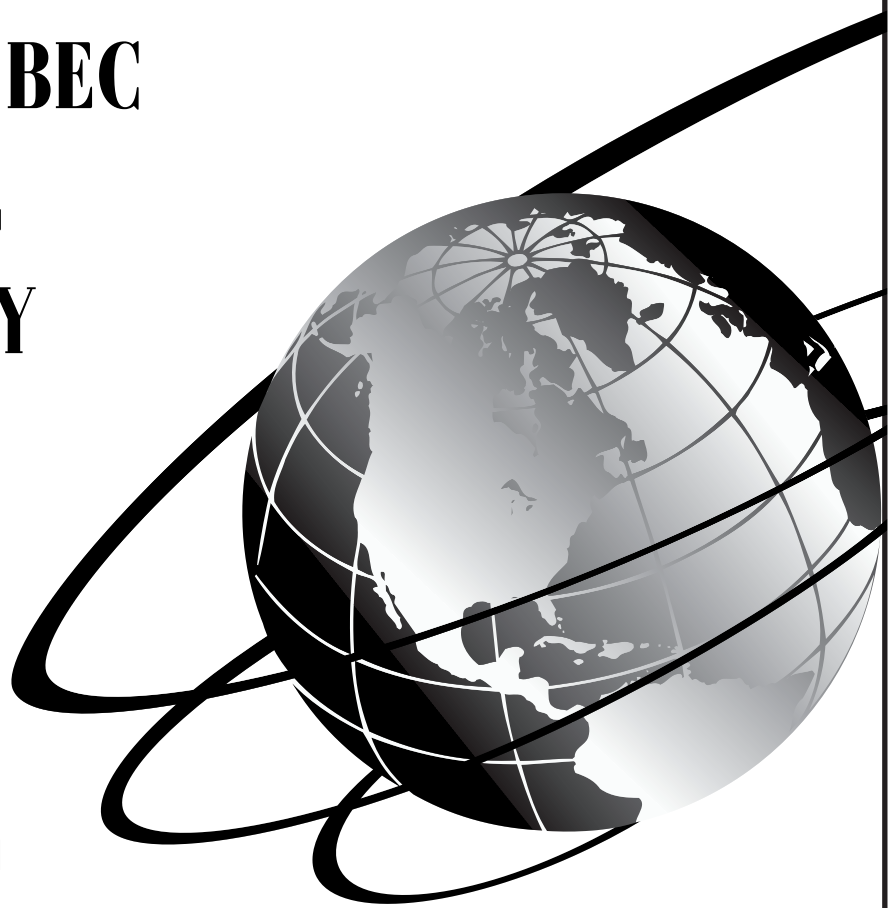
THE QUÉBEC APPAREL INDUSTRY



SINCE THE
INTRODUCTION
OF THE
FREE TRADE AGREEMENT

Québec

Québec
Industrie et Commerce

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Introduction

The Free Trade Agreement between Canada and the United States (FTA)—which became the North American Free Trade Agreement (NAFTA) when Mexico signed on as a member of the free trade zone—has brought about changes in Québec's apparel industry. Of course, FTA is not the only factor influencing the industry, making it difficult to identify its effect or impact with absolute certainty. However, this does not prevent us from providing a glimpse of FTA's contribution to change in the apparel industry.

Various methods exist to assess the effect of free trade on a given industrial sector. A simple approach is to follow trade flow in the industry; another, much more complex, is to analyze fluctuations in major variables and their interrelationships using a partial or general equilibrium econometric model. The first approach is not only restricted to a very limited number of variables, but does not really distinguish variations in external trade due to the effects of free trade from those caused by other factors. The second approach, on the other hand, does make this distinction while at the same time allowing for free trade's impact on other variables such as productivity and employment in the industry. Using this approach, it is possible to consider the effects on the overall economy such as price variations affecting users, changes in markets for other goods, changes in the terms of trade, and variations in other major macroeconomic variables. However, the approach has the drawback of requiring large amounts of data and using simplifying estimates and assumptions that can have a particular impact on the accuracy of microeconomic and sectoral results.

To get around these limitations, we adopted an intermediary approach. While remaining relatively simple, our approach gives a fairly detailed description of changes in major industry variables as well as their main interrelationships. First, the analysis provides a snapshot of the apparel industry's trade environment; second, it profiles the evolution of Québec's apparel industry since the start of FTA as well as changes in trade with Québec's various trading partners (the rest of Canada, the United States, and the rest of the world). Last, an examination of the competitive position of Québec apparel manufacturers with respect to Canadian and international markets provides an overall view of FTA's effect on the industry.

1. The Trade Environment of the Apparel Industry

For several years now, world trade in apparel[1] has expanded considerably, growing 18% annually between 1985 and 1990 and 7% between 1990 and 1997. Exports totaled U.S. $176.6 billion in 1997.[2] According to data in the 1998 Annual Report of the World Trade Organization (WTO), the main apparel exporting countries in 1997 were China and Hong Kong (23.3% of the total), Italy (8.4%), the United States (4.9%), Germany (4.1%), Turkey (3.8%), France (3.0%), and the United Kingdom (3.0%). Québec remained a minor player with exports amounting to little more than 0.3% of the total. The main importing countries were the United States (27.4%), Germany (12.3%), Japan (9.1%), the United Kingdom (6.1%), and France (5.9%).

This increase in apparel trade is attributable in large part to the trade liberalization and market globalization trends currently affecting the industry. More specifically, globalization means that production is no longer driven only by domestic demand but also by world markets. Liberalization fosters North-South trade[3] and is characterized by the gradual dismantling of protectionist policies that guard the apparel and textile manufacturers of industrialized countries from competing industries in emerging countries. In addition, the formation of regional free trade associations like NAFTA adds to the growing interdependence of the national apparel industries.

1.1 Trade Liberalization Measures

Trade by Québec's apparel industry has been mainly regulated by FTA since 1989. The WTO Agreements were added in 1995 following the Uruguay Round multilateral trade negotiations.

FTA

Because of FTA, the main trade barriers between Canada and the United States have practically disappeared. Canadian tariffs on American apparel imports, which were 24.0% in 1988, gradually decreased over the years and totally disappeared in 1998; the same is true of the 22.5% American tariff on Canadian imports. The 12.3% Canadian tariff on apparel fur and the equivalent American tariffs, which ranged from 3.5% to 7.5%, were eliminated when FTA came into effect. With Mexico, the process of tariff elimination will continue under NAFTA until the year 2003.

FTA also lays down specific rules of origin (minimum zone manufacturing content) that determine whether or not a product receives preferential tariff treatment. With NAFTA, these North American content rules became stricter and preferential treatment is generally only granted for apparel that has undergone triple processing (yarn production, weaving, and assembly) in North America.[4] Certain types of apparel are not covered by these restrictive rules—those tailored and sewn using imported silk and linen, as well as certain shirt fabrics for which, in the opinion of experts, there is a shortage in the NAFTA zone.

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1 In this study, apparel and clothing are used interchangeably.

2 Despite this growth, the proportion of apparel products with respect to exports of all manufactured products has decreased, dropping from 4.8% in 1991 to 4.5% in 1997.

3 In 1997, exports from Asian, Latin American, and Eastern European countries to North America and Western Europe accounted for 38.0% of all world apparel exports.

4 One of the main criticisms by the Contracting Parties to GATT when NAFTA came up for examination was that these rules of origin caused a diversion of trade unfavorable to other countries.

To compensate for the relatively restrictive FTA rules of origin, export tariff quotas have been granted since 1989 so that a certain volume of apparel manufactured in the zone receives preferential tariff treatment even though the apparel in question does not meet North American content rules. Since NAFTA resulted in the adoption of even stricter content rules, quotas were increased substantially on January 1, 1994 (except for wool apparel). Then beginning on January 1, 1995, they gradually rose at an annual rate of 1% to 2% depending on the category over a five-year period.[5] As of December 31, 1998, 76% of the 5.3 million square meter equivalent (SME) Canadian wool apparel export quota to the United States was used, while 54% of the 86.6 million SME nonwool quota was used.[6] Only 5% of Canadian wool apparel export quotas (0.25 million SMEs) and 1% of nonwool exports (6.0 million SMEs) to Mexico were used.

In addition, to allow for the fact that Québec and Canadian companies must turn to international markets for much of their supplies to remain competitive, the Canadian government introduced a nine-year customs duties remission program for certain imported fabrics and apparel in 1989. These programs provide Canadian manufacturers with lower cost access to a wide variety of input textiles, and allow them to supplement their collections of Canadian-made products with low-cost imports from abroad. Lastly, exporters not eligible for preferential tariffs under NAFTA can still benefit from drawbacks.

WTO

The WTO Agreements, which entered into effect on January 1, 1995, have been progressively establishing a framework for international trade in textiles and apparel that was previously regulated by the Multifiber Agreement (MFA). The result has been that apparel and textiles import quotas negotiated by participating MFA countries with suppliers in countries with low production costs have been gradually disappearing. For Canada, the implementation of measures agreed to at the Uruguay Round will gradually eliminate apparel and textiles import quotas over ten years and gradually reduce average most-favored-nation (MFN) customs duties from 24% in 1995 to 18% in 2004 for apparel and from 16.6% to 10.5% for textiles. Over the course of the next few years, the trend unilaterally begun by Canada to bring tariffs—especially those for imported fabrics—in line with those in other industrialized countries, especially the United States, will continue. More specifically, once the tariff reductions agreed to during the Uruguay Round come into full effect, the average Canadian MFN tariff will be about two percentage points below that of the United States for apparel and three points higher for input textiles. Tariff reductions on fabrics enhance the competitiveness of companies in the apparel industry by giving them lower cost access to a vast choice of foreign fabrics.

The elimination of quotas and the gradual reduction of import tariffs will no doubt spur increased apparel and textiles imports by Canada. In the meantime, Canadian manufacturers will benefit from the protection offered by the stricter WTO rules aimed at preventing unfair and illegal trade practices and breaches of the rules. It is difficult to anticipate all the consequences of the revocation of the MFA because of several unknown factors. For example, since China is not yet a member of WTO, Canada can continue to enforce a bilateral agreement limiting imports from China. By becoming a member of WTO, China could benefit from the provision of the WTO Agreement on Textiles and Apparel and might carve out a larger share of the Canadian market.

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5 The Canadian industry would like the United States to continue gradually increasing their quotas on Canadian exports beyond the 1999 review date stipulated in NAFTA, unless the rules of origin are amended to make them less restrictive.

6 In comparison, the Canadian import quota of American wool apparel was 0.9 million SMEs in 1998, and 9.0 million SMEs for nonwool apparel. The percentages used did not exceed 14% and 9% respectively.

1.2 The Consequences of Globalization and Trade Liberalization for the Apparel Industry

This liberalization of trade, which has arisen with the globalization of trade and production processes, exerts a profound influence on the evolution of the apparel industry. This influence has resulted in a vast restructuring in the form of greater production specialization, better use of economies of scale and, in many cases, an increased share of total foreign trade. The apparel industry is thus increasingly part of a huge supply chain devoted to satisfying consumer demand for apparel and with which input suppliers to the textile, apparel, and retail industries are closely linked.

FTA has various effects on the structure of North American industry. It encourages companies to rethink their growth strategies and adapt their operating structures to better meet the demand of an increasingly integrated North American market. More and more manufacturers are turning to export markets, establishments are withdrawing production licenses for apparel labels from companies in other NAFTA countries, while still others are granting manufacturing licenses in order to expand into much larger markets than they are currently serving. In short, companies in the apparel industry are using various methods to improve profitability by taking advantage of the opportunities available in larger markets. The restructuring process that Québec's apparel industry began well before the start of FTA is increasingly turning in this direction.

The U.S. apparel industry, which is well established and almost nine times larger than the Canadian industry in terms of production, is also undergoing a restructuring process, as shown notably by the drastic job cutbacks taking place. In the United States, restructuring often involves moving labor-intensive production processes to Mexico or Caribbean countries where U.S. companies enjoy special privileges for processing inputs into finished products for the American market. This has raised competitiveness to a certain extent, which probably explains in part why the gross domestic product (GDP) of the American apparel industry grew by a modest 2% between 1988 and 1995 despite a fairly unfavorable context. On the other hand, the situation in the Québec apparel industry is much less positive, having posted a real 17% drop in GDP between 1988 and 1996.

Simply put, the trade globalization and liberalization process that began in the late 1980s is providing Québec's apparel industry with greatly improved access to the vast American market and, in the near future, will do the same for the Mexican market. The process is also helping to open up the markets of WTO member nations, both for exports and for the purchase of lower cost textile inputs. In return, Québec's apparel industry must deal with increasingly vigorous competition in the Canadian market, not only from American and Mexican companies, but also from companies in emerging countries. The result is a redistribution of the world's apparel trade and production, exerting a significant influence on the growth of Québec's apparel industry.

2. Québec's Apparel Industry Since the Introduction of FTA

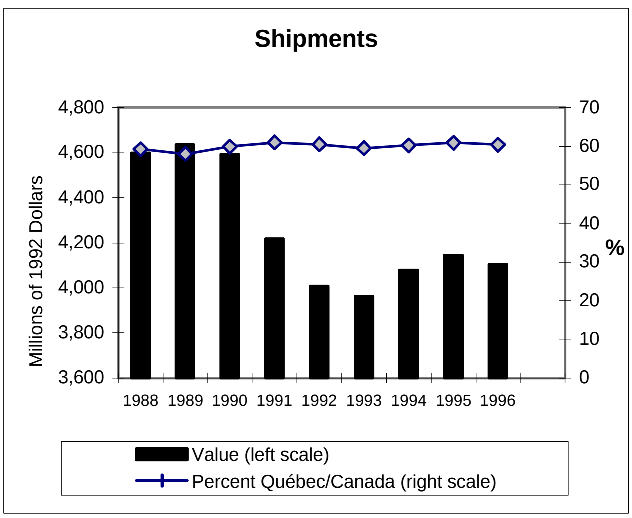
Québec's apparel industry has been undergoing significant structural changes over the past decade. This was especially the case between 1990 and 1993 when the Canadian economy was in recession. These changes have had an equal effect on the overall industry growth and foreign trade.

2.1 The Changes to the Industry

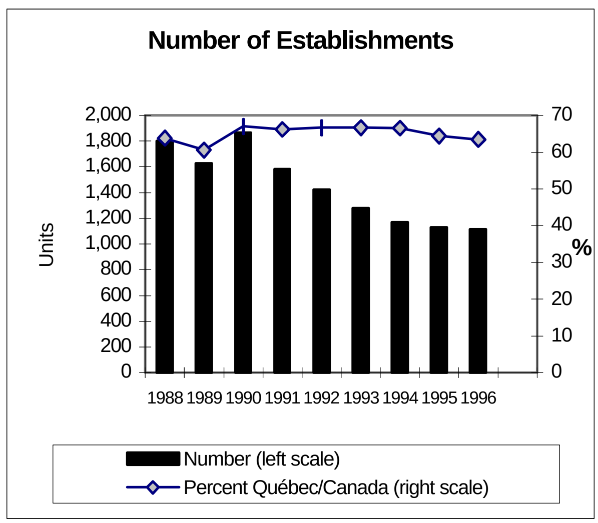
The restructuring of Québec's apparel industry has resulted in a number of changes, including a substantial drop in shipments, the number of establishments, and the number of employees (Table 4). Shipments in constant 1992 dollars fell from $4.6 billion in 1988 to $4.0 billion in 1992, where they have more or less remained (Graph 1). This 12.9% drop in shipments volumes between 1988 and 1996 parallels the 38.1% decrease in the number of establishments, which dropped from 1,798 in 1988 to 1,280 in 1993 and 1,113 in 1996 (Graph 2). It was also accompanied by a 27.1% decrease in the number of employees, which dropped from 64,669 in 1988 to 47,141 in 1996 (Graph 3).

Apparel Industry, Québec

Graph 1



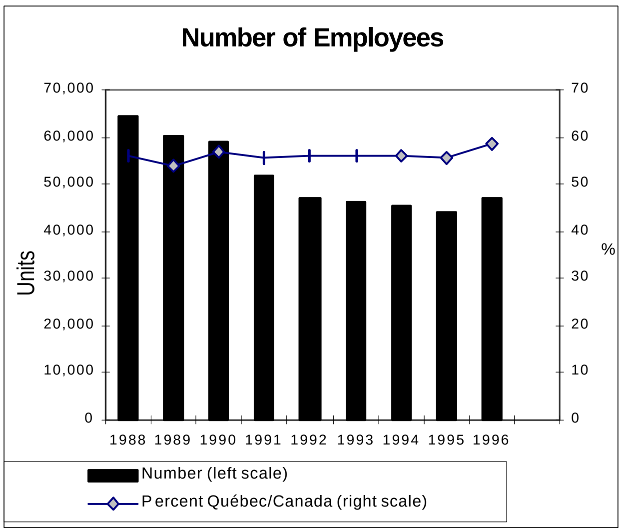
Graph 2



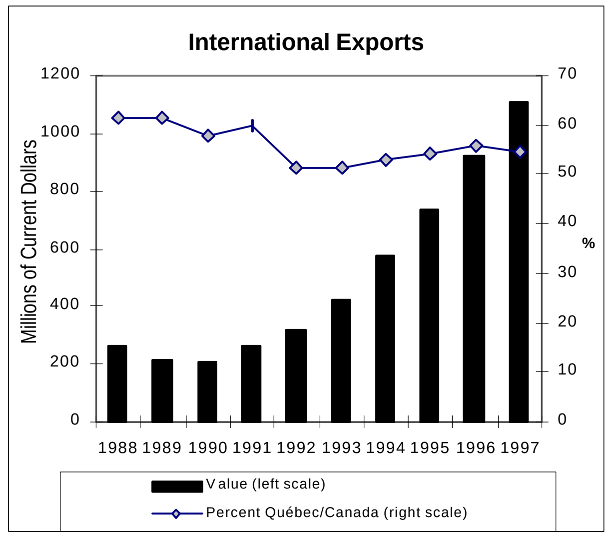
This phenomenon of unbridled rationalization is not limited to Québec. The industry in the rest of Canada is displaying the same trend, so much so that shipments by the Québec apparel industry between 1988 and 1996 as a proportion of total Canadian shipments remained essentially the same, that is, approximately 60% (Graph 1). In the same vein, the number of establishments in the same period remained at 64%, while the number of employees increased slightly, rising from 56.0% to 58.7% (Graphs 1, 2, and 3).

Apparel Industry, Québec

Graph 3



Graph 4



In addition, the breakdown in shipments, the number of employees, and the number of establishments among the main subsectors of the apparel industry have remained practically stable. In 1996, women's apparel still made up 36% of shipments by Québec's apparel industry while 29% were men's and boy's apparel, 10% children's apparel, and 26% came from other sectors including stockings and socks, foundation garments, sweaters, workwear, gloves, and fur goods.

Since industry investment fluctuates greatly from year to year, it is rather difficult to describe how it has evolved. In 1997, investments totaled $69.7 million or 53.9% of the Canadian total for the industry (Table 4). Between 1988 and 1996, labor productivity in the industry increased by 13.6% and the production cost/shipments ratio indicator also followed a positive trend, dropping from 50.7% to 48.4% (Table 4).

The changes in the apparel industry have made possible a strong increase in international exports by Québec, essentially to the United States. According to Statistics Canada customs data, international apparel exports by Québec rose rapidly from $261 million in 1988 to $926 million in 1996 and $1.1 billion in 1997 (Table 4 and Graph 4). Because of this strong export growth, apparel products as a share of total manufacturing exports rose from 1.3% in 1988 to 2.3% in 1997. This increase, however, was not as significant as that posted by the rest of Canada since Québec's share of overall Canadian apparel exports, which was 61.4% in

1988, fell to 55.8% in 1996 and 54.7% in 1997.[7] Québec's main apparel exports in 1997 according to the four-digit SIC classification were men's suits and jackets (21.7% of total), women's sports apparel (13.0%), men's and boy's shirts and underwear (8.6%), men's pants (8.6%), and apparel fur (8.6%). The share of exports to the United States increased constantly to attain 93.5% in 1997.

On the other hand, Canadian imports, especially from the United States, have also been on a strong upswing. The American share of apparel imports to Canada based on customs data from Statistics Canada rose gradually from 5.8% in 1988 to 20.0% in 1997, while imports from Asia and Oceania dropped from 73.2% to 68.3% and European imports from 17.8% to 8.9%. Mexico's share of Canadian apparel imports, which was under 0.2% in 1988, had risen to 2.3% by 1997.

2.2 Changes in Apparel Industry Trade Figures

The statistics used in this section come from the Statistics Canada Interprovincial and International Trade Databank, which is the only source of data that makes it possible to compare Québec shipments within the province, to the rest of Canada, and to international markets as well as imports from other Canadian provinces and abroad. However, since the data does not break down international trade by country, we also had to use customs statistics.[8]

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7 Information from the interprovincial and international trade databank reveals, on the other hand, that Québec's share of total Canadian apparel exports rose from 54.6% in 1988 to 57.3% in 1996. This data, however, reflects ex-factory prices, while customs statistics reflect border prices.

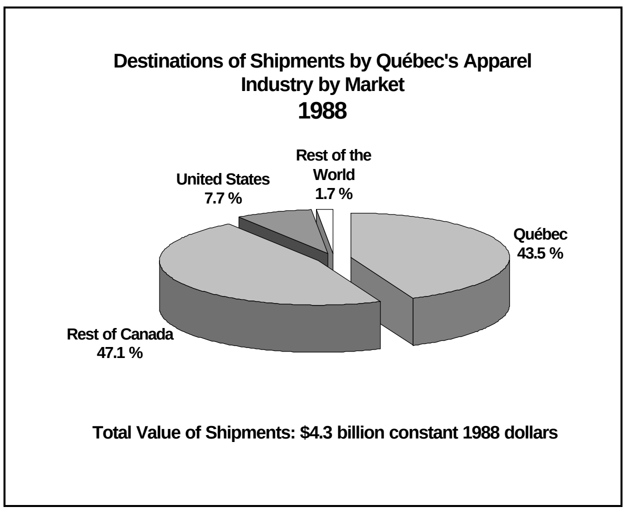
8 Trade figures with the United States are calculated by multiplying international export and import figures from the interprovincial and international trade databank by the respective proportion of the United States in total exports and imports calculated from customs statistics.

Destinations of Québec Shipments

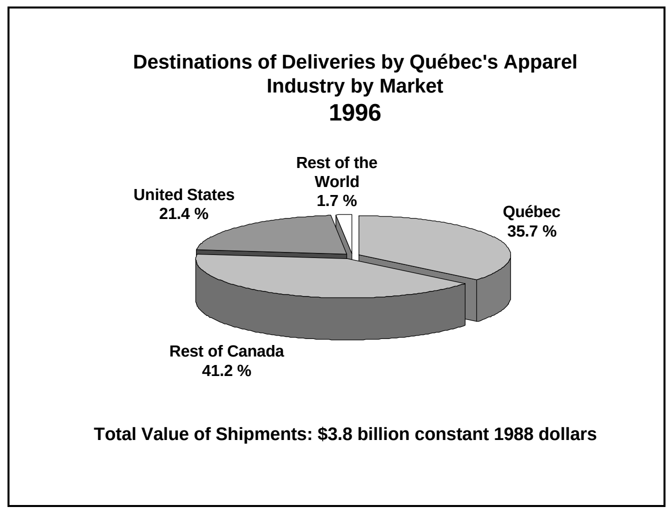
Since the start of FTA, the Québec apparel industry has posted rapid growth in shipments outside Canada, which rose from $404.7 million in 1988 (constant 1988 dollars) to $877.6 million in 1996 (Table 5 in Appendix)). International exports as a share of total shipments thus rose from 9.4% in 1988 to 23.1% in 1996 (Table 1 in Appendix and Graphs 5 and 6). This increase is wholly due to exports to the United Sates, which according to our estimates increased by $481.5 million during the period in question, while exports to the rest of the world declined slightly by $8.6 million (Table 5 in Appendix and Graph 16).

Breakdown of Apparel Industry Shipments by Destination, Québec

Graph 5



Graph 6



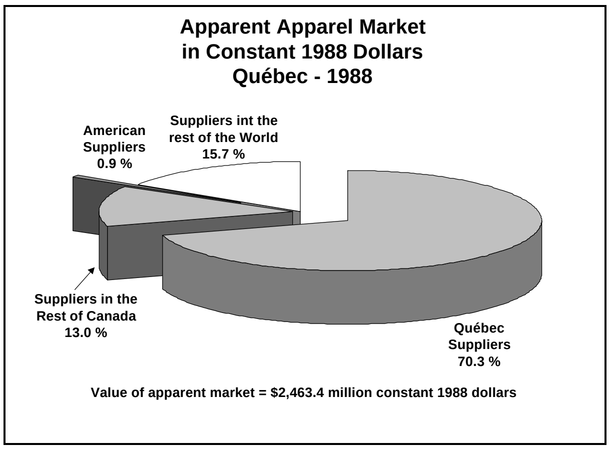
This change in delivery destinations clearly shows that Québec's apparel industry is in the process of diversifying its markets. The share of total apparel shipments from Québec to the United States has increased rapidly, rising from 7.7% in 1988 to 21.4% in 1996, while that of Canada (including Québec) dropped from 90.6% to 76.9% during the same period (Table 1 in Appendix and Graphs 5 and 6). Only shipments to international markets other than the United States remained practically unchanged at 1.7% during this period.

Canadian and Foreign Suppliers' Share of the Canadian Market

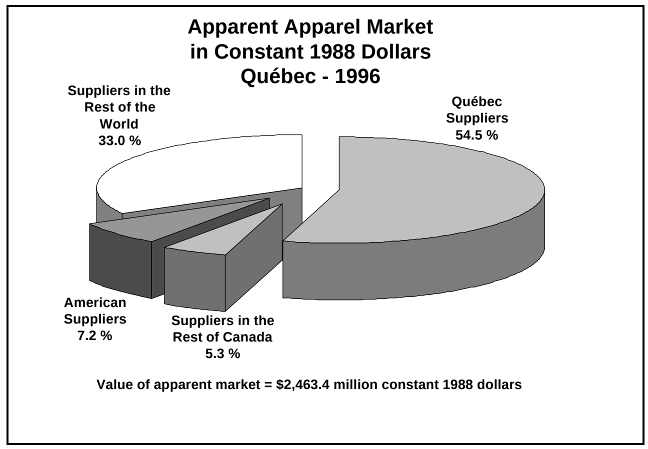
While the apparent Canadian apparel market in constant 1988 dollars shrank by 4.0% between 1988 and 1996, international imports to Québec increased by $577.2 million constant 1988 dollars, or 137.2%, while international imports to the rest of Canada rose by $673.7 million, or 29.2%.

Canadian and Foreign Suppliers' Share of the Apparent Apparel Market, Québec and Canada

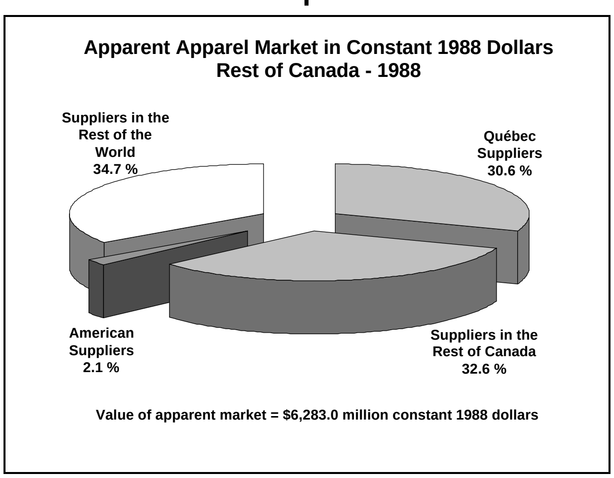
Graph 7



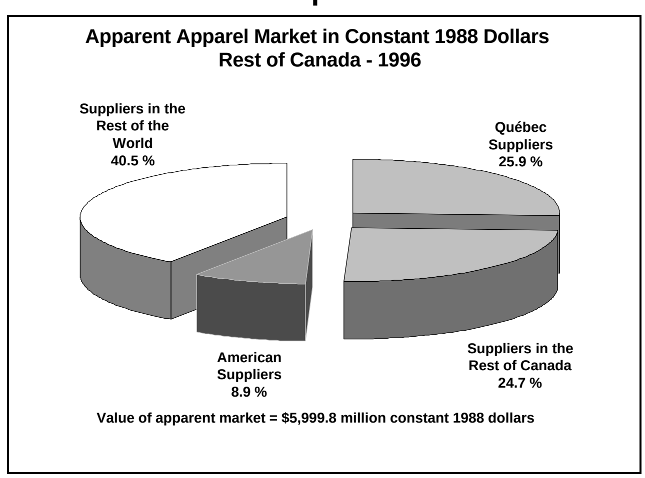
Graph 8



Graph 9



Graph 10



The relatively strong growth of imports by Québec compared to the rest of Canada is mainly attributable to the increase in imports from foreign suppliers other than the United States. The American share of Québec's apparent market rose from 0.9% in 1988 to 7.2% in 1996 (Table 2 in Appendix and Graphs 7 and 8), while the American share of the apparent market in the rest of Canada rose from 2.1% to 8.9% (Graphs 9 and 10). The increases in terms of percentages were fairly similar—6.3 points in Québec and 6.8 points for the rest of Canada. It is an entirely different story for the rest of the world suppliers, which took a 17.3% share of the apparent Québec market, but only 5.8% of the market in the rest of Canada.[9] Despite the strong growth in imports, the 33.0% share of Québec's apparent market held by the rest of the world suppliers in 1996 (other than the United States) is significantly lower than the 40.5% share they hold in the rest of Canada.[10]

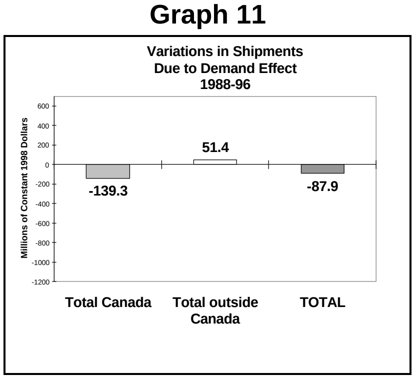
In summary, since FTA came into effect, the Québec apparel industry, like that in the rest of Canada, has been accelerating the pace of the restructuring process it had already begun. Apart from a drop in total shipments, the structure taking shape is one of greater market diversification with an emphasis on the United States.

3. Variations in Competitiveness Gains and Losses by Québec's Apparel Industry

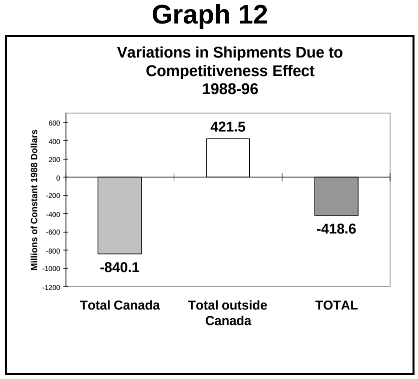
Increased sales by Québec's apparel industry to the United States are not necessarily due to increased competitiveness. They may also be a result of strong demand in the American market, just as the drop in sales to the rest of Canada may simply be the result of weak demand. This aspect is analyzed using the constant market share method, under which the effects of competitiveness and demand can be measured separately and gains by Québec suppliers on the American market can be compared to losses to their American competitors on the Canadian market (see Appendix – Methodology).

Variations in Apparel Industry Shipments to Canadian and Foreign Markets Due to Demand and Competitiveness Effects

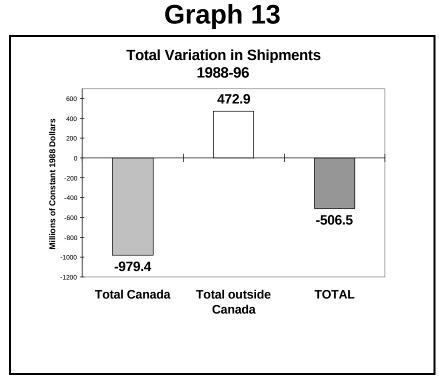
Graph 11



Graph 12



Graph 13



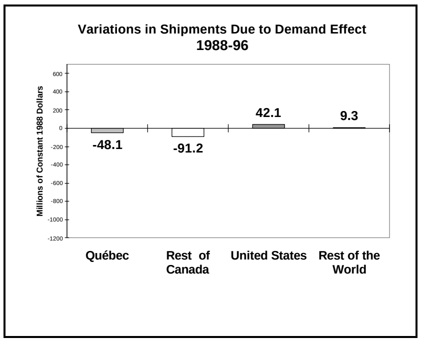
9 Table 3 (appended) shows the evolution of these market shares in current dollars.

10 Part of the increase in imports to Canada (including Québec) is certainly due to the customs duties remission program.

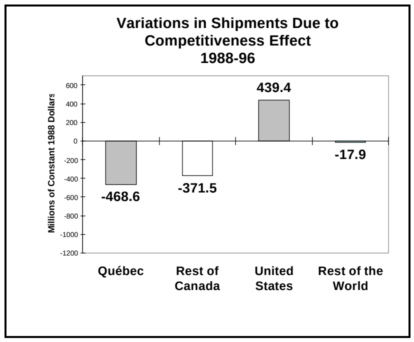
Our constant market share analysis revealed first that shipments by the Québec apparel industry declined by $506.5 million (constant 1988 dollars) between 1988 and 1996 (Table 5 in Appendix and Graph 13), of which $418.6 million (Graph 12) could be attributed to competitiveness effect and the rest—$87.9 million—to demand effect (Graph 11).

Variations in Apparel Industry Shipments to Québec, the Rest of Canada, the United States, and the Rest of the World Due to Demand and Competitiveness Effects

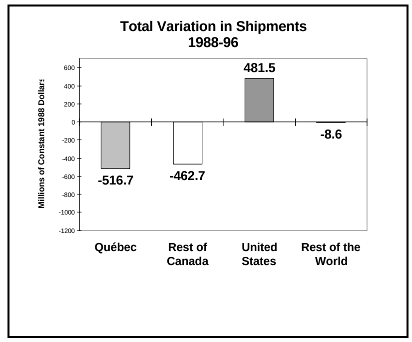
Graph 14



Graph 15



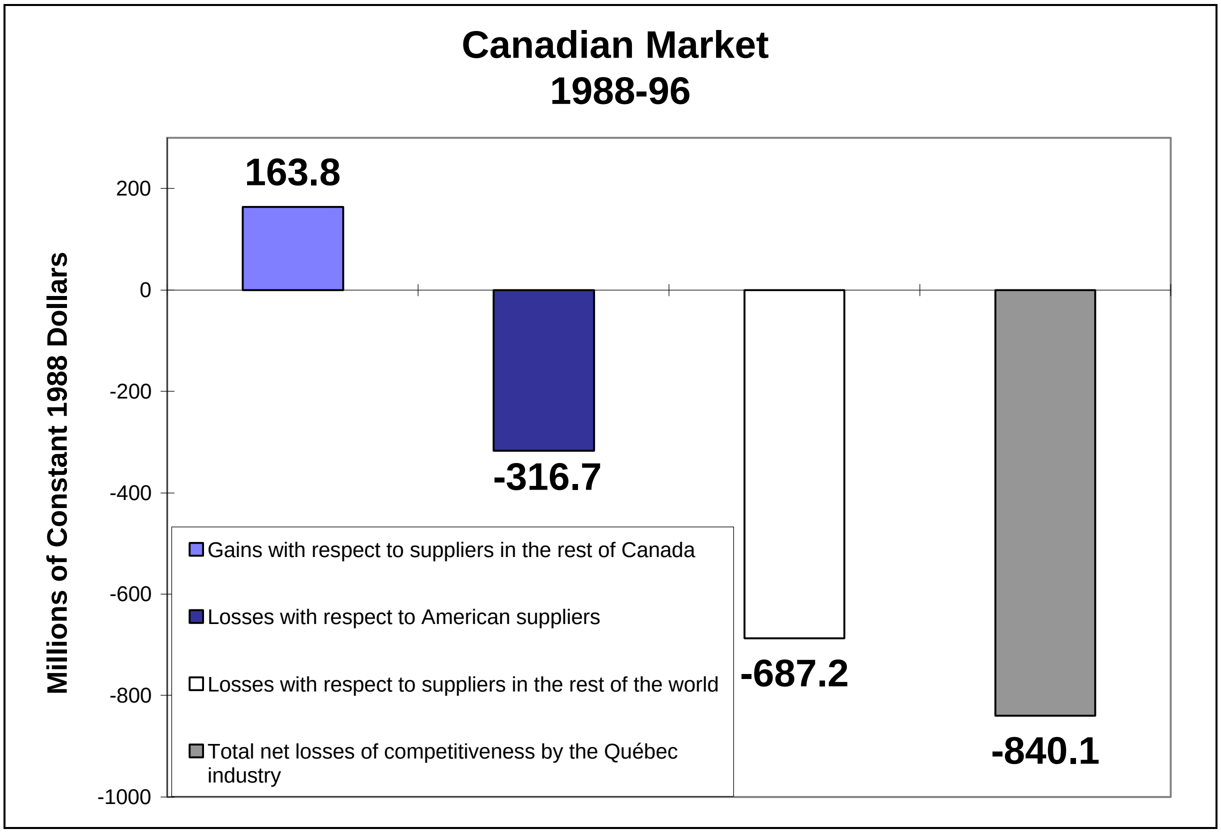
Graph 16



Our analysis also reveals that the net competitiveness losses suffered by Québec manufacturers **included $439.4 million in competitiveness gains on the American market** (Graph 15). However, these gains did not counteract the $840.1 million in losses in Québec ($468.8 million), the rest of Canada ($371.5 million), and the rest of the world ($17.9 million).

Competitiveness Gains and Losses by Québec's Apparel Industry in the Canadian Market with Respect to American, Rest of the World and Rest of Canada Suppliers

Graph 17

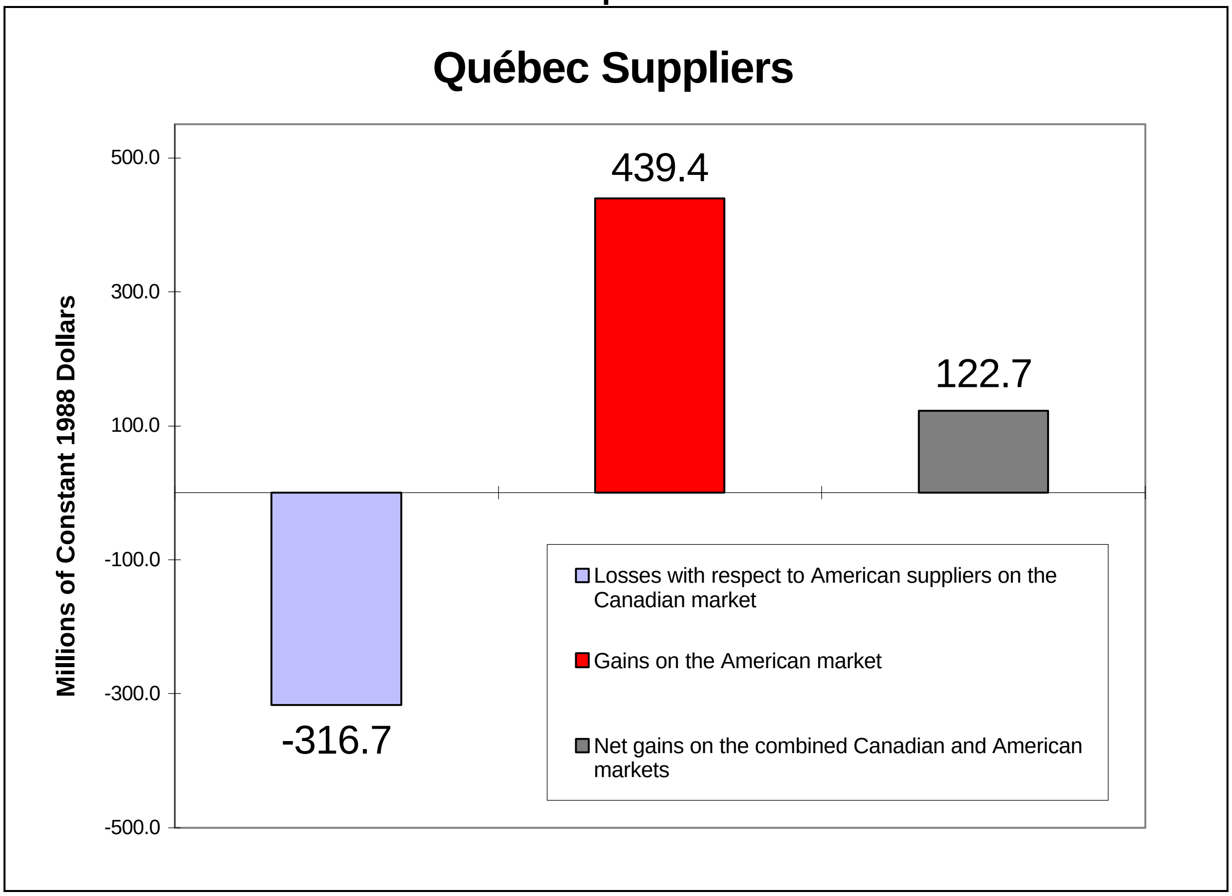


The $840.1 million in net losses suffered by Québec manufacturers at home and in the rest of Canada are the result of $163.8 million in gains made at the expense of suppliers in the rest of Canada and $687.2 million in losses suffered at the hand of suppliers in the rest of the world, as well as **$316.7 million in losses to their American counterparts** (Table 6 in Appendix and Graph 17).

The net competitiveness loss of $316.7 million to American suppliers in the entire Canadian market combined with the gain of $439.4 million on the American market means that Québec's apparel industry posted a **net gain of $122.7 million in the combined Canadian and American markets in 1996 compared to 1988** (Graph 18).

Competitiveness Gains and Losses by Québec's Apparel Industry in the Combined Canadian and American Markets

Graph 18



While the gains are small compared to the $3.8 billion (constant 1988 dollars) in total shipments by Québec's apparel industry in 1996, the simple fact that they exist nonetheless contradicts most predictions made at the time of the FTA negotiations.

The gains, however, cannot be totally attributed to FTA or NAFTA. Other factors have certainly had a positive impact, notably the decrease in Canadian tariffs on textiles in the early 1990s, the depreciation of the Canadian dollar, and the change in unit costs.

Changes in unit costs for the Québec and American apparel industries seem to have had a fairly neutral effect, at least for 1988 through 1994 (last year for which comparable U.S. data is available). When expressed in national currencies, and according to our estimates,[11] changes in unit costs have followed a similar path—decreasing by 2.0% in the United States and 0.5% in Québec.[12] Moreover, the decrease in tariffs on textiles has in all likelihood pushed

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11 These estimates were determined using information from OECD (STAN) and BSQ databanks ("Gross Domestic Product by Industry in Québec" and "Manufacturing Industries in Québec").

12 We did not take into account any differences in the changes in unit costs that might exist between Québec and other foreign suppliers on the American market since the effect is certainly negligible considering that American suppliers alone account for nearly 70% of the market in the United States. In addition, the category of apparel that Québec exports (middle and high-end) is probably a relatively small share of American imports.

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production costs lower; this was, in fact, its intended effect when the decision was made to lower tariffs as a means of increasing the competitiveness of Québec's industry and easing the transition to freer trade under FTA and NAFTA.

Lastly, the 9.8% depreciation of the Canadian dollar with respect to the American currency between 1988 and 1996 (Table 4) has certainly had a significant, positive impact on Québec's apparel industry. By stimulating Québec exports to the United States and by making American apparel imports to Canada more expensive, the depreciation of the dollar may have slightly inflated the estimated net competitiveness gains by Québec's apparel industry. However, these depreciation-linked gains are probably lower than those caused by the elimination of the 16.6% Canadian tariff on American textiles, the 22.5% American tariff on Canadian apparel, and the American tariffs on Canadian apparel exports that do not meet North American content rules.

Conclusion

Thanks to FTA, Québec's apparel industry enjoys much better access to the American market, just as American suppliers enjoy improved access to the Canadian market. To determine whether Québec's industry benefits from this trade liberalization, a constant market share analysis was used. The analysis shows that sales lost by Québec suppliers on the Canadian market to American suppliers have been slightly less than the gains made on the American market. If we disregard gains resulting from stronger American demand and losses due to weaker Canadian demand, Québec's apparel industry was in a slightly better position in 1996 than it was in 1988 on the combined Canadian and American markets. The very existence of gains—in large part attributable to the Agreement—tends to refute the generally held belief prior to the introduction of the Agreement that Québec's apparel industry would have great difficulty adjusting to American competition.

For purely methodological reasons and because the databases available for our study end in 1996—while tariffs between Canada and the United States did not totally disappear until January 1, 1998—no definite conclusion as to the effect of the Free Trade Agreement on Québec's apparel industry can be drawn. However, it is certain that the Agreement helped accelerate the restructuring process that Québec's apparel industry had begun well before the implementation of the Agreement. Moreover, the adjustment of Québec's apparel industry is far from over, not so much because of the Free Trade Agreement but because of the subsequent WTO Agreements. Most textile and apparel trade barriers will only be dismantled after the year 2000 to comply with the Agreement on Textiles and Clothing. This new dismantling is the main challenge facing Québec's apparel industry in the coming years.

Appendix — Methology

Overview of the Effect of FTA Using the Constant Market Share Method

We used the constant market share method to estimate the impact of FTA on Québec's apparel industry. For this study, the method had four steps. The first was to assess variations in Québec shipments to markets in Canada, the United States, and the rest of the world for two given years—1988 and 1996. The second was to assess the demand effect had on variations in Québec shipments to markets in Canada, the United States, and the rest of the world and to separate this out from variations due to competitiveness effect. The third consisted of breaking down variations in Québec shipments to the Canadian market as a whole due to competitiveness effect into gains made or losses suffered compared to American, Canadian, and the rest of the world suppliers. The fourth and last step was simply to compare losses of Québec supplier's competitiveness obtained on the Canadian market at the expense of American suppliers with the gains of Québec suppliers on the American market. A positive result would indicate that Québec apparel suppliers are gaining ground on the combined Canadian and American markets, while a negative result would indicate the reverse.

Step One: Measuring Variations in Shipments by Québec's Apparel Industry

For 1988 and 1996, i.e., the year preceding the start of FTA and the last year for which reliable data is available, variations in shipments by Québec's apparel industry were analyzed for each main destination market, i.e., Québec, the rest of Canada, the United States, and the rest of the world. Total shipments measured as ex-factory prices were converted into constant 1988 dollars using the CANSIM industrial price index in order to neutralize variations in shipments values attributable to price increases. Data on total shipments came from Statistics Canada's annual report on manufacturers (Tables 4 and 5). To determine the breakdown of total shipments by main destination, we had to use percentages calculated from interprovincial and international trade data as well as customs statistics from Statistics Canada (Table 1).

Step Two: Estimated Variations in Shipments Attributable to Competitiveness Effect

Subtracting variations due to demand effect from total variations in Québec shipments is essential to have a clear idea of variations due to competitiveness effect, that is, factors such as FTA.

To estimate variations in Québec shipments attributable to **demand effect**, i.e., in this case, weaker demand for apparel in the rest of Canada and stronger demand in the United States and the rest of the world, we measured the theoretical variation in Québec shipments required to maintain a constant share for Québec in each of these major markets. To do this, we multiplied the value of Québec shipments in 1988 to each of these markets by their respective rates of demand growth:

$$\frac{\text{Apparent Market in 1996 (1988 dollars)} - \text{Apparent Market in 1988}}{\text{Apparent Market in 1988}}$$

These calculations enabled us to estimate that $87.9 million of the $506.5 million drop in Québec apparel industry shipments from 1988 through 1996 was due to weakened demand effect. The $87.9 million drop is the sum of the demand effect on each market, i.e., Québec (-$48.1 million), the rest of Canada (–$91.2 million), the United States (+$42.1 million), and the rest of the world (+$9.3 million) (Table 5 in Appendix).

The variation in sales attributable to **competitiveness effect** was obtained by simply subtracting the variation due to demand effect from the total variation of Québec shipments to each market. Net competitiveness losses by Québec's apparel industry thus amount to $418.6 million and resulted from the following variations: $439.4 million in gains on the American market, $840.1 million in losses on the Canadian market, and $17.9 million in losses on other markets in the rest of the world (Table 5 in Appendix).

Step Three: Estimated Competitiveness Gains and Losses by Québec Suppliers on the Canadian Market Compared to Their American Counterparts

An estimate of losses (or gains) in competitiveness by Québec suppliers on the Canadian market as a whole with respect to American suppliers is vital to assessing whether Québec suppliers are benefiting from FTA on the combined Canadian and American market. At the same time, separating the Canadian market into a Québec market and a "rest of Canada" market allows us to determine whether suppliers in the rest of Canada, which share similar trade and economic conditions, are registering gains (or losses) with respect to Québec suppliers.

Competitiveness gains (or losses) by Québec suppliers that occur at the expense (or to the benefit) of American suppliers, the rest of the world, or the rest of Canada, **on the Québec market**, were calculated using the following formula:

Variation in A = Variation in B + Variation in C + Variation in D

where

A = Québec's apparent market/shipments by Québec suppliers within Québec

B = Shipments by suppliers in the rest of Canada to Québec/shipments by Québec suppliers within Québec

C = Imports to Québec from the United States/shipments by Québec suppliers within Québec

D = Imports to Québec from the rest of the world (excluding the United States)/shipments by Québec suppliers within Québec

The negative (or positive) variation in A gives, up to a constant, the total net competitiveness gains (or losses) that Québec suppliers posted on the Québec market, just as the negative (or positive) variation of A, B, or C, up to a constant, indicates the gains (or losses) they respectively recorded with respect to suppliers in the rest of Canada, the United States, or the rest of the world. The equation enables the net competitiveness gains (or losses) of the various suppliers to be calculated.

Calculating the breakdown of competitiveness gains (or losses) by Québec suppliers on the **"rest of Canada" market** follows the same logic as for the Québec market, and the equation used is thus similar:

Variation in A1 = Variation in B1 + Variation in C1 + Variation in D1

A1 = "Rest of Canada" apparent market/shipments by Québec suppliers to the rest of Canada

B1 = Shipments by "rest of Canada" suppliers to the rest of Canada/shipments by Québec suppliers to the rest of Canada

C1 = International imports to the rest of Canada from the United States/shipments by Québec suppliers to the rest of Canada

D1 = International imports to the rest of Canada from the rest of the world (excluding the United States)/shipments by Québec suppliers to the rest of Canada

According to this calculation method, Québec's apparel industry has suffered competitiveness losses on the Canadian market (Québec + the rest of Canada) of some $316.7 million to American suppliers and $687.2 million to the rest of the world. On the other hand, it recorded competitiveness gains of $163.8 million with respect to suppliers in the rest of Canada (Table 6 in Appendix).

Step Four: Estimated Net Competitiveness Gains by Québec Suppliers on the Combined Canadian and American Market

To estimate net competitiveness gains (or losses) by Québec's apparel industry on the combined Canadian and American market, we need only compare competitiveness losses recorded with respect to American suppliers on the Canadian market as a whole (Table 5) with gains posted on the American market.

Because of a lack of data on the American market, we did not break down competitiveness gains and losses to obtain a figure for Québec's apparel industry. It is a fact, however, that FTA has certainly helped improve the competitiveness of Québec's apparel industry on the American market compared to suppliers from the United States and the rest of the world, with the exception of suppliers from the rest of Canada, who benefited from the same advantages under FTA as their Québec counterparts. Not making allowances in our analysis for competitiveness gains and/or losses that Québec suppliers may have suffered with respect to the rest of Canada on the American market in no way changes the results of our study. The American market share held by suppliers in the rest of Canada, and by Québec suppliers, is negligible. Moreover, exports to the United States from Québec and the rest of Canada followed essentially the same curve during the period under study.

It would thus appear that Québec's apparel industry posted competitiveness gains on the combined Canadian/American market of about $122.7 million constant dollars in 1996 compared to 1988. These gains must, however, be placed in perspective. First, they cannot be totally attributed to the effects of FTA. Other factors may also have played a significant role, such as the depreciation of the Canadian dollar and differences in changes to Canadian and American unit costs. These aspects have been dealt with in Part Three of the study.

It is also important to understand that the method for distributing Québec's competitiveness variations over the entire Canadian market rests on the assumption that imports into Canada are perfect substitutes for Québec products. Since the proportion of substitute imports in Canadian imports from the United States is probably higher than in imports from low-cost countries, an analytical method that takes this factor into account may give a different result. Consequently, the size of the competitiveness loss by Québec suppliers on the Canadian market with respect to American suppliers may be underestimated and, as a result, the calculation of their net competitiveness gains on the combined Canadian/American market overestimated.

Table 1

Percent of Québec Apparel Shipments (in constant 1988 dollars) Sold in Canada and Elsewhere in the World 1988-96

Région	1988	1989	1990	1991	1992	1993	1994	1995	1996
					%				
Canada	**90.6**	**92.8**	**93.3**	**91.2**	**88.5**	**85.6**	**81.2**	**78.6**	**76.9**
- Québec	43.5	43.4	44.3	40.5	37.7	36.6	37.3	35.6	35.7
- Rest of Canada	47.1	49.4	49	50.7	50.8	49	43.9	43	41.2
World	**9.4**	**7.2**	**6.7**	**8.8**	**11.5**	**14.4**	**18.8**	**21.4**	**23.1**
- États-Unis*	7.7	5.8	5.7	7.5	10.3	13	17	19.6	21.4
- Rest of World*	1.7	1.4	1	1.3	1.2	1.4	1.8	1.8	1.7
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

* Since exports by country were not available in the databanks cited herein, the share of Québec, exports to the United States and the rest of the world was obtained by using the respetive shares of Québec apparel exports according to BSQ customs statistics.

Source: Statistics Canada, interprovincial and international trade databank.

Table 2

Apparent Market Share (in 1988 constant dollars) in Québec and the Rest of Canada Held by Canadian and Foreign Suppliers 1988 & 1996

Apparent Market [1]	Year	Suppliers [2]				
		Québec	Rest of Canada	United States [3]	Rest of the World [3]	Total
				in %		
Québec						
	1988	70.3	13.1	0.9	15.7	100.0
	1996	54.5	5.3	7.2	33.0	100.0
Rest of Canada						
	1988	30.6	32.6	2.1	34.7	100.0
	1996	25.9	24.7	8.9	40.5	100.0

1. The apparent market is equal to shipments plus imports less exports.
2. Percentages are calculated using apparent market values and shipments expressed in constant 1988 dollars.
3. Since exports by country were not available in this databank, the share of Québec exports to the United States and the rest of the World was obtained using the respective shares of apparel exports according to BSQ customs statistics.

Source: Statistics Canada, Interprovincial and International Trade Databank.

Table 3

Apparent Market Share (current dollars) in Québec and the Rest of Canada Held by Canadian and Foreign Suppliers 1988-96

Apparent Market[1]	Year	Suppliers[2]				
		Québec	Rest of Canada	United States[3]	Rest of the World[3]	Total
		in %				
Québec						
	1988	70.3	13.1	0.9	15.7	100.0
	1989	67.6	11.0	1.5	19.9	100.0
	1990	65.6	8.5	2.2	23.7	100.0
	1991	63.9	7.6	2.7	25.8	100.0
	1992	56.1	6.2	4.0	33.7	100.0
	1993	47.9	5.4	6.2	40.5	100.0
	1994	45.8	5.5	7.1	41.6	100.0
	1995	44.0	5.1	7.8	43.1	100.0
	1996	51.1	5.0	8.1	35.8	100.0
Rest of Canada						
	1988	30.6	32.6	2.1	34.7	100.0
	1989	29.7	32.6	2.8	34.9	100.0
	1990	29.8	30.2	3.7	36.3	100.0
	1991	30.8	28.8	4.2	36.2	100.0
	1992	29.0	25.6	5.4	40.0	100.0
	1993	28.1	26.5	7.0	38.4	100.0
	1994	25.1	24.5	8.6	41.8	100.0
	1995	25.0	23.7	9.3	42.0	100.0
	1996	24.3	23.4	9.8	42.5	100.0

1. The apparent market is equal to shipments plus imports less exports.
2. Pourcentages are calculated using apparent market values and shipments expressed in constant 1988 dollars.
3. Since exports by country were not available in this databank, the share of Québec exports to the United States and the rest of the world was obtained using the respective shares of apparel exports according to BSQ customs statistics.

Source: Statistics Canada, Interprovincial and International Trade Databank.

Table 4
Apparel Industry, Québec and Canada, 1988-97

	Unit	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Shipments in Current $											
Québec [1]	$000,000	4305.6	4450.7	4519.8	4196.4	4007.3	3970.0	4151.5	4332.4	4388.7	n.d.
Canada [1]	$000,000	7273.2	7671.9	7546.9	6878.1	6625.8	6674.5	6895.1	7118.8	7260.3	n.d.
Qué/Can	%	59.2	58.0	59.9	61.0	60.5	59.5	60.2	60.9	60.4	n.d.
Shipments in Constant 1992 $ *											
Québec [1]	$000,000	4600.0	4636.1	4593.3	4217.5	4007.3	3962.1	4078.1	4145.8	4105.4	n.d.
Canada [1]	$000,000	7770.5	7991.6	7669.6	6912.7	6625.8	6661.2	6773.2	6812.2	6791.7	n.d.
Qué/Can	%	59.2	58.0	59.9	61.0	60.5	59.5	60.2	60.9	60.4	n.d.
GDP in constants de 1996 $											
Québec [2]	$000,000	1474.9	1435.1	1478.2	1354.1	1245.3	1272.8	1316.0	1322.6	1221.9	n.d.
Number of Establishments											
Québec [1]		1,798	1,626	1,867	1,581	1,424	1,280	1,170	1,113	1,113	n.d.
Canada [1]		2,819	2,686	2,785	2,390	2,137	1,921	1,760	1,727	1,756	n.d.
Qué/Can	%	64	61	67	66	67	67	66	64	63	n.d.
Number of Employees											
Québec [1]		64,669	60,293	58,794	51,937	47,098	46,308	45,208	44,124	47,141	n.d.
Canada [1]		115,485	112,177	103,431	93,464	83,927	82,737	80,383	79,292	80,263	n.d.
Qué/Can	%	56.0	53.7	56.8	55.6	56.1	56.0	56.2	55.6	58.7	n.d.
Investments											
Québec [3]	$000,000	n.d.	n.d.	n.d.	69.6	66.8	41.0	94.1	51.5	49.1	69.7
Canada [3]	$000,000	n.d.	n.d.	n.d.	104.8	112.3	75.9	145.6	100.3	100.2	129.3
Qué/Can	%				66.4	59.5	54.0	64.6	51.3	49.0	53.9
International Exports ** and 4											
Québec to the World	$000,000	261.0	213.0	211.0	264.0	316.0	424.0	576.0	733.0	926.0	1112.0
Canada to the World	$000,000	425.0	347.0	366.0	441.0	614.0	825.0	1082.0	1354.0	1659.0	2034.0
Qué/Can	%	61.4	61.4	57.7	59.9	51.5	51.4	53.2	54.1	55.8	54.7
Québec to the United States	$000,000	214.0	171.0	181.0	224.0	282.0	383.0	522.0	670.0	858.0	1040.0
Canada to the United States	$000,000	355.0	284.0	313.0	369.0	545.0	733.0	977.0	1231.0	1522.0	1892.0
Qué/Can	%	60.3	60.2	57.8	60.7	51.7	52.3	53.4	54.4	56.4	55.0
International Imports [4]											
Canada from the World	$000,000	2294.0	2539.0	2745.0	2477.0	2874.0	3206.0	3349.7	3590.0	3373.0	4044.0
Canada with the United States	$000,000	132.0	188.0	231.0	257.0	344.0	492.0	574.0	648.0	635.0	810.0
Trade Balance											
Canada with the World	$000,000	-1869.0	-2192.0	-2379.0	-2036.0	-2260.0	-2381.0	-2267.7	-2236.0	-1714.0	-2010.0
Canada with the United States	$000,000	223.0	96.0	82.0	112.0	201.0	241.0	403.0	583.0	887.0	1082.0
Cost/Shipments Ratio *****											
Québec	%	50.7	49.5	48.8	47.3	48.4	48.4	48.5	48.6	48.4	n.d.
Canada	%	46.0	45.0	44.2	43.2	43.2	44.3	44.2	45.4	44.4	n.d.
Labor Productivity in 1986 $											
Québec *** 1 and 5	1988=100	100.0	104.4	110.2	114.3	115.9	120.5	127.6	131.4	113.7	n.d.
Exchange Rate											
Canadian Dollar into American Dollars [5]	1988=100	100.0	104.0	105.5	107.4	101.8	95.4	90.0	89.7	90.2	88.9

* Calculated by MIC (DACE) using CANSIM's Canadian industrial price index.

** While international exports in this table are based on customs statistics, those in Chapter 3 are ex-factory price estimates.

*** Calculated by dividing the gross domestic product of the apparel industry by the number of employees.

**** Cost of materials and supplies used divided by shipments in current dollars.

Sources : 1) Statistics Canada, Manufacturing Industries of Canada: National and Provincial Areas, 1995.
2) BSQ, Gross Domestic Product by Industry in Québec, March 1997.
3) MIC (DACE) Statistics on Québec, Ontario, and Canadian Investments, February 1999.
4) Statistics Canada data revised by BSQ and compiled by the service des données , MIC (DGAE).
5) Bank of Canada.

Table 5

Variation in Shipments by Québec's Apparel Industry Within Québec, to the Rest of Canada, to the United States, and to the Rest of the World Attribuable to Competitiveness

1988 & 1996

Québec Shipments	Within Québec	To the Rest of Canada	Total Canada	To the United States	To the Rest of the World	Total Outside Canada	TOTAL
	Millions of Constant 1988 dollars						
- in 1988	1872.9	2027.9	3900.8	331.5	73.2	404.7	4305.5
- in 1996	1356.2	1565.2	2921.4	813.0	64.6	877.6	3799.0
Change from 1988 to 1996:	-516.7	-462.7	-979.4	481.5	-8.6	472.9	-506.5
- Demand Effect *	-48.1	-91.2	-139.3	42.1	9.3	51.4	-87.9
- Competitiveness Effect *	-468.6	-371.5	-840.1	**439.4**	-17.9	421.5	-418.6

Table 6

Breakdown of Competitiveness Gains and Losses by Québec's Apparel Industry on the Québec and "Rest of Canada" Markets with Respect to American, Foreign, and "Rest of Canada" Suppliers

1988 & 1996

	Québec	Rest of Canada	Total Canada
	Millions of Constant 1988 Dollars		
Competitiveness Gains and Losses by Québec Between 1988 and 1996: *	-468.6	-371.5	-840.1
With respect to suppliers			
- From the rest of Canada	98.4	65.4	163.8
- From the United States	-141.2	-175.5	**-316.7**
- From the rest of the World	-425.8	-261.4	-687.2

* See Appendix entitled "Methodology"

Sources : Statistics Canada, Manufacturing Industries of Canada: National and Provincial Areas (31-203-XPB),
CANSIM, Interprovincial and International Trade Databank
OECD STAN databank
U.S. Government, Bureau of Labor, Statistics publications