workshops and homes in rural areas. This move, however, did not prevent their insertion, albeit under very unfavourable conditions, in transnational manufacturing networks. Alonso (1997) documented the case of micro-companies that produced clothing in Tlaxcala, where there was an outsourcing network that included from major US buyers to small workshops and household production.

Meanwhile, Gonzalez (2004) argues that, *“the decline of the textile industry and the strengthening of the garment industry in Mexico are closely related to measures taken by the United States in its competition with clothing manufactured in Asian countries”* (2004: 94). Since 2000, and especially following the total trade opening in 2005, the increase in China's share of the American market has meant the displacement of large numbers of Mexican suppliers. This has even lead to the decline of the most successful industrial complexes, such as La Laguna (to date, 6 of the 7 major export groups in the region have gone into bankruptcy and the production of jeans fell from 6 million to less than 1 million units (Morales, Parker, and Saavedra, 2010).

In highlighting these past two contrasting phases of the development of this sector (1994-2001 and 2001-2008), some authors refer to a partial transition of the Mexican temporary import model towards an OEM with the exclusion of most Mexican medium- and small-sized companies in favour of other outsourcers (Cárdenas and Dussel, 2007;

Rivera, 2004). From a more global perspective, Dicken (2007) pinpoints various elements within these contradictions. These include US rules of origin that have forced Mexican suppliers to import fibres from the United States—a clear division of labour between the two countries, with a subordinate role for Mexico—and the fact that, while US fashion-oriented companies are supplied in Europe, discount stores in that country purchase cheap products from less developed nations.

In the case of Levi Strauss, its insertion in Mexico occurred under three different schemes. In an initial stage, through the maquiladora supply program, the company moved its production activities to countries in an effort to reduce its costs and take advantage of the supply of cheap labour. In a second stage, as a result of NAFTA, the company changed to OEM type suppliers, and more recently, replacing its Mexican outsourcers for Asian companies, especially Chinese firms, in seeking more complex competitive factors such as flexibility, quality, design capacities, and product development (García de León, 2009).

Empirical evidence

The statistical evidence also corroborates this evolution of the Mexican sector's global integration, which began with the assembly of low value-added products towards a virtual de-industrialization through an interrupted upgrading process. We used a database from the National Statistics and Geography Institute (INEGI) to estimate monthly output, working hours and their ratio (labour productivity), at constant December 2003 prices, for each year from 1994 to 2008 for 5 branches and 27 categories of the sector's economic activity⁴. Based on this source, we estimate that the total production value of the sector as a whole fell in real terms by 35.7% between 1994 and 2008, with decreases of 12.5% in 1994-2001 and 26.5% in 2001-2008. In terms of working hours, these percentages were -36.0, 2.6, and -37.7%, respectively.

These numbers reveal a pronounced trend towards de-industrialization in the sector: even with the incipient growth from 1994 to 2001, the aggregate value of production declined on a cumulative basis. Thus, we can conclude that, on one hand, the balance of

⁴ The data were deflated with the Producer Price Index (IPP) of the manufacturing sector calculated by the Banco de México (BANXICO) (2011). The need to obtain series that are long-range and consistent over time, and which might account for possible changes associated with processes of structural change, implied that the only viable source of data was the Monthly Industrial Survey prepared by INEGI based on the Mexican Classification of Activities and Products (CMAP). If not otherwise specified, the data used throughout this study are from this source.

global insertion has been negative for the structure of Mexican manufacturing, and on the other, the sought-after increase in productive capacities was temporary and barely a palliative to the downward trend in overall activity. By breaking down the figures, the results confirm this interpretation, and in comparing 2008 with 1994, only 4 of the 27 categories considered in the study increased in production in real terms and, of them, only 3 increased in terms of number of working hours.

Meanwhile, in the most recent period (2001-2008) and prior to the international economic crisis, only two categories of activity increased their production value after discounting inflation, and only one of them (category 321215, production of non-woven fabric) also experienced an increase in working hours. Without taking category 321215 into account, it is apparent that the sum of the production of the three activities with positive growth rates in 1994-2008, represents only 8.4% of the sector in 2008. Thus, we conclude that, to date, the dynamism of Mexican textile production is limited to a single category, the manufacturing of non-woven fabric.⁵

Table 1 shows the cumulative growth rates in real terms over the three periods (1994-2008, 1994-2001, and 2001-2008) of the production value and working hours in the five branches and five manufacturing activity categories with the greatest output in the sector in 2008. The slowdown in the main input production branch—category 3212: threads, fabrics and finished artificial fibres, which in 2008 accounted for 61.62% of total sector output, is particularly noteworthy because of its weight in the structure. In addition, we emphasize the overall decline in both variables in the three periods under discussion and the intensification of this downward trend in the last period.

Finally, there is one aspect that we have not delved into here but should be mentioned as a factor explaining the sector's evolution in the 1994-2008 period: the inability of authorities to protect the domestic market from unfair trade practices as well as piracy and competition from the informal economy. In reviewing the different mechanisms that allow foreign textiles into the country without paying taxes, Simón (2004) concluded that Mexico's protective system is slow, bureaucratic, and accessible only to large companies with deep financial pockets.

⁵ Estimates show that the percentage share represented by this category of activity in production value and working hours in the sector from 1994 to 2008 increased from 10.10% to 25.83% and from 2.64% to 6.97% respectively.

Table 1. Accumulated real growth rate of production value and working hours in selected branches and activity categories, 1994-2008 (percentages)

Sector/ Branch / Activity	Production value			Working hours		
	1994- 2001	2001- 2008	1994- 2008	1994- 2001	2001- 2008	1994- 2008
Textiles and apparel	-12.53	-26.52	-35.73	2.63	-37.68	-36.04
3211 Textile industry – hard fibres and all types of hosiery	-6.18	-11.76	-17.21	21.54	-27.81	-12.26
321206 Soft fibre fabric	-23.3	-11.35	-32.01	5.49	-35.01	-31.44
321215 Production of non-woven fabrics	32.14	24.44	64.43	30.39	29.82	69.27
3212 Thread, fabrics, and finishing of soft fibres. Excluding knits	-7.44	-18.82	-24.86	-0.29	-39.52	-39.7
321311 Manufacturing of sheets, tablecloths, comforters, and similar type products	1.07	-26.77	-25.99	49.72	-37.44	-6.34
3213 Manufacturing of textile products. Includes the production of upholstery, and soft fibre rugs	-0.55	-30.45	-30.83	25.62	-34.86	-18.16
3214 Manufacturing of knitted fabrics	-24.39	-44.07	-57.72	1.32	-43.71	-42.97
322001 Manufacturing of men's outerwear	-22.58	-38.89	-52.69	19.48	-29.97	-16.33
322003 Manufacturing of women's outerwear	-16.89	-33.72	-44.92	4.89	-25.92	-22.29
3220 Manufacturing of clothing	-22.9	-35.71	-50.44	0.42	-32.44	-32.16

Source: Own elaboration with INEGI data, "Monthly Industrial Survey (CMAP)," 205 categories of economic activity.

Meanwhile, a subject report dated 2005 from the Centre for Social Research and Public Opinion Studies (CESOP) of the Chamber of Deputies indicates that an increasing number of illegal goods pass through Mexican customs and are sold at large retail outlets despite the many transparency and anti-corruption programs that have been implemented. As a source, the report quotes the program for the competitiveness of the fibre-textile-apparel chain, which estimates that 50% of the clothing market is supplied through illegal channels and that domestic production only accounts for 20% of it (Ochoa, 2005).

PRODUCTIVE UPGRADING AND STRUCTURAL HETEROGENEITY

Labour productivity stagnation

The previously discussed process of productive concentration and simultaneous de-industrialization in the textile sector has resulted in the stagnation of productivity and the destruction of domestic value chains, whose culmination is the widening of the disparities between the different activities in terms of efficiency, economies of scale, technological change, employment, and profitability among others. By estimating the productivity of 5 branches and 27 categories through the relationship between production value and

working hours calculated at constant prices in the 3 periods under consideration, it is found that the textile industry as a whole produced 205.7 pesos per hour in 2008, a figure very similar to 1994, 204.7 in terms of December 2003 pesos.

In terms of our timeframes, a comparison of 2001 with 1994, when capacities were supposedly upgraded and regions saw the emergence of industrial clusters, reveals that productivity experienced a considerable fall (14.7%). It seems, then, that in the framework of a strategy of indiscriminate opening, the sector's insertion in GVC through concentrating activity in a small number of activities and enterprises has resulted, on the other side of the ledger, in the displacement of entire uncompetitive industries from the markets. This underscores the absence of a public policy aimed at creating opportunities for reconversion that the market is not providing under these conditions, but also the unviability of a road of sustainable upgrading in certain areas of expertise outside of a comprehensive national development strategy.

Arroyo and Cárcamo (2010) point out that, *"neither these companies nor the government sought to integrate the textile and apparel productive (or supply) chain. Meanwhile, the evolution towards full-package production only occurred through selective partnerships with leading Mexican companies, leaving the small and medium enterprises that represent most of the sector lagging behind"* (p. 65).

Table 2 provides a summary showing that productivity in all the branches except 3212, and in all the selected activity categories, dipped in 2008 to levels below those of 1994. In fact, the database confirms that only 6 of the 27 categories considered, which are not relevant in terms of their output levels, posted increases in the variable in the 1994-2008 period. Moreover, when labour productivity increased, the trend occurred amid a strong decline in employment and economic slowdown. Thus, productive rationalization processes and not a modernization of manufacturing infrastructure could explain these results.

Table 2. Evolution of labour productivity in the branches and selected activity categories, 1994-2008 (Mexican Pesos of December 2003 per working hour and percentages)

	Sector/ Branch / Activity	Production per working hour			Annual average growth rate	
		1994	2001	2008	1994-2011	2001-2008
	Textiles and apparel	204.7	174.5	205.7	-2.1	2.6
3211	Textile industry – hard fibres and all types of hosiery	121.7	94	114.8	-3.3	3.2
321206	Soft fibre fabric	186.6	135.7	185.1	-3.9	5.2
321215	Production of non-woven fabrics	784.1	794.7	761.7	0.2	-0.6
3212	Thread, fabrics, and finishing of soft fibres. Excluding knits	212.9	197.6	265.3	-1	4.9
321311	Manufacturing of sheets, tablecloths, comforters, and similar type products	236.5	159.7	186.9	-4.6	2.4
3213	Manufacturing of textile products. Includes the production of upholstery, and soft fibre rugs	261.1	206.7	220.6	-3	1
3214	Manufacturing of knitted fabrics	222.8	166.2	165.2	-3.6	-0.1
322001	Manufacturing of men's outerwear	141.8	91.9	80.2	-5	-1.8
322003	Manufacturing of women's outerwear	306.7	243.1	217.4	-3	-1.5
3220	Manufacturing of clothing	166.2	127.6	121.4	-3.3	-0.7

Source: Own elaboration with INEGI data, "Monthly Industrial Survey (CMAP)," 205 categories of economic activity.

A periodization of the structural transformation

By the same token, in calculating the traditional statistical dispersion indicators in the productivity series both for branches and activity categories, it can be confirmed that structural heterogeneity increased in the 1994-2008 period (see Table 3). While the standard deviation increased 20.2% and 6.3%, respectively, the growth in the coefficient of variation was 33.2% and 19.6%. Nevertheless, the results of the most disaggregated series (by activity) reveal that the trend for the disparities to widen is at best erratic over the period in question, but suggest a periodization in terms of the indicator behaviour. Figure 1 illustrates the indicator's coefficient of variation evolution in the twenty seven activity categories from 1994 to 2008. Of particular importance was the upward trend between 1998 and 2005, which translated into a 36.6% increase followed by a subsequent accumulated 17.4% decrease between 2005 and 2007.⁶

⁶ Obtaining the most complete possible breakdown of statistical results, nonexistent to date due to a lack of official long-term and consistent informational data, allows us to study the intra-sectorial heterogeneity emphasized by some authors (Kupfer and Rocha, 2005).

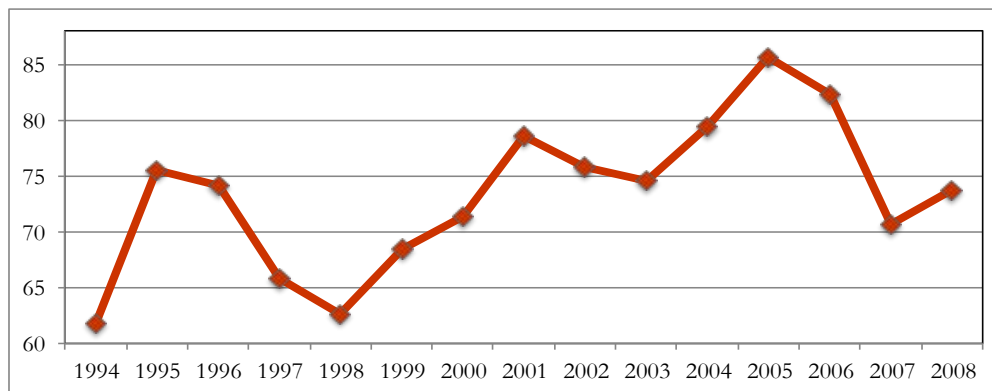
Table 3. Labor productivity dispersion indicators by branches and activity categories, 1994-2008 (Pesos of December 2003 per working hour and percentages)

Dispersion/ Years	1994	2001	2008	Growth rate 1994-2001	Growth rate 2001-2008	Growth rate 1994-2008
CV ^{a/} Branches	27.4	30.0	36.5	9.5	21.7	33.2
CV ^{a/} Activities	61.7	78.7	73.8	27.6	-6.2	19.6
SD ^{b/} Branches	53.9	47.5	64.8	-11.9	36.4	20.2
SD ^{b/} Activities	132.8	145.1	141.2	9.26	-2.7	6.3

Notes: ^{a/} CV: Coefficient of variation. ^{b/} SD: Standard deviation

Source: Own elaboration with INEGI data, "Monthly Industrial Survey (CMAP)," 205 categories of economic activity.

Figure 1. Coefficient of variation of labour productivity among activity category, 1994-2008 (Pesos of December 2003 per working hour)



Source: Own elaboration with INEGI data, "Monthly Industrial Survey (CMAP)," 205 categories of economic activity.

These periods could then be identified with the insertion phases of the Mexican textile and apparel sector in GVC. In the first instance (phase one), a relative upgrading of the functions performed, coupled with a growing concentration of activity in a few activities and companies, signified an increase in the degrees of heterogeneity in the sector. Once the possibilities of this process were exhausted and with the complete liberalization of trade that meant the displacement of Mexican industry suppliers by foreign companies, the trend seems to have been reversed as a result of a generalized process of sectorial de-industrialization (phase two). In light of the evolution of productivity presented in Table 2 (the variable decreased in the 1994-2001 sub-period but increased in the second 2001-

2008 sub-period), one question that will be discussed below, could, however, lend itself to misinterpretation.

DE-INDUSTRIALIZATION AS A DETERMINING FACTOR OF PRODUCTIVITY

Shift-share methodology

The observation of a generalized de-industrialization process with better productivity performance in some periods of time is related to the determining factors behind the variations in the efficiency indicator. Through an analytical technique commonly known as shift-share and using the same informational data, the following is a breakdown of productivity variations (total effect) that occurred between 1994 and 2008 on two levels, one associated with technological change within each activity (intrinsic effect) and the other corresponding to structural change understood as the contribution of the intra-sectorial displacement of the labour factor to favour productive efficiency (structural effect).

The mathematical formulation of this breakdown that is applied to compare the values of the variable of the 27 categories at three points in time (1994, 2001 and 2008) is as follows:

$$(P^T - P^0) = \sum_{i=1}^n [(P_i^T - P_i^0) \cdot (S_i^0 + S_i^T)/2] + \sum_{i=1}^n [(S_i^T - S_i^0) \cdot (P_i^0 + P_i^T)/2],$$

where P_i^t is the productivity in activity i ($i = 1, 2, \dots, n$) at time $t = 0, T$ and S_i^t is the percentage share of labour force employed in the activity i ($i = 1, 2, \dots, n$) within the entire sector $t = 0, T$. The first term on the right side of the equation represents the variation in labour productivity that occurred due to changes in the intrinsic productivity of the n categories of activity (intrinsic effect). The second term indicates the contribution of the re-composition of the labour force (structural effect) (ECLAC, 2007).⁷

The lack of a sustainable technological change

The results of the exercise are revealing, as the total effect is simply the difference between the level of productivity in the two reference years, and is negative for the sector

⁷ The corresponding numbers for the effects in the case of five branches have been calculated by adding together the numbers for the effects of the activity categories that each of these branches include in order to avoid statistical discrepancies.

as a whole at a value of 30.24 December 2003 pesos, in comparing 1994 with 2001, and is positive and equivalent to 31.25 pesos in the same constant terms between 2001 and 2008. In the first case, the result is explained by an intrinsic effect that is negative and even higher in value than that corresponding to the total, i.e., behind the fall in the indicator is technological obsolescence. In the second case, both components (intrinsic and structural) are positive and the transferring of workers towards tasks involving higher productivity explains 68.4% of the total increase in productivity (see Table 4).

Table 4. Determining factors behind the evolution of labour productivity in the sector, 1994-2008 (Pesos of December 2003 per working hour)

Effects/period	Intrinsic	Structural	Total
1994 - 2001	-37.66	7.41	-30.24
2001 - 2008	9.88	21.37	31.25
1994 - 2008	-27.18	28.18	1.00

Source: Own elaboration with INEGI data, "Monthly Industrial Survey (CMAP)," 205 categories of economic activity.

In conclusion, on one hand, in general terms we can rule out the hypothesis of upgrading process based on a technological change in the 1994-2001 period, and on the other, the findings confirm that the model of global insertion continues to be based on the exploitation of poorly paid labour. Indeed, and interestingly enough, in the 1994-2001 period, the effect of the structural change on productivity is minor but positive (7.41 pesos). Therefore, it cannot be argued that, as the supposed upgrading progressed, labour has been used less efficiently by being redirected to non-globalized activities. In this regard, García de León (2009) states that, "... *the characteristics of these networks reveal the presence of an upgrading process with a very modest scope with limited spreading to the branch as a whole, low leverage and catalyst effect, and results that are very limited in their labour markets*" (2008: 362). At the same time, the increase of the indicator in the second sub-period (2001-2008) can be attributed to the collapse of non-competitive activities and enterprises with the culmination being the displacement of workers towards tasks that are evidently more efficient, which seems to confirm the hypothesis of a context of rationalization of the productive processes.

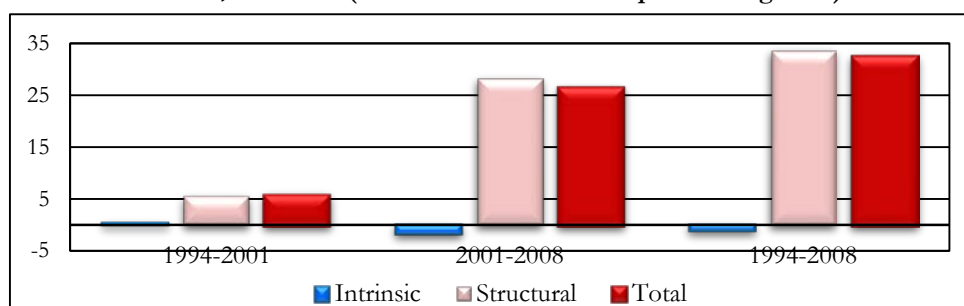
An analysis of the results obtained from the exercise, when data is further broken down, statistically confirms this conclusion and associates it with a high concentration of activity. If the sector's dynamic category (321215, production of nonwoven fabric) is

excluded, the stagnation of productivity in the entire period in question (1994-2008) leads to a 31.46 peso reduction in the indicator, a figure that is higher in absolute value than the total positive effect registered between 2008 and 2001 (see Table 4). Thus, activity category 321215 accounts for 84.9% of the total increase in the sector's productivity over the 2001-2008 period, representing a positive contribution between 1994 and 2001 despite the downward trend in the sectorial indicator in that timeframe.

As a result, the marginal improvements in productive efficiency in the sector are concentrated in the manufacturing of nonwoven fabrics, whose favourable performance is based exclusively on its capacity to generate employment in the context of generalized de-industrialization. The intrinsic effect (related to technological progress) of this activity category is negative in the 1994-2008 and 2001-2008 periods and is only 0.31 pesos between 1994 and 2001, which indicates that the only strong activity in the Mexican textile and apparel sector did not as a whole experience any modernization in the 14 years being considered.

In contrast, the structural component (related to the shifting of the workforce) in this category contributed more than 100% of the total increase in its productivity in the 1994-2008 and 2001-2008 periods, and 94.8% from 1994-2001 (see Figure 2). It should be noted that the average salary in the activity category in 2008 was only slightly higher than the industry average (7.7%) which in turn was lower than that of the domestic manufacturing industry as a whole by 28.8%.⁸

Figure 2. Determining factors behind the evolution of labour productivity in category 321215, 1994-2008 (Pesos of December 2003 per working hour)



Source: Own elaboration with INEGI data, "Monthly Industrial Survey (CMAP)," 205 categories of economic activity.

⁸ Own estimate based on data from the Monthly Industrial Survey (EIM) of the National Statistics and Geography Institute (INEGI) under the Mexican Classification of Activities and Products (CMAP).

Finally, among the main activities that are together responsible for the poor performance of the indicator and with a negative contribution in the entire period under consideration (1994-2008) to the evolution of sectorial productivity, are category 321217, yarn, fabrics, and finished artificial fibres (-11.76 pesos), and 321401, hosiery production (-8.39 pesos). While in the first case, the behaviour occurs primarily as of the second sub-period (2001-2008) and can be attributed to a strong reduction in the workforce (working hours decreased from 26,022 in 2001 to 7,019 in 2008); in the second case, it is the negative contribution of the intrinsic effect in the 1994-2001 period (6.42 pesos) that explains the data (see Appendix 1). This reveals the different characteristics of a de-industrialization process that could be characterized as uneven and combined, in which different degrees and types of decline ranging from the technological obsolescence (category 321217) of the manufacturing infrastructure to the collapse or near collapse of entire activities (category 321401) occur together.

In this same vein, Taboada (2000) suggests that the sector's global insertion ended with the stock of existing knowledge and skills, even leading to the clear obsolescence of the prevailing number of companies that temporarily remained in the markets. This evidence of an involution of the specialization pattern in terms of its content in knowledge-intensive activities is corroborated by Alonzo (2009), who on the regional level documents the case of companies that operated with design capacities, their own trademarks, and their own marketing channels, and renounced these capacities to become simple manufacturers of garments during the maquiladora industry boom.

GLOBAL INSERTION AND EXTERNAL COMPETITIVENESS

Methodology

An approximation of the evolution of the competitiveness of the textile and apparel industry in the 1994-2008 period can be obtained by extending the methodology developed for MAGIC software by the sub-regional office in Mexico of the Economic Commission for Latin America and the Caribbean (ECLAC). Based on the outlook that was adopted, the transformation of the productive specialization model is evaluated through the classification of the sector's exports tracking their performance (dynamic or stagnant), and depending on the change in the relative share of global demand for each item in total trade of goods (ECLAC, 2006).

MAGIC establishes a typology that classifies exports as rising stars, falling stars, lost opportunities and withdrawals. A rising star is when imports of the product in question increased in the US market and the country in question increased its share in total US imports of that product. A falling star means that imports of the product in question declined in the US market but the country in question increased its share in total US imports of that product. Lost opportunity means that imports of the product in question increased in the US market but the country in question reduced its share in total US imports of that product. Withdrawal means that imports of the product in question declined in the US market and the country in question reduced its percentage share of total US imports for that product (Cordero, 2010: 26).

To this end, a database was prepared with 622 product categories, based on the classification of the Harmonized Commodity Description and Coding System (HS) on a six digit level, and using the United Nations Commodity Trade Statistics Database (Comtrade) figures as a source. The exercise used the world market as its reference instead of limiting itself to the US market.

A deteriorating competitiveness performance

An initial observation centres on the reduction of the sector's exports as a percentage share of the national total of overseas sales of goods from 3.9% in 1994 to 2.2% in 2008 and particularly in the 2001-2008 sub-period, taking into account that the corresponding figure reached 6% in 2001. This indicates the declining importance of the textile and apparel maquiladora industries in the Mexican export model, and the fall in their levels of competitiveness due to the gradual elimination of import quotas in the US market.

Also important to note are, on one hand, the lack of dynamism of the export model that underscores the failure of the upgrading process, and, on the other, a strong trend towards the concentration of sectorial export sales in a small number of categories. This is illustrated by data indicating that, to begin with, the four top export products in 1994 remained the same in 2008, and secondly, that their weight in the sector's total exports increased from 29.5% to 43.8% in that same period (see Appendix 2).

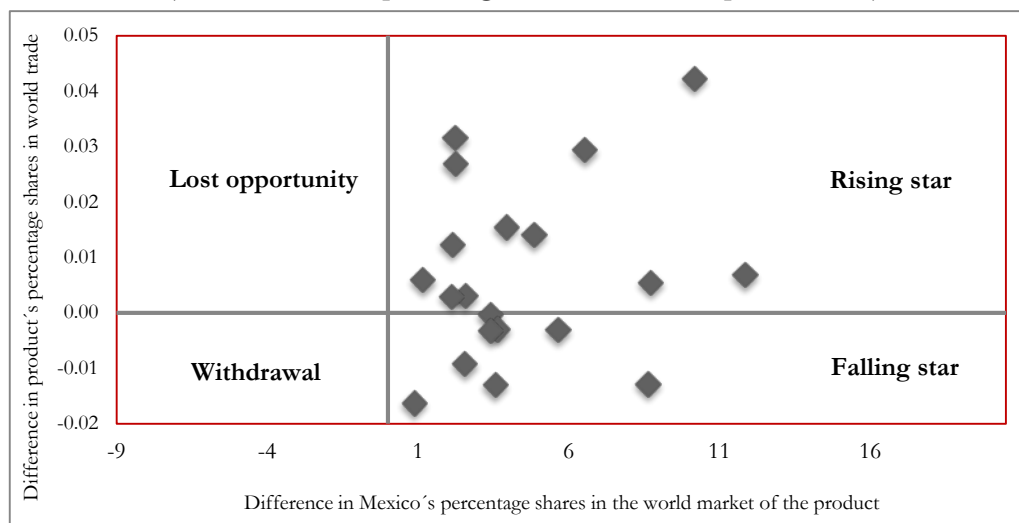
Taking into account the 20 main export categories in 2008,⁹ representing a value of more than 4.36 billion dollars, that is, 67.1% of the sector's total foreign sales in that year,

⁹ Because there are no data for the years prior to 2008 in the source of information due to changes in the HS classifications, category 611595 (Other goods such as stockings, pantyhose, leotards, tights, socks and other hosiery products, including progressive compression, knitted or crocheted, or cotton goods) was not included.

the conclusions are clear and revealing when the periods corresponding to the exercise are differentiated. In the 1994-2008 period, 10 types of products are falling stars, 3 are rising stars, 5 represent lost opportunities, and 2 were withdrawals, meaning that although in 13 of them, Mexican industry increased its market share internationally, only 3 of these product categories boosted their share in world trade. In short, if the entire period is considered, it would appear that the industry had performed well in terms of external competitiveness, but this is conditioned by globally sluggish business segments, that is, those with low value added (see Appendix 3).

In considering the previously conceptualized sub-periods, it turns out that between 1994 and 2001 in all of the 20 categories, the Mexican textile and apparel sector increased its global market share, and in 12 of these cases, it did so in dynamic products, which would point towards an upgrading of the sectorial productive specialization model (see Figure 3).

**Figure 3. Typology of the top 20 products exported to the world market, 1994-2001
(Differences in the percentage shares in 2001 compared to 1994)**

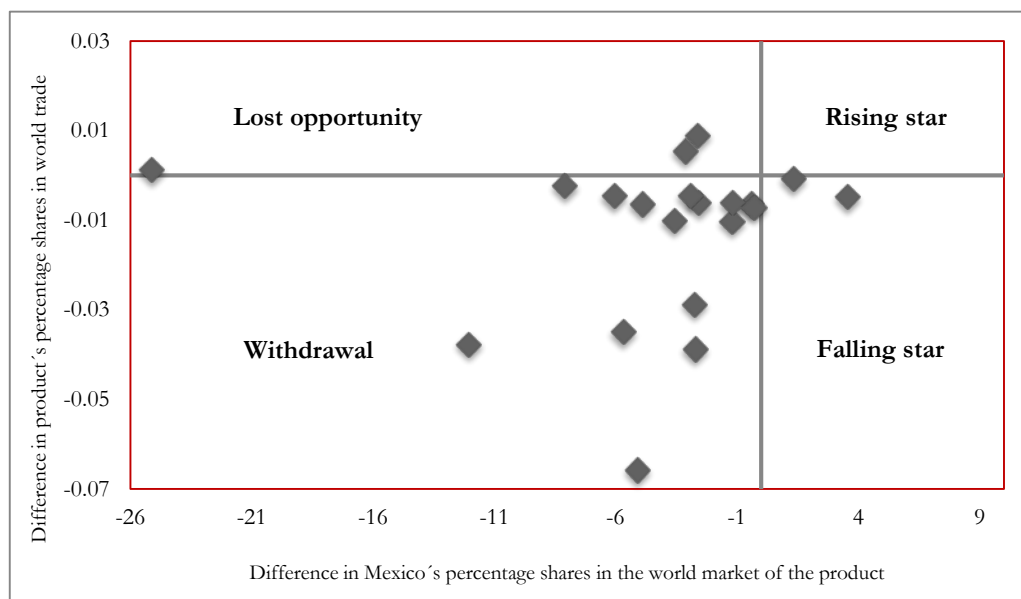


Source: Own elaboration with UN Data, "COMTRADE Database."

Nevertheless, by analyzing the most recent period (2001-2008), the evidence confirms the collapse of the model, since with the exception of two types of products, in all others, Mexico is seeing a decline in its share of international sales, and the only cases in which the country is increasing its percentage share corresponds to globally stagnant

categories. In fact, 15 of the 20 categories of goods correspond to the “withdrawal” classification in that period (see Figure 4).

**Figure 4. Typology of the top 20 products exported to the world market, 2001-2008
(Differences in the percentage shares in 2008 compared to 2001)**



Source: Own elaboration with UN Data, 'COMTRADE Database'.

In this sense, the programs to boost the competitiveness of the fibre-textile-garment chain implemented between 2001 and 2006 by the Mexican federal government with the aim of creating the conditions for increasing the availability of OEM type processes and encouraging exports of products with greater value added, have failed. The failure, among other reasons, is because they lacked the necessary resources and did not define active instruments for promoting and protecting such overseas sales. While in the first stage, the country's trade opening modified the sectorial export base, a sustained diversification of foreign sales did not take place and activity remained concentrated in manufacturing apparel (Cárdenas and Dussel, 2007). As García de León (2008) pointed out, the initial transition did not occur in the direction of a nationally coordinated structure based on a strategy of upgrading and lasting competitive positioning, which underscores the absence of a long-term government project for the sector.

CONCLUSIONS

The complete liberalization of the textile and apparel sector in the international arena has resulted in heightened competition for global markets, which has enabled the companies that control the GVC to increase the demands on suppliers in terms of technological capacities. Currently, these suppliers have a responsibility to perform all the tasks of the manufacturing process with high standards of quality and efficiency. As a result, we have the shift in outsourcing strategies worldwide towards large suppliers with high technological and financial capacities. This has forced maquiladora companies to accordingly scale their operations and the way they organize their tasks, at the risk of being replaced by more efficient competitors in other locations, primarily in China and other Asian countries.

In the case of Mexico, the data and information available confirm the hypothesis of a failed transition from a maquiladora model based on temporary imports towards OEM type configurations. Following the signing of the NAFTA, in an initial period, an incipient upgrading allowed for an improvement in capacities and activities, but the trend was limited to a small number of companies that progressed more as a result of an imposed requirement than due to their initiative. The process also occurred alongside the exclusion of most small and medium size enterprises, which until then had been central players in the evolution of the sector, limited by the reduced scale of their operations and unable to make the necessary investments due to lack of orientation and competitive credit (Canto, 2011). Eventually, the fact that those resources were not reallocated contradicts the orthodox assumption concerning the virtues of trade liberalization and free market as well as the Schumpeterian principle of creative destruction.

As for the second period (2001-2008), the textile and apparel industry moved towards a genuine process of de-industrialization, marked by the fall in production and employment numbers. This occurred alongside the weakening of the competitiveness of the leading activities contained in the productive specialization model. Another main finding indicates that the reported upgrading was not based on sustainable technological change and that, on a general level, the low wages and proximity to the United States were always the mainstays of the sector's global insertion. Cases have even been documented of a reversal in value added content and knowledge of the tasks performed in technologically advanced companies that were reconverted to assembly operations during the maquiladora boom.

The problem then seems to lie in the lack of state planning that initially sought to develop a sector that was locally articulated and underpinned by an appropriate physical and institutional infrastructure, elements present in the widely discussed case studies of successful industrial upgrading in Southeast Asian countries. The exercise of the GVCs governance has resulted in another aspect that is worth highlighting: the predominance in practice of the notion of specialization above that of product diversification, reflected in the limited number of products and important export destinations for the Mexican textile and apparel industry. In this, as in many other cases, the failure of the industrial development model ultimately can be attributed to the subordination of the interests of national development to private economic profits.

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THE TRANSFORMATION OF THE TEXTILE AND APPAREL SECTOR IN MEXICO AFTER NAFTA

APPENDIX I: Determining factors behind the evolution of labour productivity by type of activity, 1994-2008 * (Pesos of December 2003 per working hour)

Category	1994-2001			2001-2008			1994-2008		
	Intrinsic	Structural	Total	Intrinsic	Structural	Total	Intrinsic	Structural	Total
321112	-0.47	0.02	-0.45	-0.01	-0.25	-0.26	-0.40	-0.30	-0.71
321120	-0.24	0.46	0.22	0.30	0.95	1.25	-0.05	1.52	1.47
321202	-3.70	-0.61	-4.32	4.83	-4.07	0.75	1.96	-5.52	-3.57
321203	-1.38	-1.09	-2.47	2.56	-1.86	0.69	1.63	-3.41	-1.77
321204	-0.08	-0.53	-0.61	0.30	0.15	0.45	0.25	-0.42	-0.17
321205	-1.67	2.41	0.75	0.35	1.22	1.57	-1.50	3.81	2.31
321206	-6.42	0.56	-5.86	6.44	0.88	7.32	-0.20	1.66	1.46
321207	0.35	-0.09	0.27	-0.45	-0.09	-0.27	-0.09	0.09	0.00
321208	-0.72	-1.52	-2.24	-0.75	0.23	-0.52	-1.61	-1.15	-2.76
321214	-0.33	-0.41	-0.74	0.28	0.75	1.03	-0.07	0.36	0.28
321215	0.31	5.63	5.94	-1.70	28.22	26.52	-1.08	33.54	32.46
321216	0.80	-0.61	0.19	0.67	1.51	2.17	1.64	0.72	2.37
321217	-0.18	-1.31	-1.49	-1.31	-8.96	-10.27	-1.51	-10.25	-11.76
321311	-3.84	3.69	-0.15	1.62	0.04	1.66	-2.48	3.99	1.51
321312	-0.53	-0.35	-0.88	-0.07	-0.09	-0.16	-0.53	-0.52	-1.05
321321	0.71	1.85	2.56	-2.01	2.89	0.88	-0.89	4.33	3.44
321332	-1.40	-0.77	-2.17	0.45	-0.51	-0.06	-0.81	-1.42	-2.23
321401	-6.32	-2.00	-8.32	-0.67	0.61	-0.06	-7.45	-0.93	-8.39
321402	0.24	-0.64	-0.40	0.68	-0.83	-0.15	1.00	-1.54	-0.55
321403	-0.42	-0.97	-1.40	-0.77	-0.81	-1.57	-1.25	-1.72	-2.97
321404	-2.33	3.85	1.52	1.38	-1.66	-0.29	-0.98	2.22	1.24
321405	-0.42	0.41	-0.01	-0.11	-0.29	-0.40	-0.51	0.10	-0.41
322001	-5.11	1.81	-3.30	-1.37	1.17	-0.20	-6.73	3.24	-3.49
322003	-2.72	0.26	-2.47	-1.21	1.88	0.67	-4.18	2.38	-1.80
322005	-0.05	-1.06	-1.11	0.51	-0.71	-0.19	0.56	-1.86	-1.30
322006	-1.27	-0.37	-1.63	0.13	0.29	0.42	-1.20	-0.02	-1.22
322009	-0.47	-1.20	-1.68	-0.17	0.45	0.28	-0.69	-0.71	-1.40
Total	-37.66	7.41	-30.24	9.88	21.37	31.25	-27.18	28.18	1.00

Note: The numbering of the categories follows the nomenclature of the Mexican Classification of Activities and Products (CMAP)

Source: Own elaboration with INEGI data, 'Monthly Industrial Survey (CMAP)', 205 categories of economic activity.

APPENDIX II: Top 20 products exported by the sector to international markets, 1994-2008 (Millions of dollars and percentages)

Main products	Code	Mexican exports (A)			World exports (B)			A/B (%)		
		1994	2001	2008	1994	2001	2008	1994	2001	2008
Mens, boys trousers & shorts, of cotton, not knit	620342	278.0	1,370.0	1,348.7	7,564.5	11,137.0	18,746.3	3.7	12.3	7.2
T-shirts, singlets and other vests, of cotton, knit	610910	111.8	946.8	643.3	6,086.1	11,314.9	23,933.5	1.8	8.4	2.7
Womens, girls trousers & shorts, of cotton, not knit	620462	200.2	1,374.7	500.2	4,320.7	9,294.0	18,274.4	4.6	14.8	2.7
Made up articles (textile) nes, textile dress pattern	630790	112.8	304.0	353.7	1,123.0	2,496.6	5,773.1	10.0	12.2	6.1
Mens, boys trousers shorts, synthetic fibre, not knit	620343	33.0	233.4	180.8	162.9	3,395.8	4,390.2	2.0	6.9	4.1
Articles of bedding nes	940490	23.1	107.3	169.5	1,344.2	2,096.1	6,797.3	1.7	5.1	2.5
Jerseys, pullovers, cardigans, waist-coats & similar articles, knitted/crocheted, of man-made fibres	611030	63.8	311.1	167.8	3,979.8	8,126.6	15,094.7	1.6	3.8	1.1
Jerseys, pullovers, cardigans, waist-coats & similar articles, knitted/crocheted, of cotton	611020	14.5	334.3	125.0	4,415.2	7,861.2	18,802.3	0.3	4.3	0.7
T-shirts, singlets & other vests, knitted/crocheted, other than of cotton	610990	21.7	142.3	112.3	1,309.4	3,652.9	8,526.1	1.7	3.9	1.3
Garments made up of textile felts and nonwoven fabric	621010	45.0	197.6	92.4	211.2	658.5	1,894.9	21.3	30.0	4.9
Women's/girls' swimwear, knitted/crocheted, of synthetic fibres	611241	1.0	123.5	91.8	389.6	1,020.1	2,288.7	0.3	12.1	4.0
Plates, sheets, film, foil & strip (excl. cellular), of plastics, n.e.s	392190	9.1	54.8	83.2	3,722.0	4,891.3	11,690.1	0.2	1.1	0.7
Men's/boys' suits (excl. knitted/crocheted), of wool/fine animal hair	620311	8.8	62.4	69.6	104.9	1,832.0	3,177.3	0.8	3.4	2.2
Slivers of glass fibres; chopped strands, of a length of >50mm, of glass fibres	701919*	3.2	25.0	64.8	657.7	606.5	843.8	0.5	4.1	7.7
Curtains (incl. drapes) & interior blinds (excl. knitted/crocheted); curtain/bed valances, not knitted/crocheted, of synthetic fibres	630392	7.8	29.4	63.2	190.8	475.1	2,069.3	4.1	6.2	3.1
Track suits (excl. knitted/crocheted), men's/boys'; other garments, n.e.s. (excl. knitted/crocheted), me's/boys', of man-made fibres	621133	4.5	48.9	62.7	915.7	1,251.7	2,303.3	0.5	3.9	2.7
Men's/boys', anoraks (incl. ski-jackets), wind-cheaters, wind-jackets & similar articles of cotton	620192	1.7	17.1	60.5	734.0	614.3	1,473.3	0.2	2.8	4.1
Track suits (excl. knitted/crocheted), women's/girls'; other garments, n.e.s. (excl. knitted/crocheted), women's/girls', of man-made fibres	621143	4.1	60.8	60.4	738.7	980.8	1,841.2	0.5	6.2	3.3
Brassières & parts thereof, whether/not knitted/crocheted	621210	101.1	220.8	57.5	2,317.2	4,000.6	9,375.3	4.4	5.5	0.6
Men's/boys' jackets & blazers (excl. knitted/crocheted), of wool/fine animal hair	620331	4.6	40.1	55.9	1,127.2	1,008.0	1,520.1	0.4	4.0	3.7

Note: The data of 1994 corresponds to 1996.

Source: Own elaboration with UN Data, 'COMTRADE Database'.

THE TRANSFORMATION OF THE TEXTILE AND APPAREL SECTOR IN MEXICO AFTER NAFTA

APPENDIX III: Typology of the top 20 products exported by the sector to international markets, 1994-2005* (percentages)

HS Code	1994-2008			1994-2001			2001-2008		
	(A)	(B)	(C)	(A)	(B)	(C)	(A)	(B)	(C)
620342	3.5191	-0.0786	FS	8.6257	-0.0128	FS	-5.1066	-0.0658	W
610910	0.8514	-0.0054	FS	6.5312	0.0295	RS	-5.6798	-0.0349	W
620462	-1.8961	0.0046	LO	10.1582	0.0423	RS	-12.0544	-0.0377	W
630790	-3.9184	0.0079	LO	2.1324	0.0124	RS	-6.0508	-0.0045	W
620343	2.0954	-0.0146	FS	4.8505	0.0141	RS	-2.7551	-0.0287	W
940490	0.7737	0.0087	RS	3.3981	-0.0003	FS	-2.6245	0.0090	LO
611030	-0.4906	-0.0071	W	2.2260	0.0316	RS	-2.7167	-0.0388	W
611020	0.3372	0.0055	RS	3.9242	0.0155	RS	-3.5869	-0.0100	W
610990	-0.3386	0.0209	LO	2.2390	0.0270	RS	-2.5775	-0.0060	W
621010	-16.4229	0.0068	LO	8.7085	0.0055	RS	-25.1314	0.0013	LO
611241	3.7585	0.0046	RS	11.8480	0.0069	RS	-8.0895	-0.0023	W
392190	0.4670	-0.0226	FS	0.8750	-0.0163	FS	-0.4080	-0.0063	W
620311	1.3484	-0.0071	FS	2.5623	0.0031	RS	-1.2139	-0.0102	W
701919	7.1915	-0.0076	FS	3.6336	-0.0029	FS	3.5579	-0.0047	FS
630392	-1.0083	0.0085	LO	2.1241	0.0030	RS	-3.1324	0.0055	LO
621133	2.2328	-0.0093	FS	3.4176	-0.0032	FS	-1.1848	-0.0061	W
620192	3.8718	-0.0099	FS	2.5420	-0.0091	FS	1.3298	-0.0008	FS
621143	2.7318	-0.0076	FS	5.6495	-0.0031	FS	-2.9177	-0.0045	W
621210	-3.7482	-0.0003	W	1.1573	0.0060	RS	-4.9054	-0.0064	W
620331	3.2639	-0.0200	FS	3.5611	-0.0129	FS	-0.2973	-0.0071	W

Notes: 1. A-Change in Mexican share, B-Change in the share of the product in world trade, C-Typology; 2. Rising Star (RS); Falling Star (FS); Lost Opportunity (LO); Withdrawal (W).

Source: Own elaboration with UN Data, 'COMTRADE Database'