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THE IMPACT OF THE FTA ON THE CANADIAN MANUFACTURING INDUSTRY

BY

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## INTRODUCTION

This thesis identifies potential effects of the Free Trade Agreement (FTA) on the Canadian manufacturing industry. It addresses the following questions: Are the costs and gains of the FTA expected by economists for the Canadian manufacturing industry realistic?; Do the provisions of the FTA create an environment favoring development in the Canadian manufacturing industry?; What does the FTA mean for the Canadian manufacturing industry?

In 1972, the Canadian government initiated a re-evaluation of Canada's relationship with the United States. This process led to the publication of "Canada-U.S. Relations: Options for the Future". In this document Mitchell Sharp, who was then the Secretary of State for External Affairs, outlined three possible options for Canada:

- (1) maintain the present relationship with the United States with a minimum of policy adjustments,
- (2) move deliberately towards closer integration with the United States,
- (3) pursue a comprehensive long-term strategy to develop and strengthen the Canadian economy and other aspects of our national life and in the process to reduce the present Canadian vulnerability. (Sharp, 1972, p.13)

The debate on a FTA began when the Mulroney government, influenced by the results of The Royal Commission on the Economic Union and Development Prospects for Canada (Macdonald Commission), decided to pursue a policy promoting bilateral free trade with the U.S.. It chose, consequently, to implement the second option proposed by Mitchell Sharp. The following arguments played an important role in the Mulroney government's decision:

- (1) The elimination of trade barriers would protect Canada against U.S. protective actions such as anti-dumping, countervailing duties, and emergency measures.
- (2) The FTA would give Canada assured access to a large market of at least 250 million people.
- (3) The removal of protective tariffs and U.S. trade barriers would give Canada an opportunity to increase its exports, rationalize its industries, and create economies of scale. This action would allow, or even force the manufacturing industry to become more competitive in international markets. (Finlayson, 1985, p.57)

Arguments in favor of the FTA have predominantly focused on the expected gains for the Canadian economy, in terms of per capita income or total gross national product (GNP). Wonnacott and Wonnacott (1967), for example, forecasted a 10.5 per cent income gain for Canada, if tariffs between the U.S. and Canada were eliminated. Harris and Cox (1984)

predicted a nine per cent increase of the Canadian GNP under generalized free trade. Other economists, who followed Harris and Cox's approach, however, came up with different predictions. Hamilton and Whalley (1985), for example, foresaw a 0.6 per cent increase in GNP. In 1987, the Economic Council of Canada indicated that a FTA would result in a three per cent wage increase in Canada. Furthermore, the Economic Council estimated that 350,000 new jobs would be created by 1995, largely due to a five per cent increase in manufacturing productivity following a FTA.

Anti-Free trade advocates, on the other hand, argued that by choosing the FTA option, Canada was opened up some serious economic and noneconomic issues. They argued that the potential impact of a FTA on the Canadian economy, in terms of adjustment costs and redistribution of income, would be severe and far reaching and could not be offset by any gains in total GNP. In addition, they predicted that the price of a FTA would be higher for certain sectors in the manufacturing industry, since firms in these sectors were not ready or equipped to deal with a more competitive trade environment. Following the signing of the FTA, they attributed major job losses and closures in the manufacturing industry to it. Finally they argued that the FTA will cause an increase in regional disparities, and that the price to pay for it may be Canadian sovereignty itself.

The FTA has been widely regarded as a mean to solve problems of the Canadian economy and, in particular, of the manufacturing industry. The Macdonald Commission indicated in 1985 that the manufacturing industry

needed to be more productive. The FTA was perceived as the ideal way to resolve that problem. In December 1983, American and Canadian officials began discussions which led in January 1989 to the signing of the FTA. Since this date, there have been few studies which assessed the impact of the FTA on the Canadian manufacturing industry.

The manufacturing industry has played, and could continue to play, an important role in the Canadian economy. This study assesses the impact that the FTA has and will have on the Canadian manufacturing industry, with particular emphasis on the ability of manufacturing firms to compete in a FTA environment. The main hypothesis of this thesis is that pro-free trade advocates have overstated the potential benefits for the Canadian manufacturing industry that could result from the FTA. They have done so, because they have relied on economic models which are based on questionable assumptions, and have, therefore, contributed to the implementation of questionable policies.

This study challenges the cost and benefit predictions put forth by pro-FTA advocates in the neoclassical and industrial organizational school of thought; shows that the impact of the FTA on the manufacturing industry has been detrimental by reinforcing the status quo and denying the industry any real mechanism for growth; and examines the impact of the FTA on the productivity and competitiveness of the Canadian manufacturing industry.

The first section of this paper examines the theories and economic models used by pro-FTA supporters. It evaluates the validity of the costs and benefits predicted by pro-FTA advocates which are used to formulate and justify the policy decisions of the Mulroney government. The second section focuses on the manufacturing industry. It assesses the impact of the FTA on the Canadian manufacturing industry, by evaluating some provisions of the FTA in terms of its ability to assure access to a large market and to provide a favorable environment which will allow the manufacturing industry to become more productive and competitive. In addition, it presents evidence which shows that some firms in the manufacturing industry began specializing prior to the FTA, and suggests that these firms may be in a good position to benefit from the FTA. Finally, it examines the impact of the FTA on the productivity and competitiveness of the Canadian manufacturing industry.

## SECTION I: FREE TRADE AND THE ECONOMY

### INTRODUCTION

The following question is still debated: what are the potential costs and benefits of the FTA between the United States and Canada. Most supporters of a FTA argue that the benefits of the bilateral agreement by far outweigh the costs, and that FTA has had and will continue to have a positive impact on the Canadian economy. Those who are against the FTA argue that the cost of this agreement by far outweighs the benefits and that it has weakened and will continue to weaken the Canadian economy and cause losses of Canadian industries and jobs. It has been suggested that pro-FTA and anti-FTA supporters have different objectives and therefore have different considerations related to the Canadian economy. On the one hand, pro-FTA supporters state that improvements in per capita income or GNP is caused by freer trade and that a FTA will lead to freer trade. On the other hand, anti-FTA supporters argue that the adjustments required for the implementation of the FTA are too great a sacrifice for minimum gains. Prior to discussing the potential costs and benefits of the FTA, an understanding of the theoretical assumptions on which theory of trade is based is essential, since these assumptions are used by pro-FTA advocates to support their positions.

Section I summarizes the theoretical foundations of Free Trade theory and explains how, based on certain assumptions, it is deduced that nations will gain from free trade. Part A of section I focuses on two theories of

free trade, the neoclassical and the industrial organization schools. Most supporters of the FTA could be described as either neoclassical trade theorists, who use general equilibrium models as their main tool for analysis, or industrial organization trade theorists, who use partial equilibrium models to conduct their analysis. Part B of this section lists the cost and benefits forecasted by supporters of the FTA and evaluates the validity of their analysis.

## PART A: FREE TRADE THEORY

Part A summarizes the free trade theory of two of the most prominent members of the neoclassical school: Ricardo and Heckscher-Ohlin. It also presents the main theoretical elements of the Industrial School. Finally, it examines how economists have used the neoclassical theory and the industrial organization theory to create models which in turn are used to determine the costs and benefits of the FTA.

### i) NEOCLASSICAL SCHOOL

#### RICARDO

David Ricardo developed the basic theory of gains from trade, which explains trade using the concept of "comparative advantage". The Ricardian model shows that countries who enter into a free trade relationship will have higher income, increased production and greater consumption, because they will be forced to specialize in what they can do best. (Ricardo, 1821)

According to this theory, when two countries trade freely with each other, the competition resulting from the lowering of trade barriers forces at least one of these countries to specialize in the production of the commodity which it produces relatively more efficiently. A country develops a comparative advantage in the production of a product "A" by concentrating on the production of product "A". Ricardo's theory states that countries will import the commodities which it produces

comparatively expensively. According to Ricardo, gains from specialization, which depends on the pattern of comparative advantages, make gains from trade possible. His theory identifies labour as the only effective constraint on production and assumes that all resources are being fully employed. (Jones and Neary, 1986, p.11)

#### HECKSCHER-OHLIN

The Heckscher-Ohlin model (Heckscher, 1920), which is viewed as an extension of Ricardo's model, was created in response to the view that comparative advantage did not explain why there are differences in production costs among countries. It attempted to provide an alternative analysis of trade patterns by explaining comparative advantage in terms of factor endowments in countries. (Jones and Neary, 1986, p.14)

This model predicts that, in a free trade environment, a country will export the commodity which it produces intensively using the factor that it has in relative abundance. Trade, according to this model will allow a country to specialize in that product. The model assumes that there are no impediments to trade; it implies no tariffs or quotas, no transportation costs and full employment (i.e. all factors of production are assumed to be fully utilized).

Costs of production, in this model, are specific to each country and, in general, will differ between countries, because of their particular internal resources, even when they have access to the same technology for

production. The model also assumes that there is a direct and proportional relationship between input and output; this is known as constant returns. In other words, an increase in the factors of production will result in an increase in output. (Jones and Neary, 1986, p.15)

This model can also be illustrated using the concept of "capital abundance". A country with the greater relative endowment of capital will, according to this theory, produce relatively more of the capital-intensive goods, since the source of comparative advantage, in this case, would be the relative capital abundance. (Jones and Neary, 1986, p.18)

Heckscher-Ohlin also examined what happens in a non-trade situation. According to their theory, a land-abundant country produces land intensive commodities relatively more cheaply than non-land abundant countries. A labour-intensive country will produce the labour-intensive commodities more cheaply, than a non-labour abundant country. Heckscher and Ohlin indicate that under a non-trade situation countries could not maximize their resources, since they would not specialize in the production of the commodities using the factor for which they have greater relative endowment. Once free trade is established, these countries will be forced to specialize, will export goods using the factor they have in relative abundance, and will import the other goods. The overall result predicted is increased wealth.

Consequently, according to this model, a country is better off in a free trade environment. This environment allows a country to take advantage of its relative factor abundance, and protect it against distortions in trade. (Findley, 1970, p.55)

Until the late 1970's, international trade theory was dominated by the concept of comparative advantage, that is, countries taking advantage of their differences. The traditional models of Ricardo and Heckscher-Ohlin, as we have seen, were based on the assumption that there was perfect competition, constant returns to scale and full employment. The Ricardian model emphasizes labour differences as a source of comparative advantage. The Heckscher-Ohlin model emphasized differences in factor endowments as the source of comparative advantage. While these theories remain an important part of international trade theory, some economists argue that, in a contemporary world, traditional determinants of trade cannot explain the whole picture. These economists describe Ricardo and Heckscher-Ohlin models as providing a poor description of the contemporary world in which multinationals, international factor mobility, scale economies, technical changes, and government-imposed tax distortions play a major role. These positions will now be considered.

## ii) INDUSTRIAL ORGANIZATIONAL

The industrial organizational branch of trade theory argues that "increasing returns to scale", an assumption which states that a doubling of factors of production will result in more than a doubling of output, can be an independent cause for specialization and trade. This theoretical shift from comparative advantage to increasing returns to scale as a cause of specialization, is based on the belief that traditional theories of international trade could not account for empirical observations. (Harpman and Krugman, 1985; Krugman, 1986)

Traditional trade theory suggests that trade occurs because of differences among countries, such as differences in labour and factor endowment. The industrial organization school, however, points out that empirical evidence indicates that, "nearly half the world's trade consists of trade between industrial countries that are relatively similar in their factor endowments." (Helpman and Krugman, 1985, p.3) Industrial organization theorists further argue that intra-firm trade, and direct foreign investment, where investors have substantial control over a foreign firm, or have subsidiaries in foreign countries, are not explained by traditional trade theory. Furthermore, they maintain that the traditional school can neither explain intra-firm trade, since it conflicts with traditional thinking on comparative advantage, nor direct foreign investment, because in a framework of perfect competition and constant returns to scale, "there are no visible firms and thus no way to discuss

issues hanging on the scope of activities carried out by firms." (Helpman and Krugman, 1985, p.3) According to this view, "countries specialize and trade, not only because of underlying differences, but also because increasing returns are an independent force leading to geographical concentration of production of each good."(Helpman and Krugman, 1985, p.2)

The industrial organization theorists argue that "(e)ven if differences in factor rewards or labour do not create an incentive for specialization and trade, the advantages of large-scale production will still lead countries to specialize and trade with one another." (Helpman and Krugman, 1985, p.3) They also argue that increasing returns provide a simple explanation for intra-industry trade, since "specialization which takes place to realize economies of scale rather than because of differences in factor rewards can easily involve two-way trade in goods with similar factor content." (Helpmen and Krugman, 1985, p.4) In addition, they add that if differences between countries were the only source of trade, as the traditional trade theory suggests, then, we should expect this to be reflected in the composition of trade, that is; countries should export goods whose factor content reflects their underlying resources. According to them, patterns of trade do not confirm that countries export goods whose factor content reflect their underlying resources. To support their position, they refer to empirical evidence which indicate that there is substantial "intra-industry" trade, and substantial "two-way" trade in goods of similar factor intensity. (Helpman and Krugman, 1985, p.2-4)

Although the increasing returns to scale argument is seen as a sufficient basis for trade and has support from a large group of researchers, it has not led to the production of a complete model of trade. Analysis of isolated problems have been based on it, but the industrial organization school has not yet offered a model which would simultaneously addresses factors such as the interdependence of trade, the amount of trade, the direction of trade, or the gains from trade.

Two industrial organizational theorists, Eastman and Stykolt (1967), who studied Canadian economics, argued that there is a positive relationship between competition and market size and competition and optimal pricing. According to Eastman and Stykolt, market access will increase economies of scale and reduce costs, while competition will ensure that prices reflect minimum costs.

The concept of "economies of scale" is based on the principle of imperfect competition and refers to the benefits resulting from an increase in the division of labour following a market expansion. The industrial organization theory has been attacked by the neoclassical theorists, who argue that the industrial organization theory cannot predict the conditions of trade liberalization between firms under the conditions of imperfect competition. They argue that the relationship between minimal cost of production and prices is not defined and that, therefore, no conclusions about the benefits can be made. Furthermore, they point out that the removal of tariffs may also cause a deviation in prices from minimum average costs therefore undermining potential trade benefits to

the consumer. (Furlong and Moggach, 1990, p.141)

In response to this criticism, some theorists from the industrial organizational school have attempted to incorporate some aspects of the neoclassical theory to their approach, namely: perfect competition and full employment. As mentioned above, the neoclassical theory predicts that increasing competition from trade will result in countries producing the product for which they have a comparative advantage.

The benefits possible from comparative advantage are possible because the assumptions of constant returns to scale, perfect competition and full employment are made. The concept of "full employment" in the neoclassical tradition refers to the fact that any jobs lost as a result of rationalization will be replaced by new jobs, created as a result of the opening up of the market.

The neoclassical school assumes that the gains from firms or industries will be transferred to the economy. This combination of the neoclassical assumptions of "full employment" and "perfect competition", with the concept of "economies of scale" allows theorists from the industrial organization school to claim that free trade will increase per capita income, since competition will equate prices with costs, even when economies of scale exist. (Furlong and Moggach, 1990, p.139-141)

Upon examination of the neoclassical and the industrial organization schools, it becomes clear that the main difference between these analysis

are the various factors which lead to specialization. These analysis show that once the various criteria specific to each school are satisfied, specialization occur. On the one hand, the Ricardian theory asserts that it is the differences in the labour cost of production which provide the incentive for comparative advantage and thus specialization. On the other hand, the Heckscher-Ohlin model, identifies the differences in factor endowment as the cause of specialization. Finally, new thinking sees the combination of imperfect competition and constant returns to scale as the cause of specialization. Economies of scale are viewed as a possible incentive for specialization. These theories all predict the same result once a free trade environment is established: trade will necessarily lead to specialization.

### iii) ECONOMIC MODELS OF TRADE

Both neoclassical and industrial organization researchers have attempted to provide a framework on which policy makers can base and optimize economic policies. They have achieved that by blending theory and policy and have produced an impressive array of quantitative empirical models. Two of these models are prevalent in the free trade literature: the general equilibrium theory - which is associated with Heckscher and Ohlin trade theory of comparative advantage - and the partial equilibrium theory - which is applicable only to specific parts of the economy and is associated with the industrial organization trade theory of increasing returns to scale.

Common to most general equilibrium models is the use of the Armington assumption which states that imported and domestic commodities are imperfect substitutes. This assumption is included in numerous general equilibrium models to resolve the problems highlighted by the industrial organization theorists, who argue that traditional trade theory does not explain simultaneous import and export by the same country of the same commodity, a condition inconsistent with competitive behavior found in traditional trade theory such as Heckscher-Ohlin. (Whalley, 1985, p.7)

There are many important aspects of the general equilibrium approach. For the purpose of this analysis of the FTA, however, only the following three assumptions need to be mentioned:

- (1) constant returns to scale, which limits the extent of potential efficiency improvements;
- (2) perfect competition, which yields returns on constant unit costs, combined with a collusive model, which results in tariff cuts having a direct impact on domestic pricing;
- (3) free entry and exit into industries, which results in competitive pricing and imply full use of resources and therefore full employment;  
(Hazledine, 1988, p.205)

These assumptions allow neoclassical trade theorists to predict significant gains from trade such as increases in per capita income and GNP.

Like the general equilibrium approach, the partial equilibrium approach has many important aspects. For the purpose of this analysis of the FTA, however, only three of these assumptions will be mentioned:

- 1) increasing returns to scale applied to specific parts of the economy, this allows theorists to eliminate the general equilibrium requirement that "all markets must clear" and that there is full employment.
- 2) market size stimulates efficiency gains through a division of labour as a result of technology change or longer production runs.

3) competition drives price to average cost. (Furlong and Moggach , 1990, p.142)

These assumptions led Industrial Organization theorists to conclude that the removal of tariff barriers between the U.S. and Canada would increase or enhance Canadian competitiveness in foreign markets. (Eastman and Stykolt, 1967, p.102-7)

The Industrial Organization theorists have come under attack from neoclassical theorists who point out that a single market or partial equilibrium approach limits the conclusions that can be drawn. For example, they argue that under conditions of imperfect competition between firms, where there is no necessary direct relationship between price and cost of production, the impact of trade liberalization cannot be determined. According to them, imperfect competition between firms may cause deviations in price from the minimum cost. The removal of tariffs, therefore, can no longer guarantee net gains from trade. (Karikari, 1988, p.422-423)

The neoclassical theorists using the general equilibrium approach, and the industrial organization school of theorists, using the partial equilibrium approach, both argue that countries can gain from trade, if they specialize. Economists from both camps have attempted to show that Canada, and more specifically the Canadian manufacturing industry, can capture gains from trade by entering into a competitive distortion-free economic relationship with the U.S. Under the terms of this relationship,

manufacturing firms would have secure access to the larger U.S. market, and barriers to exports and investments would be lowered or eliminated. The result has been a magnitude of studies which predict costs and benefits of FTA based on the principles of the industrial organizational school or of the neoclassical theory of trade. Part B of this section will evaluate some of these studies.

## PART B: EVALUATION OF COST AND BENEFITS ASSOCIATED WITH THE FTA

### INTRODUCTION

Part B of this section evaluates the validity of the potential costs and benefits associated with the FTA by its advocates. It will examine the work of the following economists: Wonnacott and Wonnacott; Harris; and Markusen. These economists have been chosen because of the impact of their work on the FTA debate. Part B argues that: free trade literature from the Neoclassical and the Industrial Organization schools apply assumptions which have not been supported by empirical evidence, and are at variance with historical facts. For these reasons, they may lead to invalid policy conclusions.

In Part A of this section we saw that neoclassical trade theorists base their models on the assumptions of constant returns to scale, perfect competition and full employment. According to this view, creating a free trade environment is the most effective way to exploit comparative advantages and to realize the benefits of trade. These theorists argue that the opening up of trade leads to competition, which in turn allows countries to specialize in the production of the commodity for which they have a comparative advantage. This group view governments as being at most aids to natural market forces. In the context of the FTA, analysts using this approach believe that Canadian GNP will improve following the implementation of the agreement, because of the size of Canada's GNP relative to the size of the U.S. GNP and that, therefore, Canada will be the overall winner. (Markusen 1986 p.84)

The industrial organization theorists, on the other hand, use the partial equilibrium technique of industrial organization theory, which is characterized by increasing returns to scale (i.e. decreasing costs of production). According to them, increasing returns to scale lead to lower product prices and higher real wages. Unlike the general equilibrium theorist, the partial equilibrium theorists see no need for the assumption of "constant returns to scale", or "full employment", since these theorists limit their studies to individual parts of the economy or to a single market. In partial equilibrium models, competition is responsible for driving prices to average cost of production ensuring that consumers, rather than just firms, realize gains from trade. (Furlong and Moggach 1990, p142; Markusen 1986 p. 84)

Economists from both the neoclassical and the industrial organization schools have attempted to determine the macroeconomic consequences of the FTA for the Canadian economy. The results include a multitude of studies outlining the potential costs and benefits of a FTA. Some studies look at the real income gains for Canada, others look at employment gains. The main difference between these arguments, is the magnitude of the gains associated with a FTA.

At a strictly Macro-economic level – which is, according to many of these authors, where the positive effects of free trade will be felt – there are three general areas of benefits which are common to pro-FTA arguments. These are:

(1) The removal of tariffs will have a direct effect on domestic prices. The argument is that under the conditions of perfect competition, prices will be kept to their lowest average. Consequently, consumers will have a greater variety of choices at lower prices.

(2) Economies of scale and specialization, resulting from the removal of tariff barriers, will increase competition, which will lead to a more productive and efficient manufacturing sector. The argument is that, because of a secure access to the large American market, Canadian firms will restructure their operations to produce in more efficiency. The FTA is seen as a method to strengthen Canadian firms capability to compete.

(3) The per capita income for Canada will increase. The reasons cited are: increased scale efficiencies will eliminate the productivity gap between the American and the Canadian manufacturing sectors; and increased specialization will increase productivity. Using on the full employment assumption, these analysts predict that gains at the firm level will be transferred to the economy, thus increasing per capita income.

To evaluate the validity of the costs and benefits predicted by pro-FTA advocates, the work of three prominent pro-FTA economists will be reviewed. These include studies by Wonnacott and Wonnacott, Harris, and Markusen. Studies by these economists will be evaluated using the following criteria; a) do pro-FTA studies provide empirical evidence to support the assumptions used to arrive at the predicted costs and benefits;

and b) are the pro-FTA studies cost and benefit conclusions consistent with historical fact? These two criteria have been chosen for two major reasons. First, pro-FTA studies must prove, not assume, that under certain conditions a FTA will be beneficial to Canada. Otherwise, decision makers, who use these studies, run the risk of implementing invalid policies. Second, historic evidence which contradicts current thinking cannot be ignored, since history is the only pool of data available in political science or in economics to verify predictions or assumptions.

### i) WONNACOTT AND WONNACOTT

Wonnacott and Wonnacott studied the merits of free trade, using the framework of economies of scale, and argued that bilateral free trade between Canada and the U.S. would result in higher real incomes in the two countries, with greater gains going to Canada in the manufacturing sector. The main areas of a FTA addressed by Wonnacott and Wonnacott were the expected size of gains or losses, and the effects of reduction of protection. According to Wonnacott and Wonnacott, the gains that could be captured by Canada in a FTA with the U.S. is a 10.5 percent increase in Canada's GNP (i.e. the estimated cost of North American tariffs to Canada). (Wonnacott and Wonnacott, 1967)

The work of Wonnacott and Wonnacott is at the forefront of the FTA debate. It has been quoted from by many pro-FTA advocates. The Business Council on National Issues (BCNI), for example, has used the argument of Wonnacott and Wonnacott's work to support its position on the FTA. It views the FTA as a way to strengthen the manufacturing industry's capacity to compete, make Canada "more attractive" to investors, encourage research and development in Canada, and force Canadians to "clean up" non tariff barriers to free trade. (BCNI 1986, p.4)

According to Wonnacott and Wonnacott, the reduction of tariff barriers will provide a larger market to Canadian exporters. This access to a larger market will allow economies of scale and specialization and, for these reasons, will lead to an increase in production in Canada. The net result

will be more efficient and competitive Canadian firms. The net gain will be higher production runs, higher employment, lower costs of production, and an increase in real wages, thus raising income in Canada.

The gains anticipated by Wonnacott and Wonnacott are measured in terms of specialization. It is believed that, once a free trade environment is created and once certain minor adjustments are made within the manufacturing industry, specialization will occur. According to Wonnacott and Wonnacott "free trade would increase the possibility of specialization and would lead to a greater exploitation of economies of scale with the sum effect of greater gains for Canada". (Wonnacott and Wonnacott, 1967 p. 335)

The type of specialization that is forecasted for the Canadian manufacturing industry following an FTA is two-fold. On one hand, there is sub-industry specialization, which is defined by Wonnacott and Wonnacott as a movement towards labor-intensive activity. This type of specialization, however, is not where the gains of a FTA lie. Wonnacott and Wonnacott points out that the type of specialization that would bring about major gains in the manufacturing industry would result from the exploitation of economies of scale, which they define broadly as "not only engineering economies but also managerial and organizational efficiencies associated with specialization and competition in a larger market." (Wonnacott and Wonnacott, 1967, p.336-337) In other words, the manufacturing industry would have to make substantial adjustments before it could capture benefits from a FTA. (Wonnacott and Wonnacott,

1967, p.334)

Wonnacott and Wonnacott admit that there will be certain difficulties created by a FTA. These difficulties, however, are seen as minor, when compared to the gains resulting from a FTA. For example, they claim that Canada would become an area where "pressures of both growth and decline" would be felt. This is explained as follows, "free trade would provide an additional impetus for particularly efficient and fast (growing) firms in any industry, but it would speed the demise of the inefficient." (Wonnacott and Wonnacott, 1967, p.338) Furthermore, Wonnacott and Wonnacott require that there be "sufficient flexibility and imagination by management to recognize and grasp the new opportunities for specialization opened up by freer access to the U.S. market." (Wonnacott and Wonnacott, 1967, p.338)

The increase in real wages anticipated by Wonnacott and Wonnacott was based on a relationship between competition and market size, and competition and optimal pricing. According to their approach production costs will decrease because of economies of scales introduced following increased access to a larger market. At the same time, increased competition will insure that prices will stay at minimal levels. In this context, Wonnacott and Wonnacott attribute to competition the ability to keep relativity between price and cost. (Furlong and Moggach 1990, p.140)

These assumptions came under attack from economists using the general equilibrium approach who claim that the Wonnacott and Wonnacott

argument failed to acknowledge the existence of competitive distortions. They argued that in a FTA environment, even if economies of scale were realized, economic distortions occur, because, in micro-economic theory, the concept of "economies of scale" is not compatible with "perfect competition". "Perfect competition" implies that prices are to equal marginal costs, and that firms behavior, in terms of changes in the rate of production and sales, do not affect price levels. "Economies of scale" on the other hand, means that firm behavior has a direct impact on prices. The assumption is that average prices will fall with increased output, as a result of larger plant size and larger production runs. "Economies of scale" is, therefore, associated with "imperfect competition" a concept which refers to the situation where firms are not in equilibrium and where there are deviations from minimal average costs. (Markusen, 1985, p.84-85)

The same economists argue that these distortions, which would be present because of the implementation of economies of scale, could counterbalance any predicted gains. They further add that it is difficult to assess the impact of trade liberalization under the condition of imperfect competition between firms, since distortions introduced by imperfect competition may result in a movement of prices away from minimum average costs, therefore reducing the benefits to consumers. (Furlong and Moggach, 1990, p.143)

There is little doubt that under the FTA there will be increased competition. How this increased competition will lead to greater technical efficiency, increased market opportunities, and optimal pricing

has not, however, been specified by Wonnacott and Wonnacott. They do not offer any empirical evidence to delineate the connection between the concept of "competition" and "market size" and "competition" and "optimal price" are missing in their work.

According to Wonnacott and Wonnacott, the FTA will result in an increase in employment in the manufacturing sector, if adjustments in management style and technical improvements are made in the context of mutual market access by both the U.S. and Canada. They did not specify, however, how or whether employment losses, resulting from these adjustments, will be balanced by the gains resulting from the reduction and eventual removal of tariffs. Nor did they show how any reductions in the cost of living brought about by the FTA could override the effects of unemployment resulting from tariff reductions. Failure to delineate this relationship constitutes a serious problem in the Wonnacott and Wonnacott approach, since it can be argued that the removal of tariffs could also result in a net fall in per capita income, a fall which could be caused by potential loss of the Canadian domestic market to American competitors.

Wonnacott and Wonnacott, also argue that economy of scale is the determinant of productivity efficiency, and that, therefore, under a FTA we can expect the Canadian manufacturing industry to increase productivity, because of the implementation of economies of scale at the firm level. History, demonstrates, however, that increases in productivity in the manufacturing industry is achieved by guaranteed access to a new market. (Furlong and Moggach 1990, p149) Therefore, in order to capture the

benefits predicted by Wonnacott and Wonnacott, Canadian firms must not only have reductions in tariffs, but also a guaranteed access to U.S. markets. Any anti-competitive practices by multinational corporations which would have the sum effect of limiting or denying access to the U.S. market, could substantially reduce the gains predicted by Wonnacott and Wonnacott. Recent duties imposed on the Canadian magnesium and lumber industries are two examples of government imposed limits on access to American markets.

Wonnacott and Wonnacott argued that a reduction in tariff barriers between the U.S. and Canada would result in an increase in production in the manufacturing industry, and in an increase in real income in Canada because a FTA would provide access to a larger U.S. market and allow firms to benefit from economies of scale and specialization. The costs-benefits estimates of Wonnacott and Wonnacott are not, however, supported by any empirical research, which would evaluate the assumptions used to support the claim that tariff reductions will lead to increased productivity. Finally historical evidence suggest that improvements in productivity efficiency is achieved by guaranteed access to new markets, not simply by implementing economies of scale at the firm level. The substantial gains predicted by Wonnacott and Wonnacott for Canadian and the manufacturing industry have not been substantiated. Therefore, their study of the potential impact of a FTA between the U.S. and Canada, remains problematic and should not be used to support policy decisions.

## ii) HARRIS

The work of Harris has been widely embraced by pro-FTA supporters. In his 1984 work with Cox, Harris uses a general equilibrium trade model (GETM), which combines economies of scale and imperfect competition to predict the positive impact of multilateral free trade (MFT) on Canada. In his later work for the Macdonald Commission, and in his 1986 study, Harris recommends an industrial policy for Canada based on his GETM and discusses options for Canada under a FTA. Harris pursues two main objectives through his analysis: to assure the growth of a strong manufacturing sector in Canada; and to determine how this could be done.

Using the GETM, which is described by Cameron (Cameron, 1986), Hazledine (Hazledine, 1988), and Furlong and Moggach (Furlong and Moggach, 1990), as a synthesis of elements from the general and partial equilibrium model, Harris studies the positive impacts of trade on Canada. Harris and Cox estimated in 1984 that the annual gain from MFT, between Canada and the rest of the world, would be an increase of 8 to 10 percent of GNP, due to improved productivity. In addition, they forecasted a 33 per cent increase in labor productivity, which represents a 10 per cent improvement in total factor productivity, and an increase of 12 per cent of total employment in the manufacturing industry. (Harris and Cox, 1984, p.114-115)

In his study for the Macdonald Commission, Harris recommends to aim trade and investment policies at the creation of larger markets for

Canadian products. He further adds that industrial strategies should aim at the promotion of competitive industries and the elimination of industries with competitive disadvantages. In his 1986 study, Harris agrees with the Wonnacott and Wonnacott estimates and predicts that under a FTA Canadian GNP will increase by 9 per cent. (Harris, 1986) These predictions and recommendations were based on the belief that non-competitive prices in Canada were the result of high Canadian tariff levels relative to American tariff levels. According to Harris, therefore, the lowering of domestic tariff levels would have had a positive impact on competitive conditions which prevailed in Canada. (Harris, 1984, 1986, Cameron, 1986, p.100)

Harris and Cox's GETM combines the general and partial equilibrium approaches. They select this approach to conduct their analysis, because they assess that the neoclassical trade theory and the general equilibrium approach are inadequate tools to conduct analysis of a substantial part of world trade. They also reject the industrial organization school or the partial equilibrium approaches, because they do not produce assessments which can be used to make broad policy statements. The GETM incorporates concepts related to firm's pricing, production, and market behavior and has four main features, which include: economies of scale at the plant level; increased production runs within the plant; specialization; and imperfect competition within the manufacturing sector.(Harris and Cox, 1984, pp.8-9)

In his study for the Macdonald Commission, in his 1984 work with Cox,

and in his 1986 study, Harris, argued that non-competitive prices in Canada were the result of high Canadian tariffs, which restricted access to the Canadian market. This first assessment led Harris to conclude, in his 1986 work, that under a FTA, domestic prices would be lowered by the full amount of tariff levels, because of this direct relationship between domestic prices and tariff rates. He expanded this idea in his 1984 work with Cox. According to Harris and Cox, cuts in domestic tariff levels would force industries to rationalize and drive prices down, thus producing beneficial results for consumers. (Harris, 1984, pp.25, 55,134) In other words, the replacement of inefficient domestic production lines by more efficient production lines would ensue from the FTA.

Harris defines "rationalization" as a process leading firms to greater economies of scale, which reduce their costs of production. According to Harris, cuts in domestic tariff levels are followed by rationalization of domestic industries. As non-competitive firms are eliminated, production becomes more efficient. Furthermore, domestic firms become export oriented, more specialized, and realize economies of scale by producing for the world market. Harris concludes that economies of scale leads to improved productivity and increased income. (Harris and Cox, 1984, pp. 25-26, 35-36, 94)

The firm plays an important role within the GETM. Harris and Cox attribute to firms the ability to collude to set prices. They also assume that in a pre-FTA environment there are free exit and entry of firms into the manufacturing sector and that any "rents", (i.e. the difference between

profits earned and total investment capital) which may result from tariff protection are competed away. The result of this pre-FTA environment is a manufacturing industry where there are high prices and high costs of production. (Harris, 1986) The GETM predicts that a FTA will cause a shift in comparative advantage in favour of the manufacturing industry, because a FTA will lead to a change in productivity efficiency. (Harris, 1984, p.72-74; Harris, 1986)

The GETM incorporates general and partial equilibrium theory into one model and predicts significant gains from a FTA. Some of these predictions and assumptions, however, have not been substantiated by empirical evidence or are not consistent with historical evidence. The critics have identified the relationships between productivity and tariff levels, tariffs and pricing, competition and improved market opportunities, and economies of scale and improved productivity as being problematic.

While there are studies analyzing the relationship between productivity and tariffs, no study supports clearly Harris' statement that there is a link between increased productivity and tariff cuts. Harris and Cox in support of their assessment, refer to a 1972 study by Magee, which shows the effect of multilateral tariff reductions on the U.S. economy during the Kennedy and Tokyo Rounds of GATT. They admit, however, that the Magee study is "crude" and based on incomplete information. (Harris, 1984, pp.17-19) The Magee study does not demonstrate clearly the existence of a link between tariff cuts and increased productivity. Therefore, it does not

confirm Harris' conclusions.

Baldwin and Gorecki also look at the Kennedy and Tokyo Round of GATT and link tariff reductions to length of product runs. (Baldwin and Gorecki, 1986, Hazledine, 1988) The Baldwin and Gorecki study cannot, however, be used to support Harris and Cox's conclusions, since the Baldwin and Gorecki's conclusions apply only to the relationship between tariff cuts and length of production runs. "Production runs" refers to the act of making a commodity, while "productivity efficiency" refers to the lowest attainable costs for an output per unit of input. (Lipsey, 1985) While these studies contribute to the understanding of the relationship between tariff levels and particular aspects of production, they do not clearly support Harris' claim that there is a proportional relationship between tariff cuts and increased production efficiency. There is no analysis demonstrating clearly the existence of a direct relationship between cuts and increased production efficiency in Canada. (Hazledine, 1988, p.206) Any conclusions based on that assumption should therefore be reconsidered and should not be used to support policy decisions.

The GETM's market behavior assumption is also not clearly supported by empirical evidence. The GETM attributes to firms the ability to collude to raise prices, but not to prevent free entry of new competitors. Hazledine argues that a more realistic assumption would take into account two more factors: entry into a market is not free; new firms are generally vulnerable to entry constraints such as, size of market and strength of competitors. For Hazledine, these constraints have a direct impact on new

firms pricing behaviour. He further adds that the main factor guiding new firms pricing policies is not tariff levels but rather a relationship between price and cost. (Hazledine, 1988, p.206) Hazledine suggests that prices can also rise because of the fact that profits can be shielded from competition from entering firms, and concludes that a more accurate approach to market behavior would forecast considerably reduced gains from a FTA than the one predicted by Harris. (Hazledine, 1988, p.206)

The economic literature on pricing and imperfectly competing firms supports Hazledine conclusions. Economic literature suggests that when oligopolistic industries raise prices above long-run average costs, as in Harris' collusion assumption, non-tariff barriers inhibit new firms from entering the industry. (Lipsey, 1985, p.230-244) The following are a few examples of non tariff barriers: the imbalance in supply and demand that could be caused by the arrival of a new firm into a domestic industry; restricted access to technology; and government policies (i.e. policies on ownership requirements, imperfect information about market opportunities, high cost of entry, inadequate financing, ect.)

Furthermore, according to microeconomic theory, competitive market prices are determined by demand and supply. (Lipsey, 1985, p.283-284). It can be argued, consequently, that the removal of tariffs could increase the demand and, therefore, increase prices, a result that would contradict Harris' forecasted drop in prices. Harris' argues that the removal of tariffs leads to productivity efficiencies, to economies of scale, and to a reduction in prices, but again he does not demonstrate clearly the

existence of a link between tariff cuts and pricing.

According to the GETM, competition resulting from the reduction of tariff levels is responsible for the creation of new market opportunities. Firms, because of the new competition resulting from a reduction in tariff levels, change their patterns of trade to take advantage of new economies of scale. The presence of economies of scale and imperfect competition in an industry, according to Harris, change the comparative advantage in its favor. (Harris, 1984, p.76-77) Harris' treatment of competition is problematic as was the case of Wonnacott and Wonnacott. Historically, productivity improvements has been achieved by guaranteed access to new markets, not by increased competition. (Furlong and Moggach, 1990, p.149) Harris does not provide empirical evidence which would support the assumption that increased competition has a positive impact on the creation of new market opportunities.

Another critique of Harris' analysis comes from Daly and MacCharles, who question the validity of Harris' entire analysis. For Daly and MacCharles, Harris' analysis contradicts evidence collected during the last two decades. According to Daly and MacCharles, if Harris was correct when he states that scale economies in the manufacturing industry lead to improved productivity, we should find that higher output leads to improved total factor productivity (TFP). (Daly and MacCharles, 1986, p 391-132)

But during the period 1958-79 despite a 4.6 per cent average annual rate of output growth in manufacturing,

TFP increased at a average annual rate of only 0.7 per cent. (Daly and MacCharles, 1986, p.392)

Daly and MacCharles suggests that technical progress may have contributed to the noted improvements in Canadian TFP during that period. From their analysis, Daly and MacCharles clearly demonstrates that "scale economy" is not the only factor which has an impact on productivity efficiency. For these reasons, Daly and MacCharles forecasts that increases in TFP and GNP of Canada following a FTA would be much smaller than those predicted by Harris. (Daly and MacCharles, 1986, p.392)

Harris' analysis has been widely accepted by pro-FTA advocates and has had a significant impact on the FTA debate. Using a synthesis of the partial and general equilibrium trade approach, Harris argues that economies of scale and imperfect competition within the manufacturing industry will lead to substantial gains under a FTA. He further adds that economies of scale are responsible for increased productivity in the manufacturing industry and that, because of firm's behavior in the market, greater gains can be anticipated from a FTA.

The above analysis suggests, however, that the gains resulting from the FTA may not be as high as predicted by Harris. First there is no empirical evidence to support the assumption of a relationship between productivity efficiency and tariff levels, or between tariff levels and pricing. Second, Harris did not provide empirical evidence to prove that competition will produce improved productivity within the manufacturing industry under a FTA. Finally, as demonstrated by Daly and MacCharles, the relationship

between economies of scale and productivity has not been validated by historical evidence.

### iii) MARKUSEN

In his study for the MacDonald Commission, Markusen, like Harris, combines different elements of the partial and general equilibrium model to show that imperfect competition and economies of scale under a FTA will have a positive impact on the Canadian manufacturing industry and on the Canadian economy as a whole. According to Markusen, the presence of economies of scale and imperfect competition under a FTA will cause a "production rationalization effect" (PRE). Markusen assesses that the following gains will result from the PRE: more efficient production and lower prices at the plant and industry level; the elimination of inefficient production and the expansion of efficient production, resulting in lower prices and costs; the introduction of new products; and specialization. (Markusen, 1986; Cameron, 1986, p.90)

The PRE, according to Markusen, guarantees that the Canadian manufacturing industry and economy will respond to the FTA by specializing. Using methodological rigour, Markusen attempts to show that gains from trade can be achieved, within the context of economies of scale and imperfect competition, because the market forces will push prices down to average costs. (Markusen, 1985)

Markusen's definition of the "PRE" differs from the traditional definition of "rationalization". "Rationalization" traditionally refers to the elimination of least efficient producers and to the concentration of resources in a smaller market. (Markusen, 1986) Markusen's "PRE"

concept is more complicated than that. It refers to a division of labour, to a more efficient streamlining of production and to the expansion of output in a larger and more competitive market. (Markusen, 1985, 1986; Furlong and Moggach, 1990)

According to Markusen, the implementation of the FTA will lead to the occurrence of the PRE, which will ensure increased production runs and lower cost of production. This first step will be followed by specialization and increased output. Inefficient domestic production lines will be eliminated by lower-cost imports. This elimination process will transfer resources to profitable areas of the economy. In other words, firms will respond to increasing competition and access to a larger market by specializing and expanding outputs, thereby lowering costs. (Markusen, 1985)

According to Markusen, the PRE is a sufficient condition for capturing gains following a FTA if there are: free entry and exit from industry, which forces domestic firms to produce more efficiently in order to avoid being eliminated by their competitors; relatively equivalent techniques of production; symmetry between prices and average costs (i.e. no collusive behavior); and inequality in size between the two economies involved. Markusen's second and third conditions ensure that countries respond to the creation of a larger market and to increasing competition by expanding their output, which will result in the lowering of their domestic average costs of production. (Markusen, 1985; Cameron, 1986, p.91)

Markusen's PRE, which is supposed to occur as a result of larger markets and increased competition created by a FTA, is problematic. The concept of "PRE", like Harris' GETM and Wonnacott and Wonnocott's assumptions, is not supported by empirical evidence. Furthermore, Markusen's concept of "competition" is not consistent with historical facts concerning the behavior of firms.

Markusen does not prove that, under a FTA, the PRE will take place. He states, for example, that the following conditions are sufficient, but not necessary, for firms to increase production runs: firms must have access to the same technologies; there must be free entry into and exit from an industry; and one of the countries involved must be small relative to the other. Markusen does not offer proof that these conditions will allow Canadian firms to achieve economies of scale. He simply states that under trade liberalization firms will produce more efficiently or be forced out of the market by foreign competitors, because of the fact that there will be free entry and exit into an industry. (Markusen; 1985; Cameron, 1986, p. 91) Markusen should prove that his PRE will lead to increased production runs and economies of scale and not just to the elimination of the Canadian manufacturing industry by foreign competitors, but he does not.

Markusen simply argues that, under a FTA, rationalization, which spreads fixed costs over more commodities, will occur. He does not explain, however, why this form of rationalization is more likely to occur than rationalization which generates technical changes, increased

unemployment and a reduction in production. This is a very important oversight, since rationalization which generates technical changes, unemployment and reduction in production will not produce the gains predicted by Markusen.

Furlong and Moggach suggest that the assumption of "full employment" would insure that rationalization does not lead to decreased production, technology changes and of course unemployment. Markusen did not assume full employment, therefore, his PRE model cannot guarantee that gains in one sector would not be cancelled by losses in another sector. (Furlong and Moggach, 1990, p.146) What is lacking in Markusen's analysis, is a study showing what type of rationalization will prevail under the conditions implied in a FTA. Markusen probably did not assume full employment, because of the fact that it did not fit into his conceptual framework.

Under the PRE, Markusen argues, that increased competition will allow firms to rationalize. Inefficient production will be eliminated and efficient firms will expand their production runs. Markusen does not show, however, how increased competition will allow firms to both rationalize and expand at the same time. Markusen explains that a firm may achieve lower costs by specializing under the pressure of increased competition, but he does not clearly demonstrate how that firm will at the same time be able to achieve longer production runs. In economic literature, the ability to achieve longer production runs is usually linked to a guaranteed access to an expanded market. (Furlong and Moggach, 1990, p.148) The occurrence of the gains predicted by Markusen, consequently appears to

depend not only on competition but also on a "guaranteed" access to a larger market. The PRE, however, does not require both increased competition and a "guaranteed" access to a larger market to have the impact forecasted by Markusen under a FTA. According to Markusen, competition by itself will ensure productivity improvements, and streamlining of production. His argument demonstrating the validity of this causal relationship is rather weak.

Furthermore, Markusen's concept of "competition" ignores historical evidence, which suggests that firms respond to competition by contracting production and by specializing, rather than by expanding production runs. Historically, increases in productivity have been the result of market opportunities created during expansionary periods. They did not necessarily ensue, as Markusen argues, in a situation of increased competition within a larger market. (Furlong and Moggach, 1990, p.149)

In addition, historic evidence show that there is generally little competition during periods of expansion, this can be explained easily; since these periods are characterized by a demand which is higher than the supply. Under these conditions prices tend to rise above average costs, increasing profit margins. Investments increase and lead to the introduction of new technologies. (Furlong and Moggach, 1990, p.149) The PRE, forecast exactly the opposite: increased competition will cause expansion. Furthermore, Markusen does not explain how prices will stay at average cost during a period characterized by an imbalance between supply and demand due to the opening of a larger market.

In the opposite situation, that is when markets shrink, competition forces prices down to minimum cost and leads to a different type of "rationalization". Firms eliminate redundant factors of production, by reducing or abandoning inefficient operations and production runs. This type of "rationalization" does not lead to innovation or to the introduction economies of scale, but rather to a contraction of production. (Furlong and Moggach, 1990, p.149) A FTA that does not guarantee access to a larger market, and increases competition from foreign firms, could very well lead to shrinking markets. Since PRE does not require a guaranteed access to a larger market, Markusen's model could establish conditions which would cause markets to shrink. Increased competition in the manufacturing industry, resulting from a FTA could, therefore, produce contraction of domestic production and specialization, not expansion of production runs, if a FTA does not guarantee access to the larger U.S. market.

According to Markusen, the FTA will bring considerable gains for the manufacturing industry. His prediction are predominantly based on the PRE. The gains forecasted by Markusen are related to the ability of firms to take advantage of economies of scale and imperfect competition, by increasing their production runs and by specializing, thereby decreasing their costs.

The Markusen study, however, like the Harris and Wonnacott and Wonnacott's studies, is problematic for two major reasons. First, because Markusen's theory of rationalization is left untested. The PRE concept, which predicts that increase competition will allow firms to spread cost

over more commodities, reducing their total cost of production, is not supported by empirical evidence. Second, because it is not consistent with historical evidence which suggests that firms do not react to competition by expanding their production runs, as suggested in the PRE, but rather by contracting them. History indicates that, it is a guaranteed access to larger markets which causes increases in production run. Markusen, however, ignores that fact and does not fully integrate this condition in his PRE.

#### iv) CONCLUSION

Part A of this section looked at the theory of trade and identified, according to this theory, the effects of trade on an economy. It showed how, according to the theory of trade, free trade had the potential to lead to a more productive and efficient economy. In a few words, the theory states that all countries could improve their economy by promoting freer trade with their economic partners.

An analysis of three prominent pro-FTA studies in part B has shown that basic assumptions used, in their analysis, to make cost and benefit predictions were often not supported by empirical research, and were not always consistent with historical facts. Part B's analysis indicates, therefore, that these FTA studies could be misleading. Their forecasts of costs and benefits for the manufacturing industry and the Canadian economy are tainted by their inconsistencies. They should not, therefore, be used, in their actual state, to make or support policy decisions, especially decisions that will affect the manufacturing industry, since this industry occupies an important place in the Canadian economy.

The purpose of section II is to further test the validity of these studies by looking at the effects of the FTA on the manufacturing industry. It will aim at identifying the impact that the FTA has had on the manufacturing industry and will try to answer the following question: has the FTA improved productivity and competitiveness in the manufacturing industry?

## SECTION II: THE FREE TRADE AGREEMENT AND THE CANADIAN MANUFACTURING INDUSTRY

### INTRODUCTION

The FTA came into effect on January 1, 1989. Three years after its implementation, however, the following question is still being debated: has the FTA created an environment which has improved the productivity and competitiveness of the Canadian manufacturing industry? Supporters of the FTA argue that the FTA created an environment where there are opportunities to increase productivity and improve the efficiency of our industries. (Garos, 1990, pp.48-51) Representatives from this group believe that the FTA has improved the Canadian trading position in relation to the U.S. by introducing dispute settlement mechanisms, decreasing trade barriers, and providing access to the larger U.S. market. The anti-FTA supporters are convinced, on the other hand, that we have already begun to feel the negative impact of the FTA. Representatives from this group point to the increased level of unemployment in the manufacturing industry, since the signing of the FTA, as just one example of the negative impact of the FTA on the industry and the economy. (Campbell, 1992, pp.1-3)

Section I examined the forecasted costs and benefits of a FTA for the Canadian manufacturing industry. Three pro-FTA studies identified "guaranteed access to a larger market" as one of the major conditions which would lead to substantial gains for the manufacturing industry. The partial equilibrium theorists, for example, stated that increased

competition and access to a larger market, resulting from the removal of tariff barriers, would allow Canadian manufacturing firms to achieve economies of scale and increased technical efficiencies. To sum it up, Canadian manufacturing firms were expected to become more efficient and competitive, to increase production, and to reduce their prices, if there was guaranteed access to a larger market.

Wonnacott and Wonnacott argued that access to a larger market would allow the manufacturing industry to decrease costs of production and achieve economies of scale. Harris, using his GETM, stated that increased competition, resulting from a decrease in tariff levels, would lead to productivity efficiencies, economies of scale, and reduced prices. Canadian trade and investment policies should therefore, according to Harris, aim at assuring access to large markets for Canadian exports. Finally, Markusen, using his PRE model, argued that "market access" was a sufficient, but not a necessary condition, to achieve gains from trade. Analysis of Markusen's PRE, however, indicated that guaranteed access to a larger market was, in fact, a crucial but not a sufficient condition, to insure the occurrence of the gains predicted on the basis of his model.

The influence of these three pro-FTA studies is reflected in the Conservative government's justifications for its policies on a FTA. The Canadian government stated that its main objective for pursuing a FTA was to gain greater security of access to the U.S. market for Canadian exports. It argued that Canada was a small open economy, which depended on exports for 30 per cent of its income and employment, but lacked access to

a large enough market to benefit from economies of scale and specialization. Access to the U.S. market through a FTA, it argued, would provide this market and would allow Canadian companies to rationalize and become more productive and more competitive. Furthermore, the Canadian government maintained that the FTA would exempt Canadian exports from U.S. protective measures. (External Affairs, 1985, pp.1-2)

The Canadian government negotiated the FTA with the following objectives in mind:

- eliminate barriers to trade in goods and services between the territories of the parties,
- facilitate conditions of fair competition within the free-trade area,
- liberalize significantly conditions for investment within this free-trade area,
- establish effective procedures for the joint administration of the agreement and the resolution of disputes, and,
- lay the foundation for further bilateral and multilateral cooperation to expand and enhance the benefits of the agreement. (FTA, article 102: objectives)

This section will test the validity of the cost/benefit predictions deduced on the basis of the three pro-FTA studies reviewed in section I. It will also challenge the following assumption: guaranteed market access leads to increased productivity and competitiveness. Finally, it will consider the following question: is the manufacturing industry more productive and competitive three years after the implementation of the

**FTA?**

Part A will focus on the terms and conditions of the FTA. It will outline FTA provisions relevant to the manufacturing industry and assess whether these provisions provide guaranteed access to a larger market, as required by the pro-FTA studies. It will suggest that important factors which contribute to increased productivity and competitiveness such as availability of financing, tax reforms, and market penetration, were not taken into consideration by the three pro-FTA studies or by the Canadian government. Part B will focus on the productivity and the competitiveness of the manufacturing industry. It will assess changes in employment levels and output levels, specialization in the manufacturing industry, and market penetration by the manufacturing industry, since the FTA.

## PART A: PROVISIONS OF THE FTA

### INTRODUCTION

Part A of section II is dedicated to the terms and conditions of the FTA. Its purpose is to determine whether these terms and conditions guarantee, for the Canadian manufacturing industry, access to the U.S. market. Part A first presents FTA provisions which have a direct impact on the manufacturing industry. It, then, examines these provisions, to determine whether they provide the manufacturing industry with a guaranteed access to the U.S market. Finally, part A presents information which suggests that guaranteed access to a larger market is not a sufficient condition for increases in productivity and competitiveness. It will argue that changes in productivity and competitiveness depend on many factors, which were not considered by the pro-FTA studies or by the federal government.

#### i) THE FTA

Many trade policy experts heralded the terms and conditions of the FTA as a substantial achievement. (Garos, 1990, pp.48-54) The FTA is defined as an agreement which liberalizes all sectors of the economy, and sets principles on how Canada and the United States are to treat each other's goods, services, investments, suppliers and investors covered in the free trade document. The FTA consists of eight parts: Objectives and Scope; Trade in Goods; Government Procurement; Services Investment and Temporary Entry; Financial Services; Institutional Provisions; Other

Provisions; and Final Provisions. The information pertinent to this analysis is contained in the provisions included in the following parts. Tariff in Goods, Government Procurements, and Institutional Provisions.

### Tariffs and Goods

According to the FTA, all tariffs between Canada and the U.S. will be eliminated over a 10 year period. The lower tariffs will be eliminated first. Higher tariff levels will be phased out over a five year period, on the basis of a 20 per cent annual cut. Furthermore, goods considered to be sensitive to foreign competition - generally those protected by the highest tariff levels - will receive special treatment. Tariffs on these imports will be phased out over a 10 year period, on the basis of a 10 per cent annual cut. These phasing out periods, however, can be accelerated, if both parties agree on a new timeframe. (FTA, Part two, Chapter three and four) By January 1992, the U.S. tariff on canola oil was eliminated. (Tabloid special, 1992, p.3)

Rules of origin are used to identify the goods covered by the FTA. Both parties, according to the FTA, will continue to apply tariffs on imports from third countries. According to articles mentioned in the chapter of the FTA on the "Rules of Origin for Goods", goods which originate entirely from Canada or the U.S. are covered by the conditions of the agreement. Goods incorporating materials or components from third countries, however, can still qualify, if 50 per cent of their manufacturing cost is incurred in Canada or in the U.S. (FTA, Part two, Chapter three)

According to the FTA's chapter on "National Treatment", goods which are imported from the other country should not be subjected to discriminatory activities which would favour domestic goods over imported goods. (FTA, part two, Chapter five)

Chapter six of the FTA states that Non tariff barriers (NTB), such as requirements regarding technical standards related to goods other than agricultural, food, beverage and certain related agriculture goods, are covered by the GATT agreement on Technical Barriers to Trade. Article 601, specifies, however, that the Canadian and U.S. federal government "need not ensure the observance of these provisions by state or provincial governments". (FTA, Part two, Chapter six)

The safeguards contained in the Auto Pact, which protect Canadian auto makers from imports, were kept, but duty payments for not complying with these safeguards have been eliminated. Furthermore, the FTA states that remissions, the Canadian restrictions on used car imports, and the 60 per cent Canadian content requirement will be phased out, to be replaced by the provisions contained in the chapter on the "Rules of Origin for goods". (FTA, Part two, Chapter ten)

#### Government Procurements

Under this provision, the GATT Government Procurement Code threshold for bidding on government contracts is lowered to US\$25 billion from \$171

billion. This provision pertains only to trade in goods listed in the agreement, and is intended to increase accessibility to government contracts for suppliers located on the other parties territory. The national treatment rules and the rules of origin do not apply to bids on government contracts. (FTA, Part three, Chapter 13)

### Institutional Provisions

These provisions cover two areas; general dispute settlements, and dispute settlements in anti-dumping (AD) and countervailing duty (CVD) cases. (FTA, Part Six, Chapter 18 and 19) The FTA established the binational Canadian-U.S. Trade Commission. The role of the Commission is to manage and implement the agreement. It consists of representatives from both countries and deals with disputes arising from the application of AD and CVD laws, financial disputes and all other disputes related to the implementation of the FTA.

In the case of settlement of disputes not related to financial services, AD or CVD cases, the Canadian-U.S. Commission has up to 30 days to reach a decision. If the Commission can not reach a decision within 30 days, it refers the dispute to an arbitration panel. The panel consists of five members. Two of the members are Canadian citizens and two are American citizens. The fifth member chairs the panel and is chosen by the Commission. The panel's decisions are mandatory. However, in disputes over emergency measures, consent of both parties is required for the panel's decision to be implemented. "Emergency measures", under the

agreement, refers to any measures taken to protect an industry from serious injury caused by import competition. The agreement specifies that until 1998, both countries can implement emergency measures, when serious injury are caused to domestic producers due to tariff reductions. An emergency measure can last a maximum of three years, and is subject to compensation. (FTA, Part two, Chapter 11)

Under the FTA, Canada and the U.S. agreed to establish common rules to govern AD and CVD practices. The agreement allows the two parties to continue to apply, and make ammendments, to AD and CVD national laws . However, each country can request a binding review of existing and new AD and CVD laws by binational panels. The five members of each of these panels are usually selected from a list of 50 candidates, which was created prior to the effective date of the FTA. Each country selects two panelists, but reserves the right to select panelists who are not mentioned on the list. The fifth panelist is selected by mutual agreement. If the two countries cannot agree, the four panelists will select the fifth from the list of candidates. The role of the panel is to determine whether the AD and CVD laws are applied correctly and fairly. Once a complaint has been lodged, the panel has up to 315 days to render a decision. The decisions of the panel are binding. (FTA, Part two, Chapter 19)

## ii) CRITIQUE OF THE FTA PROVISIONS

Has the provisions of the FTA created conditions which guarantee access to a larger market for the manufacturing industry? This is an important question. Both economists and the federal government, consider that market access is a crucial requirement to fully benefit from trade. Failure to guarantee access to the U.S. market in a FTA, would have a significant impact on the costs and benefits forecasted by the three pro-FTA studies reviewed in section I.

The objective of this critique is to determine whether the FTA provisions guaranteed, for the Canadian manufacturing industry, access to the large U.S. market. This critique will focus on the three following areas of the FTA: AD and CVD laws, government procurement rules and technical standards. These three areas of the FTA have been selected because we are convinced that they can be used to deny the manufacturing industry access to the U.S. market, and in the case of CVD laws, may undermine mechanisms used to promote economic growth, such as regional development programs, currently available to the manufacturing industry.

According to the FTA, when AD and CVD laws are imposed by one of the parties, the other party can lodge a complaint to a binational panel. In each case, the panel reviews the laws to determine if they are correctly applied. Currently AD and CVD laws in the U.S. are subject to the Trade Agreement Act of 1974. This act allows the creation of CVD laws under three conditions; the offending industry received a government subsidy;

there is injury to domestic firms because of the price and volume of the imported good; and the subsidy was responsible for the injury. The three conditions must apply. AD laws are used by the U.S. when a country sells its commodities in the U.S. market at a price which is below their cost of production. (United States, Trade Act of 1974, Section 321)

CVD laws were originally designed to protect domestic producers from unfair foreign competition based on government subsidies. These laws, however, have been applied by the U.S. in an increasingly loose fashion and have had, for this reason, a detrimental effect on Canadian industries and on Canadian government's freedom. Canadian regional development programs, for example, are increasingly being targetted by the Americans as subsidies. The 1983 case against the Canadian softwood lumber industry, and a more recent case against Canadian hog and pork producers, are just two examples of this trend. Furthermore, CVD can be applied against a Canadian firm, even if domestic firms received similar or larger subsidies from their government than the Canadian firms targetted by CVD laws. (Lipsey and Smith, 1985, pp.150-151)

American AD laws can be applied against Canadian manufacturing firms under a "sales below cost provision". The U.S. apply a test called "fair market price test" on each product perceived as being sold in the U.S. below its cost of production. National market prices, however, are used in the fair market price test. Since American prices can be higher than Canadian prices for a whole series of products, firms who are not selling below Canadian cost of production can be unfairly targetted by American AD laws.

Therefore, this method for determining "fair market value", can unfairly restrict access to the U.S. market and eventually put Canadian industries out of business. (Lipsey and Smith, 1985, pp.156-157)

The failure of the FTA to exercise effective control of AD and CVD laws constitutes a serious threat to trade for the Canadian manufacturing industry, since more than 78 per cent of all Canadian manufactured exports are sold in the United States. (CMA, 1992, p.49) These laws can be used to control unwanted competition and national policies, such as regional development programs. The FTA's provisions related to dispute settlements, help to promote a fair application of AD and CVD laws, but, they cannot in their present form, guarantee to Canadian manufacturing firms access to U.S. markets, since unfair protective trade policy actions can still be taken against Canada. Furthermore, the panel has up to 315 days to solve a dispute once it has been referred to it, enough time to seriously injure an industry.

Currently, trade between the U.S. and Canada is subject to many kinds of NTBs. Two of the most important NTBs which unduly restrict competition, are government procurement procedures, which give preference to local firms, and technical standards, which, if different from the importing country, have the effect of limiting access to domestic markets. (Lipsey and Smith, 1985, pp.138-141)

Government procurement activities are not subject to GATT requirements, which guarantee that foreign firms are treated in the same

manner than national firms. This means that foreign suppliers must undercut domestic suppliers by a specified percentage, in order to get a government contract. In other words, Canadian firms, in order to remain competitive, have to either invest in the U.S., to build plants in the U.S., for example, or purchase U.S. made parts for their products in order to qualify as a local producer. (Lipsey and Smith, 1985, pp.148-149); Metzger, 1974) In both cases, these actions take jobs and investments away from Canada. Furthermore, it means that, as far U.S. government procurements are concerned, Canadian industries do not have guaranteed free access to the U.S. market.

Under the FTA, Canadian firms now have access to different types of U.S government contracts, specified in the agreement, and valued at \$25 billion and up. This represented a decrease in the threshold for bidding on U.S. government contracts, but in spite of this decrease, government contracts not covered under the FTA are still not available to Canadian manufacturing firms. Contracts for services, purchases of power generation equipment, transportation or telecommunication equipment, for example, are not included in the FTA. The overall result is that Canadian firms, specializing in these areas, are still excluded from a significant part of the U.S. market.

According to Furlong and Moggach, the gain of an additional \$3 billion in U.S. federal expenditures available to Canadian firms is proportionally little when we consider that Canadian firms already had access to \$19-22 billion through the GATT and other arrangements. They argue that

... the potential total of \$22-24 billion is still only 10% of US federal expenditure, primarily because it excludes most defense contracts, and only about 3% of the \$750 billion a year spent by municipal, state and federal U.S. governments. (Furlong and Moggach 1990, p.158)

Technical standards have in the past, been used to limit access to the U.S. market. They include, quarantine standards, product standards, national security standards, environment standards, etc..., and have had a significant impact on the Canada U.S. trade relationship. The two governments agreed in the FTA to build on provisions of the GATT agreement on technical barriers to trade, by harmonizing standards, in the long-term, and decreasing discriminatory treatments, in the short-term. The FTA, specifies, however, that technical standard provisions agreed to in the FTA "shall not apply to any measure of a provincial or state government". (FTA, Part two, Chapter six, article 601) This a serious loophole, since provincial and state governments also have jurisdiction over the establishment of technical standards. (Garos, 1990, p.45 ) This leaves room for country specific standards, such as standards related to safety, consumer protection, or health, to be used as methods of controlling foreign competition.

FTA provisions dealing with AD and CVD laws, government procurements rules, and technical standards, were supposed to create conditions which would have guaranteed free access to U.S. markets for Canadian industries. As we have seen, however, AD and CVD laws, and NTBs have and can

effectively deny Canadian manufacturing firms access to the U.S. market. The objective identified by both pro-FTA studies and by the Canadian Conservative government has not been reached: guaranteed access for the Canadian manufacturing firms to the larger U.S. market has not been achieved. This has had and will have many implications for the manufacturing industry.

### iii) GUARANTEED MARKET ACCESS - PRODUCTIVITY AND COMPETITIVENESS

Analysis of the provisions contained in the FTA indicated that the agreement did not guarantee access to a larger market for the Canadian manufacturing industry in general. Therefore, we can no longer expect the gains, predicted by the three pro-FTA studies examined in section I, to apply to the FTA. There are three main reasons why these studies failed to accurately predict the costs and benefits of the FTA for the manufacturing industry. First, these studies forecasted costs and benefits of a FTA for the manufacturing industry before they saw the terms and conditions of the agreement. Second, these studies assumed that the agreement was just about tariff removal. The FTA, however, is more than a tariff removal agreement. It is a comprehensive agreement which deals with tariff removal, but also investments and the terms and conditions of trade. Finally, the utopian notion that the Canadian manufacturing industry can become more productive and competitive once greater access to the U.S. market is assured, failed to consider that there are other factors which determine productivity and competitiveness.

The approach adopted by the pro-FTA studies and the Canadian government is to encourage increased production and competitiveness by "reducing" tariffs and letting the firms and industries figure out how to deal with an increasingly competitive "larger" market. Neither group took into consideration other important factors such as, a company's market share position, the availability of financing for expansion, workforce adjustments and retraining, and accompanying government fiscal and

monetary reforms. All of these factors can also affect productivity and competitiveness.

The Canadian manufacturing industry faces formidable challenges, both at home and in the U.S. market, since it has to become more productive and, at the same time, more competitive. Government and analysts expect the industry to develop markets in the U.S. while it becomes specialized. This expectation is problematic. By definition, when an industry becomes more specialized, it reduces the diversity of its product lines and, therefore, reduces its domestic market. (Crookell, 1984, p.30) This process is not without serious risks, since the end result could be, for the firms involved, a loss of domestic market share, without an increase in foreign market share. It is not, therefore, simply access to a larger market which will determine productivity, but also the ability of a firm to increase its share of that larger market.

In the case of the manufacturing industry, any decrease in its share of the domestic market, due to specialization, must be followed by an increase in its share of the U.S. market of similar importance. Since access to the larger U.S. market is not guaranteed by the FTA, as we have seen, the industry, while specializing, may not be in a position to develop a market in the U.S. or to increase its share of that market. Furthermore, the transition time available to a firm for making adjustments will be reduced by increased competition resulting from tariff removals.

Financing the capital expenses, incurred by the industry, if it is to become more specialized, increase production and become more competitive, is the second problem of importance which was ignored in the studies of the FTA. Productivity improvements, for example, may be accompanied by extensive retraining of workers, management development costs, high capital costs for transforming factors, product innovation costs, export marketing costs, and high research and development costs. Unless Government policies promoting competitive interest rates, a dollar which is not artificially inflated, and a reform of the Federal Sales Tax - which, it is argued, increases the cost of capital and distorts trade - are implemented at the same time than the FTA, the cost of borrowing will be very high for manufacturing producers. Consequently, government policies should create an environment where the industry can find the capital to finance its operations during the transition period. Otherwise, the result could be an industry ready to expand, but deprived of the resources to do so. (Bulloch, 1991, p.18)

Some economists argue that a more specialized economy will be more difficult to stimulate by conventional fiscal means. (Crookell, 1984, p.30) In the past, for example the federal government used tax cuts to stimulate domestic demand. In a more specialized economy, however, tax cuts may result in more imports, and create jobs outside of rather than in Canada. As Canadian firms specialize they become less diversified, thereby giving up a part of their share of the Canadian market. In the short-term, the renewed demand created by the fact that certain Canadian firms have withdrawn from a market to specialize may be satisfied by imports. In

this situation, tax cuts, which may be offered to importing firms could have the effect of increasing their profits, increasing their returns on investments, and increasing their rate of growth. (Lipsey, 1985, pp.822, 434-436) Any increases in production resulting from those tax cuts, however, would occur in the exporting country, not in Canada. Therefore, any change which could make the economy more specialized, such as the FTA, must be accompanied by government fiscal policy reforms. For example, a tax on capital leaving the country, reforms that would stop transnational corporations from declaring their profits elsewhere, or more involvement by the government in the area of investment. (Warnock, 1988, pp.242-243)

It is difficult to estimate the impact that the FTA has had and will have on the Canadian manufacturing industry. An analysis of the provisions of the FTA revealed, however, that the agreement did not, in general, guarantee access to a larger market. This failure makes all costs and benefits associated to the FTA made by the pro-FTA studies and the Federal government invalid. Furthermore, important factors, such as availability of capital, market penetration, and government reforms, were not considered by these two groups. Failure to take these factors into consideration, when making cost/benefit predictions or during the negotiation of the FTA, may have a significant impact on the ability of the industry to increase productivity and competitiveness following implementation of the FTA. Can the manufacturing industry increase its productivity and its competitiveness, when access to the larger U.S. market is not guaranteed, when resources necessary for expansion may not

be available, or when trade barriers come down and competition intensifies? Probably not. Part B presents empirical research which supports this conclusion. It will assess the competitiveness and productivity of the manufacturing industry three years after the FTA.

## PART B: PRODUCTIVITY AND COMPETITIVENESS OF THE MANUFACTURING INDUSTRY

### INTRODUCTION

In Part A, it was argued that the FTA failed to guarantee to the Canadian manufacturing industry access to the U.S. market. Furthermore, part A also highlighted the fact that factors such as availability of capital, market penetration, and government reforms, which also have an impact on productivity and competitiveness, were not considered by pro-FTA studies or by the Canadian negotiators. The failure to include these factors in the cost and benefit prediction process, it was argued, rendered the predictions invalid.

Part B conducts a second test of the validity of the cost and benefit predictions presented by the three pro-FTA studies considered in Section I Part B. It determines whether the Canadian manufacturing industry is more productive and/or competitive since the implementation of the FTA. It does this, by empirically measuring changes in the level of productivity, level of employment, level of output, level of specialization and level of market penetration of the Canadian manufacturing industry, since the implementation of the FTA.

## i) CHANGES IN THE LEVEL OF PRODUCTIVITY

"Productivity" can be defined in terms of output per worker or output per hour of work. These two definitions will be used here to measure productivity. Changes in levels of productivity of the Canadian manufacturing industry, since the implementation of the FTA, will be measured by analysing trends in output per hour of work and output per worker, in order to determine if the FTA had a positive or a negative impact on the level of productivity of the Canadian manufacturing industry.

"Productivity" defined in terms of output per worker will be considered first. Using this definition, we notice that there was a decrease in productivity between 1989, the first year of the implementation of the FTA, and 1990. In 1991, the average output per worker increased in the Canadian manufacturing industry, compared to 1990. The increase noticed in 1991, however, was not important enough to compensate for the decrease of 1990: in 1991 the average output per worker in the Canadian manufacturing industry was 1.1 per cent lower than in 1989. (CLMPC, 1992, p.5)

Furthermore, the increase noticed in 1991 was not due to an increase in the level of output or in employment, but rather to the fact that the level of employment was falling at a much faster rate than the level of output.

This is a very important point. Increased productivity can be the result of an increase in unemployment, if firms are able to restructure in order to produce more or the same with less employees. In other words, an increase in productivity – that is, an increase in output per worker – can be achieved, if employment is declining at a faster rate than output. That is exactly what happened in 1991 in the Canadian manufacturing industry: the levels of output and employment both decreased, but the level of employment decreased at a faster rate than the level of output. (CLMPC, 1992, p.25)

The second definition of "productivity", that is, output per hour of work, will now be considered. According to the Canadian Labour Market and Productivity Centre (CLMPC), output per hour in the Canadian manufacturing industry has continued to increase since 1989, but at a slower pace than for the period prior to 1989. Between 1981 and 1989, there was an average increase in output per hour of 1.7 per cent. In 1990, the average increase diminished to 1.3 per cent. By 1991, the average increase was reduced to only 0.8 per cent. (CLMPC, 1992, p.5) Table 1 shows the average increase in the level of productivity of the Canadian manufacturing industry, between 1981 and 1991.

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TABLE 1.0: PRODUCTIVITY TRENDS IN THE CANADIAN MANUFACTURING  
INDUSTRY 1981-1991  
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YEAR	INCREASE IN OUTPUT PER HOUR WORKED
1981-1989	1.7
1990	1.3
1991	0.8

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SOURCE: CLMPC, 1992, p.5  
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It must be concluded, therefore, that prior to the FTA, the Canadian manufacturing industry was able to improve its productivity at a faster pace than after the FTA. Consequently, the FTA seemed to have had a negative impact on the ability of the Canadian manufacturing industry to improve its productivity defined in terms of output per hour.

Pro-FTA studies predicted that firms in the Canadian manufacturing industry would be able to improve productivity and increase employment. They did not consider that improvements in productivity could be achieved by reducing the work force at a faster rate than the level of output. Failure to consider this point resulted in the miscalculation of the "real" costs of the FTA: high level of unemployment in the Canadian manufacturing industry created by a desire to improve productivity. Finally, our second definition of productivity seems to indicate that the FTA had a negative impact on the ability of the Canadian manufacturing industry to improve its productivity.

## ii) CHANGES IN THE LEVEL OF EMPLOYMENT

According to Statistics Canada, the Canadian unemployment rate went from 7.5 per cent in 1989, to 11.6 percent in August 1992. This 11.6 per cent represented a total of 1.6 million people unemployed. Furthermore, job creation progressively decreased since the implementation of the FTA. Between 1982 and 1988, an average of 326 thousand new jobs per year were created. Between 1989 and 1990, however, an average of only 152 thousand new jobs per year were created. By November and December of 1990 this average was down to minus 82 thousand jobs. (Campbell, January 1992, p.3; Campbell, September 1992, p.2)

The manufacturing industry has been particularly hard hit by high unemployment levels. Between 1989 and 1992, in the manufacturing industry alone, there was a loss of 416,739 jobs, which represented approximately 20 per cent of all manufacturing jobs. This was a dramatic increase, since prior to 1989, more precisely between 1981 and 1988, there was a overall loss, of less than one per cent in total manufacturing jobs. (Campbell, September 1992, pp.3-4)

It has been argued by some pro-FTA supporters that job losses incurred in the manufacturing industry were due to the recession, which began in 1990, rather than to the restructuring in the manufacturing industry, which was caused by the implementation of the FTA. A comparison of job losses in the Canadian and the American manufacturing industries indicate clearly, however, that job losses in the Canadian manufacturing industry

were not simply the result of the recession.

The Canadian manufacturing industry lost 23 per cent of all its jobs between 1989 and 1991. During the same period, the U.S. manufacturing industry did not experience job losses of that magnitude. In fact, only 6.3 per cent of all U.S. manufacturing jobs were lost. Consequently, manufacturing jobs were lost in Canada at a rate which was almost four times faster than in the American manufacturing industry. Furthermore, massive job losses in the Canadian manufacturing industry began immediately after the implementation of the FTA. A total of 150 thousand jobs were lost before the onset of the 1990 recession. (Campbell, January 1992, p.1) Therefore, while the 1990 recession may have exasperated the problem of job losses in the manufacturing industry, the recession alone could not have been responsible for these losses. Appendix one presents changes in job losses by sector in the Canadian manufacturing industry, between 1981 and 1992. It shows that between 1989 and 1992, the manufacturing industry has suffered unprecedented levels of job losses.

According to a Ontario Ministry of Labour report, since 1989, there has been 397 complete plant closures, which accounted for 65 per cent of layoffs in that province. (Campbell, September 1992, p.10; Campbell, January 1992, p.2) Appendix 2 lists plant closures and partial closures in the manufacturing industry since 1989. It provides some insight into the extent of the job loss phenomenon, which resulted from plant closures and transfers of production facilities outside Canada.

Restructuring in the Canadian manufacturing industry, since the implementation of the FTA, has had a direct impact on job losses in Canada. According to the CMA, many foreign owned plants have closed production facilities in Canada, many domestically owned firms have downsized production facilities, and some are now producing in other countries. (CMA, 1992, p.43) Since 1989, there has been a substantial increase in complete and partial plant closures in the Canadian manufacturing industry.

There have been substantial job losses in the manufacturing industry since 1989. These job losses were caused by the restructuring of the manufacturing industry, which, in turn, was caused by the implementation of the FTA. It can be concluded, therefore, that the decline in the level of employment in the manufacturing industry had a direct negative impact on the level of productivity of that industry. In other words, a decline in the level of productivity of the manufacturing industry has followed the implementation of the FTA has been caused by the FTA.

### iii) CHANGES IN THE LEVEL OF OUTPUT

According to Statistics Canada, between June 1989 and May 1992, manufacturing output fell by 12.1 per cent. This represents a decline of 5.3 per cent in 1990, and a further decline of 6.7 per cent in 1991. (CLMPC, 1992, p.10) Production output of the manufacturing industry has declined more rapidly than the production output of the Canadian economy as a whole. During that same period, for example, furniture output fell by 32 per cent, textile by 20 per cent, clothing by 33 per cent, plastic by 7 per cent, painting and production by 21 per cent, machinery by 28.6 per cent, auto parts by 11 per cent, clothing by 23.1 per cent, primary textiles by 26.0 per cent, wood by 17.8 per cent and fabricated metal products by 21.8 per cent. (Campbell, September 1992, p.4; CLMPC, 1992, p.10)

The number of bankruptcies declared by Canadian manufacturing firms between 1989 and 1992 probably had a direct impact on the decline in output experienced in that area of the Canadian economy. There were a total of 400,000 bankruptcies declared in Canada during that period. According to Statistics Canada, 9,407 companies declared bankruptcy between January and October of 1991. This number of bankruptcies is 25 percent higher than for the same period in 1990, and 41 percent higher than for the same period in 1988. The furniture industry, for example, has been particularly hard hit. According to the Vice-President of the Council of Furniture Manufacturers, since 1989, 25 percent of their members have declared bankruptcy, and 32 percent have relocated to the U.S. (Campbell, January 1991, p.21)

Since the implementation of the FTA, there has been an unprecedented decline in the levels of employment in the manufacturing industry. Furthermore, during the same period, there has been a dramatic decrease in the levels of output of the manufacturing industry. Employment levels in the manufacturing industry declined at a faster rate than the output levels of the industry. (Campbell, September 1992, p.4)

The goal of increased productivity for the Canadian manufacturing industry was achieved at the expense of decreases in employment. This was contrary to the pro-FTA studies who predicted increased productivity and increased employment. This expectation was unrealistic, misleading, and represents a paradox in the thinking of pro-FTA advocates who believe that the FTA will allow the Canadian manufacturing industry to, at the same time, increase productivity and increase employment.

#### iv) CHANGES IN THE LEVEL OF COMPETITIVENESS

The two variables which will be used to measure competitiveness of the Canadian manufacturing industry are "product specialization" and "market penetration". According to the neoclassical and industrial organization schools trade theorists, increased specialization in a sector is an indication of a more efficient and competitive sector. This relationship has been widely accepted in the economic community and has remained relatively unchallenged. Following this line of thought, changes in the level of specialization in the manufacturing industry should provide some insight into changes in the manufacturing industry's level of competitiveness.

"Specialization" has been defined by economists as the production of a similar line of products, or, in the negative sense, refers to the fact that a manufacturer is not producing a wide variety of products. (Douphin, 1978, p.31) A more comprehensive definition of "specialization" would cover instances where a firm produces one product, or where a firm produces several products which are relatively similar. Therefore, for the purpose of this study "specialization" is defined as the production of one product or of a group of related products. Consequently, a firm will be considered to have increased its specialization level if it reduces the variety of unrelated products it produces. Similarly, a firm will be said to have decreased its level of specialization, if it increases the number of products it produces, or if it moves from the production of one product to the production of unrelated products.

"Increased market penetration" has not been identified by the pro-FTA studies or by the FTA negotiators as an indicator of the ability of a firm to compete. In part A of this section, however, we saw that "increased market penetration" was a positive sign of a firm's ability to compete. "Market penetration", for the purpose of this study, is defined as the ability to expand a share of a market, by increasing exports, in the case of foreign markets, and/or increasing shipments to the domestic markets.

If there has been an increase in the level of specialization of the Canadian manufacturing firms, or in the penetration of their domestic or U.S. markets, since the implementation of the FTA, it will indicate that the FTA had a positive impact on the competitiveness of that industry. If, however, there has been no change, or a decrease in specialization or market penetration, since the implementation of the FTA, it will indicate that the FTA did not cause an increase in the Canadian manufacturing industry's ability to compete. For the purpose of this study it will be assumed that only the FTA had an impact on these variables.

## Changes in levels of specialization

A sample group consisting of 11 Canadian manufacturing firms holding membership in the Business Council on National Issues (BCNI), a pro-FTA group, was studied, to determine if these manufacturing firms increased their level of specialization between 1986 and 1991. In other words, to determine if the FTA had a positive impact on these firms' ability to compete. This group was selected because the BCNI is a national body and should, therefore, represent a cross-section of manufacturing firms in Canada. These firms are also members of the Canadian Manufacturing Association (CMA).

The information was gathered from Made in Canada B.O.S.S Business Opportunities Sourcing System (B.O.S.S), between 1986 and 1991. This document was produced by the government of Canada Department of Regional Industrial Expansion. The B.O.S.S. is a yearly report on the activities of Canadian manufacturing firms. Included in the B.O.S.S., are the names of the firms, type of product(s) manufactured, whether a product is exported and to which country(ies), foreign market(s) of interest to exporters, and the total value of export sales. The information contained in the B.O.S.S. is gathered from questionnaires filled on a voluntary basis by the companies mentioned in B.O.S.S..

"Specialization" is defined as a restriction of production to one product or to a group of related products. Table one and two of Appendix three presents the results of this research. None of the 11 firms were producing

only one product during the period studied. Between 1986 and 1988, there were only two firms producing products which were not related; ITT and Stelco. By 1988, however, all firms were producing related products. Between 1989 and 1991, all firms were still producing related products, in other words, were still all specialized.

The results of this study indicate that these firms were already specialized prior to the implementation of the FTA, since they were all producing related products prior to 1989. Therefore, there is no conclusive evidence indicating that the FTA caused an increase in the level of specialization of these firms, contrary to expected results. In fact, this analysis indicates that these firms were able to specialize without a FTA and that, therefore, the FTA, may have little or no impact on the ability of a firm to specialize. A 1986 study by Daly and MacCharles supports this conclusion. This study shows that there was during the early 1980's - well before the FTA - a movement towards specialization in the manufacturing industry.

In 1986, Daly and MacCharles showed in a study that manufacturing firms in Canada were already becoming more specialized. The Daly-MacCharles study surveyed thirty middle- and small-sized manufacturing firms from 1981 to 1986, to assess their ability to improve their ability to compete. The following table sum up the results of their study.

TABLE 1.1: RESPONSE TO CHANGING TRADE ENVIRONMENT BY SAMPLE  
MANUFACTURING FIRMS

YEAR	Left or leaving industry	Already special- ized	Becoming Specialized	Not specialized	Total
1981	---	7	---	23	30
1986	5	7	7	11	30

Source: Daly and MacCharles Sample of Firms p. 41

According to the Daly-MacCharles study, between 1981 and 1986, just under half of the 30 firms studied were becoming or had become more specialized. Eleven of the thirty firms remained diverse in their production. Seven of the remaining nineteen firms were already specialized at the beginning of the study. Another seven were in the process of specializing. Five had either left the market or were in the process of doing so, due to increased competition, declining market shares and decreasing profitability. (Daly and MacCharles 1986 p.42)

These findings indicate clearly that specialization of the Canadian manufacturing firms did not follow, in many cases, the FTA, but preceded it. The prediction stating that the FTA would cause specialization seems therefore, simplistic, since many Canadian manufacturing firms were able to specialize without the FTA. Appendix three table one indicates that of the 12 firms in the sample group, all were specialized prior to the

implementation of the FTA and all remained specialized after the implementation of the FTA.

This analysis indicates that there was already specialization in the manufacturing industry prior to the FTA. It suggests that the FTA had little or no impact on the ability of the firms studied to specialize, contrary to the predictions of pro-FTA advocates. Therefore, it can be concluded that the FTA had little or no impact on the competitiveness of the sample group studied. Based on these results, it is plausible to conclude that the FTA had little or no impact on the ability of the Canadian manufacturing industry to specialize, to become more competitive.

## Changes in levels of market penetration

This study uses a second variable to measure increases in the ability to compete of the Canadian manufacturing industry, since the implementation of the FTA: market penetration. "Market penetration" is defined as the ability to increase one's share of a market by increasing one's exports, and/or increasing one's shipments to one's domestic markets. As explained before, increases in market penetration are considered to be indicators of increases in the ability of an industry to compete. In the same manner, a decrease in market penetration is considered to be an indicator of a decrease in the ability of an industry to compete. The number of exports to the U.S. by the Canadian manufacturing sector will be analysed, to determine if there was an increase in exports to the U.S. from that industry, since the implementation of the FTA. Shipments from that industry to its domestic markets will also be analysed to determine if there was an increase in domestic market penetration, since the implementation of the FTA.

Between 1988 and 1991, there was a net decline in Canadian exports to the U.S. in at least six Canadian manufacturing sectors. The exports to the U.S. from the Canadian furniture sector fell by 11 per cent between 1988 and 1991. Canadian imports of furniture, however, increased by 88 per cent over the same period. The exports to the U.S. from the Canadian clothing sector decreased by 3.7 per cent, while Canadian imports of clothing from the U.S. rose by 84 per cent. The Canadian exports of chemicals to the U.S. rose by 6.7 per cent, but Canadian imports of these

products from the U.S. rose by 19.1 per cent. In the Printing and Publishing sector, Canadian exports fell by 26 per cent, while Canadian imports in that sector rose by 33 per cent. Canadian iron and steel exports to the U.S. fell by 13 per cent, while Canadian imports from the U.S. increased by 28 per cent. In this case the increase in Canadian imports represented an increase of 17 per cent in U.S. share of the Canadian iron and steel market. Finally, during the same period, Canadian soft wood lumber exports to the U.S. fell by 11 per cent and auto parts exports to the U.S. fell by 27 per cent. (Campbell, September 1992, pp.4-6) These trends indicate clearly that Canadian manufacturing firms are not increasing their penetration of the "open" market "created" by the FTA.

Furthermore, the amount of goods exported from Canada to the U.S. increased by only 4.9 per cent between 1988 and 1991. This represents the smallest growth in Canadian exports to the U.S. over a three year period since 1960. In addition, according to the U.S. Commerce Department, imports from countries such as Australia, Mexico, and South Africa, grew faster than Canadian imports between 1988 and 1991. This means that Canadian manufacturers are losing shares of the U.S. market to countries who do not have a FTA with the U.S. (Campbell, September 1992, p.5, 9)

In 1983, 73 per cent of the manufacturing goods sold in Canada were made in Canada. In 1992, only 55 per cent of manufacturing goods sold in Canada were made in Canada. In 1992, Canadian manufacturing shipments to domestic markets, have dropped by 10 per cent, compared to 1991 shipments. A CMA survey indicates that, by April 1992, 44 per cent of

Canadian companies surveyed were losing their domestic market share. (CMA, 1992, p.43) Furthermore, the U.S. share of the Canadian market is increasing. Appendix four, indicates that there has been a significant increase in the U.S. share of the Canadian market between 1985-1987 and 1991. In the furniture industry for example, the increase has been 347 per cent. In all industries examined except one there has been an increase in the U.S. share of the Canadian domestic market. To sum it up; penetration of the Canadian market by Canadian manufacturing firms is diminishing, while penetration of the Canadian market by U.S. exports has increased.

The results of the analysis of changes in levels of market penetration indicate that three years after the FTA, the Canadian manufacturing industry is not more, but less competitive. The manufacturing industry in general did not increase its penetration of the U.S. market, since the implementation of the FTA. In fact, it lost ground in the U.S. market. Furthermore, the Canadian manufacturing industry's share of the Canadian market is diminishing. For these reasons, it can be concluded from this analysis of changes in level of market penetration that the FTA, three years after its implementation, did not increase the ability to compete of the Canadian manufacturing industry.

## v) CONCLUSION

In part A of Section II, we saw that the provisions of the FTA did not guarantee for the manufacturing industry free access to the U.S. market. Furthermore, it was found that factors such as, increasing market penetration, access to capital, and government reforms, which can potentially all affect the productivity and the ability to compete of an industry, were not considered by pro-FTA studies or by the Canadian negotiators of the FTA, in their costs/benefits assessments. These omissions, it was argued, had an impact on the validity of the predicted costs and benefits of the FTA for the manufacturing industry.

Several important conclusions can be drawn from part B of section II. First, the Canadian manufacturing industry is not more productive or more competitive three years after the implementation of the FTA. Second, one of the more dramatic outcomes of the FTA is the unprecedented increase in the levels of unemployment in the Canadian manufacturing sector. Furthermore, job losses and decreased levels of output, which resulted from restructuring and relocation of production in the manufacturing industry, have caused a weakening of the Canadian manufacturing industry. Third, there was no evidence of increased specialization in the sample group of manufacturing firms studied since the implementation of the FTA. In fact, it was found that specialization in the manufacturing industry began prior to the FTA. It is plausible to conclude, therefore, that the FTA had little impact on specialization in the manufacturing industry. In addition, in general, the manufacturing industry's share of the U.S. market

has diminished. Finally, its domestic market share has diminished too. It can be concluded from these results that the FTA, contrary to the predicted costs and benefits, did not contribute to produce a more productive or competitive Canadian manufacturing sector.

### SECTION III: CONCLUSION

The objective of this thesis was to identify the impact of the FTA on the Canadian manufacturing industry. Its main hypothesis is that pro-FTA advocates have overstated the potential benefits of the FTA for the Canadian manufacturing industry. In doing so, they have contributed to the implementation of questionable policies which have had and still have negative impacts on the Canadian manufacturing industry.

Section I, part A, reviews the theoretical foundations of the neoclassical and industrial organization schools of thought. In brief, both of these schools predict, for different reasons, that, once a free trade environment is established, trade necessarily leads to specialization.

Section I, part B, presents a critique of the cost and benefit predictions of three pro-FTA studies. It reveals that these pro-FTA studies applied assumptions which are not supported by empirical evidence and which are at variance with historical facts. For these reasons, Section I, part B, concludes that these pro-FTA studies are invalid. Furthermore, it argues that they may lead to invalid policy conclusions and that, therefore, they should not be used to justify policy decisions.

Section II, focuses on the Canadian manufacturing industry. Part A, questions the following assumption made by the pro-FTA studies: the FTA will guarantee access to the U.S. market. It indicates that non tariff barriers, antidumping laws and countervailing duties, which still exist

after the implementation of the FTA, can effectively deny Canadian manufacturing firms access to the U.S. market. It concludes, therefore, that the Canadian government did not reach one of its main objectives: to guarantee access for the Canadian manufacturing industry to the U.S. market. Furthermore, it shows that pro-FTA studies failed to consider important factors, such as availability of capital, market penetration, and government reforms, which also have an impact on productivity and competitiveness. For all these reasons, it concludes that the costs and benefits forecasted by pro-FTA studies are invalid.

Section II, part B presents an empirical test which measures productivity and competitiveness in the manufacturing industry since the implementation of the FTA. This test reveals that the FTA did not produce a manufacturing industry which is more productive and/or competitive, but rather an industry which is in distress.

The state of the Canadian manufacturing industry has been directly influenced by the decision to enter into a bilateral FTA with the U.S.. This decision was founded on pro-FTA studies which relied on questionable assumptions and produced invalid costs and benefits assessments. These studies predicted significant benefits for the Canadian manufacturing industry under a FTA. Three years after the FTA, however, it is evident that there were and still are more costs than benefits for the Canadian manufacturing industry.

Some comments will be made about the methodology used in this thesis,

before concluding it. The first concerns the size of the group used to measure specialization in the Canadian manufacturing industry in part B of section II. The size of the group – a very small one – may have had an impact on the preciseness of the results. While it is reasonable to assume that a national body such as the BCNI represents a cross-section of the manufacturing industry, caution must be exercised when a small group of manufacturers is used to draw conclusions for the entire Canadian manufacturing industry. The use of a larger cross-section of the manufacturing industry would improve the reliability of the results. The second comment is on the following assumption made in part B of Section II: the FTA was the only factor which had an effect on the variables considered. While this assumption is necessary for this analysis, there may be other factors which may have influenced these variables (e.g. impact of the international market forces on the Canadian manufacturing industry). Again, further tests and the consideration of the international market's influences on the Canadian manufacturing industry would improve the reliability of the analysis presented.

In spite of its weaknesses, this thesis presents a comprehensive analysis of the impact of the FTA on the Canadian manufacturing industry. It addresses important issues related to the state of the Canadian manufacturing industry, and the limits of pro-FTA studies, which were used to support policy decisions. Furthermore, it challenges pro-FTA studies, by showing that the assumptions used to arrive at costs and benefits predictions were flawed.

The same assumptions and arguments used by pro-FTA advocates are now being used to support the North American Free Trade Agreement (NAFTA). The NAFTA is expected to be concluded in the Spring of 1993. At this time, it will supersede the FTA, and is supposed to establish free trade between the U.S., Canada and Mexico. Unless the flaws which were identified in the costs and benefits predictions and in the FTA itself, are considered and corrected, it is reasonable to forecast that the NAFTA agreement will have a similar outcome for the Canadian manufacturing industry to that of the FTA.

APPENDIX 1: JOB LOSSES BY SECTOR OF THE CANADIAN MANUFACTURING  
INDUSTRY SINCE 1981

SECTOR	PERCENTAGE 1989-1992	PERCENTAGE 1989-1991	PERCENTAGE 1989-1990	PERCENTAGE 1981-1988
Furniture	20.0 %	----	----	----
Furniture & Fixtures	----	32.0 %	----	----
Textile	22.0 %	28.2 %	29.7 %	15.5 %
Clothing	35.0 %	29.5 %	17.8 %	12.0 %
Plastics	35.0 %	----	----	----
Rubber & Plastics	----	26 %	6.3 %	+ 29.2 %
Painting & Publishing	15.0 %	17.8 %	9 %	+ 28.6 %
Chemicals	----	15.2 %	7.6 %	0.2 %
Paper & Allied	----	16.2 %	13.2 %	9.3 %
Transport & Equipment	----	16.8 %	7.3 %	+ 23.9 %
Auto parts	22.0 %	----	----	----
Machinery	31.0 %	31.4 %	----	----
Overall	20.0 %	23.1 %	6.9 %	0.9 %

(Campbell, 1991, p.19; Campbell, September 1992, pp.3-4; Campbell,  
January 1992, p.4))

APPENDIX 2: SELECTED MANUFACTURING CLOSURES & PARTIAL CLOSURES  
SINCE 1989

COMPANY	TRANSFER LOCATION	JOB LOSS
ALLIED-SIGNAL	U.S.	400
AMERLOCK INC	U.S.	140
BECKMAN IND.	MEXICO	90
BENDIX SAFETY RESTRAINTS	U.S.&MEXICO	400
BESF CANADA	U.S.	150
B.F. GOODRICH	U.S.	70
BILT-RITE UPHOLSTERING	U.S.	400
BLACK&DECKER	U.S.	150
BRISTOL-MEYERS SQUIB	U.S.	124
BURLINGTON CARPETS	U.S.	450
CANADIAN COLEMAN	U.S.	214
CANASPHERE INC	U.S.	5
CANRON, INC	U.S.	20
CATERPILLER	U.S.	400
CELANESE	U.S.	108
CLAIROL CANADA INC.	U.S.	228
CLEVITE	U.S.	50
COBI FOODS	U.S.	250
COLGATE PALMOLIVE	U.S.	240
COMMANDER ELEC.	U.S.	190
CONSUMER GLASS	U.S.	95
CROYDEN	U.S.	360
DIXON TICONDEROGA	U.S.	60
DOUBLEDAY	U.S.	48
ELASTOMER	U.S.	50
ELECTRO PORCELAIN	US&MEXICO	200
EMBLEMATIC	MEXICO	40
FORD	MEXICO	140

COMPANY	TRANSFER LOCATION	JOB LOSS
FOURNIER STANDS	U.S.	50
FREUDENBURG	U.S.	57
FRISKIES PET PROD	U.S.	150
GENERAL ELECTRIC	MEXICO	200
GENERAL MOTERS (TRIM PLANT)	U.S.	255
GENERAL TIRE	U.S.&MEXICO	950
GILLETTE	U.S.	530
GOOD YEAR	U.S.	144
GROLIER	U.S.	90
HARTZ CANADA	U.S.	26
HARVARD IND.	U.S.	150
INGLIS	U.S.	1000
INTERNATIONAL PLAYING CARD CO	U.S.	35
JCI EXPLOSIVES	U.S.	200
JOHNSON CONTROLS	U.S.	153
KANDRESCO	U.S.	200
KELLOG	U.S.	340
LEVITON MFG.	U.S.	175
MARR'S LEISURE PROD.	U.S.	40
MIDAS	U.S.	140
MOTOR WHEEL	U.S.	300
NEWCOR INC	U.S.	40
KNOLL WALL	U.S.	114
OLAN MILLS	U.S.	95
OUTBOARD MARINE	U.S. & MEXICO	290
PHILIPS ELECTRONICS	HOLLAND	442
PICKER INT	U.S.	160
PLAYTEX	MEXICO & CARIBBEAN	160
PROGRESS CO.	U.S.	75
RANDOM HOUSE	U.S.	73
REDIRACK LTD	U.S.	135
ROBERTSON CONTROLS	U.S.	150

COMPANY	TRANSFER LOCATION	JOB LOSS
SCHLEGEL INC.	U.S.	104
SCHOLL PLOUGH	U.S.	78
SCHWITZER	U.S.	80
SHELLAR GLOBE	MEXICO	350
SPEEDO	U.S.	70
SQUARE D	U.S.	140
STAR KIST TUNA	U.S.	250
STERLING DRUG	PUERTO RICO	180
STONE CONSOLIDATED	U.S.	150
SUNARHAUSEMAN	U.S.	280
SUNBEAM CORP	MEXICO & U.S.	200
SUPERIOR PERFORMANCE	U.S.	150
THERMODISC LTD	U.S.&MEXICO	300
TRIDON LTD.	U.S.	550
TUPPERWARE	U.S.	160
UNICAN SECURITY	U.S.	250
UNIROYAL GOODRICH	U.S.	1000
UNISYS CORP.	MEXICO & U.S.	230
UNITED TECHNOLOGIES	U.S.&MEXICO	319
WANG CANADA	U.S.	65
WARNER LAMBERT	U.S.	35
WAYNE CANADA	U.S.	145
WCI CANADA LTD	U.S.	100
WOLVERINE TUBE	U.S.	180
WOODBIDGE	U.S.	140

(CAMPBELL, JANUARY-FEBRUARY 1991, P.20-21; CAMPBELL, JANUARY 1992, P.22; STANFORD, DECEMBER 1991, P.7)

## APPENDIX 3: RESULTS OF TEST ON SPECIALIZATION

TABLE 1 - 1986-1988

	1986			1987			1988		
	A	B	C	A	B	C	A	B	C
C-I-L	42	42	0	42	42	0	41	41	0
DOMTAR	23	23	0	23	23	0	14	14	0
DU PONT	5	5	0	5	5	0	21	21	0
FORD	3	3	0	3	3	0	3	3	0
HONEYWELL	---	---	---	5	5	0	18	18	0
INCO	20	20	0	20	20	0	13	13	0
ITT	58	44	14	29	28	1	29	29	0
MANALTY	3	3	0	5	5	0	5	5	0
NORANDA	40	40	0	40	40	0	39	39	0
REVELSTOKE	---	---		1	1	0	---	---	
STELCO	330	330	0	327	326	1	331	331	0

TABLE 2 - 1989-1991

	1989			1990			1991		
	A	B	C	A	B	C	A	B	C
C-I-L	41	41	0	2	2	0	2	2	0
DOMTAR	14	14	0	14	14	0	100+	100+	0
DU PONT	21	21	0	21	21	0	2	2	0
FORD	3	3	0	3	3	0	9	9	0
HONEYWELL	18	18	0	18	18	0	9	9	0
INCO	13	13	0	13	13	0	13	13	0
ITT	29	29	0	29	29	0	72+	72+	0
MANALTA	5	5	0	5	5	0	---	---	---
NORANDA	39	39	0	---	---	---	---	---	---
REVELSTOKE	---	---	---	---	---	---	8	8	0
STELCO	331	331	0	331	331	0	200+	200+	0

A = TOTAL PRODUCTS MANUFACTURED

B = TOTAL PRODUCTS SPECIALIZED

C = TOTAL PRODUCTS NOT SPECIALIZED

+ = PLUS

## APPENDIX 4: U.S. SHARE OF THE CANADIAN MARKET

INDUSTRIES	% U.S. SHARE 1985-1987	% U.S. SHARE 1991	% CHANGE	INCREASE IN SHARE OF MARKET
FOOD INDUSTRIES	5.1	8.0	+2.9	57 %
BEVERAGE INDUSTRIES	1.0	1.7	+0.7	70 %
RUBBER PRODUCTS	21.8	37.9	+16.1	74 %
PLASTIC PRODUCTS	19.4	25.5	+6.1	31 %
LEATHER PRODUCTS	4.3	7.5	+13.2	74 %
PRIMARY TEXTILES	15.1	22.7	+7.6	50 %
TEXTILE PRODUCTS	9.1	19.5	+10.4	114 %
CLOTHING	1.3	3.2	+1.9	146 %
FURNITURE	5.9	26.4	+20.5	347 %
PAPER	10.2	20.3	+10.1	99 %
PRINTING AND PUBLISHING	11.1	13.4	+2.3	21 %
PRIMARY METELS	18.7	25.7	+7.0	37 %
FABRICATED METAL PRODUCTS	13.7	19.4	+5.7	42 %
MACHINERY	49.1	51.2	+2.1	4.3 %

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INDUSTRIES	% U.S. SHARE 1985-1987	% U.S. SHARE 1991	% CHANGE	INCREASE IN SHARE OF MARKET
TRANSPORTATION EQUIPMENT	71.6	55.3	-16.3	-23 %
ELECTRICAL AND ELECTRONIC EQUIPMENT	39.6	44.1	+4.5	11 %
CHEMICALS	21.9	26.9	+5.0	23 %
NON METALLIC MINERAL PRODUCTS	11.5	19.1	+7.6	66 %
REFINED PETROLEUM AND COAL	4.9	5.9	+1.0	20 %

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SOURCE: THE MINISTER FOR INTERNATIONAL TRADE, OCTOBER 20, 1992: NOT PUBLISHED.

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BIBLIOGRAPHY

- Aho Michael C., William Diebold, Jr., (ed), *Bilateralism, Multilateralism and Canada In U.S. Trade Policy*, Cambridge, Massachusetts: Ballinger Publishing Company, 1988.
- Anderson F.J., "Trade, firm size, and product variety under monopolistic competition, *Canadian Journal of Economics*, February: XXIV.No.1, 1991.
- Bailey E. and A. Friedlaender, "Market Structure And Multiproduct Industries," *Journal of Economic Literature*, September, Vol.XX:pp.1024-1048, 1982.
- Balassa B., *Trade Liberalization among Industrial Countries: Objectives and alternatives*, Council on Foreign Relations Atlantic Policy Studies, New York:McGraw-Hill, 1957.
- Baldwin. John R. and Paul K. Gorecki, *The Role of Scale in U.S. Productivity Differences in the Manufacturing Sector 1970-1979*, Toronto: University of Toronto Press, 1986.
- Barlow Maude, "Free trade in the litmus test of what Canada is about. So why haven't the Liberals taken a stand on the issue?" *The Canadian Forum*, Duncan Cameron, (ed), Ottawa: Formac Publishing, 1992.
- Belous Richard, and Rebecca S. Hartley, (ed), *The Growth of Regional Trading Bloc in the Global Economy*, Washington, D.D.: National Planning Association, 1990.
- Bhagwati Jagdish, *International Factor Mobility*, London: MIT Press, 1983.
- Britton John, "Locational Perspectives on Free Trade for Canada," *Canadian Public Policy*, Vol. 4, No. 4, 1978.

Business Council on National Issues (BCNI), "Business's stake in the Free Trade Negotiations Perspectives on Manufacturing" New York, 1986.

Cameron Duncan, (ed), The Free Trade Papers, Toronto: James Lorimer & Company, Publishers, 1986.

Campbell Bruce, "A Critique of 'The Global Trade Challenge' A Tory Trade Tabloid," Draft, September 1992.

Campbell Bruce, Canada Under Siege. Three Years into the Free Trade Agreement, Ottawa: Canadian Centre for Policy Alternatives, January 1992.

Campbell Bruce, "Recession made in Canada; going south - 2 years under free trade," Canadian Dimension, January-February 1991.

Canadian Labour Congress, The Economy, Ottawa: The Canadian Labour Congress, 1992.

Canadian Labour Market and Productivity Centre (CLMPC), Quarterly Labour Market and Productivity Review, Ottawa: CLMPC, 1992.

Canadian Manufacturing Association, The Aggressive Economy,: Competing to Win, Ottawa, 1992.

Crookell Harold, "Specialization and International Competitiveness," Business Quarterly, Vol. 49, Fall:pp. 26-31, 1984.

Daly D.L., Scale and Specialization In Canadian Manufacturing, Ottawa: Economic Council of Canada, 1968.

Daly D.L., and MacCharles, Canadian Manufacturing Exports, Ottawa, 1986.

Daly D.L., and Someshwar Rao, "Free Trade, Scale Economies And Production Growth In Canadian Manufacturing," *The Manchester School Of Economics and Social Studies*, December, No.4: pp.391-402, 1986.

Dauphin Roma, *The Impact of Free Trade in Canada*, Ottawa: Economic Council of Canada, 1978.

Department of External Affairs, *Canadian Trade Policy for the 1980s: A Discussion Paper*, Ottawa: Ministry of Supply and Services, 1983.

Department of External Affairs, *The Decision*, in Duncan Cameron, *The Free Trade Papers*, Toronto: James Lorimer and Company, 1986 pp11-25.

Eastman, H.C. and S. Stykolt, *The Tariff and Competition in Canada*, Toronto: Macmillan, 1967.

El-Agraa A.M., *The Theory of International Trade*, New York: St. Martin's Press, 1983.

Findlay Ronald, *Trade and Specialization*, Middlesex: Penguin Books, 1970.

Findlayson, J.S., "Canadian International Economic Policy: Context, Issues and a Review of Some Recent Literature", in D. Stairs and G.R. Winham (eds), *Canada and the International Political Economic Environment*, Toronto: University of Toronto Press, 1985.

Finn Ed, and Duncan Cameron, (ed), *The Facts on the free trade Canada Don't trade it away*, Ottawa: Canadian Union of Public Employees, 1988.

Furlong Kieran, and D. Moggach, *The Political Economy of Free Trade: Sectors, Cycles, and the State*, Ottawa: Canadian Centre for Policy Alternatives, 1988.

Furlong Kieran, and D. Moggach, "Efficiency, Competition, and Full Employment in Canada Free Trade Literature", *Studies in Political Economy*, Autumn, 33:135-59, 1990.

Garos C., *Canada-United States Free Trade Background, Issues and Impact*, Amsterdam; VU University Press, 1990.

General Agreement on Tariffs and Trade, Canada-Administration of the Foreign Investment Review Act: Report of the Panel, Document L/5504, Geneva:GATT, 1983.

Gorden David, Thomas Weisskopf and Samuel Bowles, "Power, Accumulation and Crisis: The Rise and Demise of the Postwar Social Structure of Accumulation," in *The Imperiled Economy*, New York, 1987.

Government of Canada, "The Global Trade Challenge", *Special Tabloid Supplement*, 1992.

Gray R.C., *Trade Policies in the 1980s: An Agenda for Canadian-U.S. Relations*, Montreal: C.D. Howe Institute, 1981.

Greenaway D., and Tharakan P.K.M., *International Competition and International Trade*, New Jersey: Humanities Press, 1986.

Grimwade Nigel, *International Trade New Perspectives of Trade, Production and Investment*, London: Routledge, 1989.

Grinspun Ricardo, *North American Free Trade Area: A Critical Economic Perspective*, Ottawa: Canadian Center for Policy Alternatives, September 1991.

Hamilton, Bob and John Whalley, "Geographically Discriminatory Trade Arrangement," *Review of Economic and Statistics*, August, 67: p.446-55, 1985.

Harris, Richard, "Applied General Equilibrium Analysis of Small Open Economies with Scale Economies and Imperfect Competition," *American Economic Review*, December, 74:p.1016-32, 1984.

Harris, Richard G and David Cox, *Trade, Industrial Policy, and Canadian Manufacturing*, Toronto: Ontario Economic Council, 1984.

Harris, Richard, "Summary of a Project on the General Equilibrium Evaluation of Canada Trade Policy," in John Whalley (ed), *Canada-United States Free Trade*, Toronto: University of Toronto Press, 1986.

Harris Richard, *Trade, Industrial Policy and International Competition*, Macdonald Commission research study Volume 13, 1987.

Hay K.A.J., "Canadian Trade Policy in the 1980s", *International Perspectives*, July/August: pp.16-20, 1982.

Hazledine Tim, "Review Article and Comment Canada-US Free Trade? Not So Elementary, Watson," *Canadian Public Policy - Analyse de Politiques*, XIV:2 p.204-213, 1988.

Heckscher E. F., *The Effects Of Foreign Trade On The Distribution Of Income*, Ekonomisk, Uppsala. 1920.

Helpman E. and Krugman P., *Market Structure and Foreign Trade*, London:MIT Press, 1985.

Henderson M.D., *The Future on the Table*, North York:Masterpress, 1987.

Holtfrerich Carl-Ludwig, *Interactions in The World Economy Perspectives from International Economic History*, New York: New York University Press, 1989.

Hufbauer G.C., and A.J. Samet, "A US View of Freer Trade",  
International Perspectives, March/April: pp.27-28, 1985.

Hufbauer and J.S. Erb, Subsidies in International Trade, Washington,  
D.C.: Institute for International Economics, 1984.

Jones R. W., and Neary, International Trade: Surveys of Theory and  
Policy, New York: Elsevier Science, 1986.

Karikari J.A., "International Competitiveness and Industry Pricing in  
Canadian Manufacturing," Canadian Journal of Economics, Vo.  
XXI/2:p.411-143, 1988.

Kim C., Evolution of Comparative Advantage, Tubingen: Mohr press,  
1983.

Klamer Arjo, Donald N. McCloskey and Robert M. Solow, (ed), The  
consequences of economic rhetoric, Cambridge: Cambridge University  
Press, 1988.

Kolko J., Restructuring the World Economy, New York and Toronto:  
1988.

Krugman P., Strategic Trade Policy and the New International  
Economics, London :MIT Press, 1986.

Krugman, Paul R, "Is Free Trade Passe?" Journal of Economic  
Perspectives, Fall, 1:p.131-44, 1987.

Leamer E.E., Sources of International Comparative Advantage: Theory  
and Evidence, London: MIT Press, 1984.

Lipsey R., D. Purvis and P. Steiner, Economics, London: Harper and Row,  
Publishers, 1982.

- Lipsey R., and M. Smith, *Taking the Initiative: Canada's Trade Options in a Turbulent World*, Montreal: C.D. Howe Institute, 1985.
- MacCharles, Donald, "Do Foreign-Controlled Subsidiaries Have a Future?" *The Canadian Business Review*, Vol. 11, No. 1, 1984.
- Magee S.P., *International Trade*, London: Addison-Wesley, 1980.
- Markusen James R. and James R. Melvin, *The Theory of International Trade and Its Canadian Applications*, Toronto: Butterworth, 1984.
- Markusen James R., "New Research Shows New Benefits" in *The Free Trade Papers*, Duncan Cameron editor, Toronto: James Lorimer and Company, 1986.
- Maskus K.E. *The Changing Structure of Comparative Advantage in American Manufacturing*, Ann Arbor: UMI Research Press, 1983.
- McCloskey, David N., *The Rhetoric of Economics*, Madison: University of Wisconsin Press, 1985.
- McNally David, "Beyond Nationalism, Beyond Protectionism: Labor and the Canada-U.S. Free Trade Agreement," *Review of Radical Political Economics*, Vol. 22(1):p.179-194, 1990.
- Mersereau Berry, "Characteristics of importing firms 1978-86," *Canadian Economic Observer*, Statistics Canada, cat. No. 11-010, August 1992.
- Metzger S.D., *Lowering Nontariff Barriers: U.S. Law, Practice, and Negotiation Objectives*, Washington, D.C: Brookings Institution, 1974.
- Pool J.C. and Stephen C. Stamos, *International Economics Theory, Policy, and Practice*, Toronto: Lexington Books, 1990.

Porter, Michael E., *Competitive Strategy: Techniques for Analyzing Industries and Competitors*, New York: Free Press, 1980.

Rao, P.S. and Preston, R.S., "Inter-Factor Substitution, Economics of Scale and Technical Change: Evidence from Canadian Industries," *Empirical Economics*, Vol.9, No.2. pp. 87-111, 1984.

Richard D., *The Principles Of Political Economy And Taxation*. 3rd ed.:London. 1821.

Salembier G.E., Moroz A.R., and Stone F., *The Canadian Import File*, Montreal: Institute for Research on Public Policy, 1987.

Sarna A.J., "The Impact of a Canada-US Free Trade Area" *Journal of Common Market Studies*, Volume 13, No. 4 June 1985 pp299-317

Sayer A., *Capital and Class*, "New developments in manufacturing: the Just-in Time system", 30, pp 43-72, 1986.

Schott, Jeffrey J. "More Free Trade Areas?" In *Free Trade Areas and U.S. Trade Policy*, (ed) Jeffrey J. Schott, Washington, D.C.: Brookings Institute of International Economics, 1989.

Schott Jeffrey and Murray G. Smith, (ed), *The Canada-United States Free Trade Agreement: The Global Impact*, Washington D.C.: Institute For International Economics, 1988.

Section 301 (a) of the U.S. Trade Act of 1974, as amended by Section 304 (b) of the U.S. Trade Act of 1984.

Sharp Mitchell, "Canada-US Free Trade Options for the Future," *International Perspectives*, Autumn, 1972.

Shone R., *The Pure Theory of International Trade*, London: Macmillan, 1972.

Smith Michael, "Sectoral Free Trade with Canada," *International Perspectives*, May-June, 1984.

Srinivasan T.N., and John Whalley, (ed), *General Equilibrium Trade Policy Modeling*, London: The MIT Press, 1986.

Stanford James, C.G.E. *Models of North American Free Trade: A Critique of Methods and Assumptions*, New York: Graduate Faculty, New School for Social Research, April 1992.

Stanford Jim, *Going South: Cheap Labour As An Unfair Subsidy In North American Free Trade*, Ottawa: Canadian Centre for Policy Alternatives, December 1991.

Stone Frank, *Canada, The GATT and the International Trade System*, Montreal: Institute for Research on Public Policy, 1984.

Von Veithoven Ben, "The Applicability Of The Traditional Theory Of Economic Policy," *Journal Of Economic Surveys*, Vol. 4, No. 1, 1990.

Warnock John W., *Free Trade and the New Right Agenda*, Vancouver: New Star Books, 1988.

Warskett George, "Capital's Strength and Labour's Weakness under Free Trade," *Studies in Political Economy*, Autume, 33:pp. 113-34, 1990.

Watson, William G., "Canada-US Free Trade: Why Now?" *Canadian Public Policy - Analyse de Politiques*, XIII:p.337-49, 1987.

Whalley, J., "Trade, Industrial Policy, and Canadian Manufacturing by Richard G. Harris (with the assistance of David Cox): A Review Article," *Canadian Journal of Economics*, Vol. 17, No. 2:pp. 386-398, 1984.

Whalley J., *Canada-United States Free Trade*, Toronto: University of Toronto Press, 1985.

Whalley J., (ed), *Canadian Trade Policies and the World Economy*, Toronto: University of Toronto Press, 1985.

Whalley J., and R. Wige, "Prices and quantity Rigidities in Adjustment to Trade Policy Changes: Alternative Formulations and Initial Conclusions," Centre for the Study of International Economic Relations, University of Western Ontario, 1982.

Wilkinson B., "Canada-U.S. Free Trade and Some Options," *Canadian Public Policy*, Vol. VIII, Supplement, October: pp. 428-439, 1982.

Wilkinson B., "Some Comments on Canada-U.S. Free trade," G. Whalley, (ed), *Canada-United States Free Trade*, Toronto: University of Toronto Press, pp.91-102, 1985.

Wilkinson B., "I Beg to Differ", in Duncan Cameron *The Free Trade Papers*, Toronto: James Lorimer And Company, 1986.

Williams James, *The Canadian-United States Tariff and Canadian Industry: A Multisectoral Analysis*, Toronto: University of Toronto Press, 1978.

Wonnacott P., *The United States and Canada: The Quest for Free Trade*, Washington: Institute for International Economics, 1987.

Wonnacott R.J., *Selected New Developments in International Trade Theory*, Montreal: The Institute for Research on Public Policy, 1984.

Wonnacott R.J., "Trade Arrangements Among Industrial Countries: Effects on Canada", in Bela Balassa *Studies in Trade Liberalization*, Baltimore: The John Hopkins Press, 1967.

Wonnacott R. J. and Wonnacott P., "Free Trade between the United States and Canada: Fifteen Years Later," *Canadian Public Policy*, Vol. VIII, Supplement, October: pp.12-427, 1982.