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Justyna Wieloch

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Książkę dedykuję moim rodzicom
I dedicate this book to my parents

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Foreword

Economic integration is, beyond doubt, one of the most typical forms of cooperation in the contemporary global economy and it would be difficult to find a country that would not be a member of at least one integration grouping.

The investigation into this matter starts with the model laid out by Viner,[1] a precursor of the analysis of the welfare effects of economic integration. It was Viner who proposed concepts of trade creation and trade diversion as foundations for further, more comprehensive studies on the effects of trade agreements. Viner's model contains several constraints. As argued by Meade,[2] on the one hand, they help in avoiding the lack of clarity that could emerge in more detailed research, however, on the other hand, adopted assumptions impact conclusions which is why other researchers, such as Meade,[3] Gehrels,[4] as well as Lipsey,[5] Bhagwati,[6] and Richardson[7] have modified Viner's assumptions and demonstrated how that might influence the welfare effects of integration. Conclusions as to the latter issue, however, are not unambiguous.

Despite abundant subject-matter literature, only a handful of available empirical analyses focus on concrete groupings and seek to evaluate membership in a trade agreement through the lenses of trade creation and trade diversion effects.

The above is especially true of the North American Free Trade Agreement (NAFTA) bringing together just three countries but representing 30% of global trade, which makes it the second biggest integration grouping when it comes to

1 J. Viner, *The Customs Union Issue*, Carnegie Endowment for International Peace, New York 1950.

2 J.E. Meade, *The Theory of Customs Unions*, North-Holland Publishing, Amsterdam 1955.

3 *Ibidem*.

4 F. Gehrels, *Customs Union from a Single-Country Viewpoint*, "Review of Economic Studies" 1957, Vol. 24(6), pp. 61–64.

5 R. Lipsey, *The Theory of Customs Unions: Trade Diversion and Welfare*, "Economica" 1957, Vol. 24(93), February, pp. 40–46.

6 J. Bhagwati, *Trade-Diverting Customs Unions and Welfare Improvement: A Clarification*, "Economic Journal" 1971, Vol. 81(323), pp. 580–587.

7 M. Richardson, *Why a Free Trade Area? The Tariff Also Rises*, "Economics & Politics" 1994, Vol. 6(1), pp. 79–95.

trade volumes. Despite NAFTA's prominent role in the global economy, researchers, also in Poland, rarely deal with this integration block.[8]

This publication seeks to provide an evaluation of the impact of NAFTA membership on the economy of Mexico,[9] especially on the trade creation and trade diversion effects for this country. The goal set for this work distinguishes it clearly from other investigations into both the above-mentioned effects as most of these other studies deal with either theory or empirical analysis of particular integration groupings. There are very few studies that would address differences in levels of economic development of integrating economies.[10]

The publication seeks to validate two research hypotheses. The first of them argues that trade integration within the North American Free Trade Agreement is advantageous[11] to the Mexican economy. The second one states that the scale of trade diversion effect for Mexico depends on the intensity of trade flows between NAFTA members prior to the conclusion of the Agreement.

The hypotheses were formulated with reference to the subject-matter literature. As to the first one, we need to stress that although researchers agree that trade creation and diversion effects do exist, their scale often remains unknown. When examining the effects of integration, Venables[12] emphasizes that trade arrangement is bringing together countries whose income is relatively high leads to the convergence of their welfare. For low-income countries, the process is reversed, i.e., integration or, more precisely, the effects of trade creation and diversion result in the divergence of income of the member countries. In turn, for a developing economy whose resources of the skillful workforce are very limited, the best potential partner is a country with the abundance of such workforce. Such an arrangement enhances the trade creation effect and, at the same time, minimises the diversion effect. On top of that, a developing country experiences relatively significant increases in demand for exports, which improves its *terms of trade* and, by the same token, expands its share in benefits of integration.

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8 A.O. Krueger, *Trade Creation and Trade Diversion under NAFTA*, NBER Working Paper No. 7429, California 1999; D. Salvatore, *Economic Effects of NAFTA on Mexico*, "Global Economy Journal" 2007, Vol. 7(1), Art. 1.; C.E. Montenegro, I. Soloaga, *NAFTA's Trade Effects: New Evidence with Gravity Model*, "Estudios de Economia" 2006, Vol. 33(1), pp. 45–63; A. Michalska-Haduch, *Efekt kreacji handlu w wymianie handlowej Meksyku z krajami partnerskimi po wejściu w życie porozumienia NAFTA*, "International Journal of Management and Economics" 2012, Vol. 33, pp. 116–143.

9 Whenever in this work the author refers to Mexico, she means the United Mexican States.

10 A. Panagariya, *Preferential Trade Liberalization: The Traditional Theory and New Developments*, University of Maryland, Department of Economics, Maryland 1999; A.J. Venables, *Winners and Losers from Regional Integration Agreements*, London School of Economics and CEPR, London 2001; K. Śledziewska, *Regionalizm handlowy w XXI wieku: przesłanki teoretyczne i analiza empiryczna*, Wydawnictwo Uniwersytetu Warszawskiego, Warszawa 2015.

11 Benefit means positive net effect of integration, i.e., the surplus of trade creation effect over trade diversion.

12 A.J. Venables, *op. cit.*

The second hypothesis results from the observation that the profitability of integration is linked with the intensity of trade cooperation before and after the signing of an integration agreement. The problem occurs in the concept of natural trading blocks.[13] Its author, Krugman, believes that the effects of integration relate to the natural tendency of some countries to engage in cooperation and enter into trade agreements. Whenever the scope of a grouping overlaps with natural borders of trading regions, opportunities to enhance the welfare of all the parties to the agreement are much bigger than for agreements concluded between "non-natural" partners as the likelihood of the trade diversion effect is smaller.

Hypotheses adopted for this publication stem also from empirical studies. Researchers[14] identified the effects of NAFTA membership to the countries involved using mainly statistical reasoning and gravity models. They have led to the conclusion that Mexico is a beneficiary of NAFTA, and the agreement works towards the tightening of cooperation and triggers the trade creation effect. Due to intense cooperation between NAFTA countries still before the agreement was signed, the scale of the diversion effect is not significant.

This is a theoretical-empirical publication whose hypotheses have been validated using diverse research methods. The first method consists of a critical review of theoretical achievements concerning trade creation and diversion effects. It takes account of the economic advancement of countries-members of a free trade area or a customs union. Provisions of the NAFTA agreement were also analysed, and empirical studies of its effects were compared. Statistical reasoning based on regression analysis (gravity model) was deployed and a statistical forecast was drafted.

The book comprises three chapters, each of them ends with a summary section. The first chapter is theoretical and deals with economic reasons behind trade integration. It discusses the evolution of the notion of integration and its forms taking account of types identified by theoreticians as well as those used by the WTO; it also investigates the drivers of integration. Besides, it reviews literature devoted to the effects of the integration of countries at different development levels. An option for homogenous and heterogenous products is considered when comparative advantages of member countries stem from different availability of the factors of production. Effects of integration are also presented under conditions of imperfect

13 P. Krugman, *Is Bilateralism Bad?*, [in:] E. Helpman, A. Razin (eds), *International Trade and Trade Policy*, Massachusetts Institute of Technology, Massachusetts 1991, pp. 9–23; L. Summers, *Regionalism and the World Trading System*, [in:] *Symposium on Policy Implications of Trade and Currency Zones*, Federal Reserve Bank of Kansas City 1991, pp. 295–301; P. Wonnacott, M. Lutz, *Is There a Case for Free Trade Areas?*, [in:] J.J. Schott (ed.), *Free Trade Areas and U.S. Trade Policy*, Institute for International Economics, Washington D.C. 1989, pp. 59–84.

14 D. Salvatore, *op. cit.*; G.C. Hufbauer, J.J. Schott, *North American Free Trade: Issues and Recommendations,* Institute for International Economics, Washington D.C. 1992; C.E. Montenegro, I. Soloaga, *op. cit.*

competition broken down as proposed by Baldwin.[15] Because of the subject of the book, I will confine myself to the free trade area theory, of which NAFTA is an example, and a customs union as a point of reference for these issues.

Chapter two explains what NAFTA is about. It outlines the origins and main provisions of the agreement: its objectives, principles and institutions, liberalisation and trade in goods monitoring mechanisms, rules for making investment and rendering cross-border services, as well as other vital areas of trade. By referring to the works of other researchers, attention is paid to the specificity of solutions used in NAFTA compared to free trade areas operating in the global economy.

Since the abolishing of restrictions in mutual trade was carried out in multiple stages, sectors that had been protected for more extended periods are discussed more in-depth and the reasons for such longer protection are given.

On the one hand, the provisions of NAFTA translate into integration models discussed in the first chapter but, on the other hand, they provide foundations for own studies presented below and focused on the analysis of changes in Mexico trade triggered by NAFTA.

From the point of view of the accomplishment of the goal and the validation of the research hypotheses, chapter three, which discusses the author's studies, is crucial. It starts with a comparative overview of empirical studies on the effects of integration in NAFTA. Attention was drawn to the timeframe, research methodologies, results, and conclusions. They served as a point of reference for the own study comprising three stages.

In the first stage, a gravity model is deployed to explain the determinants of Mexico's foreign trade based on the modified model of Montenegro and Soloaga.[16] Based on data from all the WTO member countries[17] for the period 1986–2012, the share of Mexico's exports to a particular country in the total exports of Mexico was estimated together with the share of Mexico's imports from a specific country in the total imports of this country. In both cases, exogenous variables were: the share of the GDP of a particular country in the global GDP; straight line distance between Mexico City, the capital of Mexico, and the capital of a selected state; zero-one variable equal to 1 if Spanish, the official language of Mexico, is the official language of that other country; as well as all trade agreements to which Mexico is a party.

The study differs from the one carried out by Montenegro and Soloaga with, inter alia, the exclusion of variables, such as, e.g., the common land border or the exchange rate (which turned out to be insignificant). In return, zero-one variables were introduced for all (not only selected) trade agreements concluded by Mexico,

15 R.E. Baldwin, *Towards an Integrated Europe*, Center for Economic Policy Research, London 1994.

16 C.E. Montenegro, I. Soloaga, *op. cit*.

17 If no study for a country was available in the sample or for the majority of observations, the country has been removed from the database.

and the variable relating to the GDP was modified. The share of GDP of a particular country in the global GDP was used to absorb fluctuations resulting from, inter alia, the global crisis.

In the second stage, the *ex post* forecast was developed for trade between Mexico and its NAFTA partners. The study used data concerning trade between Mexico and the United States and between Mexico and Canada over the period 1990–2014. First, arithmetical mean was calculated for the share of Mexico's exports/imports to/from the US and Canada's share in imports/exports US/Canada. According to the assumption, the share should be constant over the entire examined period, and potential divergencies from the calculated annual mean reported after 1994 have been attributed to the establishment of NAFTA. They may testify to the trade creation and diversion effects. That was the basis for the forecast, in which the value of mutual trade was calculated for cases when the share was constant and equal to that for the period 1990–1993. Considering the likelihood of a situation when intensified trade flows in one sector would go hand in hand with decreasing trade flows in another industry, the analysis takes account of 11 commodity aggregates that had been previously created by the author. Differences between real and forecasted values are counted as the effects of NAFTA.

The third chapter focuses on the identification of the trade diversion effect. To find out about the scale of the effect, changes in imports from NAFTA members as well as from third countries were calculated. Increased imports from NAFTA accompanied by a simultaneous decrease in imports from outside of the grouping may be indicative of the trade diversion effect. For the same reason, the shares of exports to NAFTA countries in the exports of Mexico and their imports were calculated together with nominal changes in the US and Canada's imports. Increases in imports from Mexico reported by these countries may be indicative of the trade creation effect. If, however, an increase in the nominal value takes place in parallel with the increasing share of Mexico in imports, this change can be interpreted as a trade diversion effect. Because this publication is devoted to Mexico, the following were calculated:

1) shares of Mexico's exports/imports to/from the US and Canada in total Mexico's exports/imports;
2) shares of Mexico's exports/imports to/from the US and Canada in total imports/exports of the US and Canada;
3) nominal changes in imports of Canada and the US (combined);
4) nominal changes in imports of Canada and the US (combined) from Mexico;
5) nominal changes in imports of Canada and the US from the rest of the countries (ROW);
6) total nominal changes in Mexico's imports;
7) nominal changes in Mexico's imports from the US and Canada (combined);
8) nominal changes in Mexico's imports from the rest of the countries (ROW).

Two methods used to calculate shares in mutual trade (*ex post* forecast and changes in bilateral trade in relation to changes vis-à-vis the ROW) provided information about the relevance of Mexican trade seen from the perspective of all three NAFTA countries. Increasing shares after 1993 mean that trade with a partner from NAFTA got more intensified. However, one may not unambiguously conclude whether the increase happened at the expense of countries from outside of the grouping or independently of them. Disaggregated data, to some extent, eliminate[18] drawing erroneous conclusions resulting from different directions of changes in individual groups of goods. Aggregated information could suggest the absence of changes when an increase in the share of one commodity group would be offset with a decrease in the share of another group.

The comparison of nominal changes in Mexico's imports that takes account of these changes' sources may provide an answer to the question about trade diversion. If an increase in imports from NAFTA was accompanied by decreasing imports from ROW, we could expect that there had been a shift from previous suppliers to partners from the grouping. Increased imports of the US and Canada from Mexico and a parallel drop in imports from the ROW may be indicative of trade diversion from the third countries to Mexico. Disaggregated data allowed avoiding erroneous interpretation stemming from the balancing effect of changes in imports in different commodity groups.

The work has been written based on scientific literature published mostly in English. Bibliography lists over a hundred titles: monographs, research papers, reports and legal acts.

18 Calculations were based on partly disaggregated data, which is why it is likely that trade might get diverted in subgroups that make up a commodity group.

1. Economic premises behind trade integration

1.1. Trade integration: notion and forms

1.1.1. Definitions of trade integration

According to the Oxford English Dictionary, the term 'integration' was used for the first time in the 1st half of the 17th century to denote processes consisting of merging or bringing together. Economy-wise, the notion of 'integration' was initially used to describe consolidating processes in enterprises.[1]

F. Machlup[2] collected an exhaustive body of information about the first authors who used the term; his studies demonstrated that the term 'integration', understood as bringing individual economies together to make up bigger economic regions, proliferated in the 1930s. Heckscher,[3] who used the term as an adjective in the phrase 'integrating state policy,' pioneered this way of using it. In the same publication, the author uses the term 'disintegration,' the antonym of 'integration,' arguing that mercantilism, as a system of unification, facilitates the overcoming of the disintegration of the national or regional economy. In the 1930s, integration was also discussed by Röpke,[4] who indicated that after the years of international economic integration observed in the period 1700–1914, the world experienced economic disintegration. Röpke realized that social, political, and economic integration are inter-linked, similarly to disintegrating tendencies in these areas.[5] The

1 E. Synowiec, *Zarys teorii międzynarodowej integracji gospodarczej*, [in:] U. Płowiec (ed.), *Polska i Unia Europejska. Stan obecny i wyzwania na przyszłość*, Agencja Wydawnicza Placet, Warszawa 2000, pp. 11–30.

2 F. Machlup, *Integracja gospodarcza – narodziny i rozwój idei*, transl. into Polish by H. Hagemejer, K. Hagemejer, Państwowe Wydawnictwo Naukowe, Warszawa 1986.

3 *Ibidem*, pp. 21–22.

4 W. Röpke, *International Order and Economic Integration*, D. Reidel Publishing Company, Dordrecht 1959.

5 F. Machlup, *op. cit*., p. 23.

propagation of the term 'integration' owes a lot to Mises[6] and Bonn,[7] who used the word 'disintegration' in the titles of their papers but failed to apply it in the body of their essays. Besides Heckscher, Mises and Bonn also Hayek[8] discussed disintegration claiming that the Constitution of the United States "helped to prevent an even more rapid disintegration into many separate economic areas." The term 'integration' was used for the first time in the 1940s by Hilgerdt,[9] who spoke of the multilateral exchange of goods and services that provides for the international economic integration of countries profitable to all.

The proliferation of the term 'integration' was also primarily triggered by the post-war political projects, including the Marshall Plan adopted to prevent the advancing disintegration of Europe. The period between 1940 and 1960 was marked with the growing number of trade contracts. This intensification substantially contributed to the launching of theoretical studies on international integration, which provided relevant information for the next wave of integration in the 1980s.

The evolution of economic integration and the complexity of processes involved in it have made economists propose different definitions of the term, which, however, share three elements common to all of them. The first one boils down to the statement that economic integration stems from the international division of labor. The second concerns the mobility of production factors as well as goods and services. Finally, the third one connects with the non-discrimination or discrimination on the grounds of origin and destination. According to the authors, the most important definitions of integration are the ones proposed by Röpke, Tinbergen, and Balassa.[10]

Röpke[11] understands economic integration as a situation in which trade links between different national economies develop as mutually beneficial and freely as if they were part of one economy.

Tinbergen[12] examines the problem of economic integration at two levels and distinguishes positive and negative integration. The first one refers to actions launched by central government institutions that work towards the unification of economic policies and, consequently, to more effective market performance. Activities of the central government include, inter alia, amendments to the existing legal regulations, changing the operating profile of institutions, and setting up new,

6 L. von Mises, *The Disintegration of the International Division of Labor*, [in:] *The World Crisis*, Longmans, Green & Co., London–New York 1938, pp. 245–274.

7 M.J. Bonn, *The Crumbling of Empire: The Disintegration of World Economy*, Allen and Unwin, London 1938.

8 F. von Hayek, *The Economic Conditions of Interstate Federalism*, "The New Commonwealth Quarterly" 1939, Vol. 5(2), [in:] F. von Hayek, *Individualism and Economic Order*, The University of Chicago Press, Chicago 1948, pp. 255–272.

9 F. Machlup, *op. cit*., p. 27.

10 E. Synowiec, *op. cit*., p. 11.

11 W. Röpke, *op. cit*., p. 225.

12 J. Rymarczyk, *Międzynarodowe stosunki gospodarcze*, Polskie Wydawnictwo Ekonomiczne, Warszawa 2010, p. 291.

supranational organizations to perform regulatory and intervention actions. On the other hand, negative integration refers to steps adopted by the central government, which through liberalization, i.e., elimination of barriers and restrictions to the free movement of goods, services, etc. eliminate discrimination of suppliers and products originating from partner countries.

Kamecki[13] explains the economic integration of a country as developing an internal and coherent economic structure, especially in the area of production. An economically integrated state is an economic system that can be singled out of the global economy, in which all spheres of economic activity are closely linked with one another inside the sectors, among them and in the spatial dimension. Changes in one constituent trigger changes, of different intensity, in the remaining ones, which match one another. This means that individual elements are somehow complementary, although their complementarity is not static.

For economic integration to take place, certain conditions must be met. Firstly, there must be adequate resources of production factors that would enable establishing and developing economy sectors that could be engaged in integration. Secondly, the economic system of the integrating country should be distinguished from the global economic system (through customs duties, specific currency system, etc.). Thirdly, there must be proper technical conditions in a given country that would ensure free business transactions.

Based on remarks on national economic integration Kamecki defines international economic integration as "the emergence, from an established uniform economic structure, of an economic organization that brings together integrating countries, an organization, which – due to high degree of economic ties and internal economic coherence achieved through them – clearly stands out from the entire body of the global economy".[14]

The above-quoted definition of international integration calls for some additional comments. First, it describes the stage of a complete economic integration whose achievement – because of cultural, economic, social, or geographic differences of the participating countries - is incomparably more difficult than within one economy. Thus, economic integration covers above all processes leading to the formation of a single economic organism. Balassa, whom we quote further in this subchapter, wrote in more detail about integration as a state of affairs and a process.

Second, an integrated economic system is not a simple sum of participating structures. International economic integration implies transformations in individual national structures that evolve to create a new construct of a completely different quality. Economic operators within this particular area – enterprises, industries, or economic regions – influence one another and adjust to one another creating a network of ties.

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13 Z. Kamecki, *Pojęcie i typy integracji gospodarczej*, "Ekonomista" 1967, Vol. 1, pp. 92–98.

14 *Ibidem*, p. 94.

Third, these transformations depend on political and economic decisions as well as on the infrastructure that enables the flow of goods that would maintain a sufficiently high level of trade amongst the member countries, adequate to their output. The likelihood of intensification of the integration processes grows if the countries involved adopting measures to facilitate the transfer of production factors. Kamecki stresses, however, that even if the conditions are met, it is not enough to intensify trade cooperation when the countries intending to integrate are not and cannot be complementary.

Fourth, Kamecki explains what it means that an integrated economic area becomes distinct from the rest of the global economy; distinction, in this case, is understood as being identical to national economies getting distinct within the global economy but linked with one another (not as isolation from the rest of the economy).

Seeing integration in the broader context is advocated by Balassa,[15] who, unlike his predecessors, takes account of the discrimination of economic entities and national economies. Balassa defines integration as a process and as a state of affairs. As a process, integration covers measures intended to eliminate discrimination between economic entities based in different countries. Concerning the state of affairs, integration means non-discrimination between national economies.

1.1.2. Forms of integration according to Balassa

Balassa authored the best known and the most widely used classification of forms of integration. He identified five of them: free trade area, customs union, single market, economic union, and complete economic integration.[16] This publication deals with trade integration, which is why the first two forms are critical: free--trade area and a customs union. The first one has been considered because the North American Free Trade Agreement represents this form of integration, while the second one, customs union, is used as a basis in investigating the effects of integration.

The free trade area is an agreement, which eliminates all charges and quantitative restrictions in mutual trade. When it comes to cooperation with third countries, each party to the agreement individually shapes its trade policy by making decisions about import duties, quantitative or other non-tariff restrictions. Independence in pursuing trade policy translates into countries independently negotiating cooperation principles with the third countries.[17]

15 B. Balassa, *The Theory of Economic Integration*, R.D. Irwin, Homewood, Illinois 1961, p. 1.
16 *Ibidem*, pp. 1–2.
17 M.N. Jovanović, *The Economics of International Integration*, Edward Elgar Publishing Ltd, Cheltenham 2006, p. 10.

A threat involved in the establishing of a free trade area consists of importing goods for which customs duties (and other barriers to imports) are higher by a country whose regulations are more liberal. If in countries A and B of the area in question customs duty amounts to 10% and 30%, respectively, country C which does not belong to the area may export its goods across the borders of country A, from where it can re-export them without additional charges to the country B. Such actions can be motivated – besides the wish to decrease charges – by: costs and availability of transport, storage conditions, insurance or specific qualities of the product and its durability. Such practices, called geographic trade deflection, can be impeded by the adoption of rules of origin, which are decisive for specifying the origin of a product from a particular market.[18]

The effects of the establishment of an area can be divided into short-term static, i.e., trade creation and trade diversion and long-term dynamic, i.e., intensified competition, improved productivity, or development of research and development activities.

Trade creation triggers the following sub-effects: trade expansion, together with production and consumption effects. Trade expansion takes place when the drop in prices of imported goods generates higher demand and consumption in the national market-leading, ultimately to production and consumption effects. Production effect is a situation when a member country ceases to produce a good whose manufacturing costs are higher and starts importing it from another member country within the same area where the manufacturing costs of this good are lower. Consumption effect takes place when as a result of the abolishing of barriers to trade in one of the countries, a more expensive or lower quality product is replaced with a cheaper or higher quality product imported from another member of the area.

Customs union is an arrangement under which its member countries not only abolish customs duties and quantitative restrictions within the grouping but also adopt common external tariffs on goods originating from third countries. Members of a trade block speak with one voice in international negotiations on the abolishing of barriers to trade.

When it comes to trade with other countries, establishing a customs union produces effects like those of a free trade area; however, the adoption of a common external tariff eliminates the problem of trade distortion.

Uniform customs duties translate into central government revenue. Two factors determine the effect and its scale: the new tariff compared against the previous one and the size of trade inside the block. If the previous customs tariff in country A was 10% and the new one has been set at 5% then, assuming that the volume of trade remains unchanged, income from customs duties decreases because the government loses all revenue from duties imposed on goods originating from countries

18 E. Naumann, *Rules of Origin and EPAs: What Has Been Agreed? What Does it Mean? What Next?*, Trade Law Centre for Southern Africa, South Africa 2008, p. 4.

– members of the customs union and some income from trade with third countries (the effect of differences in customs tariffs). If the new common tariff is higher than the previous one, income from customs duties is higher, although the increase does not have to be proportional to the difference in duties.

Jovanović[19] stresses that a free trade area and a customs union bear similar consequences for the members of the block, and for the entire integrated group, they differ only with details concerning trade and the location of production. He also highlights that a free trade area produces a creation effect rather than the trade diversion, one which is often overlooked in discussions about trade integration. A customs union may intensify protectionism in countries which before integration did not use customs duties at all or where customs tariffs were lower than the new common one. In such a case, a free trade area will produce much lower costs, vis-à-vis third countries. If, however, the tariff in a customs union equals the lowest tariff of the member countries, then, at least theoretically, there is no difference between this form of integration and the free trade area.

Shibata[20] elaborated definition which differs from the one presented by Balassa. Author points out that his description corresponds with the economic reality. He stresses out that free trade area has to be equipped with certain measures like rules of origin which prevent trade deflection and allow free intra-area trade only to the qualified goods within the member states. According to Shibata, a free trade area is an *economic union formed with respect to tariffs on products originating in the territories of the participating countries. For purpose of customs administration, this means that the participating countries remove tariffs on products originating within the free trade area ad traded among themselves, through members retain the power to fix their own separate tariff rates on imports of products originating outside the union*.

Also Kundera[21] reviewed the definition of the free trade area, which was the basis for his own characteristics. According to him, the free trade area is a separate, distinguished with, as a necessary feature, lack of any restrictions in the main or all international trade in goods. It may also be distinguished by the necessary features with the partial lack of restrictions on other international turnover, for example, capital, services, people, and partly by the unification of economic policy or the legal system. Free trade areas are usually subject to external protection by individual partners, although one can also imagine the functioning of such zone without any protection against third countries.

19 M.N. Jovanović, *The Economics of International Integration, Second Edition*, Edward Elgar Publishing Ltd, Cheltenham 2015, p. 187.

20 H. Shibata, *Free Trade Areas*, [in:] M.N. Jovanović (ed.), *International Economic Integration: Theory and Measurement*, Routledge, London 1998, pp. 257–275.

21 J. Kundera, *Liberalizacja obrotów gospodarczych w strefach wolnego handlu*, Wydawnictwo Uniwersytetu Wrocławskiego, Wrocław 1996, pp. 13–21.

1.1.3. Forms of integration according to the WTO classification

Theoretical forms of integration specified by Balassa and used universally, for example, to examine benefits of integration, differ from those used in the WTO practice. In this case, classification is based on four types of regional trade agreements (RTA) distinguished by the World Trade Organisation (WTO).

Forms of integration distinguished by the WTO have been considered by, inter alia, Śledziewska,[22] who calls them types of trade regionalism. The author puts regional trade agreements on equal footing with preferential ones and after Bhagwati[23] defines them as agreements in which parties oblige themselves unilaterally or as a result of negotiations to award preferences in trade in goods or services. Śledziewska stresses that WTO understands regionalism as a form of bilateral or multilateral agreement between at least two (but not all) WTO members. Following the organizational typology, functional agreements bringing together countries not necessarily from the same geographic region should be considered regional. Czarny[24] discusses forms of regional integration groupings as a compilation of forms distinguished by the WTO and Balassa and stresses that there are groupings, in which the scope of liberalization is the sum of freedoms expected in different types of grouping.

NAFTA – being an example of a free trade area and economic integration – is such an agreement. The list of foreign researchers who conducted studies on the forms of integration identified by the WTO includes, inter alia, Acharya, Crawford, Maliszewska, and Renard.[25] Not only have they specified the scope of trade liberalization typical of such individual forms but also gave examples of groupings that represent each of these forms. Unlike Czarny, these authors see NAFTA as a free trade area. Baldwin and Low[26] make an overview of integration groupings and note that most such groupings, either already existing (82%) or under negotiation (93%), take the form of a free trade area.[27] A similar list was compiled by

22 K. Śledziewska, *Znaczenie trzeciej fali regionalizmu w regulowaniu współpracy międzynarodowej*, "Studia Ekonomiczne – Zeszyty Naukowe" 2012, Uniwersytet Ekonomiczny w Katowicach, Vol. 123, pp. 187–198.

23 J. Bhagwati, *Regionalism and Multilateralism: An Overview*, [in:] J. Bhagwati, P. Krishna, A. Panagariya (eds), *Trading Blocks, Alternative Approaches to Analyzing Preferential Trade Agreements*, The MIT Press, Cambridge 1999, pp. 3–32.

24 E. Czarny, *Regionalne ugrupowania integracyjne w gospodarce światowej*, Polskie Wydawnictwo Ekonomiczne, Warszawa 2013.

25 R. Acharya, J.-A. Crawford, M. Maliszewska, C. Renard, *Landscape*, [in:] J.P. Chauffour, J.C. Maur (eds), *Preferential Trade Agreement Policies for Development: A Handbook*, The World Bank, Washington D.C. 2011, pp. 37–67.

26 R. Baldwin, P. Low, *Multilateralizing Regionalism: Challenges for the Global Trading System*, Cambridge University Press, Cambridge 2009.

27 Data for 2007.

Jovanović,[28] who additionally provided a detailed description of WTO regulations on the creation of regional trade agreements.

Under the WTO classification, the least advanced form of integration is a Partial Scope Agreement (PSA) governed by the *Decision on Differential and More Favourable Treatment, Reciprocity and Fuller Participation of Developing Countries* commonly referred to as the *Enabling Clause*, which creates conditions that enable the developed WTO Members to deviate from the provisions of Art. I of the GATT. Art. I speaks about the Most-Favoured-Nation treatment, which requires the WTO Members to accord privileges, advantage, or immunity granted to one partner to all other members of the organization. The Enabling Clause specifies exceptions based on which parties to the agreement may offer more favorable trading conditions to developing-country Members with respect to both tariff and non-tariff restrictions.[29] The preferential treatment of developing countries is aimed at facilitating and promoting trade with these countries.[30]

The next types of integration groupings are a free-trade area[31] and a customs union.[32] according to Art. XXIV of the GATT, partners who decide to establish a free-trade area may not increase the duties while in the case of a customs union, the common external customs tariff may not exceed the duties in the constituent territories prior to the formation of such a union. The fundamental WTO requirement is to ensure fully mutual preferences, meaning they should cover substantially all the trade and all products originating from its members.

The Economic Integration Agreement (EIA),[33] or a preferential agreement that covers only services, is the last form of integration identified by the WTO. In accordance with Art. V of the General Agreement on Trade in Services (GATS), economic integration assumes the total absence of discriminatory measures with respect to a "substantial sectoral coverage." When parties to the agreement are developing countries, in line with the Enabling Clause, asymmetric liberalisation of trade in services is allowable.

28 M.N. Jovanović, *International Handbook on the Economics of Integration, Volume 1: General Issues and Regional Groups*, Edward Elgar Publishing, Cheltenham 2011.

29 K. Śledziewska, *op. cit.*, p. 188.

30 World Trade Organization, *Differential and More Favourable Treatment Reciprocity and Fuller Participation of Developing Countries*, Decision of 28 November 1979 (L/4903).

31 Art. XXIV (8b) GATT: *Territorial Application-Frontier Traffic-Customs Unions and Free-trade Areas.*

32 *Ibidem*.

33 Uruguay Round Agreement, *General Agreement on Trade in Services,* Article V: *Economic Integration,* www.wto.org/english/docs_e/legal_e/26-gats_01_e.htm#articleV [accessed 04.03.2020].

1.2. Integration: premises and drivers

Marszałek[34] distinguishes two groups of arguments that may be put forward in favor of economic integration. The first one includes objective premises while the second one subjective drivers. Premises stem from the internal pressure exerted by changes in the global economy that are unfavorable for some countries and from military, political, and environmental threats as well as these countries' readiness (economic and civilization) to engage in international integration.

According to Marszałek,[35] the principal reason why economies unite is their wish to ensure external and internal safety. This is the universal premise, valid already in antiquity, and linked with the power attributed to integration to prevent international conflicts, act as a stabilizing agent, and a deterrent discouraging predatory forces external to the grouping. This is, first, the effect of the abolishing of borders, i.e., the elimination of the principal cause of conflicts and, second, the result of the increased importance of a grouping in the international context and the multiplication of resources which might be deployed in situations of conflict. Membership in regional blocks provides the sense of community with other members of the agreement concluded, at least partly, to promote economic cooperation. Entering into an integration agreement raises the cost of potential conflict and tightens the ties of cross-border collaboration, which enhances security and safety inside the block.[36] Agreements are often employed by developed economies to build geopolitical alliances and tighten diplomatic relations. In developed countries, issues surrounding the labor market or environment are essential drivers of integration and subjects around which future cooperation develops.[37]

Other reasons for integration include economic aspects since being a member of an integration grouping offers bigger opportunities for economic growth and achieving a higher level of competitiveness. In a contemporary economy, no country can develop without maintaining international economic ties. At the same time, the higher the economic advancement of a country and the lower its economic potential and domestic market, the bigger its need to establish international economic ties. Besides, the propensity to integrate is the biggest for the smallest countries as it remains in reverse proportion to the size of the domestic economy. Economic growth induces problems with individually taking care of requirements stemming from the deepening division of labor or the expansion

34 A. Marszałek, *Integracja europejska*, Wydawnictwo Uniwersytetu Łódzkiego, Łódź 2000, pp. 45–46.

35 *Idem*, *Z historii europejskiej idei integracji międzynarodowej*, Uniwersytet Łódzki, Łódź 1996, p. 45.

36 *Idem*, *Integracja*…, pp. 45–46.

37 P. Pal, *Regional Trade Agreements in a Multilateral Trade Regime: An Overview*, International Development Economics Associates, 2004, p. 9.

of markets. The launching of integration depends on the economic advancement of the neighboring countries, the intensity of various ties existing among them, as well as the sense of restricting the economic, population, and territorial potential. For individual countries, integration becomes a must when they are all under the intense competitive pressure of the global economy, lose in this competition and feel the real threat of losing their competitive advantage and the position in the global economy.

Besides objective premises, there are also subjective motivations that reflect the attitude of the authorities and society to integration.

Regional integration agreements help smaller economies grow because they strengthen their bargaining power in the international forum, e.g., when negotiating with international organizations, as they 'bind' partners with regional obligations. However, success, in this case, depends on whether countries are able to work out a common position.[38] Economic growth also takes place through the gradual opening, which helps in preparing the economy and administration for intensified cooperation first with its partners within the block and next with the third countries. Integration blocks are sometimes used to advance and foster economic and political reforms, but also as constituents of a strategy designed to boost market openness, restrict the role of the government in favor of the private sector or intensify competition.

1.3. Effects of integration of countries at a different level of economic development under conditions of perfect competition

Many theoretical analyses have been drafted on the benefits of integration distributed along with different timelines. Considering time as the main factor, we can introduce a dichotomic division of effects of integration into short-term (static) and long-term (dynamic) ones.

Structural or technical and technological changes do not accompany short-term effects, and they emerge within a short period. Static effects include trade and non-trade outcomes, which deal with the exchange of goods and services, investment, production, and consumption.[39] Long-term (dynamic) effects concern a longer time horizon, call for structural changes and focus on mobilizing eco-

38 World Trade Organization, *World Trade Report 2013*, p. 50.

39 P. Bożyk, J. Misala, *Integracja ekonomiczna*, Polskie Wydawnictwo Ekonomiczne, Warszawa 2003, p. 93.

nomic growth of the member countries. Within long-term effects, we can identify allocation, accumulation, and location effects. A synthetic list of dynamic effects of a customs union is presented in Figure 1.1.

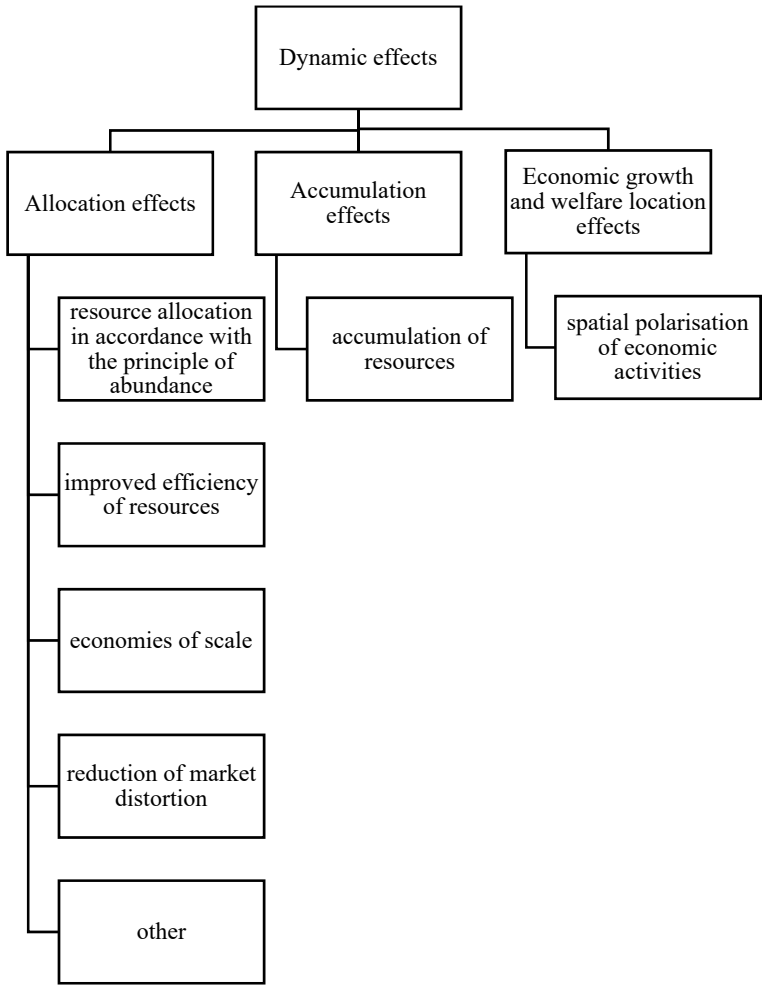

Figure 1.1. Dynamic effects of a customs union
Source: P. Bożyk, J. Misala, *Integracja ekonomiczna*, Polskie Wydawnictwo Ekonomiczne, Warszawa 2003, p. 123.

Subchapter 1.3 discusses the short-term theoretical benefits of integration to countries at different levels of economic advancement in the context of their comparative advantages. For the sake of the subject of this publication, considerations have been limited to a free-trade area, such as NAFTA, and a customs union, the form usually deployed in theoretical studies devoted to the effects of trade integration.

The first part describes a scenario for homogenous products, then, in the next step after the assumption of product homogeneity has been lifted at international and national levels, comparative advantages of the member countries stem from differences in the availability of production factors.

According to Venables,[40] a customs union bringing together relatively affluent countries contributes to the convergence of their welfare. For poor countries, the opposite process is at work and integration, or, more precisely, the net sum of the creation and diversion effects, enhances the divergence of member countries' income.

These conclusions rest on the comparative advantages of the member countries relative to each other and the rest of the world and refer to the Heckscher-Ohlin theory. Suppose that countries differ with regard to their endowments of skilled and unskilled labor and that these differences form the basis of their comparative advantages. Countries A and B have abundant resources of unskilled labor compare to the rest of the world C, and country A has got relatively more unskilled labor than the country B. Thus, country A has got an 'extreme' comparative advantage while country B has got an 'intermediate' one. If these countries form a customs union, comparative advantages will lead to a situation where:

1) country B will export skilled labor-intensive goods (e.g., industrial products) to country A;
2) country A will export unskilled labor-intensive goods (e.g., agricultural products) to country B.

The first of the above flows is trade diversion since A imports manufactured goods from B not from C in line with intra-union, not global, comparative advantages. The other effect of the customs union is the trade creation effect because if B increases imports of agricultural products from A, it intensifies trading with the supplier who is the cheapest globally, not just at the intra-union level. More generally speaking, one may argue that a country (B) with an 'intermediate' comparative advantage will benefit more than the country with an 'extreme' comparative advantage (A). By engaging the country with an 'intermediate' comparative advantage (B) into trade between a country with an 'extreme' comparative advantage (A) and the rest of the world, we may lead to country's A trade diversion. In the case of two poor countries, an unequal division of costs and benefits leads to income divergence, as a result of which the country with the least skilled labor, i.e., the poorest one, loses. For two rich economies (whose resources of skilled labor are above the global average), the country with extreme advantage has got relatively the most significant abundance of skilled labor. As a result – contrary to the integration of little developed nations – we are dealing with income convergence.

Subchapter 1.4 discusses studies that bring this approach forward. It starts with the examination of two goods and relationships between comparative advantages

40 A.J. Venables, *Winners and Losers from Regional Integration Agreements*, London School of Economics and CEPR, London 2001.

and trade creation and diversion. Then it presents the study of multi-product comparative advantages based on the generalized Ricardian model. And then, it proceeds with a study based on the assumptions of the Heckscher-Ohlin-Armington theory, which considers two factors and two goods.

1.3.1. Internal and external comparative advantage

In his model, Venables[41] shows the impact of the formation of a customs union by two small countries in the context of internal and external comparative advantages. We consider two homogenous goods, X and Y, two small countries, A and B and the rest of the world C. Member countries of the customs union pursue autarkic policy, meaning they do not trade with the rest of the world.

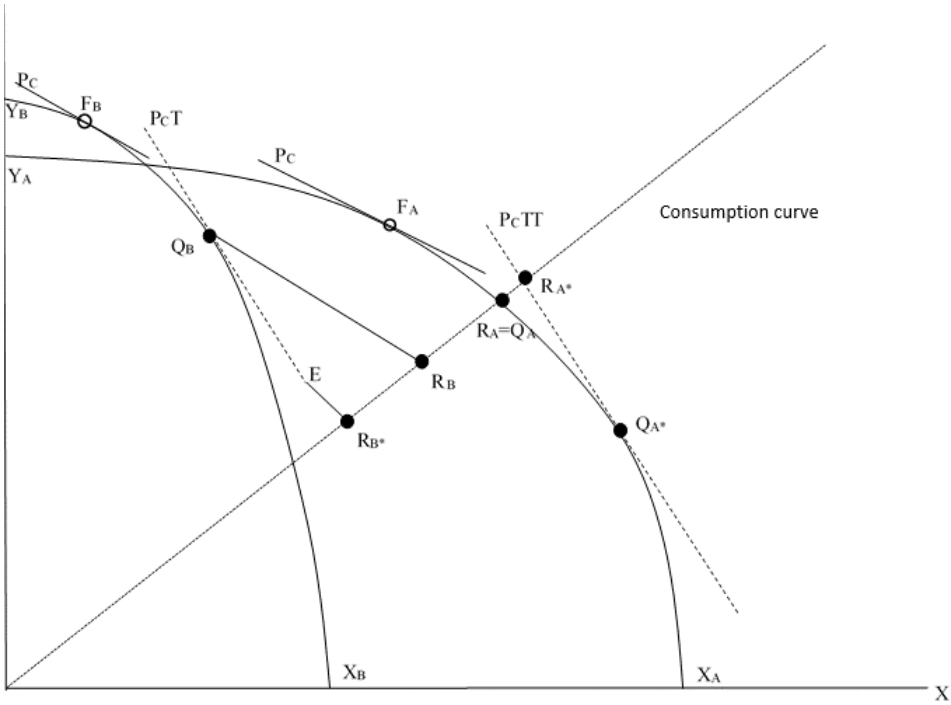

Figure 1.2. Effects of a customs union formed by two small countries
Source: A.J. Venables, *Winners and Losers from Regional Integration Agreements*, London School of Economics and CEPR, London 2001, p. 21.

41 *Ibidem*.

In Figure 1.2 on the axes, we can see the quantities of goods, X and Y, consumed in proportions delineated by the consumption curve. The price of good X in terms of Y is marked as P_C. Production capacity for countries A and B is illustrated by transformation curves X_AY_A and X_BY_B. Countries A and B have a comparative advantage in good Y relative to country C and country B has a comparative advantage in the production of good Y relative to country A. Under free trade conditions and at the price P_C, output in countries A and B oscillates at F_A and F_B. Both countries export good Y, while the volume of exports of country A is smaller than that of B because B has got an 'extreme' comparative advantage.

If there is no integration arrangement between the countries, all imports by countries A and B are subject to tariff T > 1.[42] In such a case, country A is self-sufficient at point $R_A = Q_A$, with the price of good X in terms of good Y given by the gradient of the transformation curve. This price lies between the domestic price ratio (P_CT), which would rule if good X were to be imported and price (Pc/T), which would rule if good Y were to be imported. This confirms the assumption that trade between the countries is not profitable. Country B imposes the same duties, but since its comparative advantage is more 'extreme', it trades in the starting point, where production is Q_B and consumption R_B. Production (output) in country B amounts to Q_B and consumption R_B. Country B imports good X while at domestic price P_CT production Q_B allows maximizing profits. Budget constraints maintain the world price at P_C, so country B's trade vector is Q_BR_B.

After a customs union has been formed, in the state of equilibrium, member countries of the customs union continue to import good X from C, and the intra--union price ratio is P_CT. Production in countries A and B is Q_A* and Q_B. Country A has got a comparative advantage in the production of X relative to B, and trade in this good between the countries is illustrated by vector $Q_A^*R_A^*$ at relative price P_CT. Internal trade in B equals the vector $Q_BE = Q_A^*R_A^*$, while external trade of B – at price P_C – equals the vector ER_B^*. The total external trade of the union is illustrated by the vector $ER_B^* = (Q_A^* + Q_B)-(R_A^* + R_B^*)$.

The welfare effects of a customs union can be identified based on the changes in consumption. In the customs union, A gains from trade, which did not exist before the integration, although changes in country A's production structure have taken the opposite direction from the way they would go under free trade. On the other hand, country B loses as a result of imports diversion because before integration it was getting all its imports from the cheaper supplier from C, while after the customs union has been formed, some imports originate from a more expensive manufacturer from country A. Trade of the country that enjoys extreme comparative advantage (B) gets diverted towards the country with comparative advantage (A) close to that of C. However, for A trade with B and C are less close substitutes and hence less vulnerable to trade diversion.

42 Tariff T = 1 is used for free trade.

1.3.2. Multi-product comparative advantage

In accordance with the model presented in subchapter 1.3.1, prior to the integration, one of the countries had been pursuing an autarkic policy. After a customs union was formed, it has been trading only with its partner from the grouping. Venables developed a more general model, in which he considers many goods with different technical coefficients (different resource-intensity of two factors of production: *w* and *l*) in economies A and B.

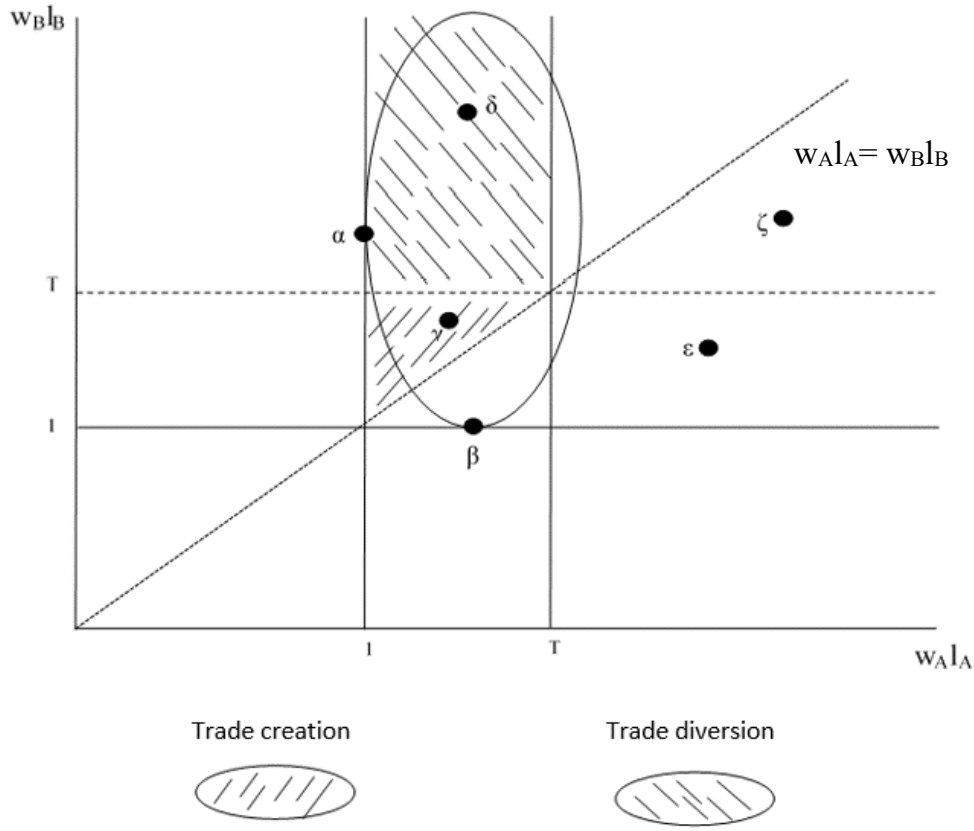

Figure 1.3. Effects of an integration grouping considering the manufacturer's origin
Source: A.J. Venables, *Winners and Losers from Regional Integration Agreements*, London School of Economics and CEPR, London 2001, p. 22.

In Figure 1.3 the vertical axis measures the cost of producing a good in a country B while the horizontal axis shows the same cost for country A. Points marked with letters α, β, γ, δ, ε, ζ, represent goods and costs of producing them in each country. The cost of producing a good is found by multiplying a unit cost of labor in each country (w_A and w_B) and the number of units of labor needed to manufacture

it (l_A, l_B) and differs across goods and countries. All goods also have a world price 1 and initially bear import tariffs at rate T.

Of all the goods illustrated in Figure 1.3, α is the one which requires the lowest number of units of labor in country A. For this reason, country A will export good α, and when its world price is 1, labor cost in country A is $w_A l_A(\alpha) = 1$. Initially, when tariff T covers all imports, country A is self-sufficient in the production of goods β, γ, and δ, because the cost of producing them locally is lower than the cost of importing these goods (marked with line T in the figure) and higher than the receipts from exporting them (shown in the figure with line 1). Goods ε and ζ are imported from C (rest of the world). For country B, good β requires the lowest number of units of labor, so the cost of labor in country B is set by $w_B l_B(\beta) = 1$. Country B is self-sufficient in the production of goods γ and ε, but it imports goods α, δ, and ζ.

The formation of a customs union changes the pattern of trade in some goods. Costs of labor remain unchanged in individual economies as the member countries continue to supply domestic goods to the external market. Country A will import from country B any good, for which $w_B l_B < w_A l_A$ and $w_B l_B < T$, i.e., goods whose duty-free imports from the member countries are cheaper than imports from the rest of the world charged with a customs duty. Circumstances presented in Figure 1.3 are given for goods ε and β. Trade in good ε, which prior to the formation of the customs union was imported by A from the rest of the world, diverts towards the member country. The additional cost of trade diversion per unit of this good amounts to $w_B l_B(\varepsilon)-1$. Country A, which was self-sufficient in good β, starts importing it from B. Trade creation goes hand in hand with cost-saving equal to $w_A l_A(\beta)-w_B l_B(\beta)$ per unit of good β. Analogously – after a customs union has been formed, B imports from A goods, for which $w_A l_A < w_B l_B$ and $w_A l_A < T$. For good δ, country B imports get diverted from the rest of the world to the partner country ($T > w_A l_A(\delta) > 1$). For good γ, B's domestic supply is replaced with imports from country A, since $w_A l_A(\gamma)-w_B l_B(\gamma)$. Trade creation brings cost-saving equal to the difference between the unit cost of production in countries A and B.

Suppose goods are uniformly distributed within the ellipse shape area in Figure 1.3. Country A is more like the rest of the world than country B. The most significant difference in country A's production costs relative to the rest of the world is equal to the width of the ellipse and on average by half of this width. The height of the ellipse shows country B's differences in production costs. Country A has a comparative disadvantage relative to the rest of the world and a comparative advantage relative to country B for all goods in the ellipse and above the 45° line. For the majority of goods, country A 'lies' between country B and the rest of the world.

As shown in Figure 1.3, a relatively small proportion of goods supplied to country A change the source, and, if they do, this is trade creation. When it comes to country B, after a customs union has been formed, it is getting many more products from new suppliers, while most changes are trade diversion. This multi-product framework confirms the earlier proposed hypothesis, according to which the country with an 'extreme' advantage benefits less than the country with

an 'intermediate' advantage. This finding confirms Ricardo's theory that absolute advantage in production costs is not a pre-condition for trade.[43] The above-discussed effects of forming a customs union are synthetically presented in Table 1.1.

Table 1.1. Changes in trade directions in a customs union

	Initial stage		Customs union		Welfare change	
	Country A	Country B	Country A	Country B	Country A	Country B
A	Exports to ROW	Imports from ROW	Exports to ROW	Imports from ROW		
B	No trade	Exports to ROW	Imports from B	Exports to ROW and A	Higher welfare, trade creation	
Γ	No trade	No trade	Exports to B	Imports from A		Higher welfare, trade creation
δ	No trade		Exports to B	Imports from A		Lower welfare, trade diversion
ε	Imports from ROW	No trade	Imports from B	Exports to A	Lower welfare, trade diversion	
ζ	Imports from ROW	Imports from ROW	Imports from ROW	Imports from ROW		

Source: A.J. Venables, *Winners and Losers from Regional Integration Agreements*, London School of Economics and CEPR, London 2001, p. 7.

1.3.3. Income divergence and convergence

When examining the effects of integration, Venables also considers a model in which the comparative advantages of member countries result from differences in factor endowments. He puts forward an assumption about the differentiation of products at the national level to maintain non-specialization and allow changes in output prices. The analysis repeats the assumptions of the Heckscher-Ohlin's (H-O) theory, according to which international trade is triggered by differences in relative resource endowments between its participants. A country exports goods whose production consumes a high proportion of a factor available in this country.[44]

The model includes three countries A, B, and C, which have the same technology and are endowed with two factors of production: unskilled (N) and skilled (W)

43 J. Świerkocki, *Zarys ekonomii międzynarodowej*, Polskie Wydawnictwo Ekonomiczne, Warszawa 2011, p. 22.

44 *Ibidem*, p. 316.

labor. Countries A and B differ from each other and from country C with the endowment in W and N, and this difference provides the basis of their comparative advantages. Country C, endowed equally with W and N, represents the rest of the world (a big country).

All countries produce two products which differ in factor intensity, and, for ease of interpretation, we assume that factor intensity in one industry is the reciprocal of that in the other sector, and goods in question have the same share in consumption. Although the differentiation of products stems exclusively from production location, the elasticity of substitution between products originating from different countries is 50.[45] The relative price of products manufactured in country C is 1. In the initial equilibrium, all imports bear a 20% tariff. The internal price ratio and trade patterns of states A and B consider duties and factor abundance.

Figure 1.4 shows how the welfare in countries A and B changes after the abolition of customs duties between them and depending on factor endowments (relative to each other and the rest of the world).

In Figure 1.4 axes represent factor endowments of countries A and B in W and N. $W_i + N_i = 1$, (i = A, B), thus point values are $W_i/N_i = 2$, $W_i = 0{,}67$, and $N_i = 0{,}33$. If $W_i/N_i > 1$, country *i* is factor W abundant relative to the rest of the world. Comparative advantages inside the integration grouping are measured relative to the 45° line above, which country A is W abundant relative to country B.

Lines in the figure delineate level sets of proportional changes in country B's welfare resulting from the formation of an integration grouping. Lines 00 are zero contours, plus, and minus signs indicate areas in which country B gains and loses from the creation of an integration grouping. In accordance with Figure 1.4., benefits from integration understood as increased welfare are greater for the country whose relative factor endowment in W and N is close to the endowment typical of the rest of the world, i.e., $W_i/N_i = 1$. In addition, gains of integration are more significant when the partner country represents a relatively extreme factor endowment. If country A is endowed with factors of production in a way similar to the rest of the world, the likelihood of trade diversion is minor. That is because still before an integration agreement was formed, there had been little trade between A and C, so the potential amount of trade that could be diverted was small. The formation of an integration grouping with a country with very different factor endowment maximizes chances of trade creation. States with extreme factor endowments are more vulnerable to a welfare loss. If W_B/N_B is extremely low or high, country B is likely to experience welfare loss, especially when factor endowment of its partner is similar to the rest of the world, i.e., $W_i/N_i = 1$.

45 For the utility of the basket of goods to remain unchanged, the amount of good j should increase by 50 when the amount of good i decreases by 1.

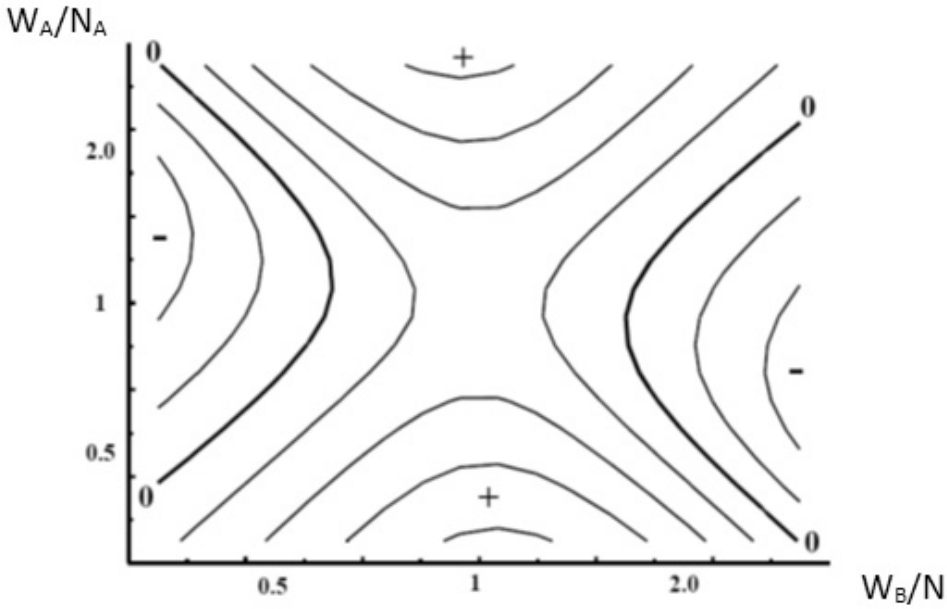

Figure 1.4. Changes in country B's welfare triggered by the formation of a free trade area at changing factor endowment ratio
Source: A.J. Venables, *Winners and Losers from Regional Integration Agreements*, London School of Economics and CEPR, London 2001, p. 23.

In Figure 1.4 factors W and N enter the model symmetrically so referring to them as skilled or unskilled labor is wrong because on average the cost of labor of W factor is not higher than that of the N factor and countries endowed with W are on average not richer than countries endowed with N. To demonstrate that W abundant economies have a relatively higher income than N abundant economies, we need to modify Figure 1.4. So far, it was assumed that if an economy gained a unit of W, it lost a unit of N since $W_i + N_i = 1$. Further, in our reasoning (as shown in Figure 1.5), N is constant, and only the amount of W changes. A high value of W_i/N_i means country *i* has a constant pool of N and is W abundant, the units of W should be interpreted as efficiency units. When the ratio of factors of production $W_i/N_i = 0.5$ moves to $W_i/N_i = 2$ and N_i is constant at 0.5, the value of W_i raises from 0.25 to 1, and doubles country *i* income. Based on the above, we may assume that W abundant economies will tend to be richer because they are endowed with bigger resources of W efficiency units.

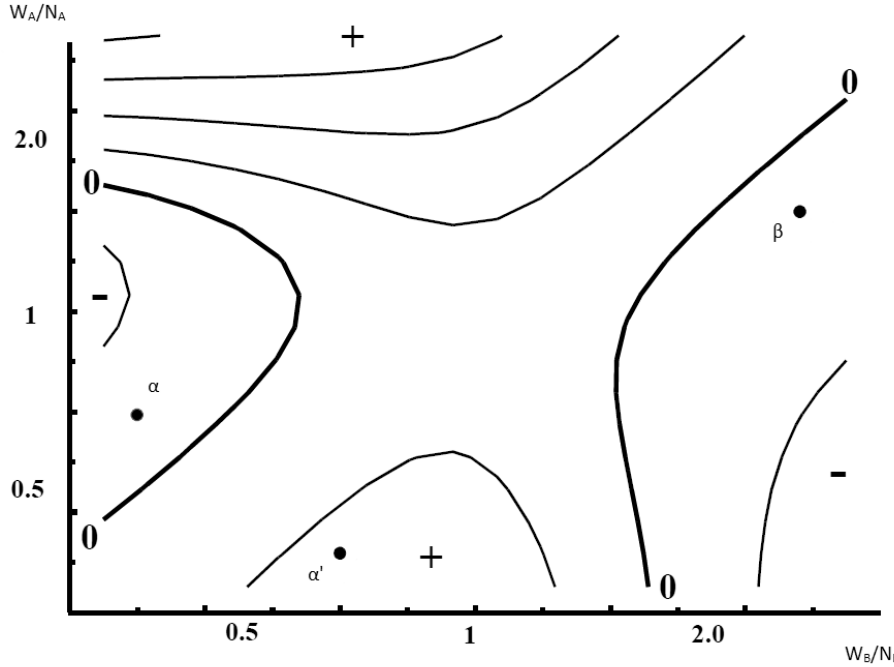

Figure 1.5. Changes in country B's welfare triggered by the formation of a free trade zone under the assumption that one factor of production is constant
Source: A.J. Venables, *Winners and Losers from Regional Integration Agreements*, London School of Economics and CEPR, London 2001, p. 23.

Contour lines in Figure 1.5 illustrate, as in the previous figure, proportionate welfare change due to the formation of an integration grouping. At point α, country B is poorer than country A since it is relatively scarce in W. Country B suffers welfare reduction. In contrast, country A experiences welfare gains, which confirms that an integration arrangement between two poor economies leads to the divergence in their income. For rich countries, we can observe the opposite occurrence of income convergence. At point β, countries A and B are W abundant. However, B's endowment is relatively bigger compared to A, so B is a richer country. In this case, B loses and country A gains; this leads to the convergence of their real incomes.

The above-presented analysis brings us to more general conclusions on the attractiveness of trade arrangements between developing and developed countries. If country A is a developing country and its factor endowment W_A/N_A is low, country B, which is abundant in skilled labor, i.e., with high $W_B/N_{B,}$ is its best partner for the trade agreement. Such configuration helps in maximizing trade creation effect with simultaneously minimized trade diversion effect. Moreover, if a country abundant in W is rich, the poor country experiences a relatively high increase in demand for its exports, which improves its *terms of trade*, and, by the same token, its share in gains from integration.

1.4. Effects of integration in conditions of imperfect competition

The so far conducted considerations on the effects of integration were underpinned by the assumption that decisions made by market participants, on the demand and supply side, do not impact prices which are identical and external to all. However, in real life economy complying with such an assumption is practically next to impossible. Competition is usually imperfect, products on offer differ, and changes in production profile take time and call for adequate financial outlays.[46] In imperfectly competitive markets operating within the framework of a free trade area or a customs union, the effects of economic integration are similar and differ predominantly with the intensity of their occurrence. They can be divided into allocation, accumulation, and localization effects.[47]

Allocation effects come as a sum of the short-term effects of optimized resource allocation. As a result of integration, i.e., elimination of market barriers between the member countries, price, and non-price competition within the grouping intensify. More fierce competition forces market participants to bring forward advances in technical and organizational progress and more efficient innovation implementation. At the same time, through the abolishing of barriers to trade, the range of goods and services available in the market gets expanded; yet this gain is hard to be measured.[48] Misala[49] argues that optimum international and interregional allocation is the more significant the higher the degree of specialization and the volume of intra-industry trade as well as accompanying parallel flows of mobile factors of production, primarily capital and technical knowledge.

Bożyk and Misala[50] see allocation effects as a sum of static effects of optimized resource allocation interpreted as the trade creation and diversion effects. Against this background, economies of scale are crucial. Economies of scale occur when production and sales increase at the rate higher than the consumption of factors of production. Authors divide gains into static and dynamic ones. The first ones appear when, due to specialization, production series get extended. This reduces the frequency of machinery and equipment adjustments to specific production profiles, increases labor productivity, and distributes fixed costs over a bigger number of units, which ultimately reduces the unit cost of production.

Dynamic production and selling economies of scale happen when changes in production techniques are more radical and reflect themselves in improved

46 J. Świerkocki, *op. cit.*, p. 173.

47 R.E. Baldwin, *Towards an Integrated Europe*, Center for Economic Policy Research, London 1994.

48 J. Świerkocki, *Zarys międzynarodowych stosunków gospodarczych*, Polskie Wydawnictwo Ekonomiczne, Warszawa 2004, p. 159.

49 J. Misala, *Lokalizacja działalności gospodarczej w warunkach globalizacji* (*ujęcie teoretyczne*), [in:] E. Czarny (ed.), *Globalizacja od A do Z*, Narodowy Bank Polski, Warszawa 2004, pp. 259–284.

50 P. Bożyk, J. Misala, *op. cit.*, pp. 124–125.

manufacturing technologies, higher productivity, and better performance of production machinery and equipment. In industries whose unit cost is constant, growing output translates into higher total profit because manufacturers can sell extra units of products to other participants of the integration grouping. The gain is referred to as the producer profit effect.[51] Economies of scale can also be achieved through the deepening of the international division of labor within an individual enterprise as well as in member country contexts.

Molle[52] observes that long-term benefits impact all of the firm structure; economies of scale that lead to an increase in a firm's average size are one of them. With the abolition of barriers to trade and facilitations targeting business activities put in place in other member countries, the population of domestic businesses increases. This change in the economic structure links, on the one hand, with increased competitiveness but, on the other hand, with the need to seek and implement increasingly more efficient solutions for production and selling. New challenges facing previously impregnable domestic companies foster market mechanisms and generate more favorable purchase terms for consumers. The bigger average size of a firm brings benefits, such as a better bargaining position, higher efficiency compared to smaller businesses, easier access to capital, and other resources necessary for implementing innovation and faster technological progress. Borowiec[53] expands the catalog of long-term benefits with the emergence and development of industrial ties. Integration leads to specialization, which intensifies the network of relations amongst industries. A position of a firm also gets strengthened, and the effect extends over an entire supply chain.

Next, there are accumulation effects, i.e., effects which boost welfare as a result of the accumulation of factors of production triggered by the growth in international trade. Bożyk and Misala identify the following factors of production: land (including the environment), physical and human capital. Accumulation effects are enhanced by the multiplier effects that trade has on the spreading of capital and technical knowledge, as well as intensified trade inside the grouping, which has a bearing on the development of sectors, industries, products, and smaller constituents of areas offering substantial resource accumulation opportunities.

Finally, localization effects are stemming from the co-existence of allocation and accumulation effects. By overlapping them and as a result of diverse intensity with which they emerge, some countries or regions in an integration grouping grow faster than the remaining ones. Thus, the localization effect manifests itself in the deepening differences in the welfare of these countries (regions) and their citizens. Misala stresses that localization effects appear due to differences in the

51 J. Świerkocki, *Zarys międzynarodowych*…, p. 159.

52 W. Molle, *The Economics of European Integration: Theory, Practice, Policy*, published in Poland by Fundacja Gospodarcza NSZZ "Solidarność", Gdańsk 1995, pp. 98–105.

53 J. Borowiec, *Ekonomia integracji europejskiej*, Wydawnictwo Uniwersytetu Ekonomicznego we Wrocławiu, Wrocław 2011, pp. 168–171.

attractiveness of countries and regions dictated by the condition of the natural environment or investment climate. The degree of factor mobility is also an issue. Surely, capital is the most mobile, and its international and inter-regional flows (in particular those of production capital) are usually linked with the migration of labor and technical knowledge, which over the long-term accelerates the growth of some countries and regions.

Żołądkiewicz[54] observes that foreign direct investment (FDI) may be viewed as one of the localization effects. Economic integration stimulates the inflow of investment triggering two effects distinguished by Kindelberger:[55] investment creation and diversion. The first one happens when the sum of investment in the global economy increases. The second one emerges when investment capital is diverted from a non-member country to the member country of an integration grouping. For developing countries, investments are often one of the significant sources of foreign capital.[56]

Machlup[57] points out that integration creates new opportunities for both, internal and external investors and in the long run may lead to both effects. The economic interpretation of investment effects is not straightforward and differs from the interpretation of short-term trade effects. Investment creation results in an increase in GDP, provided that the potential savings are greater than the investment possibilities, or if it is possible to create a higher propensity to save and maintain this high level. Otherwise, investment creation can lead to losses by contributing to recession. In the other hand, investment diversion may be a positive phenomenon and means more efficient use of capital where its marginal efficiency is higher, resulting in an increase in the total income of member countries. Yet, this does not exclude the loss of owners of production factors from third countries from which capital is shifted.

1.5. Summary

When looking at the review of studies on trade creation and diversion and welfare effects of integration discussed in the first chapter, we can note that conclusions depend on the assumptions. Traditionally, studies focus on a customs union

54 K. Żołądkiewicz, *Regionalizacja i regionalizm w gospodarce światowej*, [in:] R. Orłowska, K. Żołądkiewicz (eds), *Globalizacja i regionalizacja w gospodarce światowej*, Polskie Wydawnictwo Ekonomiczne, Warszawa 2012, pp. 169–190.

55 C.P. Kindelberger, *American Business Abroad: Six Lectures on Direct Investment*, Yale University Press, New Haven 1969.

56 World Trade Organization, *World Trade…*, pp. 49–50.

57 F. Machlup, *op. cit.*, pp. 163–165.

because uniform customs tariffs applied to all non-union countries make the analysis much easier. For a free trade area, conclusions are much more unambiguous since different member countries levy different tariffs.

Integration models considered in the first chapter suggest that a positive integration balance is never obvious and depends on the assumptions and the complexity of the theoretical model. General conclusions as to the attractiveness of trade agreements that account for the differences in development levels of their member countries indicate that to a developing country (with resources of low-skilled labor), the best partner in a trade agreement would be a developed country (with resources of skilled labor). Such a combination would help in increasing the trade creation effect and simultaneously minimize the trade diversion effect. Nevertheless, we need to highlight that this conclusion disregards the costs of adjustment (e.g., being exposed to a more efficient and subsidized competition).[58]

58 Transition periods discussed in the second chapter, i.e., gradual abolition of restrictions in cooperation, provide a sort of protection and reduce such costs.

2. Origins and main provisions of NAFTA

2.1. Origins

Economic integration in the North American continent had been launched long before NAFTA was formed. Over 30 years, a free trade area was created in three stages. The first one was the agreement between Canada and the United States, which liberalized trade in automotive spare parts and vehicles, which in 1986 (second stage) evolved into a free trade area. The last stage is the furthest reaching with respect to its substantive scope and membership; it creates a free trade area between the earlier integrating Canada and the United States and a new partner – Mexico.

The Canada – U.S. Automotive Products Trade Agreement of 1965, informally referred to as the *Auto Pact*, signed in 1965 by the United States and Canada eliminated some barriers to trade in vehicles[1] and automotive spare parts. Its goal was to facilitate production companies based in these two countries to rationalize their operations through abolishing customs tariffs levied on the transborder transport of finished vehicles and their original spare parts.

As observed by Fuss and Waverman,[2] the agreement was selective by nature as only authorized[3] manufacturers from Canada and the US could benefit from it. The rule was adopted to protect the Canadian market of manufacturers dominated by American holdings. By adopting a provision on the minimum share of Canadian input, the *Auto Pact* was a combination of regulations liberalizing and protecting the Canadian market, which, at least partly, safeguarded the Canadian automotive industry inefficient compared to the US one.

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1 In this case 'vehicles' are understood as cars, buses, and trucks.

2 M. Fuss, L. Waverman, *The Canada – U.S. Auto Pact of 1965: An Experiment in Selective Trade Liberalization,* NBER Working Paper Series, Working Paper No. 1953, Cambridge 1986.

3 Duty free trade was available to manufacturers who reached a defined minimum output in the partner country.

Anastakis[4] calls the *Auto Pact* a milestone in the evolution of the Canadian economic history and a piece of evidence of the transition from a protectionist to a free trade policy. Holmes[5] argues, however, that economic isolation, in particular in the automotive sector, was not exclusively the Canadian or North American domain but the quality of international trade policy that was universal in those times. To substantiate his claim, Holmes explains how the automotive sector in the United States and Canada had been organized before 1965, when the two were completely separated and independent. However, in many aspects, the Canadian automotive sector was a mini-replica of its US counterpart. In most industrialized economies, the automotive market was isolated from significant scale imports and supplied predominantly by local producers. The *Auto Pact* was not only a *novum* in international trade in products manufactured by the automotive industry but also laid the foundations for further liberalization of cooperation arrangements between its signatories.

The formation of CUSFTA, very much promoted by the Governor of California Ronald Reagan in the 1960s, was motivated by the wish to deepen trade relations with Canada further and fitted into the vision of the United States engagement into regional trade agreements.[6] The American side highlighted possible liberalization of flows of many goods, services, investment capital targeting Canada, and access to the resources owned by the northern neighbor. The administration continued stressing that by doing away with the protectionist doctrine, the US products would become more competitive, and the economy would grow. Like the United States, Canada viewed the agreement as a stimulus for trade cooperation, economic growth, and a factor improving its competitiveness.[7] On the other hand, politicians expressed concerns that the tightening of collaboration with the Americans might lead to a situation when their country would turn into a colony of the United States.[8]

The establishing of a free trade area in 1988 had two principal goals. First, making economic relations between Canada and the United States more open and pre-

4 D. Anastakis, *Auto Pact: Creating a Borderless North American Auto Industry, 1960–1971*, University of Toronto Press, Toronto 2005.

5 J. Holmes, *The Auto Pact from 1965 to the CUSFTA*, [in:] M. Irish (ed.), *The Auto Pact: Investment, Labor and the WTO*, Kluwer Law International, Hague 2004, pp. 3–22.

6 T.H. Cohn, *Global Political Economy. Sixth Edition*, Routledge–New York 2016.

7 E. Latoszek, M. Proczek, *Organizacje międzynarodowe we współczesnym świecie*, Dom Wydawniczy Elipsa, Warszawa 2006, p. 452.

8 By the end of the 1980s many discussions were held, in which liberal and democratic parties suggested the loss of national identity. In response to actions taken by Brian Maloney, the Prime Minister of Canada, aimed to join the agreement, the President of the Liberal Party suggested that the Prime Minister "sold the country". Moods dominating at that time in the Liberal Party and in some circles of society are well reflected in the comment of Rick Salutin, a Canadian writer, who said: "We are not against the Americans. We just do not want to become Americans", [after:] D. Benjamin, *The Gut Issue*, "Time" 1988, p. 17.

dictable but also more stable and safe. Second, to eliminate some barriers to trade.[9] Provisions of the agreement were designed to achieve trade liberalisation; its timetable was adopted together with the timeline for elimination of customs tariffs and principles of liberalisation of services, also in the banking sector, and investment flows.[10] The agreement banned export subsidies in trade in agricultural products and transport subsidies for exports to the United States. It also covered the re-negotiation of regulations for the automotive industry (*Auto Pact* signed in 1965) and Canada's commitment to lift the embargo on second-hand cars.[11] CUSFTA focused on trade liberalization through, above all, the elimination of barriers that hindered trade.

By the late 1980s in America advancing globalization of economic processes, which increased interdependence at international levels, together with changes in the world economy and internalization of economic ties,[12] created favorable conditions for the tightening of economic cooperation. On 1 January 1994, the North American Free Trade Agreement signed by three countries: United States, Canada, and Mexico entered into force, creating the biggest regional market globally representing high potential and competitiveness compared to other regional integration agreements.[13]

Factors conducive to the formation of the North American Free Trade Agreement (NAFTA) can be divided into three principal groups: factors that trigger structural changes in the world economy, factors resulting from the situation in the region, and factors connected with the situation in countries – prospective members of the grouping.

The success of the idea of integration in the European continent was an external factor that undoubtedly contributed to its promotion. Publicly declared plans to establish the Single European Market (SEM) by the end of 1992 stirred anxiety not only in the United States but spread across other countries, fearing that integrating Europe would be less interested in establishing trade relations with third countries. Size-wise, the SEM would be close to the US market.[14] Leaving aside the negative impact that the creation of the SEM could have on third countries, one could easily

9 P. Wonnacott, *The Auto Sector*, [in:] J.J. Schott, M.G. Smith (eds), *The Canada-United States Free Trade Agreement: The Global Impact*, Institute for International Economics Institute for Research on Public Policy, Washington D.C.–Canada 1988, pp. 101–116.

10 E. Latoszek, M. Proczek, *op. cit.*, p. 453.

11 R. Ludwikowski, *Handel międzynarodowy*, Wydawnictwo C.H. Beck, Warszawa 2006, p. 139.

12 B. Liberska, *Nowe wyzwania integracyjne. NAFTA i inne regionalne inicjatywy na kontynencie amerykańskim*, Studia Ekonomiczne, Vol. 34, Instytut Nauk Ekonomicznych PAN, Wydawnictwo Poltex, Warszawa 1995, p. 9.

13 T. Łoś-Nowak, *Organizacje w stosunkach międzynarodowych istota – mechanizmy działania – zasięg*, Wydawnictwo Uniwersytetu Wrocławskiego, Wrocław 2009, p. 355.

14 A. Sapir, *European Integration at the Crossroads: A Review Essay on 50th Anniversary of Bela Balassa's Theory of Economic Integration*, "Journal of Economic Literature" 2001, Vol. 49(4), pp. 1200–1229.

note that successfully progressing integration of the European countries was a step in the right direction bringing a lot of benefits to the participating economies.[15]

Besides the intensification of integration in Western Europe, also the developments in the eastern part of the continent were essential for the future steps made by North American countries. The collapse of the Soviet Union and the entire communist system in Europe forced out the re-definition of the role and place of the United States in the international scene.

Another source of the potential threat was the growth of economies of South-East Asia, in particular the growing importance of Japan in the global economic system. Changes in the existing structure were unfavorable for the United States and Mexico. They undermined the position of the United States as a global power as the country had to cope with increasing international competition. Global tendencies to move labor-intensive production to the Asian countries endowed in low-wage labor have also weakened Mexico.

Processes that unrolled in the American continent fuelled the climate of integration. Tightening cooperation in the region stemmed, inter alia, from Ronald Reagan's policy vis-à-vis the countries of Latin America. His presidency was the time when the United States would engage in combatting communism, ensuring peace and security in the region, and increasing assistance in financial, military, and training areas.[16]

Individual interests and motivations driving countries contemplating NAFTA membership can be seen as complementary to external conditions favoring integration. The United States was driven mainly by political considerations, support to Mexico, and its economic development model together with maintaining the country's pro-US orientation as a model for other countries in the region tackled with high indebtedness and the lack of political stability.[17] After WWII, sources of the United States domination, which secured it the position of the economic superpower, started to decline, which is why membership in an emerging integration block and the role of its leader were viewed as an opportunity to strengthen this position.[18]

Integration in the American continent gave a chance to build a world forum of mutual trade liberalization around the United States in case GATT Uruguay Round negotiations failed.[19]

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15 K. Czerewacz, *Procesy integracyjne w Ameryce Północnej*, Wydawnictwo Politechniki Białostockiej, Białystok 2003, p. 9.

16 Assumptions of the United States policy vis-à-vis countries of Latin America were identified in the Santa Fé and Kissinger reports.

17 K. Żołądkiewicz, *Północnoamerykańska Strefa Wolnego Handlu – NAFTA*, [in:] E. Oziewicz (ed.), *Wybrane problemy procesów integracyjnych we współczesnej gospodarce światowej*, Wydawnictwo Uniwersytetu Gdańskiego, Gdańsk 1995, pp. 89–124.

18 B. Liberska, *op. cit*., p. 12.

19 K. Czerewacz, *op. cit*., p. 12.

When it comes to economic drivers, ensuring growth in regions bordering Mexico in the south and Canada in the north was very important. In the long-term perspective, it was necessary to stop the inflow of low-paid labor from the south by increasing employment, wages, and the quality of life. On the other hand, low wages and work standards, in combination with liberal environmental regulations, encouraged American corporations to relocate to Mexico or at least to open their affiliates there to reduce the costs of production substantially. The abolition of barriers to trade was to ensure access to a new market, boost exports, and create new jobs for American workers.

Except for positive effects, which were to have been experienced by the American economy, as well as the US citizens, there were numerous threats. One of the major ones linked with the transfer of American technology to Mexico, where labor cost was lower. The AFL-CIO, trade unions federation in the United States, saw the agreement as a threat. Unfavorable effects for the US labor market were to have been triggered by lower costs and labor law standards as well as less stringent environmental regulations in Mexico. Opposition vis-a-vis the agreement was motivated by possible liberalization of the US environmental legislation in response to business re-location to Mexico.

Concerns were also voiced by fruit and vegetable growers. For them, the reduction or elimination of tariffs meant losing the competitive advantage and creating an excessive competitive advantage for Mexican farmers. Low prices of Mexican fruits and vegetables stemmed from the low cost of labor but also smaller scale intervention of the Mexican government in prices of agricultural products.[20]

From the Canadian perspective, the CUSFTA, which had been operational since 1988, was a favorable solution. That is why Canada was not so much engaged in NAFTA membership like other members of the newly emerging grouping. However, the possibility to renegotiate some of CUSFTA provisions was an argument for the country's accession. Concerns connected with the new initiative focused on relations between the United States and Mexico that could potentially intensify at the expense of the US-Canada cooperation. In other words, Canada feared that a theoretically multilateral integration would, in reality, be modeled after the hub-and-spoke concept and generate trade and investment diversion effects.

Finally, the major stakeholders (representatives of Canadian corporations and chambers of commerce) decided that NAFTA membership would be an opportunity to undermine the United States domination in the American continent and to re-define how rules of origin were determined for specific product groups.[21]

Mexico, in turn, was motivated to join NAFTA by economic arguments resulting from substantial disproportions in the level of economic development but also by political arguments based on differences in political culture and shorter

20 A. Schafer, *Amerykańska przestrzeń gospodarcza od Alaski do Ziemi Ognistej – marzenie czy przyszłość?*, Fundacja im. Friedricha Eberta, Warszawa 1997, p. 7.

21 K. Żołądkiewicz, *op. cit.*, p. 99.

democratic traditions in the country. At this point, we should discuss the political and economic context surrounding the decision on integration. In the 1980s, before the US-Canadian talks about the formation of a free trade area even started, Mexico suffered from an economic crisis, and its debt rose to USD 92 bn (ca. 14% of the GDP). Circumstances were not favorable for maintaining any trade relations with other countries on the continent. Reforms put in place by President Miquel de la Madrid and continued by his successor Carlos Salinas de Gortari led, inter alia, to the restructuring of debt repayment and interest refinancing by taking new loans. The World Bank resources financed structural reforms. A universal customs system replaced import licensing, budget expenditure was severely cut while at the same time steps were taken to stop hyperinflation and privatize selected sectors of economy, e.g., the banking, manufacturing or telecommunications sector.[22] A critical component expected to help the Mexican economy to overcome the crisis was the *maquiladora* program, within which the government offered tax allowances and legal assistance as well as simplified procedures for start-ups that would domestically assemble products made from imported parts. The program brought the United States benefits resulting from differences in the cost of labor while Mexico received one third of its foreign currency revenue to the budget.[23] The agreement also helped in the development of border regions in both countries.

Better economic performance increased Mexico's attractiveness and the country's credibility as a partner in international trade. Positive changes that took place at that time increased Mexico's interest in joining an agreement like CUSFTA.[24]

In the report drafted for the United States Congress, Villarreal[25] observes that the then President of Mexico, Carlos Salinas de Gortari, expected that trade liberalization would intensify cooperation, in particular exports and FDI inflow, which would create new jobs in the manufacturing sector and exert positive impact upon economic reforms. The low cost of labor and energy in Mexico were valid arguments and could attract investment from the US and Canada but also from other countries to whom the proximity of the US and Canadian markets acted as an additional incentive.[26]

Due to the lack of financial resources, private and state-owned enterprises could not afford to invest and create new jobs, which was why the government was

22 B. Liberska, *Strategia rozwiązywania kryzysu zadłużenia w Ameryce Łacińskiej*, Uniwersytet Jagielloński, Kraków 1991, p. 36.

23 E. Latoszek, M. Proczek, *op. cit*., p. 455.

24 Between 1985 and 1989 representatives of the administration of Mexico and the United States signed three fundamental agreements: Agreement on Subsidies and Countervailing Measures, Framework for Principles and Procedures Regarding Trade and Investment Relations, and Understanding Regarding Trade and Investment Facilitation Talks, [after:] A. Gwiazda, *Globalizacja i regionalizacja gospodarki światowej*, Wydawnictwo Adam Marszałek, Toruń 1998, p. 93.

25 M.A. Villarreal, *NAFTA and the Mexican Economy*, CRS Report for Congress, Congressional Research Service, Washington D.C. 2010, p. 1.

26 K. Czerewacz, *op. cit*., p. 15.

looking for a foreign investor who would help in developing the economy. Since Western European countries were engaged in building the European Community, the United States was the only candidate. From President Salinas point of view, protecting the US investment in combination with reduced barriers to trade in the NAFTA framework were to have triggered the inflow of investment and, consequently, stimulate economic growth. The lifting of barriers to trade meant that agricultural production of Mexico would have to compete with the US imports forcing domestic Mexican growers to increase their productivity. The low cost of labor and the immediate neighborhood of the American market could then translate into the growth of exports.[27]

The role played by Salinas was highlighted by Mize and Swords,[28] who focused on his studies at Harvard University, his in-depth knowledge about the domestic political system, and, as they call it, his 'obsession' with modernizing Mexico's economy and bringing the country into the First World.

Except for economic drivers, there were quite fundamental political arguments, above all, the opportunity for the Mexican economy to be viewed internationally as one of North American rather than Latin American economies. Whitehead[29] quotes statements made by Mexican politicians who believed that the accession to NAFTA means leaving Latin America and joining the First World. MacArthur[30] gives a similar account of events and recalls what a Mexican politician said about moods prevailing amongst the then business elite who argued that NAFTA was more critical for political rather than economic reasons and expected to ensure political stabilization and the continuity of reforms.

The international community viewed Mexico's membership in NAFTA as a factor boosting the country's credibility, Mexican people saw it as a step building confidence in the administration that was carrying out the reforms, and the Mexican administration understood it as an expression of support to these reforms.[31] Integration offered a tangible opportunity to foster the reforms and ensure economic and political stability. NAFTA membership was expected to acknowledge the successful democratization of the country while integration with the US was to have provided evidence for increasingly better performance of the Mexican economy.

Despite numerous benefits stemming from the accession to a free trade area, there were looming threats. Concerns were growing mainly around becoming

27 K. Kozak, *Asymmetric Integration under NAFTA*, [in:] M. Calda (ed.), *Acta Universitatis Carolinae: Studia Territorialia V-2003*, Department of American Studies Series, Vol. 2, Charles University, The Karolinum Press, Prague 2005, pp. 67–105.

28 R.L. Mize, A.C.S. Swords, *Consuming Mexican labor. From the Bracero Program to NAFTA*, University of Toronto Press, Toronto 2011, p. 193.

29 L. Whitehead, *Latin America: A New Interpretation*, Palgrave Macmillan, New York–Basingstoke 2006, p. 223.

30 J.R. MacArthur, *The Selling of "Free Trade": NAFTA, Washington, and the Subversion of American Democracy*, University of California Press, Berkeley–Los Angeles 2001, p. 381.

31 *Ibidem*, p. 103.

economically and politically dependent on the United States and risks connected with other members of the grouping deploying their economic advantage to get access to the market of the economically poorer and weaker country. Finally, there were fears, similar to those on the Canadian side, that failing to be a part of the agreement might generate adverse effects of trade diversion caused by the tightening of the US and Canada cooperation at the expense of Mexico.[32]

All the concerns of the United States, Canada, and Mexico were fully justified, especially when the North American Free Trade Agreement was to have become the first grouping to liberalize trade amongst economies whose economic development and social contexts were so much different. Differences in the main statistical and economic indicators of the NAFTA member countries are presented in Table 2.1.

Table 2.1. Demographic indicators and economic potential of NAFTA members before the formation of the grouping in 1991

	Country		
Indicator	United States	Canada	Mexico
Population (in millions of persons)	252.5	26.8	90
Area (in thousands of km^2)	9, 373.0	9, 976.0	1, 973.0
Working population (% of total population)	50.3	52.0	38.4
Birth rate (per 1000 residents)	15.0	14.0	29.0
Population growth rate (in %)	0.8	1.1	2.2
Labor resources (in millions)	125.0	14.0	24.0
Unemployment rate (in %)	6.7	10.3	20.0
Average wage in manufacturing (USD/h)	14.7	16.0	1.8
Female working population (in %)	44.5	43.9	27.8
GDP (USD bn)	6, 505.0	674.0	270.0
GDP per capita (USD)	25, 863.0	25, 350.0	3, 163.0

Source: E. Latoszek, M. Proczek, *Organizacje międzynarodowe we współczesnym świecie*, Dom Wydawniczy Elipsa, Warszawa 2006, p. 459.

32 K. Żołądkiewicz, *op. cit.*, p. 103.

2.2. NAFTA: objectives, principles, and institutions

Pursuant to Art. XXIV GATT, the first part of NAFTA (Art. 101)[33] establishes a free trade area. The agreement does not specify the geographic scope of the area, meaning it remains open to potential new members. When it comes to member states' participation in other international agreements, the establishing of NAFTA did not repeal the obligations of its signatories assumed under GATT regulations and other agreements to which they were party. In the event of any inconsistency, NAFTA provisions would prevail except as otherwise provided in the Agreement.

Objectives of the Agreement are laid down in its first part (Art. 102). They include:

1) granting the most-favored-nation treatment to the signatories;
2) elimination of barriers to trade and facilitation of the cross-border movement of goods between the territories of the Parties;
3) promoting fair competition principles in the area covered by the Agreement;
4) substantial increase in investment opportunities in the free trade area;
5) providing adequate and effective protection and enforcement of intellectual property rights in each Party's territory;
6) creating effective procedures for the implementation and joint administration of the Agreement and the resolution of disputes;
7) establishing a framework for further trilateral regional and multilateral cooperation to expand and enhance the benefits of NAFTA.

Objectives specified in the Agreement focus on economic aspects. It does not contain any provisions concerning the future growth of the grouping, except for a paragraph stating that NAFTA is an open Agreement.

There are no references in NAFTA to common traditions or the will to bring forward political dialogue. General objectives concern above all intensification and liberalization of trilateral cooperation in trade. Apparently, focus on these aspects stems from the selected form of integration, which, by definition, concerns exclusively trade.

Key areas of a cooperation deal with trade in goods and rules of origin, trade in agricultural products, investment and services, cross-border movements of entrepreneurs, subsidies, public procurement, establishing norms and customs, and dispute resolution.

The institutional structure of NAFTA is not very much extended, especially when we compare it to structures of other integration blocks, such as Mercosur or European Union. The NAFTA framework includes commissions and working

33 The first article of the agreement carries the number 101 (numbers 1 – 100 were not used at all). The first digit indicates the chapter, to which an article belongs. Whenever in the text the number of an article, annex or section is given in brackets without indicating its source, the author makes references to the text of NAFTA.

groups set up to ensure efficient delivery in action areas specified in the Agreement. The *Free Trade Commission*, which McKinney[34] calls the governing body, is the central institution of NAFTA. It brings together ministerial-level representatives of all member countries or their designees. Each Party rotationally chairs annual meetings. The primary responsibilities of the Commission include: supervising the implementation of the Agreement, overseeing its further elaboration, resolution of disputes arising with regard to differences in its interpretation. The Commission may establish other institutions (committees, working groups, and expert groups) and delegate responsibilities to them, it also oversees their actions (Art. 2001).

Besides the Free Trade Commission, the Committee on Trade in Goods plays an important role. According to the Agreement, the Committee should meet upon the request of any Party or the Commission. At the same time, its members responsible for areas critical for the cooperation of the member countries, such as customs, immigration, an inspection of food and agricultural products, border inspection facilities, regulation of transportation and the movement of goods are expected to meet at least once a year (Art. 316). Day to day management of NAFTA implementation is taken care of by the NAFTA coordinators, senior Trade Department officials designated by each country.[35]

More than 30 working groups, committees, and other auxiliary units operate under the auspices of NAFTA. Their role is to initiate activities designed to facilitate trade and investment efforts as well as seeking to ensure efficient delivery and administration of adopted plans. Working groups and committees are expected to streamline the implementation of the provisions of the Agreement and to provide circumstances for further trade liberalisation within the area. Directions of their works are dictated by line Ministers sitting on the committees. To ensure high-level surveillance overworking groups and committees, Deputy Ministers for Trade meet twice a year.

Two rounds of meetings carried out and managed by the Committee for Trade in Goods, which speeded up the elimination of customs duties, can serve as an example of such activities. Hufbauer, Esty, Orejas, Rubio, and Schott[36] stress that the smooth performance and effective discussions amongst the committees and working groups helped in avoiding disputes in sanitary and phytosanitary issues. Aspinwall[37] highlights the role of the Committee as a body which ensures the continuity of dialogue about national affairs with the health of animals and plants but

34 J.A. McKinney, *Created from NAFTA: The Structure, Function and Significance of the Treaty's Related Institutions*, M.E. Sharpe Inc., New York 2000, pp. 24–33.

35 NAFTANowOrg, www.naftanow.org [accessed: 15.02.2020].

36 G.C. Hufbauer, D.C. Esty, D. Orejas, L. Rubio, J.J. Schott, *NAFTA and the Environment: Seven Years Later*, Institute for International Economics, Washington D.C. 2000, p. 8.

37 M. Aspinwall, *NAFTA-ization: Regionalization and Domestic Political Adjustment in the North American Economic Area*, "Journal of Common Market Studies" 2009, Vol. 47(1), pp. 1–24.

also works towards maintaining the continuity of trade. In 2012 there were in total 22 Committees and Working Groups.[38]

NAFTA has also got its Secretariat (Art. 2002) acting in administrative and support capacity.[39] It is responsible for managing mechanisms specified by the Agreement and designed to ensure timely and impartial resolution of disputes between domestic companies and/or governments.[40] Apart from that, the Secretariat assists the Commission and, in matters not related to dispute settlement, committees, and working groups.

The Secretariat is responsible for the settlement of disputes in cases covered by the following Chapters: Fourteen (Financial Services), Nineteen (Review and Dispute Settlement in Antidumping and Countervailing Duty Matters), and Twenty (Institutional Arrangements and Dispute Settlement Procedures) of the Agreement. The Secretariat has also got some restricted responsibilities in dispute settlement under Chapter Eleven (Investment).

Each Party to the Agreement has established a permanent office of the national Section of the Secretariat are 'mirror-images' of each other. National Sections are headed by a Secretary appointed by the respective government. National Sections maintain a court-like registry of panel, committee, and tribunal proceedings.[41] The cost of running the secretariats is paid individually by the Parties.

2.3. Trade in goods: liberalisation and control mechanisms

NAFTA governs cooperation among three countries and very precisely stipulates its conditions along two directions by laying down functional, i.e., horizontal and sectoral rules of trade. This Chapter discusses general regulations for the trade in goods together with principles that apply to investment and services.

38 Global Affairs Canada, www.international.gc.ca/trade-agreements-accords-commerciaux/agr-acc/nafta-alena/nafta5_section05.aspx?lang=en&view=d [accessed: 23.02.2020].

39 A binational Secretariat operating inside the free trade area established between the United States and Canada was a similar administrative body (CUSFTA: *Canada – United States Free Trade Agreement*, 1987–1994).

40 NAFTA Secretariat, www.nafta-sec-alena.org [accessed: 5.03.2020].

41 Global Affairs Canada…

2.3.1. General regulations

Subchapter 2.3.1 examines general trade regulations, which apply horizontally irrespective of the type of product that is exchanged. They cover, in particular, access to the markets of the member states, customs duties, rules of origin, and technical barriers to trade.

2.3.1.1. National treatment and market access for goods

Kennedy[42] calls the gradual elimination of tariffs in the trade in goods between all the member states the cornerstone of the Agreement. He shows differences in average tariffs that were in force on the day of the entry into force of the Agreement; tariffs in Mexico were 2.5 times higher than in the United States, which demonstrates the potential benefits of their elimination or reduction.

NAFTA is very specific about the terms of access to the markets of its Parties. When it comes to trade in goods, the Parties to the Agreement are bound with the National Treatment clause under GATT Art. III of 1947.[43] The national treatment clause was *in extenso* incorporated into the text of the Agreement (Art. 301) and, according to Selivanova,[44] it is especially vital for fuels, which are often taxed with excise duty or other internal taxes. According to the national treatment clause means that after crossing the border when all appropriate charges have been paid, an imported good may not be treated differently than an identical domestic product. By referring to GATT principles, Condon[45] indicates that tariffs that have been eliminated or reduced may not be increased again. Tariffs were the principal tool of trade protection used in the North American continent before the formation of NAFTA. They had been being abolished between the United States and Canada in accordance with the timetable adopted under the CUSFTA, which provided for the termination of the transition period in 1998, however, when NAFTA Agreement was signed, a new calendar for tariffs reduction was adopted. All goods were divided into five categories to which different rules applied. For all categories, tariff elimination began on 1 January 1994, yet only category A was subject to free trade when the Agreement entered into force. In other categories, duties were being eliminated systematically, and only in one category, no final date for free trade

42 K.C. Kennedy, *North American Free Trade Agreement* (*NAFTA*), Kluwer Law International, Alphen aan den Rijn 2001.

43 Art. III GATT: *National Treatment on Internal Taxation and Regulation*.

44 J. Selivanova, *Regulation of Energy in International Trade Law: WTO, NAFTA, and Energy Charter*, Kluwer Law International, Alphen aan den Rijn 2011, p. 350.

45 B.J. Condon, *NAFTA, WTO and Global Business Strategy: How AIDS, Trade and Terrorism Affect Our Economic Future*, Quorum Books, Westport 2002, p. 35.

was specified.[46] Authors of the report drafted for the United States Congress[47] still before the Agreement became formally operational note that, although duties were eliminated in stages, most goods were traded freely already 10 years after NAFTA entered into force.

Table 2.2. The timetable of the elimination of customs duties in NAFTA

Staging category	Date of the complete elimination of customs duties
A	1 January 1994
B	1 January 1998
C	1 January 2003
C+	1 January 2008
D	–

Source: author's compilation based on Annex 302.2.

For goods originating from the area, the Parties may neither impose new customs duties nor increase the existing ones, but they should progressively eliminate them (Art. 302). The Parties may maintain the current import measures or adopt new ones provided; they are consistent with the tariff rate quota and do not have trade-restrictive effects bigger than the already imposed restrictions.

Parties may not maintain or adopt prohibitions or restrictions on the importation of any good originating from the area or on the exportation of any good destined for the partners of the Agreement (Art. 309). The only exception is made for restrictions set out in GATT Art. XI,[48] incorporated into NAFTA (Art. 309).

Signatories may not grant any new waiver of customs duties and expand preferences accorded to the existing beneficiaries, nor may they grant them to new beneficiaries if such waiver is, explicitly or implicitly, conditioned on the fulfillment of a performance requirement (Art. 304). These requirements concern a given level or percentage of goods or services being exported, substituting domestic products and services covered by the waiver of customs duties with imported goods, and regulations targeting persons benefitting from waivers of customs duties (Section E). Mexico was exempted from these regulations. At the same time, it was stated that Mexico might not increase the ratio of customs duties waived to customs duties owed relative to the performance required under any such waiver and expand the catalog of imported goods covered by the waiver (Annex 304.1).

46 Trade between the United States and Canada is governed by the CUSFTA, whose annex 401 was fully incorporated into the NAFTA.

47 United States General Accounting Office, *Report to the Congress, North American Free Trade Agreement. Assessment of Major Issue*s, Washington D.C. 1993, p. 16.

48 Art. XI GATT: *General Elimination of Quantitative Restrictions*.

The Agreement in great detail regulates the right to claim a drawback for paid duty, temporary admission of goods in the area, and conditions for the admission of products re-entered after repairs and alterations, e.g., specifies duty-free entry of commercial samples and printed advertising materials.

It also lays down rules for customs user fees for individual countries (Art. 310). Mexico's government may not increase its customs processing fees on goods originating from the area, and the country had to eliminate such fees by 30 June 1999. Concerning the United States, a provision was formulated that banned increasing the merchandise processing fees and ordered the elimination of such fees, following the provisions of CUSFTA by 30 June 1999 (Annex 310.1). Forbidden measures also include customs duties, taxes, and other charges levied on the exports of goods originating from the member countries unless such duties, taxes and charges are adopted on exports of such goods to all the members of NAFTA and such goods destined for domestic consumption (Art. 314). Mexico could maintain or adopt duties, taxes, or other charges on the exports of basic foodstuffs, their ingredients, or on the goods from which such foodstuffs are derived, provided these charges are binding upon exports of such goods to all other Parties to the Agreement. Restrictions were designed to prevent the re-sale of products available under the domestic food assistance program and ensure the availability of such foodstuffs in the local market. The aforesaid concerned goods whose domestic prices were held below the world price as part of the governmental stabilization plan (Annex 314). The exception was made for temporary[49] shortages of such goods in the remaining member countries.[50]

The Agreement also regulates potential developments that could unroll during the transition period. The Parties decided that in the situation of sudden and substantial increases in imports of goods as a result of the reduction of duty, a Party may adopt remedies to protect domestic producers. Under such circumstances, the Parties may take necessary measures, such as the suspension of further reduction or increasing duty on a particular good. Remedies may be instigated no later than a year after such unforeseen effects of the reduction of duties have emerged and cannot be maintained for a period longer than three years (Art. 801).

Parties may adopt remedies in situations provided for in GATT Art. XIX,[51] i.e., when a product is imported by a Party to the agreement in such increased quantities, absolute or relative to the domestic output, and on conditions that could cause or threaten to cause serious injury to domestic producers of like or directly competitive products. Remedies may also be applied when imports from a Party represent a substantial share of total imports and when imports from one

49 Temporary shortages could not go on for longer than a year.

50 Parties may maintain or adopt new trade restrictions in accordance with GATT Art. XI (2) and XXI (g, i, j), however, they have to observe conditions that are set out in detail in Art. 315 of the Agreement.

51 Art. XIX GATT: *Emergency Action on Imports of Particular Products*.

or both Parties contribute importantly to serious injury to local producers. If any of the Parties to the Agreement takes an action that would restrict imports of a concrete good from another Party or Parties, it shall compensate the Party against whose good the action is taken. Compensation should take the form of trade concessions equivalent to the value of the additional duties imposed on protected products (Art. 802). Remedies should be adopted and exercised based on equitable, timely, transparent, and efficient procedures (Art. 803). Trebilcock and Howse[52] invoke Art. 802, according to which in circumstances when a country takes multilateral emergency action (GATT), its NAFTA partners should be excluded from the procedure unless their exports account for a substantial share in total imports and contribute importantly to the serious injury, or a threat thereof, of the country which initiated the action.

On top of that, NAFTA sets out rules on which antidumping and countervailing duties can be applied. Ganster and Valenciano[53] explain their adoption with the need to protect crucial products, for which external duty does not provide a sufficient safeguard that would fill the gap between the price of a product in a given market and its current world price. Individual antidumping policies and regulations on countervailing duty are to act as a protective shield. Disputes over dumping and countervailing duties are resolved by binational panels (Annex 1901.2). Each Party has obliged to amend national laws on these issues in accordance with the adopted schedule (Annex 1904.15).

2.3.1.2. Rules of origin

Most countries adopt standards for the rules of origin. Mendelowitz[54] lists the main reasons why such rules are implemented. The catalog of reasons includes the use of such rules to set customs duties, ensure proper labeling of products, promote the flow of goods and capital as well as apply trade policy measures specific to individual countries. Canadian Department of Foreign Affairs and International Trade[55] summarized the objectives the Parties sought to achieve in drafting the rules of origin in NAFTA:

1) to provide clear rules that would give certainty and predictability to producers, exporters, and importers and solve problems encountered under CUSFTA;

52 M.J. Trebilcock, R. Howse, *The Regulation of International Trade. Third Edition*, Routledge–New York 2005, p. 40.

53 P. Ganster, E.O. Valenciano, *The Mexican – U.S. Border Region and the Free Trade Agreement*, Institute for Regional Studies of the Californias, San Diego State University, San Diego 1992, p. 32.

54 A.I. Mendelowitz, *NAFTA: Issues Related to Textile/Apparel and Auto and Auto Parts Industries*, United States General Accounting Office, Washington D.C. 1993.

55 External Affairs and International Trade. International Trade Development, *NAFTA: What's It All About?*, Ottawa 1993, p. 39.

2) to avoid imposing unnecessary burdens on exporters and importers claiming the benefits of the membership in the grouping;
3) to ensure that NAFTA benefits are accorded only to goods originating from the area and not to products that are made elsewhere and that undergo only minor processing in the North American continent.
4) The principles of preferential, duty-free trade adopted in NAFTA concern only goods originating in the area. This is why the Agreement precisely specifies rules of origin, assuming that a product originates in the area if (Art. 401):
5) it is produced entirely in the territory of one or more of the NAFTA countries;
6) the non-originating materials used in its production undergo an applicable change in tariff classification and satisfy the applicable requirements specified in the Agreement;
7) it is produced entirely in the territory of NAFTA from materials originating in at least one member country;
8) it is produced in the territory of NAFTA, but one or more non-originating materials used in its production does not undergo a required change in tariff classification. The latter may stem from the fact that a product was imported into the territory of NAFTA unassembled but was classified as an assembled final product or as a final product whose components are covered by the same tariff heading. The provision does not apply to explicitly listed products, such as, e.g., clothes and articles and devices made of a fabric of different types, e.g., tents or curtains. The full list of goods to which the article does not apply comprises several hundred items.

In the case described in point 4, a good is considered as originating in NAFTA if the value of materials is not more than 7% of the transaction value of the final good (adjusted to the F.O.B basis, Incoterms 2000) or the value of non-originating components does not exceed 7% of the total value of the product (Art. 405).

To classify a good as originating in NAFTA, we need to find out to what extent the good was manufactured in the territory of NAFTA. To this end, we may use the RVC (*Regional Value Content*) index, which can be calculated in two ways (Art. 402). The first is the transaction value method, which considers the transaction value of the goods and the value of non-originating materials used in its production.

In accordance with the formula:

$$RVC = \frac{TV - VNM}{TV} x100, \text{ where:}$$

RVC is the regional value content expressed as a percentage;

TV is the transaction value of a good-adjusted to a F.O.B. basis, Incoterms 2000;

VNM is the value of non-originating materials used in the production of the good.

The second method used to calculate the RVC is the net cost method, which considers the net cost of production and, like in the transaction value method, the value of non-originating components.

In accordance with the formula:

$$RVC = \frac{NC - VNM}{NC} x100, \text{ where:}$$

RVC is the regional value component expressed as a percentage;

NC is the net cost of the good;

VNM is the value of non-originating materials used in the production of the good.

A good is considered as originating from the area if the RVC calculated using the transaction value method is at least 60%, and the RVC calculated using the net cost method is not less than 50% (Art. 401).

Goods originating from the area should have a certificate of origin. A certificate of origin confirms that a good qualifies as an originating good, and each Party to the Agreement may require that a certificate of origin for a good imported into its territory be completed in languages required under the law of this Party (Art. 501). The provision does not apply to a commercial and non-commercial importation of goods whose value does not exceed UDS 1,000 or its equivalent amount in another currency, as well as goods for which the importer has waived the requirement of presenting a Certificate of Origin (Art. 503). The effective implementation of provisions on, inter alia, duty drawback, the Most Favoured Nation clause, and rules of origin is ensured by the Working Group on Rules of Origin (Art. 513).

Each country has identified exceptions from the above-described rules with regard to particular product categories. For Canada, these categories include inter alia, fish, and alcohol products. Mexico has adopted new and maintained the existing prohibitions or restrictions on the importation of cars, engines, and all types of machinery for the first 10 years after the entry into force of the NAFTA. A detailed list of goods covered by these regulations can be found in *Tarifa de la "Ley del Impuesto General de Importación"* (Annex 301.3).

2.3.1.3. Technical barriers to trade

NAFTA allows the use of standard-related measures and divides them into three categories: technical regulations, standards, and compatibility assessment procedures. According to Escoto,[56] the entire chapter devoted to technical barriers to trade (Chapter Nine) is intended to strike a balance between the rights of the Parties to the Agreement to regulate issues pertaining to health and safety and their obligation to minimize barriers to trade.

56 J.A. Escoto, *Technical Barriers to Trade Under NAFTA: Harmonizing Textile Labeling*, "Annual Survey of International & Comparative Law" 2001, Vol. 7(1), pp. 63–86.

Vaidya[57] highlights the impact of the decisions taken during the GATT Uruguay Round on provisions concerning technical barriers to trade, as well as sanitary and phytosanitary measures adopted in NAFTA. His observations are substantiated with the obligation undertaken in the integration agreement by its signatories to comply with their obligations under the GATT Agreement and other international agreements (Art. 903). However, the Parties may maintain or adopt measures intended to protect the safety, as well as human, animal, and plant health or life. The catalog of such allowable restrictions includes, inter alia, a prohibition to import goods that fail to comply with the applicable requirements. These measures, however, may neither discriminate its NAFTA partners nor create unnecessary obstacles to trade (Art. 904).

Standards-related measures are based on international regulations. The exception has been made for territories where for geographical, climatic, technical, and infrastructural reasons, international criteria do not apply (Art. 905). The Parties have also obliged themselves to jointly work out uniform standards that would protect the safety and life of people, animals, and plants. Each Party importing goods from the area covered by NAFTA should treat technical norms adopted by an exporting Party as equivalent to its own, provided that the seller can demonstrate that he adequately complies with standards binding in the importing country (Art. 906).

The Committee on Standards-Related Measures monitors the implementation of the Agreement with regard to standards. Other responsibilities of the body comprise the enhancing of cooperation, facilitating the unification of norms, and providing a forum to consult on issues connected with the applied criteria (Art. 913).

2.4. Investment and services

Moeser[58] concluded that NAFTA was the first trade agreement, which included provisions on rules guiding the location of international investment and offered liberalized conditions to trade in services. This section investigates the rules of cooperation in these two areas.

57 A.K. Vaidya, *Globalization: Encyclopedia of Trade, Labor, and Politics. Volume 1*, ABC-CLIO, Santa Barbara 2006, p. 293.

58 H. Moeser, *Investment Rules in the NAFTA*, Investment Policies in Latin America and Multilateral Rules on Investment, Paris 1997, pp. 127–131, [in:] United Nations, *Elimination of TRIMs: The Experience of Selected Developing Countries. UNCTAD Current Studies on FDI and Development No. 5*, United Nations Publication, New York–Geneva 2007.

2.4.1. Investment

Rugman and Gestrin[59] argue that "the investment chapter of NAFTA picks up where CUSFTA left off". Although the principal provisions of the latter agreement have been replicated in the new one, several additions have been made, which were important because they were to have affected not only the member countries but also countries from outside of NAFTA. The scope of the new agreement was unprecedented as it covered minority shareholders, included the Most Favoured Nation clause and dispute settlement procedures for FDI in North America. McKinney[60] specifies the main objectives of provisions relative to investment in NAFTA. They include the provision of a stable investment climate that would reduce uncertainty in decision-making.

NAFTA has lifted many restrictions and institutionalized a liberalized and safer investment framework. As has been already mentioned, the Parties to the Agreement adopted the rules stemming from the Most Favoured Nation (Art. 1103) and a national treatment (Art. 1102) clause. They are applied with respect to the establishment, acquisition, expansion, management, conduct, and sale, as well as other operations involved in conducting business. The host country may not impose on an investor a requirement of a minimum share of equity to be held by this country nationals or issue recommendations as to the disposition of an investment.

The host country may not order an investor to (Art. 1106):

1) export a given level of goods or services;
2) maintain a given level of domestic content;
3) purchase, use or accord a preference to local products or products acquired from local suppliers;
4) relate in any way the volume or value of imports to the volume or value of exports or the amount of foreign exchange inflows associated with such investment;
5) restrict sales of goods or services that such investment produces in the territory of the host country by relating such transactions in any way to the volume or value of its exports or revenue from exports and returns on foreign investment in foreign currency;
6) transfer technology and knowledge to persons from the host country;
7) act as an exclusive supplier of the goods he produces or services he provides to a specific region or world market.

The host country may not specify the nationality of the senior management team, however, it may require that a majority of the board of directors be this country's citizens or residents. Such interference is allowable only when the

59 A.M. Rugman, M. Gestrin, *Foreign Investment and NAFTA*, University of South Carolina Press, Columbia 1994, pp. 51–53.

60 J.A. McKinney, *op. cit.*, pp. 223–226.

requirement does not impair the ability of the investor to exercise control over his business (Art. 1107).

Relative to businesses originating in the area, the Parties to the Agreement have obliged themselves to ensure free and immediate transfers of capital, such as (Art. 1109):

1) profits, dividends, interest, royalty payments, technical assistance and management fees, etc.;
2) proceeds from the sale of all or any part of the investment;
3) payments made under a contract entered into by the investor or its investment, including payments made pursuant to a loan agreement;
4) payments made under expropriation and compensation schemes;
5) payments arising from the settlement of disputes.

Foreign businesses may not be nationalized or expropriated by the host Party. Exceptions have been made for actions instigated to protect the public interest, which is non-discriminatory by nature, comply with the binding law, and provide for compensation to the investor.

Gantz[61] made a list of benefits to foreign investors, which includes: awarding the national or the Most-Favoured-Nation clause, obligation to offer fair and equitable treatment, elimination of national content requirement, the right to select senior management team irrespective of their nationality, elimination of restrictions for most financial transfers, and protection against expropriation.

In addition to specifying the privileges and freedoms, NAFTA sets out areas open to government interference or subject to the exclusive government rights. The latter include laying down environmental and technological requirements vis-à-vis investors who are expected to make environmentally friendly investments. Members of the grouping are also asked to signal their sensitive sectors, to which some restrictions or specific access rules may apply. The list of exceptions can be found in seven appendices to the Agreement and, as observed by Rugman and Gestrin,[62] in this context NAFTA evolved positively compared to the previous FTA because a clear indication of areas, to which derogations apply theoretically enhances the transparency of the protective system in each country. Sensitive sectors indicated by the United States include airlines, maritime transport, and radio. To preserve its cultural identity and avoid the Americanisation of some areas, Canada imposed restrictions in the sector of culture, mainly on the media. Mexico restricted access to the energy sector.

Uriante[63] stresses the importance of adopted regulations, pointing out that NAFTA has radically changed the protectionist investment rules, which restricted

61 D.A. Gantz, *NAFTA, Article 303, PROSEC and Maquiladora*, [in:] M. Irish (ed.), *The Auto Pact: Investment, Labor and the WTO*, Kluwer Law International, Hague 2004, pp. 137–161.

62 A.M. Rugman, M. Gestrin, *op. cit.*, pp. 51–53.

63 J.L.R. Uriante, *Foreign Investment in Mexico Under NAFTA*, [in:] J.S. Rubin, C.D. Alexander (eds), *NAFTA and Investment*, Kluwer Law International, Hague 1995, pp. 111–145.

potential American and Canadian investment in Mexico. Adopted provisions have also boosted the investment attractiveness of Mexico and improved the country's safety in the eyes of potential investors.

2.4.2. Services

NAFTA provisions on trade in services, like the GATS rules, have been drafted based on the CUSFTA. They regulate the following issues (Art. 1201):

1) the production, distribution, and sale of services;
2) the purchase, use, and payment for a service;
3) the access to and use of distribution and transportation systems;
4) the presence of a service provider of another NAFTA country in the territory of a given Party;
5) the provision of a bond or other form of financial security as a condition for the provision of a service.

Macrory, Appleton, and Plummer[64] underline that, unlike CUSFTA, NAFTA contains an explicit obligation to accord the most favored nation (Art. 1203) and national (Art. 1202) treatment to service providers. To render services within the territory of NAFTA, economic operators from the area do not have to establish a representative office or any form of enterprise in the country where a service is provided (Art. 1205). However, these provisions do not apply to state-owned enterprises (at federal, state, provincial or local levels). When it comes to services rendered at the federal level, Parties may adopt quantitative restrictions (Art. 1207).

Macrory, Appleton, and Plummer[65] together with Wellenius and Stern[66] also draw readers' attention to the fact that NAFTA lays down fundamental principles of the trade in services but contains several annexes dedicated to specific areas with broad reservations concerning specialist services (legal, engineering, transport) and sectors, which have been wholly excluded from the Agreement (airline services, public procurement, and government subsidies).

To exercise their profession, some professional service providers, e.g., physicians or lawyers, are required to apply for a license or certificate if they originate from within NAFTA and wish to provide services in the territory of another Party. Licenses should be granted based on objective criteria, such as competence and the ability to provide a service, but not receiving them should not be burdensome or constitute a barrier to trade in services (Art. 1210).

64 P.F.J. Macrory, E. Appleton, M.G. Plummer, *The World Trade Organization: Legal, Economic and Political Analysis. Vol. 1*, Springer, New York 2005, p. 810.

65 *Ibidem*, pp. 809–810.

66 B. Wellenius, P.A. Stern, *Implementing Reforms in the Telecommunications Sector: Lessons from Experience*, World Bank Regional and Sectoral Studies, Washington D.C. 1996.

Enterprises based in all Parties to the Agreement may apply for licenses to provide financial, telecommunications and road transport services. Shipping companies and bus lines may operate freely within the territory of NAFTA – Mexico was obliged to lift restrictions on buses from the United States and the United States was supposed to eliminate restrictions for charter and tour bus companies from Mexico. Canada grants permit to cross its territory to other member countries. On 1 January 1997, i.e., three years after the Agreement had entered into force, American and Mexican shipping firms in these countries could transport goods in the cross-border states. Three years later, this possibility was extended over the rest of the countries' territories. At the same time, regular passenger flights were launched. For inland water transportation markets, a decision was made to keep them open, but the primacy of domestic transport companies was to be maintained.[67]

2.4.2.1. Telecommunications and financial services

Telecommunications and financial services, like in the CUSFTA, were addressed separately. As observed by Macrory, Appleton, and Plummer,[68] that was due to their sensitivity, critical role in the economy, and the general approach to these sectors exercised in international agreements.[69]

Pursuant to the Agreement, the Parties should ensure access to public telecommunications networks and services as well as to private leased circuits in their territories or across their borders to economic operators originating from other member states for the conduct of their business. The terms and conditions of such access should be *reasonable* and *non-discriminatory.* At the same time, the Parties should ensure that the pricing of public telecommunications services reflects economic costs related to such business and offer access to private leased circuits at a constant price (Art. 1302). Nevertheless, the Agreement does not explain how costs are to be calculated. When a Party maintains or designates a monopoly to provide public telecommunications networks or services and, directly or through an affiliate, competes in the provision of enhanced telecommunication services and products, the Party should ensure that the monopoly does not use its position to engage in anticompetitive practices. Such practices may include inter alia, cross-subsidization,[70] predatory conduct, and discriminatory fees for access to networks and services (Art. 1305).

The Agreement regulates operations of financial institutions originating from the territory of NAFTA, the rights of foreign investors to invest in financial institutions, as well as principles of international trade in financial services. The part of

67 E. Latoszek, M. Proczek, *op. cit.*, p. 472.

68 P.F.J. Macrory, E. Appleton, M.G. Plummer, *op. cit.*, pp. 809–810.

69 E.g., GATS and the Treaty Establishing the European Community.

70 Cross-subsidisation consists in using profits gained in one sector of economy to finance investment in another sector and is designed to strengthen the position of a given operator in this latter sector.

the Agreement dealing with financial services has been thoroughly examined by Glick,[71] who notes that in some instances, NAFTA does not prevent the Parties from acting as an exclusive service provider in their respective territories. This is especially the case of a public retirement plan and a statutory social security scheme, as well as activities or services of a public entity for the account or with the guarantee or using the financial resources of the government or any other public entity.

Investors have the right to provide financial services through separate institutions, to expand their activities geographically, and to establish new institutions (in a chosen juridical form) and take over the existing ones (Art. 1403). The most-favoured-nation should cover financial services or national treatment clause, identical to that accorded to the investment (Art. 1405). The receiving Party may not interfere with the national composition of the senior management of the institution and require that a simple majority of the supervisory board originate from a particular country (Art. 1408).

In the area of financial services, the host country has the right to adopt remedies to protect its investors, depositors, financial market participants, policyholders, and other creditors. Remedy measures may also be used to maintain safety, soundness, integrity and financial responsibility of institutions – financial service providers in international markets. The ultimate reason for state interference can be the need to ensure the integrity of the country's financial system (Art. 1410).

To ensure supervision over the implementation of the provisions of the Agreement, the Parties established the Financial Services Committee. The committee examines information about financial services received from market participants and takes part in settlement of disputes.

The Parties obliged themselves to carry out consultations, three years after the entry into force of the Agreement, concerning the protection of the payments system in Mexico. If the sum of the capital of foreign commercial bank affiliates reached 25% of the aggregate capital of all commercial banks in Mexico, the country might request consultations with the other members of the area to discuss the possible need for remedial action, including temporary limitations on market participation of foreign banks. That would be triggered by the fear of domination of foreign banks potentially leading to the loss of control over the system of payments in Mexico by the domestic institutions and prevent conducting an effective monetary and exchange rate policy (Annex 1413.6).

2.4.2.2. Temporary entry for business persons

There were many concerns over the establishing of NAFTA connected primarily with the inflow of specialists from Mexico to highly developed Canada and

71 L.A. Glick, *Understanding the North American Free Trade Agreement. Legal and Business Consequences of NAFTA. Third edition*, Kluwer Law International, Alphen aan den Rijn 2010, pp. 34–36.

the United States. As observed by Glick,[72] the Agreement is intended to promote temporary entry of businesspersons from the three countries within the area. However, it does not interfere with their immigration policy, regulations on safety, and conditions of employment. In accordance with those above, the Parties oblige themselves to make every effort to minimize unnecessary obstacles to trade created by administrative procedures involved in the presence of businesspersons from other member states.

The countries grant temporary entry to businesspersons, such as technicians, researchers, sales representatives, buyers, analysts, and others (Appendix 1603.A.1). When a resident of the area presents an appropriate certificate (proof of citizenship, confirmation of professional skills, engagement in an undertaking of international coverage), the receiving Party may not require any additional documents. A business person whose profession features on the list of professions entitled to the right to entry may be refused a document authorizing to employment only when in the receiving country there is a pending conflict between trade unions and a potential employer (Art. 1603).

The Agreement identifies categories of businesspersons to whom such regulations apply (Annex 1603) and establishes a Temporary Entry Working Group as a body responsible for the enactment of regulations and further works on measures intended to facilitate temporary entry of businesspersons.

The US administration feared the inflow of too many professionals from Mexico, which is why the Agreement contains a provision, according to which the United States approved as many as 5,500 petitions for temporary entry annually for the period not longer than 10 years (Appendix 1603.D.4).

2.5. Summary

The North American Free Trade Agreement is the principal source of information about operating mechanisms of the grouping. It sets out objectives and principles of cooperation within the grouping, identifies bodies responsible for the accomplishments of these objectives, and for monitoring compliance with agreed principles of collaboration. NAFTA is a grouping with rather little extensive administrative structure created to manage the grouping.

The Agreement comprises principles and rules of economic cooperation applied to different sectors. The analysis of NAFTA provisions contained in Chapter Two suggests that the scope of cooperation is liberalized inside the free trade area expanded with free trade in services.

72 *Ibidem*, p. 72.

Restrictions on trade were lifted in multiple stages, and the main reason why the protection of some sectors, products, or product groups was extended lied in considering them particularly sensitive and essential to the interests of the three countries. There are sectors, in which more than 20 years after the Agreement entered into force, trade has not been fully liberalized.

3. Trade effects of Mexico's membership in NAFTA

The effects of Mexico's membership in NAFTA can be examined in two stages. First, a gravity model can be built, which, using econometric methods, attempts to answer the question about the impact of trade agreements on the size of trade between Mexico and individual countries. Second, one might also try to respond to the question about the occurrence and scale of trade creation and diversion effects triggered by Mexico's engagement in integration on the North American continent.

This chapter provides an overview of empirical studies on the effects of Mexico's membership in NAFTA that reflect both the above-mentioned approaches. The author also discusses her gravity model and an *ex post* forecast, which served as the basis for conclusions concerning the two issues.

3.1. Overview of empirical studies

The effects of NAFTA membership have been examined in many research studies. Economists propose different criteria to assess the impact of integration upon Mexico's economy; they use quantitative or indicator methods and econometric models.

Salvatore[1] presents a critical overview of studies carried out by other economists. He proposes his analysis, which simulates the impact of integration on trade and economic growth of the integrating economies. When referring to these studies, he demonstrates that the examination of the Agreement's impact upon the Mexican economy should not be based exclusively on the analysis of macroeconomic data, such as changes in employment levels, trade dynamics within the grouping, or FDI inflow.

1 D. Salvatore, *Economic Effects of NAFTA on Mexico*, "Global Economy Journal" 2007, Vol. 7(1), Art. 1.

Salvatore refers, among others, to Hufbauer and Schott,[2] who predicted that the formation of a free trade area would stimulate the creation of new jobs and diminish wage differentials and ultimately reduce the inflow of economic migrants from Mexico to the United States. Based on similar macroeconomic data and before the creation of NAFTA, Ross Perot,[3] an American politician, suggested, that the establishment of the grouping would result in massive relocation of the US companies to the United States southern neighbor where they would be attracted by lower costs of labor and less stringent environmental and labor regulations. However, with the benefit of hindsight, we can say that the scenario did not materialize.[4] Hufbauer and Schott,[5] together with Kose, Meredith, and Towe[6] proposed investigating the effects of integration based on the changes in employment and economic growth. According to Salvatore, the approach in which macroeconomic data on changes in employment and trade are used to assess the effects of integration is erroneous. He also believes that it is wrong to study the effects of NAFTA membership by comparing the dynamics of Mexico's GDP before and after 1994. The economist argues that the value of the indicator depends on many factors, often independent of the membership in the grouping.

Salvatore observes that, in accordance with the theory of integration (Viner, Meade), the effects of being a Party to the Agreement should be assessed based on higher output and productivity resulting from specialization in production, trade, investment, and competition. Enhanced output and productivity should translate into employment, wages, and economic growth. Yet, welfare may grow in a member state even when the Agreement little contributes to the creation of new jobs or does not produce the effect at all, provided it boosts the output and productivity, which stimulate economic growth of the country in question. Nevertheless, economic growth depends also on other factors, which is why comparing the value of an indicator before and after the conclusion of the Agreement will not help in singling out the effects of NAFTA.

Salvatore claims that NAFTA effects for its member states can be measured correctly by simulating the impact of integration on trade and economic growth inside the grouping. This approach allows comparing trade and economic growth for two

2 G.C. Hufbauer, J.J. Schott, *North American Free Trade: Issues and Recommendations*, Institute for International Economics, Washington D.C. 1992.

3 *Ross Perot on Free Trade, 1992 & 1996 Reform Party Nominee for President*, On the issues. Every political leader on every issue, http://www.ontheissues.org/Celeb/Ross_Perot_Free_Trade.htm [accessed: 10.03.2020].

4 G. Hufbauer, *Ross Perot Was Wrong About NAFTA*, "The New York Times" 2013, 25.11, [after:] https://www.nytimes.com/roomfordebate/2013/11/24/what-weve-learned-from-nafta/ross-perot-was-wrong-about-nafta [accessed: 17.03.2020].

5 G.C. Hufbauer, J.J. Schott, *NAFTA Revisited. Achievements and Challenges*, Institute for International Economics, Washington D.C. 2005.

6 M.A. Kose, G.M. Meredith, C.M. Towe, *How Has NAFTA Affected the Mexican Economy? Review and Evidence*, IMF Working Paper Research Department and Western Hemisphere Department, Washington D.C. 2004.

scenarios: the first one developed for a situation where the integration grouping is operational and the second one, the 'no agreement' scenario, in which there is no agreement. No matter how correct this way of estimating the effects of integration is, it implies some methodological difficulties. Therefore, Salvatore proposes to examine the effects NAFTA has produced in its member states in a simpler way, i.e., by comparing trade dynamics between the United States and Mexico with the dynamics of the total value of Mexico's trade. Another approach proposed by this author consists in juxtaposing FDI flows from the United States to Mexico with the overall value of FDI inflow to Mexico. As an alternative, Salvatore suggests stimulating trade and economic growth effects of membership inside the area.[7] Such simulation should provide an answer as to how these indicators differ when there is a free trade area, and when such an area does not exist.

Salvatore estimates show that NAFTA membership contributed to a higher GDP growth dynamics and exports and enhanced FDI inflows and capital flows. At the same time, the Agreement helped in reducing Mexico's inflation rate. Also, the short-term interest rate in Mexico was lower. However, one needs to stress that estimates for NAFTA showed a higher value of the parameter for the trade deficit variable, meaning that the Agreement deepened the deficit.

Montenegro and Soloaga[8] discuss an econometric study, in which they estimate the impact of NAFTA on trade between the United States and Mexico and United States trade with selected third countries. In their study, they used a gravity model with multiple exogenous zero-one variables whose evolution in time is viewed as evidence of the impact of NAFTA membership on trade structure. The authors observe that a gravity model is the most often used to identify the trade diversion effect. Its advantage also lies in the discretion it gives in selecting exogenous variables and adapting them to the grouping covered by the study (GDP, population, culture-related or geographical factors). When building a gravity model, Montenegro and Soloaga drew from what had been achieved by Soloaga and Winters,[9] as well as Anderson and van Wincoop.[10]

In a classical gravity model, parameters that specify the size of imports among the countries are critical. In the equation covered by the analysis, these parameters reflect the imports of the United States and Canada from Mexico as well as the imports of the United States from the countries – members to integration groupings.

7 Salvatore does not provide details of such simulation but describes it as an alternative and compares to values obtained from the UN LINK model (a world trade model, in which national models are linked through a trade matrix in one common system).

8 C.E. Montenegro, I. Soloaga, *NAFTA's Trade Effects: New Evidence with Gravity Model*, "Estudios de Economia" 2006, Vol. 33(1), pp. 45–63.

9 I. Soloaga, L.A. Winters, *Regionalism in the Nineties: What Effect on Trade?*, "North American Journal of Finance and Economics" 2001, Vol. 12(1), pp. 1–29.

10 J.E. Anderson, E. van Wincoop, *Gravity with Gravitas: A Solutions to the Border Puzzle*, "American Economic Review" 2003, Vol. 93(1), pp. 170–192.

Soloaga and Winters[11] draw attention to the fact that to correctly identify the impact of NAFTA on changes in trade flows, we need to consider how these coefficients evolve and find out if they are statistically significant. There is no point in discussing the volume of trade since the objective is above all to answer the question of whether, after NAFTA was established, the conditions of trade have changed (trade diversion effect), and if yes, how.

Anderson and van Wincoop[12] propose an extension to the gravity model developed by Montenegro and Soloaga to take account of fixed effects of integration for the importer (i) and exporter (j). By introducing the fixed effect, we can control the unobservable, invariant country-specific characteristics. In the estimated equation, however, these characteristics change over some periods. For this reason, four subperiods have been distinguished, in which all coefficients change, which facilitate the observation of statistically significant, critical variables, such as the block coefficients. The study by Anderson and van Wincoop shows that trade between countries sharing the same border is more intensive than that between countries who are not immediate neighbors. A similar conclusion can be drawn for countries sharing the same language. Zero-one variables representing the United States and Canada's imports from Mexico were also significant, similarly to zero-one variables for Mexico's imports from Canada and the United States, which were, on average higher for the period after NAFTA entered into force. Estimation of the equation suggests that before NAFTA, Mexico's imports from the United States was at the average level for countries of these sizes and geographical distances. Conclusions from the study confirm the general idea of using the gravity model for international trade.

Interestingly, there are no differences in the size of imports from Mexico before and after NAFTA was implemented. Subperiods distinguished in the model can be seen as its drawback, more precisely the subperiod running from 1992 until 1996, which includes the border date when the Agreement was concluded. Such a structure does not permit to unambiguously and very clearly compare the pre-NAFTA and post-NAFTA periods.

Krueger[13] advocates a different approach and suggests examining NAFTA effects by identifying trade creation and trade diversion effects. She does it using three methods: analysis of trade pattern statistics of the member states, identification of product categories for which NAFTA imports from the rest of the world dropped, and intra-NAFTA trade intensified. The third method consists of building gravity models, which allows defining trade pattern determinants and diagnosing changes implied by the creation of the area. The deployment of three methods in one study stems from the constraints and imperfections each method carries. Krueger rightfully ob-

11 I. Soloaga, L.A. Winters, *op. cit.*, pp. 1–29.

12 J.E. Anderson, E. van Wincoop, *op. cit.*, pp. 170–192.

13 A.O. Krueger, *Trade Creation and Trade Diversion under NAFTA*, NBER Working Paper No. 7429, California 1999.

serves that from 1990 onward, the effects of NAFTA implementation were anticipated. That is why one cannot assume that pre-1994 data are free of the "NAFTA factor." In addition, integration within the framework of NAFTA was to be accomplished through gradual elimination of customs duties. The study carried out by Krueger covers data until 1998 when some proportion of trade between NAFTA members was still hindered by some restrictions. Integration under NAFTA was not the only form of trade liberalization observed at that time. Hence changes in trade patterns cannot be attributed to the wave of integration on the North American continent only but also to, e.g., endeavors conducive to the creation of a free trade area with the European Union. Political and economic developments also influenced trade between NAFTA members. That was visible mainly in Mexico, the country which, as a result of its engagement in integration in the North American continent, suffered a deep economic crisis, experienced fundamental economic reforms and put in place changes in its financial system. All these factors affected Mexican trade, although it cannot be unambiguously decided how and to what extent they influenced its trade with other NAFTA members and with the third countries. With these constraints in mind, Krueger conducted three complementary studies.

The first one – the analysis of trade pattern statistics of NAFTA members - led her to the conclusion that pre-NAFTA trade flows between Canada and Mexico were relatively small. Trade cooperation between the United States and Mexico was much more intensive.

The second method to learn about the trade creation and trade diversion effects consisted of examining directions of trade in selected product categories over a specific period. Increased imports amongst the member states associated with decreasing imports from third countries are indicative of the trade diversion effect. If new trade flows within the block are not associated with diminishing trade with the rest of the world, one may safely expect that integration has produced the trade creation effect.

In the late 1980s and early 1990s, Mexico's share in the United States imports was increasing while its share in third countries' imports was decreasing. Later, and after 1994 in particular, imports of all trade partners were increasing. From the viewpoint of Mexico, the change in the source of imports triggered by trade liberalization and the devaluation of peso exerted a more substantial impact upon rising Mexico's share in the US market than the diversion of exports from the rest of the world to the United States. Potentially, the exports shifted towards the US market as a result of increased export supply were met with protectionist measures in the United States, which meant that the Mexican exporters' gain was at the expense of other suppliers rather than high-cost producers from the United States. However, the fact that Mexico increased its share in the rest of the world's imports suggests that the country was a more attractive exporter, especially after the devaluation of the peso in 1994–1995.

The estimation procedure for parameters presented by Krueger confirms that variables considered in the theoretical concept of the gravity equation are highly

significant. It is also interesting to take account of the membership in the same integration block, which, in accordance with the above-discussed model, impacts, although to a different degree, trade between partners. The problem with the study lies in the number of observations resulting from the availability of data. Since the study was published in 1999, it naturally covered only several years when the block was operational, disregarding the period, in which all constraints gradually phased out.

Hufbauer and Schott also conducted an overview of studies on trade effects of NAFTA.[14] They rightfully observe that intensification of trade flows between member states cannot be treated as evidence of membership effects on trade. According to economists, *ex ante* forecast of the increase in trade triggered by the "NAFTA factor" is underestimated, however, one may not answer the question about its scale and, depending on the model, variables and the time horizon of the study, conclusions may differ significantly.

Table 3.1. Summary of selected studies regarding NAFTA trade effects

Author(s)	Study-method	Conclusions
Anderson and van Wincoop[a]	*Gravity model with fixed effects of integration for the importer and exporter.	*Trade between countries sharing the same border is more intensive than that between countries who are not immediate neighbours. *Before NAFTA Mexico's imports from the United States were at the average level for countries of these sizes and geographical distances. *There were no differences in the size of imports from Mexico before and after implementation of NAFTA.
Montenegro and Soloaga[b]	*Gravity model with multiple exogenous zero-one variables.	*United States imports from Mexico or Canada seemed not to have been affected by NAFTA. *Mexican imports from the United States and from Canada were statistically higher in post-NAFTA periods.
Salvatore[c]	*Comparison of trade dynamics between the United States and Mexico with the dynamics of the total value of Mexico's trade. *Juxtaposing FDI flows from the United States to Mexico with the overall value of FDI inflow to Mexico. *Simulating trade and economic growth effects of membership inside the area.	*NAFTA membership contributed to a higher GDP growth dynamics and exports and enhanced FDI inflows and capital flows. *Agreement helped in reducing Mexico's inflation rate. *Short-term interest rate in Mexico was lower. * Agreement deepened the deficit.

14 G.C. Hufbauer, J.J. Schott, *NAFTA*…, pp. 18–19, 69–72.

Author(s)	Study-method	Conclusions
Krueger[d]	*Analysis of trade pattern statistics of the member states. *Identification of product categories for which NAFTA imports from the rest of the world dropped and intra-NAFTA trade intensified via gravity models. *Examining directions of trade in selected product categories over a specific period. *Gravity models which allow defining trade pattern determinants and diagnosing changes implied by the creation of the area.	*Pre-NAFTA trade flows between Canada and Mexico were relatively small. Trade cooperation between the United States and Mexico was much more intensive. *From the viewpoint of Mexico, the change in the source of imports triggered by trade liberalisation and the devaluation of peso exerted stronger impact upon the rising Mexico's share in the US market than the diversion of exports from the rest of the world to the United States. *Potentially, the exports shifted towards the US market as a result of increased export supply were met with protectionist measures in the United States. It means that the Mexican exporters' gain was at the expense of other suppliers rather than high-cost producers from the United States. *The fact that Mexico increased its share in the rest of the world's imports suggests that the country was a more attractive exporter.

[a] J.E. Anderson, E. van Wincoop, *op. cit.*
[b] C.E. Montenegro, I. Soloaga, *op. cit.*
[c] D. Salvatore, *op. cit.*
[d] A.O. Krueger, *op. cit.*

Source: own elaboration based on selected studies.

3.2. Impact of trade agreements on Mexico's foreign trade: a study using the gravity model

3.2.1. Description of a gravity model

Sub-chapter 3.2. presents the gravity model for Mexico's international trade, whose structure is depicted in Figure 3.1.

Gravity model of Mexico's foreign trade:	
share of Mexico's exports to a given country in total Mexico's exports	share of Mexico's imports in total Mexico's imports

Variables that impact Mexico's foreign state:	
straight line distance between Mexico's capital city and the capital of a country – WTO member	all trade agreements to which Mexico is a party
official language of a country – WTO member	share of the GDP of a country – WTO member in the World's GDP

Figure 3.1. Factors that impact the size of Mexico's foreign trade
Source: author's compilation.

To examine the impact of trade between Mexico and individual countries, the author estimated parameters of the following gravity models, expanded with variables associated with the signing of a trade agreement between Mexico and a given country. Specification of the import and export model is similar to the one initially proposed by Montenegro and Soloaga, examined and discussed in sub-chapter 3.1:

$$EXP_{j,t} = \alpha_{0j} + \alpha_1 \log\left(DIST_j\right) + \alpha_2 \left(\frac{GDP_{j,t}}{GDP_{WORLD,t}}\right) + \alpha_3 LANG_j + \mathbf{p}_{j,t}\boldsymbol{\gamma} + \varepsilon_{j,t}, \quad \textbf{(1)}$$

$$IMP_{j,t} = \alpha_{0j} + \alpha_1 \log\left(DIST_j\right) + \alpha_2 \left(\frac{GDP_{j,t}}{GDP_{WORLD,t}}\right) + \alpha_3 LANG_j + \mathbf{p}_{j,t}\boldsymbol{\gamma} + \varepsilon_{j,t}, \quad \textbf{(2)},$$

Table 3.2. Explanatory and explained variables used to estimate exports and imports

Variable	Definition	Unit of measurement	Source
$IMP_{j,t}$	Share of Mexico's imports from country *j* in total Mexico's imports	%	UNCTAD
$EXP_{j,t}$	Share of Mexico's exports to country *j* in total Mexico's exports	%	UNCTAD

Variable	Definition	Unit of measurement	Source
$\frac{GDP_{j,t}}{GDP_{WORLD,t}}$	GDP of country *j* relative to global GDP calculated using the expenditure method (GDP is calculated as the sum of expenditures made on final goods and services) in constant prices (2003 = 100)	%	UNCTAD Calculations of the Secretariat of UNCTAD based on the UN DESA Statistics Division, National Accounts Main Aggregates Database
$DIST_{j,t}$	Straight line distance between Mexico City, the capital city of Mexico and the capital of a selected country	kilometers	www.freemaptools.com
$LANG_{j,t}$	The zero-one variable takes the value 1 when the official language of the country is Spanish, like in Mexico. In other cases, the variable is 0	0–1	www.nationsonline.org

Source: author's compilation.

Subscripts designate individual countries. To investigate the impact of trade agreements between Mexico and a given partner on the size of the trade, zero-one variables have been added linked with such agreements.

The model considers all trade agreements to which Mexico is a party. These agreements include free trade agreements (FTA) and free trade agreements & economic integration agreements (FTA & EIA). The list of such trade agreements, to which Mexico is a party and names of adequate zero-one variables, components of the vector $\mathbf{p}_{j,t}$ are presented in Table 3.3. Data in Table 3.3. show the situation as it was in 2012, the last year of observations included in the model. It is worth stressing that after 2012 trade agreement was signed between Mexico and Peru and the Mexico – Northern Triangle block, which since 2012, has been a free trade area bringing together Mexico, Honduras, Guatemala, El Salvador, Costa Rica, and Nicaragua, was transformed.

The variable was incorporated into the model, and if a binding trade agreement was, for example, concluded between Chile and Mexico in 1994, a zero-one variable associated with this agreement assumes 1 for Chile since 1995 (since the first full year after the agreement has entered into force). In other cases, the variable is always 0.

Table 3.3. Trade agreements between Mexico and other countries (as at 2012)

Partner	Agreement (zero-one variable)	Type of agreement	Signed on	Entry into force
Chile	Chile – Mexico $BEFORE\_CHILE\_MEXICO_{j,t}$ $CHILE\_MEXICO_{j,t}$	FTA & EIA	14.04.1998	1.08.1994
Colombia	Colombia – Mexico $BEFORE\_COLOMBIA\_MEXICO_{j,t}$ $COLOMBIA\_MEXICO_{j,t}$	FTA & EIA	13.01.1994	1.01.1995
Iceland	EFTA – Mexico $BEFORE\_EFTA_{j,t}$ $EFTA_{j,t}$	FTA & EIA	27.11.2000	1.07.2001
Lichtenstein	EFTA – Mexico $BEFORE\_EFTA_{j,t}$ $EFTA_{j,t}$	FTA & EIA	27.11.2000	1.07.2001
Norway	EFTA – Mexico $BEFORE\_EFTA_{j,t}$ $EFTA_{j,t}$	FTA & EIA	27.11.2000	1.07.2001
Switzerland	EFTA – Mexico $BEFORE\_EFTA_{j,t}$ $EFTA_{j,t}$	FTA & EIA	27.11.2000	1.07.2001
European Union	EU – Mexico $BEFORE\_EU\_MEXICO_{j,t}$ $EU\_MEXICO_{j,t}$	FTA & EIA	08.12.1997	1.07.2000
Israel	Israel – Mexico $BEFORE\_ISRAEL\_MEXICO_{j,t}$ $ISRAEL\_MEXICO_{j,t}$	FTA	10.04.2000	1.07.2000
Japan	Japan – Mexico $BEFORE\_JAPAN\_MEXICO_{j,t}$ $JAPAN\_MEXICO_{j,t}$	FTA & EIA	17.09.2004	1.04.2005
Uruguay	Mexico – Uruguay $BEFORE\_URUGUAY\_MEXICO_{j,t}$ $URUGUAY\_MEXICO_{j,t}$	FTA & EIA	15.11.2003	15.07.2004
El Salvador	Mexico – El Salvador (Mexico – Northern Triangle) $BEFORE\_NORTHERN\_TRIANGLE_{j,t}$ $MEXICO\_NORTGHERN\_TRIANGLE_{j,t}$	FTA & EIA	29.06.2000	15.03.2001
Honduras	Mexico – Honduras (Mexico – Northern Triangle) $BEFORE\_NORTHERN\_TRIANGLE_{j,t}$ $MEXICO\_NORTGHERN\_TRIANGLE_{j,t}$	FTA & EIA	29.06.2000	1.06.2001

Partner	Agreement (zero-one variable)	Type of agreement	Signed on	Entry into force
Guatemala	Mexico – Guatemala (Mexico – Northern Triangle) *BEFORE_NORTHERN_ TRIANGLE*$_{j,t}$ *MEXICO_NORTGHERN_ TRIANGLE*$_{j,t}$	FTA & EIA	29.06.2000	15.03.2001
Nicaragua	Nicaragua – Mexico *BEFORE_NICARAGUA_MEXICO*$_{j,t}$ *BEFORE_NICARAGUA_MEXICO*$_{j,t}$	FTA & EIA	18.12.1997	1.07.1998
Costa Rica	Costa Rica – Mexico *BEFORE_COSTARICA_MEXICO*$_{j,t}$ *COSTARICA_MEXICO*$_{j,t}$	FTA & EIA	05.04.1994	1.01.1995
United States	NAFTA *BEFORE_NAFTA*$_{j,t}$ *NAFTA*$_{j,t}$	FTA & EIA	17.12.1992	1.01.1994
Canada	NAFTA *BEFORE_NAFTA*$_{j,t}$ *NAFTA*$_{j,t}$	FTA & EIA	17.12.1992	1.01.1994

* FTA – Free Trade Agreement; FTA & EIA Free Trade Agreement & Economic Integration Agreement.

Source: author's compilation based on data from the World Trade Organisation website.

Besides, the model was expanded with a zero-one variable $PSA_{j,t}$, which represents *partial scope agreements* (PSA). Their structure is identical with that of FTA, FTA & EIA. If a country is a party to a PSA agreement and, at the same time, to a more advanced block, value "1" is attributed to the second one. If a country is a party to two PSA agreements, value "1" is attributed to the one concluded earlier. Table 3.4 contains the list of all PSAs.

Table 3.4. Partial scope agreements to which Mexico is a party

Partner	Agreement	Signed on	Entry into force date
Bangladesh	PTN	08.12.1971	11.02.1973
Brazil	PTN	08.12.1971	11.02.1973
Chile	PTN	08.12.1971	11.02.1973
Egypt	PTN	08.12.1971	11.02.1973
Israel	PTN	08.12.1971	11.02.1973
South Korea	PTN	08.12.1971	11.02.1973
Pakistan	PTN	08.12.1971	11.02.1973
Paraguay	PTN	08.12.1971	11.02.1973

Table 3.4 (contd.)

Partner	Agreement	Signed on	Entry into force date
Peru	PTN	08.12.1971	11.02.1973
Philippines	PTN	08.12.1971	11.02.1973
Serbia	PTN	08.12.1971	11.02.1973
Tunisia	PTN	08.12.1971	11.02.1973
Turkey	PTN	08.12.1971	11.02.1973
Uruguay	PTN	08.12.1971	11.02.1973
Algeria	GSTP	13.04.1988	19.04.1989
Argentina	GSTP	13.04.1988	19.04.1989
Bangladesh	GSTP	13.04.1988	19.04.1989
Benin	GSTP	13.04.1988	19.04.1989
Bolivia	GSTP	13.04.1988	19.04.1989
Brazil	GSTP	13.04.1988	19.04.1989
Cameroon	GSTP	13.04.1988	19.04.1989
Chile	GSTP	13.04.1988	19.04.1989
Colombia	GSTP	13.04.1988	19.04.1989
Cuba	GSTP	13.04.1988	19.04.1989
Ecuador	GSTP	13.04.1988	19.04.1989
Egypt	GSTP	13.04.1988	19.04.1989
Ghana	GSTP	13.04.1988	19.04.1989
Guinea	GSTP	13.04.1988	19.04.1989
Guyana	GSTP	13.04.1988	19.04.1989
India	GSTP	13.04.1988	19.04.1989
Indonesia	GSTP	13.04.1988	19.04.1989
Iran	GSTP	13.04.1988	19.04.1989
Iraq	GSTP	13.04.1988	19.04.1989
South Korea	GSTP	13.04.1988	19.04.1989
North Korea	GSTP	13.04.1988	19.04.1989
Libya	GSTP	13.04.1988	19.04.1989
Malesia	GSTP	13.04.1988	19.04.1989
Morocco	GSTP	13.04.1988	19.04.1989
Mozambique	GSTP	13.04.1988	19.04.1989
Burma	GSTP	13.04.1988	19.04.1989
Nicaragua	GSTP	13.04.1988	19.04.1989
Nigeria	GSTP	13.04.1988	19.04.1989
Pakistan	GSTP	13.04.1988	19.04.1989

Partner	Agreement	Signed on	Entry into force date
Peru	GSTP	13.04.1988	19.04.1989
Philippines	GSTP	13.04.1988	19.04.1989
Singapore	GSTP	13.04.1988	19.04.1989
Sri Lanka	GSTP	13.04.1988	19.04.1989
Sudan	GSTP	13.04.1988	19.04.1989
Tanzania	GSTP	13.04.1988	19.04.1989
Thailand	GSTP	13.04.1988	19.04.1989
Trinidad and Tobago	GSTP	13.04.1988	19.04.1989
Tunisia	GSTP	13.04.1988	19.04.1989
Venezuela	GSTP	13.04.1988	19.04.1989
Vietnam	GSTP	13.04.1988	19.04.1989
Zimbabwe	GSTP	13.04.1988	19.04.1989
Argentina	LAIA	12.08.1980	18.03.1981
Bolivia	LAIA	12.08.1980	18.03.1981
Brazil	LAIA	12.08.1980	18.03.1981
Chile	LAIA	12.08.1980	18.03.1981
Colombia	LAIA	12.08.1980	18.03.1981
Cuba	LAIA	12.08.1980	18.03.1981
Ecuador	LAIA	12.08.1980	18.03.1981
Paraguay	LAIA	12.08.1980	18.03.1981
Peru	LAIA	12.08.1980	18.03.1981
Uruguay	LAIA	12.08.1980	18.03.1981
Venezuela	LAIA	12.08.1980	18.03.1981

* GSTP – Global System of Trade Preferences among Developing Countries; PTN – Protocol on Trade Negotiations; LAIA – Latin American Integration Association.

Source: author's compilation based on data from the World Trade Organisation website.

We expect a positive sign associated with the variable representing the GDP. In accordance with the gravity model theory, the volume of trade between partners is directly proportional to their economic masses (GDP). Countries with high GDP levels, aside from higher demand for imports resulting from their excellent economic performance, have a bigger exports potential compared to countries with lower GDP.[15] By considering the value of exports and imports relative to global trade, we aim at eliminating fluctuations in global trade cycles. Thus, fluctua-

15 N. Drzewoszewska, M.B. Pietrzak, J. Wilk, *Grawitacyjny model przepływów handlowych między krajami Unii Europejskiej w dobie globalizacji*, "Roczniki Kolegium Analiz Ekonomicznych" 2013, Vol. 30, pp. 187–202.

tions of variables defined in this way do not reflect how the volume of global trade fluctuates and only inform about relative increases/decreases in the relevance of trade between Mexico and its respective partner.

We expect a negative sign of the parameter associated with the variable representing the distance between trade partners. In accordance with the gravity model theory, the volume of trade between the two countries is inversely proportional to the distance between them. The variable reflects trade-related costs and acts towards the reduction of the volume of bilateral trade. The bigger the distance between potential trade partners, the higher the costs of transportation and additional charges (insurance, etc.), the longer order lead time, and the lower flexibility of supplies.

We expect a positive sign of the parameter associated with the variable representing the common official language as speaking the same language facilitates cooperation between trade partners (entrepreneurs).

3.2.2. Results of estimations and descriptive statistics

The model was built based on data for all the WTO[16] members for the years 1986–2012. Results of estimations for parameters of models (1) and (2) are illustrated in Tables 3.5 and 3.6. Parameter estimates associated with the variable $\frac{GDP_{j,t}}{GDP_{WORLD,t}}$ are significantly positive, suggesting a positive effect of the size of the economy upon the volume of trade. Estimations of the export equation are higher, meaning demand effects are stronger than the supply effects. The parameter estimate associated with the variable $\log(DIST_j)$ is significantly positive, indicating that the distance between Mexico and its trade partner impacts the value of trade. However, the estimated parameter is higher with respect to the module compared to exports. Language is another cultural factor that affects the volume of trade between Mexico and other countries, and the variable is significant only for exports. In reality, Spain (being part of the EU) turned out to be an essential trading partner for Mexico despite huge distance between the capitals of both countries and a relatively small share of Spain's GDP of the world's GDP (compared to Japan, China, Germany, or the United Kingdom). Other important trade partners of Mexico are Chile, Uruguay, Nicaragua, and Colombia (only in imports) and

16 If data for a country were unavailable for all of the sample or for the majority of observations, the country was removed from the database. The end-date for observations in 2012 was dictated by the first attempts to build a model planned for 2013 when data for 2012 would be the latest ones available. In further studies data update was not possible due to the absence of access to a paid CEIC database.

El Salvador, Guatemala, and Honduras (only in exports), all of which have Spanish as their official language.

Econometric model parameter estimates indicate an increasing share of Mexico's exports to countries, with which it signed a trade agreement. Differences are particularly visible between parameter estimates for variables $NAFTA_{j,t,}$ and $BEFORE\_NAFTA_{j,t}$. The higher parameter estimate for the first variable means that after NAFTA was signed, trade between Mexico and Canada and the United States has intensified. Parameter estimates also suggest trade has intensified after proper trade agreements were signed between Mexico and the EU Member States, Chile, and Israel. Exports from Mexico to countries, which signed the PSA and imports from these countries are higher than the distance between them and Mexico or their share in the world's GDP would suggest. It means that even a slim margin of liberalization of international trade rules exerts a positive impact.

Table 3.5. Panel model parameter estimates for exports. The Newey-West robust estimator was used

Variable	Estimate	Standard error	t Statistic	Borderline level of significance
$\frac{GDP_{j,t}}{GDP_{WORLD,t}}$	1.783	0.115	15.55	0
$\log(DIST_j)$	–0.015	0.001	–11.31	0
$LANG_j$	0.003	0.001	2.37	0.018
$NAFTA_{j,t}$	0.185	0.036	5.13	0
$BEFORE\_NAFTA_{j,t}$	0.075	0.028	2.65	0.008
$EFTA_{j,t}$	0.128	0.018	7.11	0
$BEFORE\_EFTA_{j,t}$	0.016	0.002	9.85	0
$EU\_MEXICO_{j,t}$	0.0002	0.003	0.06	0.950
$BEFORE\_EU\_MEXICO_{j,t}$	–0.008	0.002	–3.09	0.002
$CHILE\_MEXICO_{j,t}$	0.03	0.003	8.27	0
$BEFORE\_CHILE\_MEXICO_{j,t}$	0.014	0.002	7.9	0
$ISRAEL\_MEXICO_{j,t}$	0.064	0.006	10.35	0
$BEFORE\_ISRAEL\_MEXICO_{j,t}$	0.034	0.004	9.16	0
$MEXICO\_NORTGHERN\_TRIANGLE_{j,t}$	–0.009	0.0008	–10.6	0
$BEFORE\_NORTHERN\_TRIANGLE_{j,t}$	–0.008	0.0008	–10.01	0
$PSA_{j,t}$	0.0115	0.002	7.16	0
Cons	0.115	0.011	10.86	0

Source: author's compilation.

Table 3.6. Panel model parameter estimates for imports. The Newey-West robust estimator was used

Variable	Estimate	Standard error	t Statistic	Borderline level of significance
$\frac{GDP_{j,t}}{GDP_{WORLD,t}}$	1.646	0.088	18.83	0
$\log(DIST_j)$	−0.01	0.0008	−12.36	0
$NAFTA_{j,t}$	0.094	0.021	4.45	0
$BEFORE\_NAFTA_{j,t}$	0.086	0.023	3.75	0
$EFTA_{j,t}$	0.088	0.014	6.29	0
$BEFORE\_EFTA_{j,t}$	0.011	0.001	8.71	0
$EU\_MEXICO_{j,t}$	0.001	0.002	0.74	0.457
$BEFORE\_EU\_MEXICO_{j,t}$	−0.003	0.002	−1.85	0.065
$CHILE\_MEXICO_{j,t}$	0.03	0.002	13.27	0
$BEFORE\_CHILE\_MEXICO_{j,t}$	0.012	0.001	11.09	0
$ISRAEL\_MEXICO_{j,t}$	0.046	0.005	10.02	0
$BEFORE\_ISRAEL\_MEXICO_{j,t}$	0.015	0.001	10.12	0
$COLOMBIA\_MEXICO_{j,t}$	0.003	0.0006	4.01	0
$BEFORE\_\ COLOMBIA\ \_MEXICO_{j,t}$	0.003	0.0006	4.37	0
$NICARAGUA\_MEXICO_{j,t}$	−0.0006	0.0003	−1.75	0.08
$BEFORE\_\ NICARAGUA\ \_MEXICO_{j,t}$	−0.0006	0.0003	−1.91	0.057
$PSA_{j,t}$	0.01	0.001	8.05	0
Cons	0.071	0.006	12.28	0

Source: author's compilation.

Aside from that, data showing the share of exports and imports were examined through the calculation of some descriptive statistics, i.e., arithmetic mean, standard deviation, skewness, and kurtosis. The arithmetic mean is a measure that, in a way, describes the entire investigated sample. It is a measure of central tendency showing how much data are distributed around the mean. The bigger the standard deviation, the more distant the data from the mean. Skewness is a measure of the asymmetry of observed results, which informs us how results for a given variable are distributed around the mean, i.e., whether most observed results can be found on the left side of the mean, close to the mean or its right. In other words, whether in a set of observations, more results are situated below the mean for all the investigated block, or are they above or equal to the mean. Kurtosis is a measure of the concentration of results, which informs to what extent observations are clustered

around the mean. The measure informs how many observations are close to the mean and if most observed results are close to the mean.

Table 3.7 illustrates descriptive statistics for the share of Mexico's exports in total exports and Mexico's imports in total imports for all FTAs as well as EIA & FTAs, to which Mexico is a party. By considering trade agreements other than NAFTA, one may present this block in a broader context and, in particular, answer the question of whether integration within the North-American continent has influenced the Mexican trade more, less or similar to other trade agreements, to which Mexico is a party.

For each group of countries, the sample was divided into two sub-periods (before and after a block has been formed). The year in which a given trade agreement entered into force (after 1 January) was included in the sub-period before a block had been established. In other words, the sub-period after the block came into existence always starts with the first full year of its operations. For example, a free-trade agreement between Mexico and Chile came into effect on 1 August 1994, which is why the sub-period after its formation starts in 1995. NAFTA entered into force on 1 January 1994; therefore, the period covered by the study was divided into sub-periods ending in 1993 and beginning in 1994.

Table 3.7. Descriptive statistics of the share of Mexico's exports and imports in total exports and imports

Country/ Block	Statistics from before the block was established		Statistics after the block came into existence	
Chile	For 1986–1994		For 1995–2012	
Exports	Mean	0.2760%	Mean	0.4439%
	Deviation	0.0974%	Deviation	0.1804%
	Skewness	–0.2358	Skewness	0.1574
	Kurtosis	2.2454	Kurtosis	1.5750
Imports	Mean	0.1244%	Mean	0.6123%
	Deviation	0.0698%	Deviation	0.1669%
	Skewness	0.9381	Skewness	0.2543
	Kurtosis	4.3328	Kurtosis	2.3997
Colombia	For 1986–1994		For 1995–2012	
Exports	Mean	0.4413%	Mean	0.7295%
	Deviation	0.1006%	Deviation	0.4223%
	Skewness	–0.2478	Skewness	0.7271
	Kurtosis	2.6735	Kurtosis	2.3600

Table 3.7 (contd.)

Country/ Block	Statistics from before the block was established		Statistics after the block came into existence	
Imports	Mean	0.0862%	Mean	0.0385%
	Deviation	0.0358%	Deviation	0.0708%
	Skewness	–0.0163	Skewness	–0.0894
	Kurtosis	3.0379	Kurtosis	1.8546
Israel	For 1986–2000		For 2001–2012	
Exports	Mean	0.2958%	Mean	0.0385%
	Deviation	0.3007%	Deviation	0.0126%
	Skewness	0.5725	Skewness	2.0953
	Kurtosis	2.0320	Kurtosis	9.8193
Imports	Mean	0.0769%	Mean	0.1661%
	Deviation	0.0354%	Deviation	0.0165%
	Skewness	0.8218	Skewness	0.6613
	Kurtosis	3.9089	Kurtosis	2.7888
Japan	For 1986–2005		For 2006–2012	
Exports	Mean	1.8833%	Mean	0.6764%
	Deviation	1.5189%	Deviation	0.0295%
	Skewness	1.0188	Skewness	–0.3760
	Kurtosis	2.5813	Kurtosis	0.3121
Imports	Mean	4.2062%	Mean	5.0455%
	Deviation	0.8407%	Deviation	0.4575%
	Skewness	–0.2982	Skewness	0.6267
	Kurtosis	3.0464	Kurtosis	1.8433
Uruguay	For 1986–2004		For 2005–2012	
Exports	Mean	0.1175%	Mean	0.0523%
	Deviation	0.0943%	Deviation	0.0203%
	Skewness	1.1150	Skewness	0.0955
	Kurtosis	3.5401	Kurtosis	0.9574
Imports	Mean	0.0529%	Mean	0.0960%
	Deviation	0.0179%	Deviation	0.0163%
	Skewness	–0.1631	Skewness	–0.2415
	Kurtosis	1.8073	Kurtosis	0.9560

Country/ Block	Statistics from before the block was established		Statistics after the block came into existence	
EU	For 1986–1994		For 1995–2012	
Exports	Mean	0.4888%	Mean	0.2620%
	Deviation	0.8440%	Deviation	0.3868%
	Skewness	2.5883	Skewness	1.8498
	Kurtosis	10.2821	Kurtosis	5.9288
Imports	Mean	0.7461%	Mean	0.6789%
	Deviation	1.0338%	Deviation	0.9220%
	Skewness	2.1161	Skewness	2.1879
	Kurtosis	7.4404	Kurtosis	7.4720
North Triangle	For 1986–2001		For 2002–2012	
Exports	Mean	0.2467%	Mean	0.2531%
	Deviation	0.1223%	Deviation	0.1367%
	Skewness	0.6064	Skewness	0.7242
	Kurtosis	2.5660	Kurtosis	2.1185
Imports	Mean	0.03673%	Mean	0.07372%
	Deviation	0.03963%	Deviation	0.05330%
	Skewness	1.3614	Skewness	0.7808
	Kurtosis	4.4020	Kurtosis	2.5583
Costa Rica	For 1986–1994		For 1995–2012	
Exports	Mean	0.2004%	Mean	0.2277%
	Deviation	0.0300%	Deviation	0.0414%
	Skewness	–0.3392	Skewness	0.5163
	Kurtosis	1.7718	Kurtosis	2.2536
Imports	Mean	0.02772%	Mean	0.29581%
	Deviation	0.02133%	Deviation	0.23363%
	Skewness	1.3511	Skewness	0.9573
	Kurtosis	6.0923	Kurtosis	3.4994
Nicaragua	For 1986–1998		For 1999–2012	
Exports	Mean	0.0428%	Mean	0.1175%
	Deviation	0.0105%	Deviation	0.0643%
	Skewness	0.1185	Skewness	0.9690
	Kurtosis	1.5816	Kurtosis	3.4770

Table 3.7 (contd.)

Country/ Block	Statistics from before the block was established		Statistics after the block came into existence	
Imports	Mean	0.0166%	Mean	0.0314%
	Deviation	0.0096%	Deviation	0.0150%
	Skewness	1.3166	Skewness	0.7982
	Kurtosis	5.4877	Kurtosis	4.3631
EFTA	For 1986–2001		For 2002–2012	
Exports	Mean	0.17013%	Mean	0.08159%
	Deviation	0.17764%	Deviation	0.09864%
	Skewness	1.2211	Skewness	1.4090
	Kurtosis	5.2143	Kurtosis	4.2235
Imports	Mean	0.3537%	Mean	0.2584%
	Deviation	0.3172%	Deviation	0.1889%
	Skewness	0.3970	Skewness	0.0149
	Kurtosis	1.5552	Kurtosis	0.8712
NAFTA	For 1986–1993		For 1994–2012	
Exports	Mean	30.4910%	Mean	43.3716%
	Deviation	31.3546%	Deviation	41.1543%
	Skewness	0.4438	Skewness	0.0106
	Kurtosis	1.6479	Kurtosis	0.9025
Imports	Mean	27.35789%	Mean	31.0245%
	Deviation	27.50790%	Deviation	29.5961%
	Skewness	0.3286	Skewness	0.1900
	Kurtosis	1.3871	Kurtosis	1.1790

Source: author's compilation.

The free-trade area between Mexico and Chile increased the share of exports by almost 60% and produced an almost five-fold increase in the share of imports. Thus, the conclusion of the agreement materially contributed to the intensification of trade between the countries, and the effect was much more powerful for imports. At the same time, slightly higher volatility was observed for Mexico's shares of exports and imports in total exports and imports. When it comes to exports, an increase in volatility was higher than the increase in mean value, while for imports, it was lower. After the trade agreement came into effect, skewness for both shares was closer to zero. It means that after 1994 the distribution of the shares of exports and imports was more symmetrical, i.e., bigger symmetry could be observed in the distribution of shares of imports and exports. For both shares, kurtosis dropped, which proves their higher predictability.

The establishing of a free-trade zone between Colombia and Mexico was accompanied by an increase in the average share of exports by 65% and over 50% decrease in the average share of imports. Changes in the intensity of trade translated into higher volatility of analyzed values. After the agreement was signed, Colombia's shares in trade differed from the mean more than before the agreement was signed. Speaking of changes in skewness, one could observe increases in the absolute value of this statistical measure for both shares. It suggests smaller symmetry of the distribution after the agreement entered into force. Positive skewness for the share of exports in both sub-periods confirms that the likelihood of reaching high values increases. Negative skewness for the share of imports in both sub-periods means a higher likelihood of atypical low values. Kurtosis for both shares dropped after the trade was liberalized, which suggests their higher predictability.

The establishing of a free-trade area between Israel and Mexico had a two-way impact on trade between these countries. On the one hand, after the agreement was concluded, the average share of Mexico's exports to Israel declined very clearly (by almost 90%). This is the most significant decrease in exports observed for all countries/blocks of countries with which Mexico concluded a trade liberalization agreement. On the other hand, the share of imports increased by over 100%. The formation of a block reduced the volatility of shares of exports and imports in total values, with the drop being clearly bigger for exports. Higher, positive skewness for the share of exports confirms that after 2000 the distribution was less symmetrical, and the likelihood of the occurrence of atypically high values increased. A decrease in this measure for imports suggests a more symmetrical distribution of the variable. Increased kurtosis of the distribution of shares of exports means it was more challenging to predict values of the examined variables after the agreement had been signed, and atypical observations were more frequent. Kurtosis for the share of imports after 2000 suggests the distribution was close to normal.

Trade integration with Japan triggered a decrease in the average share in exports by ca. 65% and the increase in the average share in imports by about 20%. Trade liberalization intensified Mexico's imports from Japan but has not translated into an increase in Mexico's exports to its trading partner. Trade agreement mitigated the level of volatility of the shares of Mexico's exports and imports relative to total values. In exports, a decrease in skewness reported after the agreement came into effect suggests greater symmetry in the distribution of variables, and its negative value indicates the likelihood of low atypical values. The same statistic for imports increased after 2005, meaning a less symmetrical distribution of variables. A drop in kurtosis was observed for both shares, which indicates higher predictability of their values.

Average values for the free trade area with Uruguay demonstrate that integration diminished the share in exports by ca. 55%, but at the same time, the share in imports increased by about 80%. Smaller volatility in the distribution of the share in exports was observed together with almost the same volatility of

the share in imports. Reduced statistics for the skewness of the share of exports mean the distribution of the share of exports is more symmetrical, and a higher absolute value of the skewness for imports informs about smaller symmetry of the distribution. A drop in kurtosis and its value should be interpreted as better value predictability.

Descriptive statistics for the European Union are available for those Member States, which were the first to sign a free trade area agreement with Mexico and have been benefiting from the free movement of goods for the longest period. The sample does not include Luxembourg because, in most observations, trade with Mexico was equal to zero. The establishing of the free trade area with the European Union reduced the shares of Mexico's exports and imports by, respectively, slightly more than 45% and less than 10%. Integration diminished the volatility of the share in exports and imports in total values. Reduction in skewness means that the distribution of shares became more symmetrical after the agreement had been concluded. For both shares, a drop in kurtosis was observed; its value indicates more frequent occurrence of atypical observations.

A free trade area created by Mexico and El Salvador, Guatemala, and Honduras within the framework of the Northern Triangle exerted little impact on the increase in the average share of exports but, at the same time, triggered a 100% increase in imports. The volatility of the share of exports and imports was slightly higher in sub-periods following trade liberalization. Integration stimulated a small increase in skewness for the share of exports and a rather apparent increase in the share of imports. The first change means a higher likelihood of observing atypical high values, while the second one means such a possibility is smaller. Decreased kurtosis suggests that variables could be predicted more easily after the agreement was signed.

After the agreement with Costa Rica was concluded, the average shares of exports in total exports increased by about 13%. When it comes to the share of imports, we could observe a much more significant, almost ten-fold increase. It means that a block has little contributed to the increased share of Mexico's exports but had a powerful impact on imports. At the same time, we need to stress that although the increase in average shares was significant, their size, compared to other blocks that have been examined, was small. First and foremost, it is due to the size of the economy of Costa Rica, which is rather small. We could also observe higher volatility in average shares in total values. Simultaneously, the deviation was slight and its changes were weaker than increases in the average. Changes in skewness confirm that, after the agreement was signed, the distribution of the share of exports became less symmetrical.

In contrast, the distribution of the share of imports was more symmetrical. For exports, an increase in kurtosis was reported; its value means a smaller frequency of the occurrence of atypical observations. For imports, a drop in kurtosis value could be observed, suggesting a more frequent existence of atypical observations that would be found for normal distribution.

The conclusion of a trade agreement between Mexico and Nicaragua increased the average share of the latter in Mexico's exports by over 170% and by almost 90% in imports. Such average shares mean that the trade agreement implied intensification of trade with the conclusion of the agreement generating higher increases in Mexico's exports to Nicaragua than in Mexico's imports from the country in question. For this agreement, we could also observe increased volatility of shares, much stronger for exports. The skewness of the share of exports increased while that of imports decreased. Nevertheless, it remained on the positive side, meaning the likelihood of observing atypically high values was bigger compared to atypically negative values. The values of kurtosis mean more frequent atypical observations compared to what would be produced by the normal distribution.

Indicators for EFTA countries have been calculated only for Norway and Switzerland. Iceland was excluded from the sample because its trade with Mexico was zero for most observations. After the free trade agreement was signed, the average share of exports and imports in total values dropped by ca. 50% and 25%, respectively. Reduced volatility of shares was also observed. After a trade agreement was concluded, the skewness for exports slightly increased but for imports, it significantly decreased. Positive skewness means a higher probability of the emergence of atypically high export shares compared to atypically low shares. A drop in kurtosis was also observed for both shares. High kurtosis for exports is indicative of a higher likelihood of atypical observations; low kurtosis for imports means easily predictable values.

Based on results for countries – members of NAFTA we can note that after 1994 countries from this block increased their shares in Mexico's exports by over 40% and in imports by about 13%. This is evidence of the intensification of trade, mainly exports, between Mexico and the NAFTA countries. At the same time, attention should be paid not only to the increase in shares but also to their levels exceeding 40% for Mexico's exports and 30% for the country's imports. Higher volatility of the shares of Mexico's exports and imports in total values was also observed; however, the increase in volatility was weaker (and for exports weaker) than the increase in the average. The observed decrease in the skewness means that the distribution of shares of exports and imports has got more symmetrical after NAFTA was created. Reduced kurtosis of the distribution of shares of exports and imports suggests that it was easier to predict the values of analyzed variables after the agreement was signed.

Imports and exports estimates, as well as descriptive statistics, confirm those trade agreements, to which Mexico is a party, in most instances lead to trade intensification between partners. Decreases in imports and exports were reported for the European Union. For EFTA, in other cases, after a trade agreement came into effect, at least imports or exports (or both) increased. Not all agreements turned out to be statistically significant (with Colombia, Nicaragua for imports and exports, as well as Uruguay and Costa Rica for exports). Particularly substantial differences could be observed for NAFTA, which confirms the assumptions about the role and

significance of the block for Mexico's economy. To carry out a more in-depth investigation into changes in Mexico's trade that could have been triggered by integration in the North-American continent, the next subchapter discusses an additional study, which was conducted to take account of the commodity pattern of trade.

3.3. Shifts in Mexico's foreign trade flows after the establishing of NAFTA

Economic integration elicits changes in trade between member countries and with third countries. Classical effects of integration include trade creation and trade diversion. Researchers agree as to the emergence of these effects; however, so far, no tool has been created to quantify their scale. There is no single, proper, and credible methodology that would help in answering the question about the scale of trade creation and trade diversion triggered by integration. However, subject--matter literature offers some partial methods, which, quite likely, provide an answer to the question. Yet, we need to stress that a lot of caution must be deployed when interpreting the results as they are burdened with defects that the author is aware of. Nevertheless, since there is no perfect method, we need to conclude that a method with an acceptable level of credibility allows drawing some partial conclusions.

Krueger[17] attempted to answer the question about the scale of trade creation and trade diversion effects in NAFTA. She carried out a comprehensive study using statistical methods, such as summary presentation and analysis of statistical data and an econometric study. Its principal disadvantage, however, lies in its too short time series – the latest data examined come from 1998, i.e., only four years after the agreement became operational. The functioning of NAFTA is based, inter alia, on gradual phasing out of barriers to trade, which were still partly in force back in 1998 (see subchapter 3.1).

This subchapter discusses data on trade between the NAFTA members elaborated by the author and broken down into commodity groups created pursuant to the Standard International Trade Classification (SITC). Source data come from the OECD database and cover 84 product groups. These groups were distinguished by the author based on the SITC groups and, due to the specificity of Mexican trade, some of them were aggregated (some groups singled out in the SITC classification were brought together) others were broken down into smaller sub-groups, such as textiles, clothes, footwear and accessories; metals and manufactured goods; electrical and electronic devices; nuclear reactors, boilers, and machinery. Table 3.8

17 A.O. Krueger, *op. cit*.

includes commodity groups created by the author, and Table 3.9 presents product groups included in them.

The survey deploys data on trade flows between Mexico and the United States and Mexico and Canada over the period 1990–2014. First, arithmetic mean was calculated for the share of Mexico's exports/imports to/from the United States and Canada in the United States/Canada's imports/exports. The author worked on the assumption that this share should be constant over the entire investigated period and potential shifts relative to the calculated mean observed after 1994 are triggered by NAFTA and may testify to the trade creation (Tab. 3.10 and 3.12) and trade diversion (Tab. 3.11 and 3.13) effects. Therefore, calculations of the arithmetic mean were followed by a simple forecast, in which the value of mutual trade was calculated for a situation when the share is constant and equal to the mean for the period 1990–1993. A synthetic summary of the survey is presented in Figure 3.2. Considering the feasibility of a scenario, in which increased trade flows in one sector would be accompanied by decreased trade flows in another industry, the analysis takes account of 11 earlier created commodity aggregates (see Tab. 3.7).

Table 3.8. Commodity groups

Category no.	Category title
1	Food, live animals, beverages, and tobacco
2	Chemicals, rubber and plastic products
3	Mineral fuels, lubricants, petroleum products
4	Textiles, clothes, footwear, and accessories
5	Manufactured goods classified by material
6	Metals and metal products
7	Means of transport and parts thereof
8	Other manufactured goods
9	Other
10	Electrical and electronic devices
11	Machinery and equipment

Source: author's compilation.

Table 3.9. Composition of commodity groups created based on the SITC

Commodity group	Product groups included in the commodity group
Food, live animals, beverages, and tobacco	Live animals
	Meat and edible meat offal
	Fish, crustaceans, mollusks, aquatic invertebrates n.e.s.
	Dairy products, eggs, honey, edible products n.e.s.
	Products of animal origin, products n.e.s.
	Tees, plants, bulbs, roots, cut flowers, etc.
	Edible vegetables, some roots and bulbs
	Edible fruit, nuts, peel of citrus fruit, melons
	Coffee, tea, mate and spices
	Cereals
	Products derived from milling, malt, starch, inulin, wheat, gluten
	Oils from oil-seeds, oleaginous fruits, germs, seeds, fruit, products n.e.s
	Lacquer, rubbers, resins, plant juices and extracts n.e.s.
	Materials derived from plants and plant products n.e.s.
	Animal and vegetable fats and oils, their fractions, etc.
	Prepared and processed meat, fish and seafood n.e.s.
	Sugars and sugar preparations Cocoa and cocoa products
	Preparations and products made of cereals, flour, starch, and milk
	Processed food made of vegetables, fruit, nuts, etc.
	Miscellaneous processed food
	Non-alcoholic and alcoholic beverages and vinegar
	Residues and waste from the food processing industry, animal feed
	Tobacco and industrial tobacco substitutes

Commodity group	Product groups included in the commodity group
Chemicals, rubber and plastic products	Salt, sulfur, sand, stone, gypsum, calcium, and cement
	Metal ores, gravel, and ash
	Inorganic chemicals, compounds of precious metals, isotopes
	Organic chemicals
	Pharmaceutical products
	Fertilizers
	Dyeing and tanning extracts, tannins, pigments, etc.
	Essential oils, perfume, cosmetic and toilet preparations
	Soap, polishes, waxes, candles, modeling pastes
	Albuminoidal substances, modified starches, glues, enzymes
	Explosives, pyrotechnic products, matches, pyrophoric alloys, etc.
	Photographic or cinematographic materials
	Miscellaneous chemical products
	Plastics and products made of plastics
	Rubber and rubber manufacture
Mineral fuels, lubricants, petroleum products	Mineral fuels, lubricants, petroleum products, etc.
Textiles, clothes, footwear and accessories	Raw hides and skins (other than furskins) and leather
	Leather and animal gut manufactures, harness, travel accessories
	Furskin, artificial fur and articles thereof
	Silk
	Wool, animal hair, horsehair yarn and fabrics made of them
	Cotton
	Vegetable textile fibers n.e.s., paper yarn, plaited fabrics
	Man-made continuous fibers
	Man-made stapled fibers
	Wadding, felt, non-woven fabric, yarns, cord, etc. Carpets and other floor coverings
	Special fabrics, woven or non-woven, lace, tapestries, etc.
	Impregnated, coated or laminated textile fabrics
	Knitted or crocheted fabrics
	Articles of apparel, accessories, knitted or crocheted
	Articles of apparel, accessories, not knitted or crocheted
	Other ready-made textile products, sets, second-hand clothes, etc.
	Footwear, uppers and other parts thereof
	Headgear and parts thereof

Table 3.9 (contd.)

Commodity group	Product groups included in the commodity group
Manufactured goods classified by material Manufactured goods classified by material	Wood and wood manufactures, wood charcoal
	Cork and cork manufactures
	Articles of plaiting materials, basketware, etc.
	Wood sawdust, cellulose fibers, waste, etc.
	Paper and paperboard, products made of cellulose, paper and paper-board
	Printed books, newspapers, photos, etc.
	Ceramic products
	Glass and glassware
	Pearls, precious stones, metals, coins, etc.
Metals and metal products	Iron and steel
	Products of iron and steel
	Copper and products made of copper
	Nickel and products made of nickel
	Aluminum and products made of aluminum
	Graphite and products made of graphite
	Zinc and products made of zinc
	Tin and products made of tin
	Other non-precious metals, cermets and products made of them
	Tools, supplies, knives, etc. made of non-precious metals
	Miscellaneous products made of non-precious metals
Means of transport and parts thereof	Railway or tramway locomotives, rolling-stock, fixtures
	Vehicles other than railway or tramway
	Aircraft and parts thereof
	Ships, boats and other floating structures
Other manufactured goods	Optical, photographic and medical apparatus, etc.
	Clocks, watches and parts thereof
	Musical instruments, parts and accessories thereof
	Arms and ammunition, parts and accessories thereof
	Furniture, lighting, signaling equipment, prefabricated buildings
	Toys, games and sporting goods
	Miscellaneous industrial products

Commodity group	Product groups included in the commodity group
Other	Umbrellas, walking-sticks, seat-sticks, whips, etc.
	Bird skin, feathers, artificial flowers, human hair
	Stones, gypsum, cement, asbestos, mica, etc.
	Works of art., collection items and antiquities
	Commodities not specified elsewhere
Electrical and electronic devices	Electronic and electrical devices
Machinery and equipment	Nuclear reactors, boilers, machinery, etc.

Source: author's compilation.

Forecasts that were made – with the author's being fully aware of their ramifications[18] – can answer the question about the trade creation effect of integration. They could be supplemented with information about the share of trade in the economies of the countries involved. Besides, following the methodology adopted by Krueger, trade diversion effect can be identified through calculating changes in imports from the countries-parties to the agreement and from the third countries. Increased imports from NAFTA partners and a simultaneous drop in imports from outside of the block may indicate trade diversion. Since the considerations focus on the Mexican economy, we calculated:

1) shares of Mexico's exports/imports to/from the United States and Canada in total Mexico's exports/imports;
2) shares of Mexico's exports/imports to/from the United States and Canada in total imports/exports of the United States and Canada;
3) nominal changes in imports of Canada and the United States (taken together);
4) nominal changes in Canada and the United States' imports (combined) from Mexico;
5) nominal changes in Canada and the United States' imports from the rest of the world (ROW);
6) nominal changes in total Mexico's imports;
7) nominal changes in Mexico's imports from the United States and Canada (combined);
8) nominal changes in Mexico's imports from the rest of the world (ROW).

18 Ramifications of the forecast consist, among others, in the aggregation of data – which may distort conclusions – and ignoring changes taking place in the economies of the member states and in the world economy other than the launching of NAFTA.

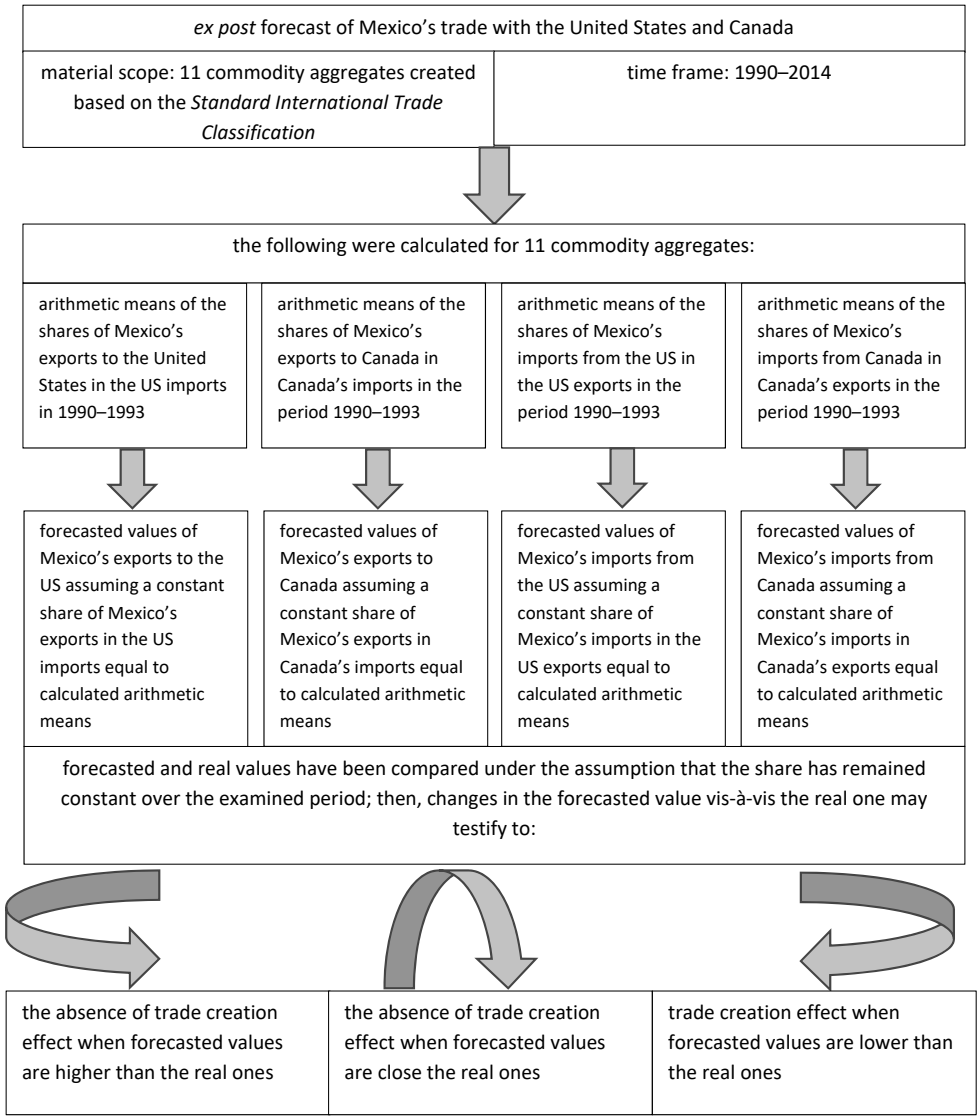

Figure 3.2. NAFTA impact on the shifts in geographical and commodity pattern of Mexico's foreign trade
Source: author's compilation.

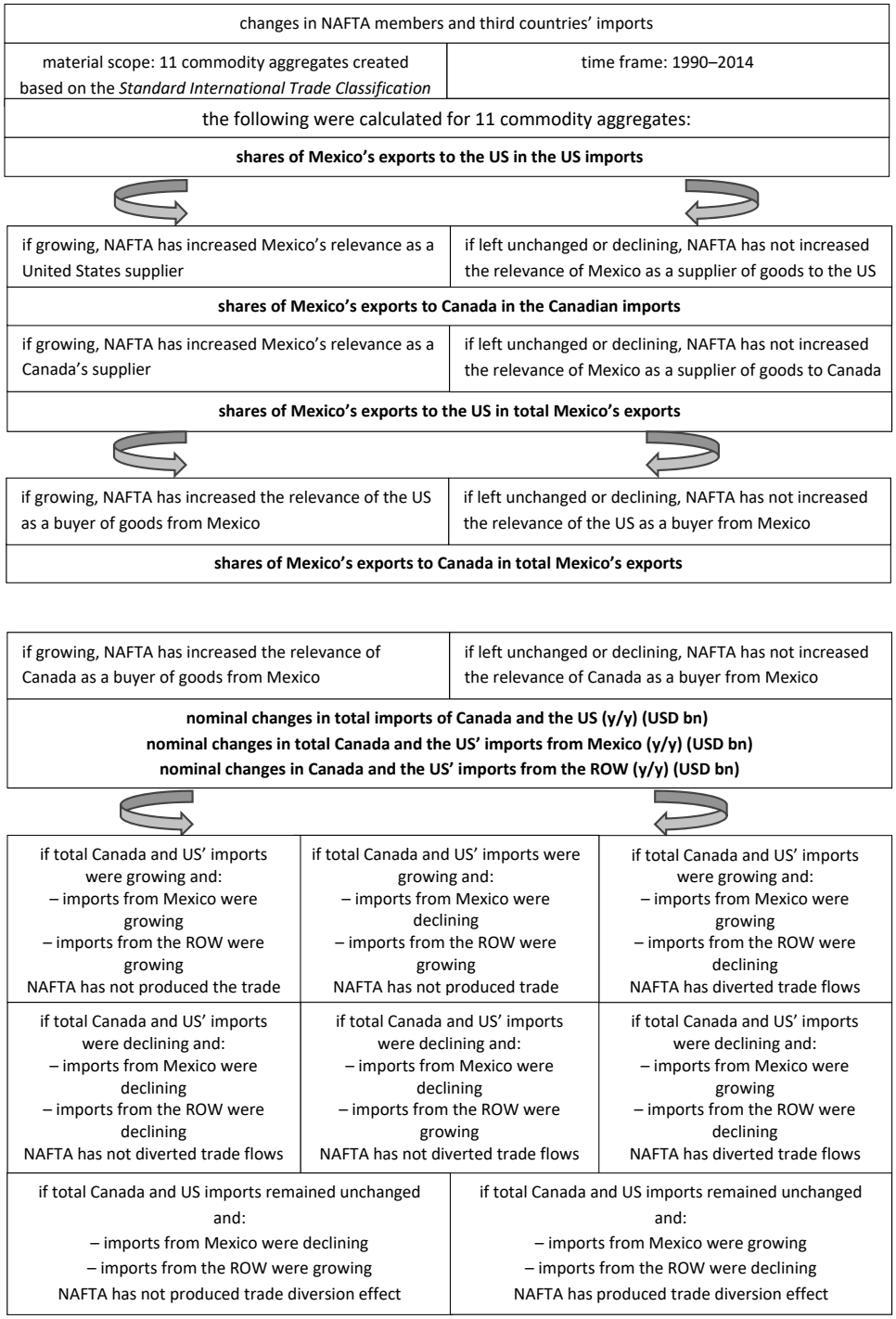

Figure 3.3. NAFTA impact on the geographical pattern of member states' exports
Source: author's compilation.

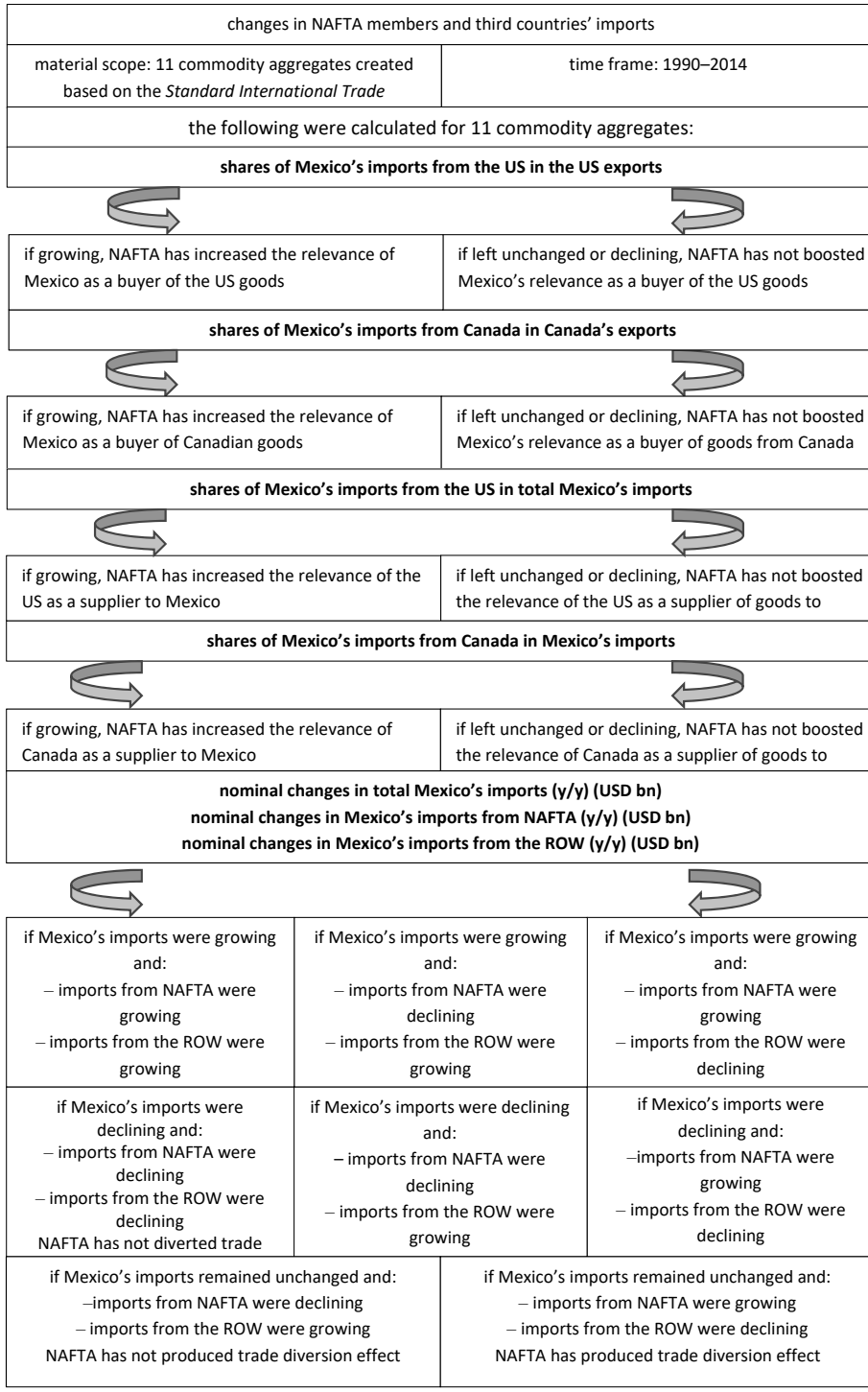

Figure 3.4. NAFTA impact on the geographical pattern of imports from the member states
Source: author's compilation.

The structure of these studies is presented in Figures 3.3 (for exports) and 3.4 (for imports). Two ways of calculating the shares (through gravity models and as an *ex post* forecast and calculated changes in mutual trade flows relative to changes vis-à-vis ROW) helps in acquiring information about the importance of Mexico's trade with its NAFTA partners from the viewpoints of all three countries. Increased shares after 1993 mean intensification of trade with the NAFTA partner. However, one may not unambiguously state whether an increase in trade happened at the expense of countries from outside of the block or not. The use of disaggregated data, to some extent, eliminates[19] the likelihood of drawing erroneous conclusions from different directions of changes in individual commodity groups. Aggregated data could have suggested no changes in the share if an increase in one commodity group was offset with a decrease in another group.

From the comparison of nominal changes in Mexico's imports by source, one could learn about trade diversion. If decreased imports from the ROW accompany increased imports from the NAFTA countries, we can expect that liberalization has led to a shift in suppliers towards those from the grouping. Increased imports of Canada and the United States from Mexico and their simultaneous decrease from the ROW may suggest trade diversion from the third countries towards Mexico. Like calculated shares, the use of disaggregated data helps in avoiding erroneous interpretation of drops/increases of imports in a given commodity group and extrapolating conclusions over total exports or offsetting changes in imports for different commodity groups.

3.3.1. Changes in Mexico's exports

Table 3.10 contains a shortened summary of Mexico's exports forecast.[20] Colors indicate real values and forecasts under the assumption that the share of Mexico's exports to a particular trading partner in this partner's total imports is constant.

Table 3.10. Trade creation effect in Mexico's exports to the United States and Canada over the period 1994–2013 estimated using the shift-share analysis method for exports

1	Food, live animals, beverages, and tobacco					
Year	MEX EX TO CAN (USD bn)	MEX EX TO US (USD bn)	AVERAGE SHARE FOR 1990–1993 CAN (%)	FORECAST MEX EX TO CAN (USD bn)	AVERAGE SHARE FOR 1990–1993 US (%)	FORECAST MEX EX TO US (USD bn)
1990	0.0225	5.0263	0.2114		9.4491	
1994	0.0447	5.8571		0.0309		5.4792

19 Calculations were made on partially disaggregated data which is why trade diversion in subgroups included in commodity groups is quite likely.

20 For full summary see Appendix 1.

Table 3.10 (contd.)

1998	0.1064	8.1318		0.0359		6.6907
2002	0.1246	8.4338		0.0388		7.1745
2006	0.4027	13.0463		0.0510		9.4398
2010	0.6535	14.9115		0.0659		10.3840
2013	0.4790	18.4867		0.0767		12.5055
2	Chemicals, rubber and plastic products					
Year	MEX EX TO CAN (USD bn)	MEX EX TO US (USD bn)	AVERAGE SHARE FOR 1990–1993 CAN (%)	FORECAST MEX EX TO CAN (USD bn)	AVERAGE SHARE FOR 1990–1993 US (%)	FORECAST MEX EX TO US (USD bn)
1990	0.0332	2.5399	0.1398		4.7456	
1994	0.0327	4.0548		0.0581		8.0324
1998	0.1231	6.1117		0.0743		10.9518
2002	0.1718	6.5980		0.0835		14.2451
2006	0.3829	9.5941		0.1222		20.8137
2010	0.3247	9.1827		0.1292		22.8636
2013	0.7412	11.8515		0.1380		24.4518
3	Mineral fuels, lubricants, petroleum products					
Year	MEX EX TO CAN (USD bn)	MEX EX TO US (USD bn)	AVERAGE SHARE FOR 1990–1993 CAN (%)	FORECAST MEX EX TO CAN (USD bn)	AVERAGE SHARE FOR 1990–1993 US (%)	FORECAST MEX EX TO US (USD bn)
1990	0.0648	11.0101	1.3417		7.5942	
1994	0.1045	8.6922		0.0173		10.6399
1998	0.1746	7.9220		0.0203		8.4133
2002	0.2323	14.3335		0.0299		14.9468
2006	0.8565	36.5323		0.0783		37.7010
2010	0.6694	37.0292		0.0894		36.6200
2013	0.8146	35.9534		0.1063		36.7841
4	Textiles, clothes, footwear, and accessories					
Year	MEX EX TO CAN (USD bn)	MEX EX TO US (USD bn)	AVERAGE SHARE FOR 1990–1993 CAN (%)	FORECAST MEX EX TO CAN (USD bn)	AVERAGE SHARE FOR 1990–1993 US (%)	FORECAST MEX EX TO US (USD bn)
1990	0.0380	0.7852	0.3383		2.3182	
1994	0.0400	4.3695		0.0233		9.7057
1998	0.1658	12.7162		0.0278		11.9724
2002	0.1464	12.5550		0.0267		12.8747
2006	0.1939	9.9843		0.0337		14.6936

2010	0.1353	6.6724		0.0351		13.6328
2013	0.1405	7.0717		0.0393		14.5752
5	Manufactured goods classified by material					
Year	MEX EX TO CAN (USD bn)	MEX EX TO US (USD bn)	AVERAGE SHARE FOR 1990–1993 CAN (%)	FORECAST MEX EX TO CAN (USD bn)	AVERAGE SHARE FOR 1990–1993 US (%)	FORECAST MEX EX TO US (USD bn)
1990	0.0255	1.4888	0.1340		3.4909	
1994	0.0286	2.7923		0.0287		6.8494
1998	0.0859	4.6095		0.0343		8.5827
2002	0.0610	4.7569		0.0350		9.1697
2006	0.0876	7.7303		0.0497		12.0400
2010	0.5835	11.1354		0.0640		10.1993
2013	0.6122	11.6537		0.0637		11.2927
6	Metals and metal products					
Year	MEX EX TO CAN (USD bn)	MEX EX TO US (USD bn)	AVERAGE SHARE FOR 1990–1993 CAN (%)	FORECAST MEX EX TO CAN (USD bn)	AVERAGE SHARE FOR 1990–1993 US (%)	FORECAST MEX EX TO US (USD bn)
1990	0.0082	2.2391	0.1682		6.0885	
1994	0.0466	4.1744		0.0329		5.8777
1998	0.1340	7.3841		0.0427		7.2953
2002	0.1113	8.2135		0.0401		6.7120
2006	0.0813	11.3111		0.0666		13.0400
2010	0.2424	9.3331		0.0602		9.9439
2013	0.2752	11.3046		0.0645		11.2051
7	Means of transport and parts thereof					
Year	MEX EX TO CAN (USD bn)	MEX EX TO US (USD bn)	AVERAGE SHARE FOR 1990–1993 CAN (%)	FORECAST MEX EX TO CAN (USD bn)	AVERAGE SHARE FOR 1990–1993 US (%)	FORECAST MEX EX TO US (USD bn)
1990	0.0104	5.3160	1.5635		5.0442	
1994	1.2475	11.2081		0.1037		16.0468
1998	0.5339	27.2347		0.1256		19.2660
2002	1.9921	33.6227		0.1336		23.7140
2006	1.3632	41.0080		0.1640		26.2284
2010	2.5032	44.9760		0.1489		21.0322
2013	3.2107	65.2358		0.1704		27.0321

Table 3.10 (contd.)

8	Other manufactured goods					
Year	MEX EX TO CAN (USD bn)	MEX EX TO US (USD bn)	AVERAGE SHARE FOR 1990–1993 CAN (%)	FORECAST MEX EX TO CAN (USD bn)	AVERAGE SHARE FOR 1990–1993 US (%)	FORECAST MEX EX TO US (USD bn)
1990	0.0072	0.4733	0.1273		3.2855	
1994	0.0495	4.7845		0.0313		7.2367
1998	0.0826	9.7156		0.0385		9.8721
2002	0.0529	14.1255		0.0399		11.7077
2006	0.2059	17.4472		0.0530		14.6581
2010	0.3713	17.2902		0.0565		14.5336
2013	0.4792	21.3395		0.0603		16.0329
9	Other					
Year	MEX EX TO CAN (USD bn)	MEX EX TO US (USD bn)	AVERAGE SHARE FOR 1990–1993 CAN (%)	FORECAST MEX EX TO CAN (USD bn)	AVERAGE SHARE FOR 1990–1993 US (%)	FORECAST MEX EX TO US (USD bn)
1990	0.0018	0.1006	0.2969		1.8672	
1994	0.0038	0.1937		0.0016		0.7456
1998	0.0074	0.3226		0.0018		5.8764
2002	0.0080	0.4165		0.0021		1.3362
2006	0.0090	0.6524		0.0164		8.1626
2010	0.2338	1.6994		0.0179		7.0131
2013	0.4143	3.1929		0.0223		8.3852
10	Electrical and electronic devices					
Year	MEX EX TO CAN (USD bn)	MEX EX TO US (USD bn)	AVERAGE SHARE FOR 1990–1993 CAN (%)	FORECAST MEX EX TO CAN (USD bn)	AVERAGE SHARE FOR 1990–1993 US (%)	FORECAST MEX EX TO US (USD bn)
1990	0.0253	1.0549	0.1980		8.7800	
1994	0.1300	25.7257		0.0610		14.2891
1998	0.4229	43.9453		0.0754		17.4451
2002	0.3480	49.0865		0.0645		19.1699
2006	1.6681	65.8589		0.0850		25.7948
2010	4.2879	64.2238		0.0933		26.2875
2013	2.1525	66.8887		0.0961		28.6223

11	Machinery and equipment					
Year	MEX EX TO CAN (USD bn)	MEX EX TO US (USD bn)	AVERAGE SHARE FOR 1990–1993 CAN (%)	FORECAST MEX EX TO CAN (USD bn)	AVERAGE SHARE FOR 1990–1993 US (%)	FORECAST MEX EX TO US (USD bn)
1990	0.1778	4.1295	0.8741		3.8315	
1994	0.7091	9.0027		0.0923		16.0287
1998	0.6216	18.2134		0.1188		21.2325
2002	0.6467	26.0830		0.1050		20.1021
2006	0.7305	31.2894		0.1364		27.0369
2010	1.3888	38.7508		0.1253		26.0228
2013	1.0956	46.8670		0.1389		29.1200

Source: author's compilation based on OECD data.

Studies conducted by Blieffert[21] show that in the period between the moment when NAFTA was established until 2000, the value of annual trade between Mexico and Canada tripled. However, despite such a significant increase, trade flows in absolute values were not so impressive as for trade between Mexico and the United States, which could be explained by geographical proximity and historical context. Noteworthy, of all Latin American countries, Mexico was Canada's major trading partner and the third biggest supplier globally.

In Mexico's exports to Canada, no commodity group exhibited a decrease in the share of exports. There are categories in which the share was higher than the forecasted and assumed constant share. That was mainly the case of electrical and electronic devices whose real share was over fifteen times higher than the forecasted one. Also, categories, such as food, live animals, beverages, and tobacco, chemicals, rubber and plastic products, manufactured goods classified by material, and other manufactured goods merit our attention, as their real share was, on average, five to seven times higher than what had been predicted. The lowest increase (lower than 100%) was reported for categories such as mineral fuels, lubricants, and petroleum products, means of transport and parts thereof, and machinery and equipment.

In exports to Canada, for most commodity groups, differences between forecasted and real values were much more significant than in exports to the United States, which stems from the so-called base effect.[22] In the United States, whose exports value in the base year was high, the dynamics are less sensitive to increases than in the case of Canada (low exports value in the base year).

21 C. Blieffert, *NAFTA's First Decade-Accomplishments and Failures from Mexican Perspective*, Grin Verlag, Nürnberg 2007, p. 9.

22 C. Azariadis, A. Drazen, *Threshold Externalities in Economic Development*, "Quarterly Journal of Economics" 1990, Vol. 105(2), pp. 501–526.

By analyzing forecasts for the United States, one can realize that there is one category (chemicals, rubber and plastic products), in which the real share of Mexico's exports in its partner's imports was lower than forecasted. Other product categories can be broken down into two groups: those in which the real share was higher than the forecast by about 150–200% and those in which the differences were smaller and did not exceed 100%.

To complement the above-presented reasoning, Table 3.11 presents calculated Mexico's export shares to its NAFTA partners in total Mexico's exports and total partners' imports together with nominal shifts in the United States and Canada's imports. Data used in the study cover the United States and Canada taken together because the goal is to find out how Mexico is doing in NAFTA, not how the country's relations evolve with individual countries.

Table 3.11. Share of Mexico's exports to the United States and Canada in total Mexico's exports and total imports of the United States and Canada (%) as well as nominal changes in Canada and the United States' imports (USD bn)

Year	Share of Mexico's exports to Canada in total Canada's imports (%)	Share of Mexico's exports to the US in total US imports (%)	Share of Mexico's exports to Canada in total Mexico's exports (%)	Share of Mexico's exports to the US in total Mexico's exports (%)	Nominal change in total Canada and the US's imports (y/y) (USD bn)	Nominal change in Canada and the US' imports from Mexico (y/y) (USD bn)	Nominal change in Canada and the US imports from ROW (y/y) (USD bn)
1	2	3	4	5	6	7	8
1	Food, live animals, beverages and tobacco						
1990	0.17	8.88	0.40	89.55			
1991	0.21	9.45	0.46	86.28	–2.0402	0.1280	–2.1682
1992	0.36	8.75	0.89	87.94	1.2212	–0.2593	1.4805
1993	0.11	10.72	0.24	93.78	–0.3019	0.9906	–1.2926
1994	0.31	10.10	0.64	84.49	3.7445	–0.0064	3.7509
1995	0.45	12.82	0.71	81.09	2.7674	1.9118	0.8555
1996	0.43	11.76	0.71	81.16	4.2557	–0.1956	4.4513
1997	0.55	11.64	0.89	79.83	6.4614	0.5658	5.8956
1998	0.63	11.48	1.03	78.65	1.6975	0.0543	1.6432
1999	0.65	11.82	1.07	82.00	2.0233	0.4661	1.5572
2000	0.67	12.24	1.04	81.28	1.7690	0.4930	1.2759
2001	0.71	11.64	1.18	79.40	–0.8760	–0.5908	–0.2852
2002	0.68	11.11	1.17	79.07	3.5661	–0.0481	3.6141
2003	0.67	12.01	1.15	84.07	7.2726	1.3853	5.8873

1	2	3	4	5	6	7	8
2004	0.78	12.57	1.24	86.26	6.2607	1.2216	5.0391
2005	0.92	12.56	1.45	83.26	6.5127	0.6439	5.8689
2006	1.67	13.06	2.54	82.22	9.6738	1.6398	8.0340
2007	2.18	12.38	3.62	78.55	8.5282	0.1541	8.3742
2008	1.81	12.04	3.04	75.23	7.2381	0.1918	7.0463
2009	1.79	13.47	2.94	77.52	–11.1402	0.2059	–11.3461
2010	2.10	13.57	3.40	77.50	12.4127	1.5643	10.8484
2011	2.13	13.83	3.26	76.45	19.5447	2.5703	16.9743
2012	1.67	12.65	2.72	75.00	5.4623	–1.0564	6.5187
2013	1.32	13.97	1.99	76.66	2.5816	1.8868	0.6949
2	Chemicals, rubber and plastic products						
1990	0.15	3.63	0.69	52.86			
1991	0.18	3.70	0.80	50.94	–1.3432	0.0030	–1.3462
1992	0.11	5.11	0.41	62.29	6.9097	1.2436	5.6661
1993	0.12	6.54	0.48	80.75	3.4726	1.1890	2.2837
1994	0.12	4.77	0.47	58.85	11.6249	–0.9212	12.5460
1995	0.25	4.84	0.84	51.15	14.9808	0.6919	14.2890
1996	0.27	5.30	0.94	60.18	5.4029	0.6931	4.7098
1997	0.30	5.72	1.00	61.88	10.1595	0.8714	9.2880
1998	0.35	5.27	1.23	60.93	8.0084	–0.1090	8.1174
1999	0.34	5.37	1.18	63.12	12.4658	0.6682	11.7976
2000	0.39	5.51	1.25	62.62	16.5582	1.0061	15.5520
2001	0.40	4.75	1.32	58.48	0.1419	–1.0172	1.1590
2002	0.44	4.38	1.51	58.17	10.0183	–0.1222	10.1405
2003	0.49	4.04	1.79	58.25	23.1481	0.3184	22.8297
2004	0.40	4.43	1.37	58.71	21.9571	1.3948	20.5622
2005	0.61	4.46	2.04	58.69	24.8191	1.1018	23.7173
2006	0.66	4.36	2.29	57.36	17.8976	0.3922	17.5054
2007	0.52	4.13	1.73	51.94	13.8192	–0.1177	13.9369
2008	0.41	3.72	1.31	48.63	19.2714	–0.3187	19.5901
2009	0.42	3.68	1.37	46.82	–48.4781	–1.6223	–46.8558
2010	0.53	3.80	1.62	45.81	40.4253	1.5891	38.8362
2011	0.87	3.85	2.40	43.18	32.7510	1.4431	31.3079
2012	1.11	4.43	2.74	43.57	–7.0376	1.4138	–8.4514
2013	1.14	4.58	2.77	44.25	–4.7870	0.2284	–5.0154

Table 3.11 (contd.)

1	2	3	4	5	6	7	8
3	Mineral fuels, lubricants, petroleum products						
1990	0.49	7.14	0.34	58.33			
1991	1.32	6.79	0.90	58.49	–33.5997	–2.5338	–31.0659
1992	3.33	7.11	2.06	58.63	–6.7139	0.1595	–6.8734
1993	0.23	9.33	0.15	84.32	–3.4994	2.0456	–5.5450
1994	1.28	7.72	0.87	72.45	–2.7330	–1.9496	–0.7834
1995	1.22	9.08	0.83	76.45	0.4477	1.4903	–1.0426
1996	1.86	11.92	1.16	77.37	4.5842	3.5974	0.9868
1997	2.65	10.91	1.97	77.34	6.8331	–0.4503	7.2834
1998	1.82	8.90	1.64	74.56	–33.9978	–5.3375	–28.6603
1999	2.86	8.42	1.98	76.62	44.2127	3.3743	40.8384
2000	2.52	7.30	1.96	76.13	100.8486	5.5184	95.3303
2001	1.77	6.08	1.74	74.78	–22.9675	–4.2681	–18.6994
2002	1.64	9.06	1.25	77.33	–48.4140	1.8447	–50.2587
2003	1.82	8.88	1.48	78.28	53.7477	4.1540	49.5937
2004	1.72	8.70	1.44	80.90	64.9595	4.9337	60.0258
2005	2.21	8.58	2.00	80.18	99.1881	7.6200	91.5681
2006	2.31	9.16	1.92	81.79	45.7907	6.1152	39.6755
2007	2.12	9.21	1.77	80.52	22.3698	2.0071	20.3626
2008	1.81	8.24	1.83	82.47	139.6428	6.3726	133.2703
2009	1.52	9.37	1.50	85.74	–262.0587	–16.8714	–245.1873
2010	1.58	9.55	1.53	84.38	93.8666	8.8015	85.0651
2011	1.40	9.84	1.34	82.08	106.2270	10.4060	95.8210
2012	1.64	9.11	1.62	75.74	–44.0972	–7.2062	–36.8910
2013	1.62	9.24	1.67	73.84	–52.3771	–4.1304	–48.2467
4	Textiles, clothes, footwear and accessories						
1990	0.34	0.93	2.90	60.06			
1991	0.37	0.93	2.74	55.47	–2.0918	–0.0057	–2.0861
1992	0.44	3.45	1.20	82.22	9.2972	2.4255	6.8717
1993	0.19	3.96	0.50	91.90	4.9426	0.6317	4.3109
1994	0.36	4.25	0.78	84.78	5.6720	0.5349	5.1371
1995	0.64	5.80	0.97	80.13	4.3211	1.8334	2.4877
1996	1.11	7.64	1.31	86.48	0.8588	2.1098	–1.2511
1997	1.23	9.48	1.23	88.34	13.7289	3.1626	10.5663
1998	1.26	10.04	1.18	90.69	7.2219	1.3665	5.8553

1	2	3	4	5	6	7	8
1999	1.30	11.01	1.06	91.66	3.1062	1.6242	1.4820
2000	1.18	10.90	0.93	91.63	11.4919	1.0444	10.4475
2001	1.18	9.47	1.03	88.16	–6.1649	–2.5552	–3.6096
2002	1.16	9.21	1.04	89.45	0.5722	–0.2940	0.8662
2003	1.14	8.70	1.16	94.04	5.6698	–0.2541	5.9239
2004	1.35	7.99	1.49	91.63	8.2863	–0.3839	8.6702
2005	1.34	7.48	1.62	92.16	5.8020	–0.3776	6.1796
2006	1.22	6.42	1.79	92.13	2.7966	–1.5075	4.3041
2007	1.01	5.37	1.83	89.87	0.4725	–1.6805	2.1529
2008	0.84	5.15	1.68	89.30	–9.5020	–0.8604	–8.6416
2009	0.73	4.93	1.57	88.62	–21.7826	–1.3291	–20.4536
2010	0.81	4.62	1.76	86.78	20.2794	0.4994	19.7799
2011	0.77	4.58	1.70	84.27	8.9545	0.2857	8.6688
2012	0.73	4.62	1.58	83.89	–1.2603	–0.0042	–1.2561
2013	0.76	4.58	1.67	83.93	4.2541	0.1230	4.1311
5	Manufactured goods classified by material						
1990	0.20	2.37	1.28	74.69			
1991	0.11	2.53	0.76	80.85	–4.3791	–0.0079	–4.3712
1992	0.13	4.57	0.50	88.56	2.3820	1.3001	1.0819
1993	0.09	4.49	0.39	92.37	6.2488	0.1968	6.0520
1994	0.21	3.85	0.87	84.72	6.2591	–0.1824	6.4415
1995	0.22	4.15	0.78	81.22	9.1954	0.5510	8.6444
1996	0.33	4.94	1.04	85.92	–0.5756	0.6505	–1.2261
1997	0.34	5.29	1.07	85.97	5.6424	0.4914	5.1510
1998	0.53	5.07	1.53	82.23	6.7151	0.1816	6.5334
1999	0.52	5.15	1.44	84.47	7.8065	0.4547	7.3518
2000	0.48	4.67	1.38	84.21	9.9940	–0.0504	10.0444
2001	0.44	4.55	1.33	83.79	–12.1039	–0.6281	–11.4758
2002	0.37	4.90	1.13	87.91	0.8291	0.3463	0.4828
2003	0.32	4.71	1.03	88.05	4.1176	–0.0385	4.1561
2004	0.31	4.70	0.96	88.47	19.0042	0.7860	18.2181
2005	0.31	5.00	0.93	87.04	6.3385	0.6007	5.7378
2006	0.37	6.07	1.00	87.77	7.8716	1.6518	6.2198
2007	0.94	6.06	2.48	78.87	–2.9843	–0.1309	–2.8534
2008	1.08	6.92	2.69	73.32	–7.6081	0.4640	–8.0721
2009	1.48	9.94	3.29	78.30	–30.1766	0.7513	–30.9279

Table 3.11 (contd.)

1	2	3	4	5	6	7	8
2010	1.93	10.32	3.96	75.53	28.0451	2.8167	25.2284
2011	1.99	11.76	3.69	75.65	16.9309	3.1289	13.8020
2012	2.22	11.89	3.85	75.01	–7.1100	–0.3351	–6.7748
2013	2.03	9.75	3.97	75.65	1.6106	–2.2468	3.8574
6	Metals and metal products						
1990	0.06	4.35	0.26	71.60			
1991	0.21	4.49	0.85	68.65	–6.2571	–0.1509	–6.1063
1992	0.24	6.85	0.69	74.89	0.1263	1.1059	–0.9795
1993	0.16	8.66	0.43	87.56	3.9684	1.0855	2.8828
1994	0.30	6.71	0.89	80.14	15.3559	–0.0669	15.4228
1995	0.61	8.11	1.29	65.77	7.2905	1.3527	5.9379
1996	0.32	8.70	0.64	70.39	–1.6246	0.3018	–1.9264
1997	0.41	10.06	0.84	75.26	7.8282	1.4213	6.4069
1998	0.66	9.56	1.46	80.29	6.1205	0.2213	5.8992
1999	0.61	9.74	1.44	86.07	–4.7659	–0.2915	–4.4744
2000	0.52	10.04	1.26	85.96	11.4607	1.0407	10.4200
2001	0.54	11.53	1.08	88.06	–15.9885	–0.1210	–15.8675
2002	0.59	11.56	1.20	88.40	1.8819	0.1786	1.7033
2003	0.55	10.29	1.24	84.31	–0.0149	–0.9496	0.9347
2004	0.54	9.29	1.18	83.84	35.8179	2.1676	33.6502
2005	0.41	9.09	0.90	78.22	14.1893	0.7391	13.4502
2006	0.26	8.20	0.53	73.75	29.5198	1.1104	28.4094
2007	0.36	8.80	0.67	70.70	–2.2489	0.6792	–2.9281
2008	0.44	8.25	0.83	66.10	6.0645	–0.3656	6.4301
2009	0.54	9.54	1.03	67.19	–70.1346	–3.8234	–66.3112
2010	0.85	8.87	1.65	63.57	30.5525	1.6929	28.8596
2011	0.94	9.08	1.72	64.18	21.2484	1.9134	19.3350
2012	1.25	9.02	2.42	67.84	3.9896	0.3223	3.6674
2013	0.90	9.53	1.64	67.32	–9.8751	–0.2314	–9.6437
7	Means of transport and parts thereof						
1990	0.02	3.57	0.18	90.87			
1991	2.64	4.14	15.87	77.54	–7.3431	1.7170	–9.0602
1992	1.76	5.70	7.99	84.70	2.0110	1.9628	0.0482
1993	1.83	6.78	7.00	88.96	9.1227	2.1967	6.9261
1994	2.54	6.60	9.22	82.87	21.0548	1.2526	19.8022

1	2	3	4	5	6	7	8
1995	3.32	9.41	8.67	84.56	4.8608	5.5252	–0.6644
1996	3.11	12.20	6.26	85.05	1.3453	4.8813	–3.5360
1997	2.18	12.37	4.93	87.87	21.8811	1.5955	20.2856
1998	0.90	13.36	1.80	91.58	16.3504	3.3110	13.0394
1999	3.91	12.23	7.29	84.96	37.5903	3.7321	33.8582
2000	3.47	13.72	5.67	88.89	17.8004	5.6448	12.1556
2001	3.72	13.70	5.78	88.22	–15.2325	–1.4665	–13.7660
2002	3.15	13.40	5.34	90.07	10.6837	–0.0642	10.7479
2003	2.63	12.58	4.81	89.34	1.1802	–2.3848	3.5650
2004	1.62	12.61	3.04	92.37	17.2724	1.2469	16.0255
2005	1.85	13.08	3.42	88.19	7.0065	1.7006	5.3060
2006	1.76	14.77	2.88	86.76	15.5387	6.1938	9.3449
2007	1.95	14.38	3.29	80.80	1.3001	–1.3458	2.6460
2008	2.29	15.59	3.50	77.55	–39.4131	–1.5305	–37.8826
2009	3.35	18.18	4.86	80.60	–94.3511	–7.1650	–87.1861
2010	3.55	20.21	4.42	79.48	70.3320	15.1494	55.1827
2011	4.15	21.24	4.62	75.34	21.0555	6.3999	14.6556
2012	3.91	20.55	4.20	76.64	42.0856	6.0622	36.0234
2013	3.98	22.80	3.98	80.80	10.5331	8.5053	2.0278
8	Other manufactured goods						
1990	0.06	0.78	1.11	73.12			
1991	0.15	1.00	2.29	78.79	0.1781	0.1431	0.0350
1992	0.20	5.23	0.71	95.27	7.0121	2.8815	4.1306
1993	0.10	6.13	0.31	97.09	5.2416	0.8703	4.3713
1994	0.33	6.25	0.97	93.54	6.6267	0.4586	6.1681
1995	0.46	6.32	1.25	92.33	7.1247	0.4862	6.6385
1996	0.45	7.72	0.94	92.47	3.4085	1.4446	1.9640
1997	0.49	8.84	0.91	92.37	11.0189	1.7979	9.2210
1998	0.45	9.30	0.79	93.26	9.7249	1.2356	8.4894
1999	0.34	9.35	0.60	94.07	10.3906	0.8686	9.5220
2000	0.29	10.09	0.46	95.26	13.5293	2.0664	11.4630
2001	0.29	10.86	0.40	92.74	–8.2536	0.2505	–8.5041
2002	0.28	11.40	0.35	94.19	4.4215	1.1947	3.2267
2003	0.28	10.70	0.37	94.34	8.7021	–0.0464	8.7485
2004	0.42	10.18	0.59	92.20	14.5190	0.6018	13.9173
2005	0.79	11.04	1.04	92.77	7.7408	2.0363	5.7045

Table 3.11 (contd.)

1	2	3	4	5	6	7	8
2006	0.82	11.25	1.09	92.57	6.4594	0.8830	5.5764
2007	1.03	10.69	1.47	91.96	9.0909	–0.0094	9.1002
2008	1.00	11.02	1.43	91.18	–4.3051	0.0091	–4.3142
2009	1.13	11.21	1.63	90.82	–28.8712	–2.5300	–26.3412
2010	1.39	11.24	1.96	91.32	24.4583	2.5388	21.9195
2011	1.28	11.47	1.81	91.78	4.9307	0.7579	4.1728
2012	1.70	11.79	2.28	90.95	10.3470	1.7387	8.6083
2013	1.68	12.58	2.06	91.63	2.3659	1.6606	0.7053
9	Other						
1990	0.16	1.31	1.59	89.10			
1991	0.38	1.56	2.28	83.66	–1.4756	0.0036	–1.4792
1992	0.43	2.21	1.78	87.94	0.2395	0.0491	0.1904
1993	0.22	2.39	0.82	95.70	1.0610	0.0354	1.0256
1994	0.49	2.45	1.78	90.59	0.0172	0.0069	0.0103
1995	0.52	2.27	1.77	87.73	0.6291	0.0003	0.6288
1996	0.66	0.52	1.75	87.55	39.2281	0.0556	39.1724
1997	1.01	0.58	2.37	86.45	5.2789	0.0635	5.2154
1998	0.85	0.52	2.01	87.51	9.2587	0.0130	9.2456
1999	0.81	2.96	1.74	90.66	–48.6445	0.0763	–48.7208
2000	0.76	2.82	1.23	70.50	1.6738	0.0276	1.6462
2001	0.90	3.45	1.26	73.06	–0.8411	0.0682	–0.9093
2002	0.81	2.95	0.68	35.59	–0.1209	–0.0775	–0.0434
2003	0.84	3.46	1.55	76.48	–0.5451	0.0503	–0.5955
2004	0.16	3.46	1.37	67.23	7.5554	0.0699	7.4856
2005	0.15	0.73	0.82	47.12	67.1408	0.0693	67.0715
2006	0.12	0.76	0.58	42.52	4.8477	0.0474	4.8004
2007	0.09	0.62	0.07	4.74	3.9335	–0.1022	4.0357
2008	1.62	1.93	8.02	83.54	–1.4363	1.2710	–2.7073
2009	2.19	2.02	8.72	79.31	–16.9721	–0.2113	–16.7609
2010	2.75	2.29	10.99	79.90	3.0509	0.3142	2.7368
2011	2.93	3.19	9.17	82.80	4.0574	0.8129	3.2445
2012	3.64	4.73	6.93	79.17	6.6239	1.5641	5.0598

1	2	3	4	5	6	7	8
10	Electrical and electronic devices						
1990	0.11	1.00	1.78	74.20			
1991	0.16	1.12	2.54	80.34	1.5230	0.1510	1.3720
1992	0.31	15.82	0.39	96.61	9.5373	17.1771	–7.6398
1993	0.21	17.19	0.24	98.75	13.0703	3.5869	9.4834
1994	0.45	17.01	0.49	96.93	27.2739	3.8604	23.4135
1995	0.54	16.88	0.57	96.58	30.5160	4.3173	26.1987
1996	0.58	19.72	0.53	96.42	–5.2876	4.1387	–9.4262
1997	0.66	21.92	0.56	96.37	9.7014	5.3974	4.3040
1998	1.19	23.80	0.93	96.14	5.3004	4.6591	0.6413
1999	0.74	24.79	0.55	96.71	27.0539	7.4790	19.5748
2000	0.88	24.35	0.62	97.13	54.3328	11.0193	43.3135
2001	1.19	25.63	0.71	93.20	–60.3007	–9.3702	–50.9305
2002	1.14	24.20	0.63	89.38	–8.0079	–4.0618	–3.9461
2003	1.08	24.39	0.63	95.82	3.6943	1.2435	2.4507
2004	1.46	23.61	0.87	95.61	33.4168	5.4892	27.9276
2005	3.18	22.81	1.88	92.26	22.6078	3.3572	19.2506
2006	4.15	24.13	2.30	90.98	20.0788	8.0026	12.0762
2007	4.58	23.25	2.69	90.97	8.8106	–0.5093	9.3199
2008	5.55	25.97	2.90	86.70	–5.8171	6.3428	–12.1599
2009	10.78	23.59	5.98	84.22	–45.5466	–14.1847	–31.3618
2010	9.71	23.09	5.60	83.92	51.7208	9.3359	42.3849
2011	5.87	21.45	3.76	85.19	16.3539	–3.1746	19.5285
2012	5.04	21.44	3.05	84.47	7.0518	1.2381	5.8136
2013	4.74	22.08	2.75	85.44	2.5994	2.4659	0.1334
11	Machinery and equipment						
1990	0.47	3.39	3.56	82.58			
1991	1.05	2.66	7.82	65.92	–6.2951	–0.8012	–5.4939
1992	0.95	4.33	4.61	76.59	11.7242	2.4391	9.2851
1993	1.03	4.95	4.84	87.06	17.3432	1.5684	15.7748
1994	1.63	5.31	6.38	80.99	30.8901	2.1983	28.6919
1995	1.62	5.60	5.67	79.66	25.8564	1.8072	24.0492
1996	1.70	6.49	5.15	81.37	5.7925	2.0899	3.7026
1997	1.33	7.33	3.80	81.79	22.9401	2.7542	20.1859
1998	1.11	8.11	2.83	82.94	13.0173	2.4718	10.5455
1999	1.76	9.47	3.93	85.01	14.6798	4.6094	10.0704

Table 3.11 (contd.)

1	2	3	4	5	6	7	8
2000	1.82	10.33	3.66	86.26	15.6923	3.5609	12.1315
2001	1.38	12.20	2.34	84.99	–41.5637	0.2096	–41.7733
2002	1.30	12.26	2.11	85.28	–7.2990	–0.4852	–6.8139
2003	1.41	12.55	2.30	87.14	8.0150	1.4934	6.5216
2004	1.03	12.65	1.63	91.04	36.4090	4.1256	32.2834
2005	1.06	10.89	1.92	87.56	23.7968	–2.3540	26.1508
2006	1.13	10.94	1.99	85.34	20.0562	2.0252	18.0310
2007	1.23	10.51	2.25	85.00	8.6595	–0.4088	9.0682
2008	1.22	11.04	2.22	86.16	–13.7556	0.1452	–13.9008
2009	1.84	11.98	2.97	86.74	–67.3643	–3.5797	–63.7846
2010	2.34	14.07	3.14	87.55	56.4420	11.9630	44.4790
2011	2.01	14.22	2.70	87.59	37.9720	4.7259	33.2461
2012	2.02	15.03	2.55	87.42	11.1863	3.8977	7.2885
2013	1.67	15.21	2.05	87.72	–9.9548	–0.8006	–9.1542

Source: author's compilation.

Shares of Mexico's exports to NAFTA partners presented in Table 3.11 were growing in this country's total exports as well as in the United States and Canada's imports in almost all commodity groups. Increasing shares calculated using both methods indicate the increasing importance of Mexico as a supplier of imported goods to other NAFTA countries. Still, also higher relevance of these countries as recipients of Mexico's exports to the United States in two commodity groups, i.e., other manufactured goods and electrical and electronic devices, the share relative to the American as well as Mexican economy achieved over 90%. Attention should also be paid to disproportions in shares of Canada and the United States. The latter ones reflect the scale of dependency of Mexican exports on American demand.

Comparing changes in Canada and the United States' imports from Mexico and the ROW, one can see that increased imports from Mexico were usually not accompanied by declining imports from the third countries. Such reasoning should be approached with caution; however, one may expect that the establishing of NAFTA was not accompanied by trade diversion from third countries towards Mexico, and increased imports were the effect of trade creation. That can be explained by references to the natural trade partners theory. Imports of the NAFTA members from Mexico are mainly the United States' imports. Since before the integration grouping was formed, Mexico and the United States had maintained close economic relations, trade liberalization produced a positive effect in the form of new trade streams within the block, however, it failed to divert trade from third countries to Mexico.

3.3.2. Changes in Mexico's imports

A forecast similar to the one discussed in subchapter 3.3.1 was deployed to identify trade effects in Mexico's imports. The results of the estimates are given in Table 3.12.

Table 3.12. Trade creation effect for Mexico's imports from Canada and the US for the period 1994–2013 estimated using the shift-share analysis method for imports

1	Food, live animals, beverages and tobacco					
Year	MEX IMP from CAN (USD bn)	MEX IMP from US (USD bn)	AVERAGE SHARE FOR 1990–1993 CAN (%)	FORECAST MEX IMP FROM CAN (USD bn)	AVERAGE SHARE FOR 1990–1993 US (%)	FORECAST MEX IMP from US (USD bn)
1990	0.0941	5.2903	1.3930		7.8441	
1994	0.6204	7.7219		0.2882		6.3712
1998	0.7805	8.3810		0.3453		6.3072
2002	0.8626	10.3837		0.3508		5.6102
2006	1.3483	13.0220		0.4496		6.5216
2010	1.6979	15.7689		0.5665		9.7700
2013	1.9161	18.8555		0.6719		11.5477
2	Chemicals, rubber and plastic products					
Year	MEX IMP from CAN (USD bn)	MEX IMP from US (USD bn)	AVERAGE SHARE FOR 1990–1993 CAN (%)	FORECAST MEX IMP FROM CAN (USD bn)	AVERAGE SHARE FOR 1990–1993 US (%)	FORECAST MEX IMP from US (USD bn)
1990	0.0933	5.0540	0.6857		8.6559	
1994	0.2186	12.3044		0.3129		8.0415
1998	0.3835	19.4471		0.3855		9.7603
2002	0.4782	22.5319		0.4239		10.4842
2006	0.9982	29.8699		0.6939		14.9749
2010	1.3501	30.5394		0.7099		18.6458
2013	1.5472	35.0676		0.7683		19.5009
3	Mineral fuels, lubricants, petroleum products					
Year	MEX IMP from CAN (USD bn)	MEX IMP from US (USD bn)	AVERAGE SHARE FOR 1990–1993 CAN (%)	FORECAST MEX IMP FROM CAN (USD bn)	AVERAGE SHARE FOR 1990–1993 US (%)	FORECAST MEX IMP from US (USD bn)
1990	0.0005	2.8766	0.2076		12.2354	
1994	0.0391	2.8846		0.3411		1.6065
1998	0.0272	4.9791		0.3522		1.1338
2002	0.0608	4.3588		0.5756		1.1911

Table 3.12 (contd.)

2006	0.2514	10.0974		1.2477		3.1682
2010	0.1918	18.1124		1.3713		6.7856
2013	0.0953	26.3448		1.6692		11.6427
4	Textiles, clothes, footwear and accessories					
Year	MEX IMP from CAN (USD bn)	MEX IMP from US (USD bn)	AVERAGE SHARE FOR 1990–1993 CAN (%)	FORECAST MEX IMP FROM CAN (USD bn)	AVERAGE SHARE FOR 1990–1993 US (%)	FORECAST MEX IMP from US (USD bn)
1990	0.0196	1.4415	0.9869		11.2317	
1994	0.0388	5.4265		0.0546		2.3689
1998	0.0705	10.8041		0.0864		2.7967
2002	0.1742	10.0019		0.0870		2.3822
2006	0.1735	7.2289		0.0851		2.5383
2010	0.1242	5.0686		0.0633		2.4542
2013	0.1959	5.3920		0.0702		2.7091
5	Manufactured goods classified by material					
Year	MEX IMP from CAN (USD bn)	MEX IMP from US (USD bn)	AVERAGE SHARE FOR 1990–1993 CAN (%)	FORECAST MEX IMP FROM CAN (USD bn)	AVERAGE SHARE FOR 1990–1993 US (%)	FORECAST MEX IMP from US (USD bn)
1990	0.0829	2.1307	0.2132		6.6426	
1994	0.2464	5.5955		0.6126		4.3996
1998	0.1444	7.0703		0.6268		4.5160
2002	0.3328	6.8317		0.5927		4.2243
2006	0.4830	7.4900		0.7156		6.1889
2010	0.3979	7.5527		0.6808		8.0212
2013	0.3242	7.5763		0.7181		9.4261
6	Metals and metal products					
Year	MEX IMP from CAN (USD bn)	MEX IMP from US (USD bn)	AVERAGE SHARE FOR 1990–1993 CAN (%)	FORECAST MEX IMP FROM CAN (USD bn)	AVERAGE SHARE FOR 1990–1993 US (%)	FORECAST MEX IMP from US (USD bn)
1990	0.0871	2.8529	0.7774		16.9745	
1994	0.1887	7.2481		0.2676		2.4682
1998	0.2945	12.0373		0.3190		3.0569
2002	0.5071	11.6527		0.3059		2.8121
2006	1.0457	15.4167		0.5743		4.9826
2010	1.2240	14.8304		0.4852		5.6385
2013	1.4622	16.8484		0.4501		6.2413

7	Means of transport and parts thereof					
Year	MEX IMP from CAN (USD bn)	MEX IMP from US (USD bn)	AVERAGE SHARE FOR 1990–1993 CAN (%)	FORECAST MEX IMP FROM CAN (USD bn)	AVERAGE SHARE FOR 1990–1993 US (%)	FORECAST MEX IMP from US (USD bn)
1990	0.0403	2.0762	0.0935		1.9508	
1994	0.2790	4.4660		0.9327		10.0731
1998	0.5156	12.7308		1.0753		12.8959
2002	2.1225	15.2775		1.1388		11.0523
2006	2.1391	16.6086		1.2081		14.9495
2010	1.6747	14.9904		0.8808		9.3455
2013	1.7342	19.8359		0.9841		11.7670
8	Other manufactured goods					
Year	MEX IMP from CAN (USD bn)	MEX IMP from US (USD bn)	AVERAGE SHARE FOR 1990–1993 CAN (%)	FORECAST MEX IMP FROM CAN (USD bn)	AVERAGE SHARE FOR 1990–1993 US (%)	FORECAST MEX IMP from US (USD bn)
1990	0.0188	1.8845	0.7426		5.7281	
1994	0.0908	4.3731		0.0979		4.4520
1998	0.1023	5.4370		0.1640		5.6350
2002	0.1547	6.4378		0.1716		5.5467
2006	0.2510	6.2797		0.2101		7.3049
2010	0.2802	6.2364		0.1669		8.0718
2013	0.3313	7.4890		0.1729		9.1494
9	Other					
Year	MEX IMP from CAN (USD bn)	MEX IMP from US (USD bn)	AVERAGE SHARE FOR 1990–1993 CAN (%)	FORECAST MEX IMP FROM CAN (USD bn)	AVERAGE SHARE FOR 1990–1993 US (%)	FORECAST MEX IMP from US (USD bn)
1990	0.0010	0.1030	0.2199		3.0352	
1994	0.0060	0.2203		0.0103		0.3498
1998	0.0064	0.2674		0.0165		2.7829
2002	0.0080	0.2758		0.0173		0.3932
2006	0.0094	0.3065		0.2862		3.6742
2010	0.1780	1.9174		0.1954		10.3227
2013	0.2259	3.2601		0.2223		12.6073

Table 3.12 (contd.)

10	Electrical and electronic devices					
Year	MEX IMP from CAN (USD bn)	MEX IMP from US (USD bn)	AVERAGE SHARE FOR 1990–1993 CAN (%)	FORECAST MEX IMP FROM CAN (USD bn)	AVERAGE SHARE FOR 1990–1993 US (%)	FORECAST MEX IMP from US (USD bn)
1990	0.0747	3.1967	1.3788		10.1647	
1994	0.2378	18.1387		0.1598		9.3006
1998	0.3400	34.4226		0.2558		12.1695
2002	0.3803	29.7686		0.2200		11.2511
2006	0.8027	22.8244		0.2986		13.2490
2010	1.0176	20.0581		0.2171		12.5840
2013	0.8511	22.0236		0.1962		12.9402
11	Machinery and equipment					
Year	MEX IMP from CAN (USD bn)	MEX IMP from US (USD bn)	AVERAGE SHARE FOR 1990–1993 CAN (%)	FORECAST MEX IMP FROM CAN (USD bn)	AVERAGE SHARE FOR 1990–1993 US (%)	FORECAST MEX IMP from US (USD bn)
1990	0.0738	6.9774	0.8938		6.5133	
1994	0.2881	11.6513		0.2950		12.2089
1998	0.5592	19.4640		0.4127		15.2678
2002	0.6336	19.4606		0.3851		13.2083
2006	1.0077	21.5960		0.4818		16.4802
2010	1.0599	20.3293		0.4166		15.3939
2013	1.1636	25.0652		0.4344		16.2483

Source: author's compilation based on OECD data.

Simulations for Mexico's imports unambiguously indicate that trade creation effect was observed for trade with both Canada and the United States while intensification differed across countries.

The real values of Mexico's imports from Canada for most groups were by 100–200% higher than forecasted. Only for mineral fuels, lubricants and petroleum products, the real value was below the forecasted one. Means of transport and parts thereof stood out against the backdrop of the remaining groups. In this group, real imports had been steadily growing since 1998, and in 2013 they were eighteen times higher than in 1994. High growth dynamics stemmed predominantly from legal regulations included in the agreement and targeting the automotive sector.

One must also bear in mind that, similarly to Mexico's exports to NAFTA partners, the so-called base (threshold) effect was also observed for imports. Nevertheless, import from the United States was on average by 25–100% higher than the forecasted. Like in Canada, the share much higher than forecasted was reported

for means of transport and parts thereof (increased on average almost four times) and a share lower by about 10% in the category "Other".

Similarly to exports, data on imports are presented in Table 3.13, where Mexico's import shares from NAFTA partners were calculated relative to total Mexico's imports and total NAFTA partners' exports together with nominal changes in Mexico's imports.

Table 3.13. Shares of Mexico's imports from the United States and Canada in total Mexico's imports and total exports of the United States and Canada (%) together with nominal changes in Mexico's imports (USD bn)

Year	Share of Mexico's imports from Canada in total Canada's exports (%)	Share of Mexico's imports from the US in total US exports (%)	Share of Mexico's imports from Canada in total Mexico's imports (%)	Share of Mexico's imports from the US in total Mexico's imports (%)	Nominal change in total Mexico's imports (y/y) (USD bn)	Nominal change in Mexico's imports from NAFTA (y/y) (USD bn)	Nominal change in Mexico's imports from ROW (y/y) (USD bn)
1	2	3	4	5	6	7	8
1	Food, live animals, beverages and tobacco						
1990	0.47	6.92	1.17	65.99			
1991	0.91	7.54	2.41	76.49	–0.5692	0.4913	–1.0605
1992	1.70	8.92	3.78	74.77	2.1807	1.6871	0.4936
1993	2.49	7.99	5.41	69.45	–0.6689	–0.8551	0.1862
1994	3.00	9.51	5.72	71.24	1.8789	1.6347	0.2442
1995	2.18	5.94	6.60	74.20	–3.4135	–2.3430	–1.0706
1996	2.50	8.42	5.79	77.38	3.1486	2.7954	0.3533
1997	2.16	8.65	5.67	76.29	–0.4483	–0.4964	0.0481
1998	3.15	10.42	7.05	75.65	0.9534	0.8631	0.0903
1999	3.11	11.09	6.73	74.87	0.0658	–0.0678	0.1336
2000	3.64	11.72	7.41	73.33	1.0330	0.7389	0.2942
2001	3.97	13.46	7.63	73.21	1.4222	1.1623	0.2599
2002	3.43	14.52	6.20	74.62	0.3148	0.2513	0.0635
2003	3.66	14.29	6.42	73.89	0.9701	0.7073	0.2628
2004	4.96	14.31	9.08	67.98	1.2143	0.4516	0.7627
2005	3.86	15.40	6.88	70.66	0.6051	0.5484	0.0567
2006	4.18	15.66	7.41	71.56	1.4939	1.4168	0.0770
2007	4.26	15.01	7.32	71.73	3.2206	2.5626	0.6580
2008	4.39	14.41	7.73	73.62	3.2885	3.1678	0.1207

Table 3.13 (contd.)

1	2	3	4	5	6	7	8
2009	3.85	13.05	7.25	72.80	–5.0689	–4.3801	–0.6888
2010	4.18	12.66	7.77	72.20	2.2020	1.7463	0.4557
2011	4.65	13.30	8.07	71.72	4.7175	3.7241	0.9934
2012	3.80	12.12	7.50	72.67	–2.1899	–1.6551	–0.5348
2013	3.97	12.81	7.30	71.80	1.8942	1.2357	0.6584
2	Chemicals, rubber and plastic products						
1990	0.42	5.80	1.25	67.88			
1991	0.75	6.35	1.73	66.24	1.4525	0.9005	0.5521
1992	0.76	11.00	1.12	74.64	4.9047	4.4102	0.4945
1993	0.82	11.46	1.11	72.10	0.9041	0.3086	0.5955
1994	0.97	12.00	1.27	71.32	2.5449	1.7564	0.7885
1995	0.85	10.85	1.31	73.66	–0.0455	0.3766	–0.4220
1996	0.93	13.70	1.22	79.17	3.0223	3.3624	–0.3401
1997	0.94	15.06	1.13	79.84	4.0444	3.3930	0.6514
1998	1.39	15.63	1.46	74.23	1.9234	0.1756	1.7477
1999	1.42	17.13	1.40	75.41	2.5946	2.2828	0.3118
2000	1.64	17.40	1.57	75.69	3.6730	2.9697	0.7033
2001	1.65	16.53	1.60	71.46	–1.3303	–2.3358	1.0054
2002	1.57	16.86	1.48	69.64	1.2184	0.2628	0.9557
2003	1.62	16.46	1.52	68.44	2.4260	1.3232	1.1028
2004	1.83	15.41	1.85	67.18	3.4882	2.0841	1.4042
2005	1.88	15.91	2.03	65.75	3.8303	2.1176	1.7126
2006	2.00	15.65	2.17	64.89	3.9327	2.3331	1.5996
2007	2.14	14.48	2.47	63.59	1.7092	0.6685	1.0407
2008	2.42	13.15	2.88	61.05	1.9224	0.2140	1.7084
2009	2.22	11.93	2.46	61.26	–10.2171	–6.6183	–3.5987
2010	2.65	12.85	2.72	61.42	10.2770	6.7573	3.5197
2011	2.41	13.09	2.64	60.50	4.9997	2.6619	2.3378
2012	2.85	13.78	2.78	60.35	2.3785	1.4958	0.8827
2013	2.81	14.11	2.68	60.84	0.5403	0.5676	–0.0273
3	Mineral fuels, lubricants, petroleum products						
1990	0.00	9.47	0.01	82.44			
1991	0.16	10.78	0.92	80.75	0.5579	0.4285	0.1294
1992	0.46	14.83	2.26	81.63	0.7857	0.7487	0.0370
1993	0.21	13.86	1.20	76.89	–0.5880	–0.7395	0.1515

1	2	3	4	5	6	7	8
1994	0.16	14.08	1.02	75.20	–0.4089	–0.3912	–0.0177
1995	0.15	13.68	1.08	84.15	–0.1721	0.1992	–0.3713
1996	0.09	22.32	0.60	90.11	0.8447	0.9668	–0.1221
1997	0.09	31.91	0.44	85.38	2.3617	1.8065	0.5552
1998	0.11	34.45	0.43	78.24	–0.5065	–0.8899	0.3834
1999	0.11	26.63	0.46	80.17	0.3953	0.4437	–0.0483
2000	0.10	20.44	0.66	78.96	0.4223	0.2682	0.1541
2001	0.08	20.99	0.56	76.34	–0.1944	–0.3449	0.1505
2002	0.15	28.71	1.05	75.59	–1.2210	–0.9536	–0.2674
2003	0.10	32.69	0.74	80.92	1.4409	1.4656	–0.0247
2004	0.16	30.01	1.09	75.43	2.0985	1.2360	0.8625
2005	0.19	31.63	1.15	68.70	5.2168	3.0225	2.1942
2006	0.28	25.00	1.50	60.34	2.2111	0.2050	2.0060
2007	0.10	25.61	0.47	55.43	5.0807	1.8448	3.2359
2008	0.13	22.56	0.55	59.28	9.7835	6.7116	3.0719
2009	0.14	19.70	0.65	68.66	–14.4814	–7.0408	–7.4406
2010	0.19	20.94	0.75	70.46	8.5879	6.4398	2.1481
2011	0.16	21.49	0.52	79.45	10.5672	10.7029	–0.1358
2012	0.07	19.68	0.25	81.18	–2.4385	–1.4587	–0.9798
2013	0.08	17.75	0.29	80.05	–0.9232	–1.1083	0.1851
4	Textiles, clothes, footwear and accessories						
1990	0.70	5.69	0.84	61.77			
1991	1.06	6.57	1.01	58.87	0.5806	0.2840	0.2966
1992	1.03	15.45	0.54	70.64	2.8937	2.3892	0.5046
1993	1.16	17.21	0.60	69.30	0.7800	0.4706	0.3094
1994	0.99	17.97	0.50	69.97	1.1671	0.8604	0.3067
1995	1.04	16.42	0.68	83.14	–0.9138	0.2696	–1.1833
1996	0.96	21.85	0.59	88.85	1.6417	1.8521	–0.2103
1997	0.93	25.95	0.52	87.62	2.5202	2.1115	0.4087
1998	1.14	30.30	0.55	83.66	1.9110	1.1762	0.7348
1999	1.76	37.01	0.80	83.68	1.2854	1.1211	0.1644
2000	2.43	34.93	1.05	80.17	1.3498	0.6343	0.7155
2001	2.90	33.73	1.26	75.83	–1.1603	–1.5367	0.3764
2002	2.79	32.93	1.25	71.79	–0.4573	–0.9171	0.4598
2003	2.31	30.45	1.05	69.42	–0.2142	–0.5086	0.2945
2004	2.65	27.37	1.27	66.58	–0.2319	–0.5175	0.2856

Table 3.13 (contd.)

1	2	3	4	5	6	7	8
2005	2.86	25.32	1.35	60.82	–0.1703	–0.8708	0.7005
2006	2.84	22.34	1.35	56.42	–0.5037	–0.8768	0.3731
2007	2.49	20.09	1.18	52.66	–0.9678	–1.0248	0.0571
2008	2.53	17.83	1.08	47.94	–0.5295	–0.8313	0.3018
2009	2.28	17.06	0.99	47.55	–2.4850	–1.2602	–1.2249
2010	2.74	16.20	1.17	47.76	1.7837	0.9067	0.8770
2011	2.82	15.39	1.12	46.21	1.5815	0.5794	1.0021
2012	3.51	15.31	1.40	42.61	0.0267	–0.3929	0.4196
2013	3.89	15.61	1.55	42.55	0.4518	0.2086	0.2432
5	Manufactured goods classified by material						
1990	0.21	4.63	3.04	78.06			
1991	0.20	5.03	2.15	76.49	0.5637	0.3763	0.1874
1992	0.13	8.99	0.87	83.38	2.2860	2.1104	0.1756
1993	0.31	7.92	2.06	77.73	0.4357	0.0987	0.3370
1994	0.56	9.98	3.37	76.59	1.2906	1.0428	0.2478
1995	0.34	8.09	2.87	83.32	–1.1328	–0.5218	–0.6110
1996	0.12	9.23	0.91	89.14	0.2465	0.4605	–0.2140
1997	0.18	10.47	1.15	87.03	0.9807	0.7443	0.2364
1998	0.32	12.28	1.70	83.39	1.0789	0.6897	0.3891
1999	0.53	13.31	2.76	82.22	0.8843	0.7420	0.1423
2000	0.71	13.26	3.41	80.01	1.2682	0.9114	0.3568
2001	0.94	12.50	4.26	73.67	–0.7948	–1.2027	0.4079
2002	0.78	12.69	3.39	69.63	–0.0246	–0.5009	0.4763
2003	0.66	12.04	2.89	67.39	0.2090	–0.1218	0.3308
2004	0.67	11.38	3.30	65.74	0.5818	0.2778	0.3040
2005	0.73	10.47	3.45	63.12	0.4484	0.0357	0.4127
2006	0.94	9.49	4.04	62.71	0.8933	0.6168	0.2765
2007	1.13	8.54	4.45	62.85	0.4206	0.3482	0.0724
2008	1.21	7.32	4.77	62.80	–0.5120	–0.3115	–0.2005
2009	1.02	7.76	3.90	67.90	–2.5139	–1.3044	–1.2095
2010	0.81	7.39	3.55	67.29	1.8853	1.2453	0.6400
2011	0.71	6.22	3.34	65.77	0.4988	0.1514	0.3474
2012	0.65	6.38	2.77	65.90	–0.0759	–0.1038	0.0279
2013	0.63	6.30	2.77	64.65	0.0712	–0.0978	0.1690

1	2	3	4	5	6	7	8
6	Metals and metal products						
1990	0.48	9.37	2.06	67.33			
1991	0.46	11.17	1.47	65.66	1.2157	0.7203	0.4955
1992	1.09	24.27	2.00	74.76	4.0212	3.6126	0.4086
1993	1.07	23.09	2.02	71.31	–0.2565	–0.5132	0.2568
1994	0.98	23.03	1.78	68.36	1.3850	0.6771	0.7079
1995	0.73	19.51	1.68	75.59	–0.4022	0.4449	–0.8471
1996	0.77	26.43	1.42	81.64	2.1561	2.3818	–0.2257
1997	0.83	29.40	1.35	81.59	2.4184	1.9915	0.4269
1998	1.29	30.89	1.75	71.35	2.0949	0.0768	2.0181
1999	1.89	35.65	2.27	73.79	1.1920	1.4057	–0.2138
2000	1.86	35.23	2.12	72.59	2.7086	1.7796	0.9289
2001	2.31	33.57	2.72	69.56	–2.7472	–2.4910	–0.2562
2002	2.31	32.50	2.95	67.75	–0.8239	–0.8662	0.0423
2003	2.31	29.76	3.07	67.12	–0.2154	–0.2397	0.0243
2004	2.88	28.47	4.00	61.32	3.9875	1.7781	2.2093
2005	2.71	25.67	3.81	58.92	2.0762	0.7584	1.3178
2006	2.54	24.27	3.81	56.15	4.4094	2.0057	2.4037
2007	2.16	22.83	3.80	58.58	0.3169	0.8630	–0.5461
2008	2.55	20.34	3.98	56.62	1.3261	0.3087	1.0174
2009	3.29	19.07	4.26	55.63	–9.2968	–5.7745	–3.5223
2010	3.51	20.63	4.58	55.53	6.9056	4.1948	2.7108
2011	3.73	19.33	4.72	53.47	3.7584	1.6757	2.0827
2012	4.37	20.62	4.61	52.44	2.1906	0.9005	1.2901
2013	4.53	21.18	4.79	55.16	–2.1138	–0.3200	–1.7938
7	Means of transport and parts thereof						
1990	0.07	1.85	1.43	73.90			
1991	0.06	1.72	1.07	68.28	0.3159	0.0512	0.2647
1992	0.06	2.25	0.70	64.99	1.4044	0.8078	0.5966
1993	0.18	1.98	2.75	63.73	–0.6825	–0.4176	–0.2649
1994	0.42	3.48	4.36	69.80	2.5510	2.1871	0.3640
1995	0.15	4.03	1.69	78.56	–0.1188	0.2946	–0.4134
1996	0.21	6.53	1.41	84.63	4.0304	3.8313	0.1990
1997	0.18	7.73	1.00	84.81	3.4252	2.9142	0.5110
1998	0.67	7.74	3.23	79.85	2.2080	1.4613	0.7467
1999	0.98	8.72	5.08	77.01	1.7115	1.2474	0.4641

Table 3.13 (contd.)

1	2	3	4	5	6	7	8
2000	1.43	12.20	5.38	72.23	6.4435	4.2074	2.2361
2001	1.65	11.42	5.86	69.07	–0.8462	–1.2769	0.4307
2002	2.60	10.84	8.69	62.54	1.1764	–0.0244	1.2007
2003	1.73	9.71	6.36	59.78	–2.2399	–2.7249	0.4850
2004	1.58	9.46	5.76	58.22	1.6747	0.5909	1.0838
2005	2.17	9.29	7.02	55.67	3.4645	1.8657	1.5988
2006	2.47	8.71	7.11	55.21	2.7575	1.6160	1.1416
2007	2.39	8.17	6.43	55.08	1.4143	0.6284	0.7859
2008	3.23	7.91	7.18	53.92	–1.3661	–0.9646	–0.4015
2009	2.75	11.72	6.39	52.90	–9.4150	–6.1282	–3.2868
2010	2.65	12.58	6.17	55.22	6.4262	4.3818	2.0444
2011	2.69	12.82	5.67	56.54	4.0321	2.7306	1.3016
2012	2.34	12.77	4.96	56.22	3.4896	1.8127	1.6769
2013	2.45	13.22	4.97	56.85	0.2284	0.3618	–0.1334
8	Other manufactured goods						
1990	0.39	4.38	0.71	71.51			
1991	0.85	4.83	1.12	67.99	0.8839	0.5286	0.3553
1992	0.66	6.88	0.67	70.58	1.5896	1.2078	0.3817
1993	1.08	6.83	1.15	67.92	0.2676	0.0734	0.1943
1994	1.29	7.71	1.35	64.77	1.3755	0.7509	0.6246
1995	1.09	5.42	1.78	67.95	–1.8424	–1.0407	–0.8017
1996	1.26	7.11	1.99	79.40	0.9185	1.3197	–0.4012
1997	0.87	8.09	1.30	80.86	1.3169	1.1271	0.1899
1998	0.87	7.57	1.30	69.06	0.7276	–0.3308	1.0584
1999	0.94	7.96	1.38	67.31	0.7477	0.3816	0.3661
2000	1.07	8.57	1.60	70.07	1.3210	1.2036	0.1174
2001	1.58	8.41	2.01	64.67	0.0523	–0.4604	0.5127
2002	1.26	9.10	1.49	61.99	0.3912	–0.0715	0.4627
2003	1.28	8.66	1.55	60.00	0.1166	–0.1290	0.2456
2004	1.27	7.27	1.55	51.81	0.9675	–0.3437	1.3113
2005	1.53	6.95	1.73	45.89	1.4405	0.0282	1.4123
2006	1.66	6.74	1.47	36.74	4.1850	0.3827	3.8023
2007	1.82	6.34	1.26	29.84	3.9168	0.0051	3.9117
2008	2.13	6.36	1.43	31.24	–0.3895	0.2023	–0.5918
2009	2.72	5.89	2.01	37.32	–6.0377	–1.0024	–5.0353

1	2	3	4	5	6	7	8
2010	2.34	6.06	1.67	37.25	2.1573	0.7808	1.3765
2011	2.70	6.12	1.93	36.77	0.9776	0.3416	0.6360
2012	2.79	6.05	1.88	38.31	0.6314	0.5179	0.1136
2013	2.67	6.42	1.72	38.99	0.8579	0.4442	0.4137
9	Other						
1990	0.16	1.96	0.69	73.90			
1991	0.13	2.38	0.42	73.03	0.0394	0.0273	0.0121
1992	0.22	3.75	0.50	71.64	0.0706	0.0486	0.0220
1993	0.37	4.05	0.96	73.44	0.0112	0.0139	–0.0028
1994	0.81	4.94	1.79	65.74	0.0745	0.0324	0.0421
1995	0.60	4.11	1.97	66.81	–0.0835	–0.0532	–0.0303
1996	0.38	0.75	1.23	81.33	0.0507	0.0765	–0.0259
1997	0.26	0.88	0.87	83.22	0.0669	0.0609	0.0060
1998	0.54	0.75	1.71	71.27	0.0060	–0.0366	0.0426
1999	0.55	5.51	1.96	70.88	0.0127	0.0087	0.0040
2000	0.26	4.52	0.03	2.24	12.7168	0.0150	12.7018
2001	0.37	3.74	0.33	17.60	–11.5980	–0.0274	–11.5706
2002	0.65	5.50	0.18	6.14	2.9854	0.0137	2.9717
2003	0.59	5.08	0.42	15.61	–2.7704	–0.0079	–2.7626
2004	0.05	4.38	0.32	10.32	1.0252	0.0162	1.0089
2005	0.04	0.68	0.27	9.14	0.5114	0.0145	0.4969
2006	0.05	0.65	0.22	7.19	1.0066	0.0092	0.9974
2007	0.05	0.62	0.05	1.71	14.9318	0.0212	14.9106
2008	0.79	2.30	2.73	21.09	–13.5137	1.0169	–14.5306
2009	0.84	1.17	2.42	27.33	–0.3678	0.2271	–0.5949
2010	1.27	1.46	2.64	28.39	1.4375	0.5142	0.9233
2011	1.70	1.72	3.05	28.43	1.5164	0.5079	1.0086
2012	2.72	3.36	3.61	44.47	3.0424	2.8359	0.2065
2013	1.42	2.03	2.42	34.92	–1.9745	–1.9531	–0.0215
10	Electrical and electronic devices						
1990	0.74	4.39	1.35	57.99			
1991	1.04	4.60	1.57	56.94	1.2662	0.6945	0.5717
1992	1.48	16.29	0.82	77.99	12.0117	10.8439	1.1678
1993	2.25	15.38	1.11	74.39	2.0115	0.8955	1.1160
1994	2.07	15.30	0.95	72.65	4.1657	2.6713	1.4944
1995	1.40	15.01	0.70	79.14	1.6824	2.9008	–1.2184

Table 3.13 (contd.)

1	2	3	4	5	6	7	8
1996	2.52	19.13	1.27	89.03	4.4197	6.7778	–2.3580
1997	1.48	20.20	0.75	87.70	6.0417	4.7704	1.2713
1998	1.85	22.19	0.79	80.14	5.8403	1.9372	3.9031
1999	2.20	23.08	0.89	77.81	7.5154	4.9576	2.5578
2000	2.77	23.88	1.26	76.55	12.1497	9.0010	3.1486
2001	2.77	23.21	0.91	65.80	–5.7092	–10.7567	5.0475
2002	2.41	20.75	0.76	59.47	–6.8470	–7.8156	0.9687
2003	2.74	18.86	0.90	57.08	–2.8256	–2.7620	–0.0635
2004	2.88	16.07	1.03	45.49	7.2762	–2.0283	9.3046
2005	3.43	14.18	1.21	38.03	3.1817	–2.7251	5.9068
2006	3.74	13.51	1.23	34.84	7.8123	0.9936	6.8187
2007	3.29	12.09	1.26	35.89	–9.6353	–2.8719	–6.7634
2008	4.94	13.22	1.38	31.24	13.7858	1.9673	11.8185
2009	6.85	12.14	1.77	27.47	–10.0970	–5.3100	–4.7870
2010	6.53	12.50	1.36	26.74	15.4528	3.6632	11.7896
2011	4.73	13.08	0.96	27.43	2.8985	1.0482	1.8504
2012	4.68	13.20	0.91	27.69	0.0815	0.1793	–0.0978
2013	6.04	13.35	1.02	26.42	5.3795	0.5714	4.8081
11	Machinery and equipment						
1990	0.43	5.54	0.74	70.11			
1991	0.91	5.83	1.22	67.41	1.9074	1.0884	0.8190
1992	0.87	7.74	0.85	65.70	4.6555	2.8525	1.8030
1993	1.37	6.94	1.53	61.82	–0.4771	–0.8322	0.3552
1994	1.36	7.49	1.51	61.05	3.0461	1.7795	1.2666
1995	1.67	5.84	2.48	60.74	–2.4791	–1.4416	–1.0375
1996	1.35	8.81	1.51	71.89	5.7457	5.9095	–0.1638
1997	1.17	10.07	1.18	73.12	5.8004	4.5077	1.2928
1998	1.89	10.00	1.76	61.37	3.5646	–0.8919	4.4565
1999	2.27	11.43	1.96	62.80	3.2487	2.6195	0.6291
2000	2.28	10.66	2.15	66.87	–0.6684	1.0277	–1.6961
2001	2.74	11.17	2.25	59.24	1.7082	–1.5325	3.2407
2002	2.29	11.56	1.75	53.79	0.1733	–2.0437	2.2169
2003	2.57	11.18	1.94	50.19	0.6537	–0.8949	1.5487
2004	2.55	10.65	1.96	47.10	4.6830	1.1678	3.5152
2005	2.70	10.17	2.10	47.12	1.2813	0.6965	0.5848

1	2	3	4	5	6	7	8
2006	2.91	10.28	2.20	47.05	3.1053	1.5401	1.5652
2007	2.83	9.56	2.30	46.22	0.4323	–0.1255	0.5578
2008	3.45	9.54	2.59	44.30	3.3070	0.7978	2.5092
2009	4.67	9.88	3.32	41.06	–9.4564	–5.4420	–4.0144
2010	3.54	10.36	2.09	40.14	10.4667	3.5552	6.9114
2011	3.47	10.61	2.01	40.18	5.7083	2.3881	3.3203
2012	4.06	12.04	2.18	41.30	5.6961	3.2048	2.4912
2013	3.73	12.10	1.86	40.01	0.5970	–0.7533	1.3504

Source: author's compilation.

From Table 3.13, we can learn that the establishing of NAFTA increased the share of Mexico's imports from the United States and Canada in the exports of these countries in almost all commodity groups (in "Other" category shares remained at similar levels). When it comes to the share of Mexico's imports from the United States and Canada in total Mexico's imports, the conclusions are not unambiguous, and they differ across the partners. On the one hand, with the launching of NAFTA, the share of imports from Canada in total Mexico's imports increased (higher demand for Canadian exports), but, on the other hand, imports from the United States dropped or remained at the same level. Thus, we might say that the relevance of Canada for the Mexican economy increased while we failed to observe a similar effect for the US economy. At the same time, Mexico, as a buyer of exported goods, gained in importance for both Canada and the United States.

These conclusions should be juxtaposed with data regarding the trade between trading partners, which clearly show that after 1994 the value of imports from the United States was growing. However, higher nominal values were not triggered by a growing share of this country but by imports from the United States growing proportionally to total imports. In other words, Mexico's demand for imported goods was increasing, but goods imported from third countries were not necessarily pushed out by products imported from the United States.

Data reflecting changes in nominal values of Mexico's imports – like in exports – do not confirm that there has been any trade diversion effect. Drops could be observed in the value of imports from the ROW and the simultaneous increase in imports from the NAFTA countries, however, such changes did not occur over long periods even for individual categories. It means that integration created new flows of imports but failed to induce shifting the sources of imports from the third countries to partners from the integration block.

3.4. Summary

Studies on the effects of the membership in integration groupings, in particular in NAFTA, discussed in Chapter 3 confirm that this integration block is critical for Mexico's economy when it comes to the trade performance of this country. Conclusions concur with theoretical gravity models and estimates made by other researchers.

Mexico's trade is influenced by typical factors, such as distance between the countries, the same official language, and the share of the country's GDP in the world's GDP. In addition, imports and exports very much depend on trade agreements to which the country is a party. Conducted estimations allow us to conclude that in each block integration has significantly intensified trade between their members. At the same time, the relevance of such agreements for trade intensification differed, and some of them (e.g., the one with Colombia) turned out to be statistically insignificant.

The *ex post* forecast of expected values of Mexico's exports and imports to/from partners from the grouping in a "without NAFTA" scenario shows lower values for almost all commodity groups relative to real values.

Noteworthy, the shares of exports and imports were calculated in two ways. In the gravity model, the variables were the shares of Mexico's exports/imports to/from a given country in total values for Mexico. At the same time, the forecast considered shares of Mexico's exports to the United States and Canada in the total imports of these countries and Mexico's imports from the United States and Canada in the total exports of these countries. Although the methodology was different, conclusions from the studies are coherent and confirm the relevance of NAFTA for Mexican trade with these countries.

Shares of Mexico's exports/imports to/from Canada and the United States in total Mexico's exports/imports calculated in subchapter 3.3 indicate that NAFTA had a two-way impact on them. On the one hand, the role of Mexico as a supplier of goods imported by the partners from the grouping gained in importance; also, the significance of these countries as recipients of Mexican exports was raised. On the other hand, Mexico started to play a more prominent role as a recipient of Canadian exports and Canada as a supplier of goods imported by Mexico. However, the increased significance of Mexico as a recipient of the American exports was not associated with a more significant role of the United States as a supplier of goods imported to Mexico.

Based on nominal changes in the values of the United States and Canada's imports, on the one hand, and Mexico, on the other hand, one may conclude that trade liberalization on the North American continent has contributed to the creation of new trade flows within the grouping but has not diverted trade from the third countries to the partners from the integration block.

Conclusion

Economic integration is a universal occurrence in the contemporary global economy. Theory teaches us that integration produces two main effects: trade creation and trade diversion. Models discussed in the first chapter show that the scale of these effects and the net effect of integration are not unambiguous and depend on the adopted assumptions. Studies presented in Chapter 3 attempt to identify and evaluate these effects and confirm the hypothesis about trade integration within the framework of NAFTA being beneficial to the Mexican economy.

Conclusions drawn from studies carried out using different statistical methods are convergent and suggest that NAFTA has intensified trade between Mexico and other member states of this integration block and has boosted the overall value of Mexico's exports and imports, which is why we may presume that it increased the country's welfare.

Statistical data show that strong bonds connect the Mexican economy and the economies of the rest of NAFTA members. Also, the data inform us that relations between Mexico and the United States had been much more intensive than those with Canada and the agreement of 1994 enhanced cooperation with the United States. *Ex post* forecast indicates that for Canada, differences between estimated and real values were bigger than for the United States. In other words, real values for trade were higher than the potential ones. To answer the question of whether increased share results from the trade creation or trade diversion effect, changes in nominal values of imports were calculated.

There are no grounds to believe that the signing of NAFTA produced the trade diversion effect and higher imports should be interpreted as the trade creation effect, i.e., the emergence of new trade flows within the grouping. The natural trade partners theory explains the phenomenon. According to it, when countries are bound with prior intensive trade cooperation, the formation of a free trade area generates the trade creation rather than trade diversion effect.

The absence of trade diversion effect confirms the hypothesis about the dependence of trade diversion on trade intensity before a free trade area has been launched. Mexico's relations with the United States were very strong before NAFTA, and the Agreement provided additional facilitation tools for cooperation. However, considering the dynamics indicators, the Agreement boosted trade with Canada with

whom trade had not been so intense before integration; thus, potential trade diversion was relatively bigger for Canada than for the United States.

The survey aimed at examining the impact of trade agreements on Mexico's foreign trade conducted using the gravity model (stage 1) shows that trade agreements have a significant impact on increasing trade between Mexico and a country-member to a grouping (for bilateral agreements) or a group of such countries (for multilateral agreements).

Forecasted expected values of Mexico's exports and imports to/from the US and Canada, complementary to the gravity model, confirm conclusions drawn from the model and analyses discussed in Chapter 3. In accordance with the forecast, estimated values are smaller than the real ones. Besides, the share of Mexico's imports in NAFTA partners' exports and Mexico's exports in NAFTA partners' imports has been higher after 1994 in most commodity groups. Similar regularities could be observed for shares calculated as the quotient of Mexico's exports to the US/Canada and total Mexico's exports. By knowing these two shares, we can answer the question about the relevance of the agreement to both the importer and exporter. When commodity groups are considered separately, we avoid a situation in which, e.g., growing exports in one of them is counterbalanced with a drop in another. In big aggregates, such changes would not be visible. Analyses carried out for particular commodity groups investigated separately help in avoiding doubts as to changes in the commodity pattern of trade.

Despite coherent conclusions and positive validation of both hypotheses, the method does not allow us to unambiguously decide that the integration in North-American continent has triggered all changes in trade. In addition to trade liberalization, the economy is influenced by several diverse social, political, and economic factors. One may not single out the "NAFTA factor" by quantifying changes in international trade induced by this concrete trade agreement.

Analyses that take account of absolute values, shares, and dynamics demonstrate that after 1994 cooperation between Mexico and, above all, the US strongly intensified. Thus, we may expect – despite being fully aware of limitations to such inference – that trade integration within NAFTA was the source of trade creation between the member states. Still, it did not produce a trade diversion effect. Nevertheless, we may not unambiguously and conclude that, e.g., an increase in imports has been caused by exporter's bigger attractiveness and the elimination of customs duties and other restrictions rather than, e.g., market changes, such as a unique product available only from the exporter being offered by a country.

Author's studies were conducted at the macroeconomic level. Possibly, they could be supplemented with a qualitative microeconomic survey of importers from all three NAFTA countries. The most credible answers would have been obtained by asking a direct question if importer's decision about the change of supplier was motivated by the formation of the integration grouping, The problem, however, is that NAFTA has been operational for over 20 years, which is why it would be difficult to find out about motivations to decisions made two decades ago.

Afterword

The presented research focuses on NAFTA, which, at the moment of providing this book to the publishing house, is no longer in force. It does not mean that countries from the North America gave up the idea of free trade. After 25 years of NAFTA, the agreement is replaced with United States-Mexico-Canada Agreement (USMCA), which became effective 1st July 2020. USMCA is also called revised NAFTA or NAFTA 2.0, which suggests that the new deal is rather an evolution than a revolution in comparison to the previous one.

Renegotiating NAFTA was one of the election promises made by the then-presidential candidate, Donald Trump who claimed that NAFTA is "perhaps the worst trade deal ever made". Thus, after taking office, representatives of the member states have started to prepare the draft of a new deal, which revised version was finally signed in December 2019. Some of the old NAFTA provisions have been watered down, while others have been transformed. Yet, the main aim of the USMCA was to strengthen the interest of producers and citizens from the member states. This agreement is described as a mutually beneficial win for North American workers, farmers, ranchers, and businesses. The premise for its implementation was creating a more balanced, reciprocal trade that supports high-paying jobs for Americans and grows the North American economy.

According to the Office of the United States Trade Representative,[1] agreement highlights include:

- Creating a more level playing field for American workers, including improved rules of origin for automobiles, trucks, other products, and disciplines on currency manipulation.
- Benefiting American farmers, ranchers, and agribusinesses by modernizing and strengthening food and agriculture trade in North America.
- Supporting a XXI Century economy through new protections for U.S. intellectual property, and ensuring opportunities for trade in U.S. services.
- New chapters covering Digital Trade, Anticorruption, and Good Regulatory Practices, as well as a chapter devoted to ensuring that Small and Medium Sized Enterprises benefit from the Agreement.

1 Office of the United States Trade Representative, https://ustr.gov/trade-agreements/free-trade-agreements/united-states-mexico-canada-agreement [accessed: 29.06.2020].

Main changes refer to rules of origin in the automotive industry, labour provisions and protection of works, access to the dairy market and intellectual property protections, and digital trade provisions.[2] The agreement includes "sunset clause", which means it will remain in effect for 16 years. After that time, parties can choose to revisit, renegotiate terms, or withdraw from the agreement. Additionally, after six years, the term of USMCA's sunset (16 years) will be put under mandatory review and potentially extended if the parties find the deal beneficial.[3]

All the changes affect the cooperation between member states, but probably will not be a revolution in the economic linkages. It is too early to assess the real impact of the deal to the member states. Due to the adopted provision, probably it will not be significant, yet positive. The International Trade Commission projected the agreement will add the United States 176 thousands jobs, increase employment by 0,12%, and raise American GDP by 68,2 bln USD, or 0,35%, by its sixth year.[4] This are only forecasts as no historical data are available yet, neither the evidence of how this deal works in real economic life.

Author finds the new NAFTA as an interesting topic for further investigation, especially in the sectors where the changes in regulations were the deepest (automotive, chemical, and agricultural).

2 J. Kirby, *USMCA, the new trade deal between the US, Canada, and Mexico, explained. NAFTA gets an upgrade with new provisions on autos, dairy, and more*, https://www.vox.com/2018/10/2/17923638/usmca-trump-nafta-trade-agreement [accessed: 29.06.2020].

3 Livingston, *USMCA change is here*, https://www.livingstonintl.com/usmca/ [accessed: 29.06.2020].

4 L. Owens, *USMCA expected to deliver small positive economic impact and big changes for 3 industries*, https://blogs.thomsonreuters.com/answerson/usmca-economic-impact/ [accessed: 29.06.2020].

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Appendix 1. Forecasted value of Mexico's exports to the US and Canada for the period 1994–2013

1	Food, live animals, beverages and tobacco											
Year	CAN IMP TOTAL (USD bn)	US IMP TOTAL (USD bn)	MEX EX TOTAL (USD bn)	MEX EX to CAN (USD bn)	MEX EX to the US (USD bn)	MEX EX to ROW (USD bn)	MEX EX SHARE in CAN IMP (%)	MEX EX SHARE in US IMP (%)	AVERAGE SHARE for 1990–1993 CAN (%)	FORE-CAST MEX EX to CAN (USD bn)	AVERAGE SHARE for 1990–1993 US (%)	FORECAST MEX EX to the US (USD bn)
1990	13.3877	56.6098	5.6126	0.0225	5.0263	0.5639	0.1679	8.8788	0.2114		9.4491	
1991	13.4979	54.4595	5.9678	0.0277	5.1491	0.7910	0.2053	9.4549				
1992	13.5096	55.6691	5.5360	0.0492	4.8684	0.6184	0.3639	8.7452				
1993	13.8919	54.9847	6.2838	0.0151	5.8931	0.3756	0.1086	10.7176				
1994	14.6347	57.9865	6.9325	0.0447	5.8571	1.0307	0.3053	10.1008		0.0309		5.4792
1995	14.9691	60.4195	9.5524	0.0673	7.7463	1.7388	0.4499	12.8208		0.0317		5.7091
1996	15.4084	64.2358	9.3054	0.0661	7.5519	1.6874	0.4290	11.7566		0.0326		6.0697
1997	16.5707	69.5349	10.1386	0.0905	8.0934	1.9547	0.5460	11.6393		0.0350		6.5704
1998	16.9952	70.8080	10.3392	0.1064	8.1318	2.1011	0.6259	11.4843		0.0359		6.6907
1999	17.1544	72.6721	10.4788	0.1120	8.5922	1.7745	0.6532	11.8233		0.0363		6.8669
2000	17.4222	74.1733	11.1726	0.1163	9.0810	1.9753	0.6677	12.2429		0.0368		7.0087
2001	17.8504	72.8691	10.6802	0.1262	8.4803	2.0737	0.7071	11.6377		0.0377		6.8855
2002	18.3577	75.9279	10.6657	0.1246	8.4338	2.1072	0.6789	11.1077		0.0388		7.1745
2003	19.8643	81.6938	11.6689	0.1336	9.8101	1.7252	0.6727	12.0084		0.0420		7.7194
2004	20.2423	87.5766	12.7610	0.1579	11.0074	1.5957	0.7799	12.5689		0.0428		8.2752
2005	21.9215	92.4100	13.9402	0.2025	11.6067	2.1310	0.9237	12.5600		0.0464		8.7319
2006	24.1042	99.9012	15.8671	0.4027	13.0463	2.4181	1.6705	13.0592		0.0510		9.4398
2007	27.4766	105.0570	16.5548	0.5995	13.0035	2.9518	2.1818	12.3776		0.0581		9.9270

2008	29.6723	110.0995	17.6244	0.5358	13.2591	3.8296	1.8056	12.0428		0.0627		10.4034
2009	28.5196	100.1119	17.4027	0.5109	13.4898	3.4020	1.7915	13.4748		0.0603		9.4597
2010	31.1510	109.8932	19.2408	0.6535	14.9115	3.6758	2.0979	13.5691		0.0659		10.3840
2011	34.8246	125.7643	22.7532	0.7412	17.3942	4.6178	2.1284	13.8308		0.0736		11.8836
2012	35.8004	130.2508	21.9743	0.5981	16.4809	4.8953	1.6705	12.6532		0.0757		12.3076
2013	36.2877	132.3451	24.1150	0.4790	18.4867	5.1492	1.3201	13.9686		0.0767		12.5055
2	**Chemicals, rubber and plastic products**											
Year	CAN IMP TOTAL (USD bn)	US IMP TOTAL (USD bn)	MEX EX TOTAL (USD bn)	MEX EX to CAN (USD bn)	MEX EX to the US (USD bn)	MEX EX to ROW (USD bn)	MEX EX SHARE in CAN IMP (%)	MEX EX SHARE in US IMP (%)	AVERAGE SHARE for 1990–1993 CAN (%)	FORE-CAST MEX EX to CAN (USD bn)	AVERAGE SHARE for 1990–1993 US (%)	FORECAST MEX EX to the US (USD bn)
1990	21.8278	70.0029	4.8052	0.0332	2.5399	2.2320	0.1521	3.6283	0.1398		4.7456	
1991	21.9266	68.5609	4.9793	0.0398	2.5364	2.4032	0.1814	3.6995				
1992	23.1854	74.2118	6.0920	0.0248	3.7949	2.2722	0.1071	5.1136				
1993	24.7457	76.1241	6.1663	0.0294	4.9793	1.1576	0.1189	6.5410				
1994	27.4880	85.0067	6.8897	0.0327	4.0548	2.8021	0.1190	4.7700		0.0384		4.0341
1995	30.3095	97.1661	9.1943	0.0768	4.7026	4.4149	0.2534	4.8397		0.0424		4.6111
1996	31.2402	101.6382	8.9540	0.0838	5.3887	3.4816	0.2681	5.3019		0.0437		4.8234
1997	33.9555	109.0824	10.0888	0.1005	6.2434	3.7449	0.2959	5.7236		0.0475		5.1766
1998	35.1436	115.9026	10.0305	0.1231	6.1117	3.7957	0.3504	5.2732		0.0491		5.5003
1999	37.2901	126.2219	10.7361	0.1265	6.7765	3.8331	0.3393	5.3688		0.0521		5.9900
2000	39.3107	140.7595	12.3817	0.1552	7.7540	4.4725	0.3949	5.5087		0.0550		6.6799
2001	38.4372	141.7749	11.5240	0.1526	6.7394	4.6320	0.3970	4.7536		0.0538		6.7281
2002	39.4744	150.7559	11.3436	0.1718	6.5980	4.5737	0.4353	4.3766		0.0552		7.1543

2003	42.9966	170.3818	11.8050	0.2112	6.8770	4.7168	0.4912	4.0362		0.0601		8.0857
2004	48.0970	187.2385	14.1193	0.1937	8.2893	5.6363	0.4027	4.4272		0.0673		8.8856
2005	52.5259	207.6287	15.7823	0.3215	9.2633	6.1974	0.6121	4.4615		0.0735		9.8533
2006	57.7810	220.2712	16.7270	0.3829	9.5941	6.7500	0.6627	4.3556		0.0808		10.4532
2007	60.6449	231.2264	18.3715	0.3172	9.5421	8.5122	0.5230	4.1267		0.0848		10.9731
2008	61.4267	249.7161	19.1054	0.2500	9.2906	9.5648	0.4070	3.7204		0.0859		11.8506
2009	53.5167	209.1479	16.4308	0.2256	7.6927	8.5125	0.4215	3.6781		0.0748		9.9254
2010	61.1246	241.9653	20.0443	0.3247	9.1827	10.5370	0.5312	3.7951		0.0855		11.4827
2011	66.1512	269.6896	24.0252	0.5756	10.3749	13.0747	0.8701	3.8470		0.0925		12.7984
2012	65.9965	262.8069	26.6965	0.7316	11.6326	14.3323	1.1086	4.4263		0.0923		12.4718
2013	65.2433	258.7730	26.7802	0.7412	11.8515	14.1875	1.1360	4.5799		0.0912		12.2804
3	**Mineral fuels, lubricants, petroleum products**											
Year	CAN IMP TOTAL (USD bn)	US IMP TOTAL (USD bn)	MEX EX TOTAL (USD bn)	MEX EX to CAN (USD bn)	MEX EX to the US (USD bn)	MEX EX to ROW (USD bn)	MEX EX SHARE in CAN IMP (%)	MEX EX SHARE in US IMP (%)	AVERAGE SHARE for 1990–1993 CAN (%)	FORE-CAST MEX EX to CAN (USD bn)	AVERAGE SHARE for 1990–1993 US (%)	FORECAST MEX EX to the US (USD bn)
1990	13.2226	154.0964	18.8745	0.0648	11.0101	7.7995	0.4900	7.1450	1.3417		7.5942	
1991	9.8472	123.8722	14.3806	0.1299	8.4113	5.8394	1.3193	6.7903				
1992	8.8525	118.1530	14.3383	0.2948	8.4059	5.6376	3.3300	7.1144				
1993	8.4968	115.0094	12.7216	0.0193	10.7270	1.9752	0.2274	9.3271				
1994	8.1715	112.6016	11.9982	0.1045	8.6922	3.2015	1.2788	7.7194		0.1096		8.5512
1995	9.1286	112.0922	13.3113	0.1109	10.1761	3.0243	1.2154	9.0783		0.1225		8.5125
1996	11.0892	114.7158	17.6793	0.2058	13.6786	3.7949	1.8557	11.9239		0.1488		8.7117
1997	12.5742	120.0639	16.9380	0.3335	13.1006	3.5038	2.6523	10.9114		0.1687		9.1179

1998	9.6021	89.0382	10.6254	0.1746	7.9220	2.5288	1.8184	8.8973		0.1288		6.7617
1999	10.0716	132.7814	14.5950	0.2883	11.1826	3.1240	2.8629	8.4218		0.1351		10.0837
2000	16.9157	226.7859	21.7560	0.4262	16.5631	4.7667	2.5194	7.3034		0.2270		17.2225
2001	16.3363	204.3978	16.6247	0.2887	12.4325	3.9036	1.7671	6.0825		0.2192		15.5223
2002	14.1384	158.1817	18.5358	0.2323	14.3335	3.9699	1.6433	9.0614		0.1897		12.0126
2003	19.1812	206.8866	23.4681	0.3484	18.3715	4.7482	1.8163	8.8800		0.2574		15.7113
2004	23.9692	267.0580	28.7267	0.4134	23.2402	5.0731	1.7246	8.7023		0.3216		20.2809
2005	34.4849	355.7305	38.0533	0.7615	30.5121	6.7798	2.2082	8.5773		0.4627		27.0148
2006	37.0171	398.9890	44.6658	0.8565	36.5323	7.2770	2.3138	9.1562		0.4967		30.2999
2007	39.8901	418.4858	47.8764	0.8462	38.5498	8.4805	2.1213	9.2117		0.5352		31.7806
2008	54.7856	543.2332	54.2917	0.9934	44.7751	8.5232	1.8133	8.2423		0.7350		41.2541
2009	32.8199	303.1402	33.1233	0.4983	28.3988	4.2262	1.5183	9.3682		0.4403		23.0210
2010	42.2776	387.5491	43.8820	0.6694	37.0292	6.1834	1.5833	9.5547		0.5672		29.4312
2011	55.1617	480.8920	57.6718	0.7704	47.3342	9.5672	1.3966	9.8430		0.7401		36.5198
2012	52.2242	439.7323	52.8662	0.8570	40.0414	11.9678	1.6410	9.1059		0.7007		33.3941
2013	50.2939	389.2855	48.6914	0.8146	35.9534	11.9234	1.6197	9.2357		0.6748		29.5630
4	**Textiles, clothes, footwear and accessories**											
Year	CAN IMP TOTAL (USD bn)	US IMP TOTAL (USD bn)	MEX EX TOTAL (USD bn)	MEX EX to CAN (USD bn)	MEX EX to the US (USD bn)	MEX EX to ROW (USD bn)	MEX EX SHARE in CAN IMP (%)	MEX EX SHARE in US IMP (%)	AVERAGE SHARE for 1990–1993 CAN (%)	FORE-CAST MEX EX to CAN (USD bn)	AVERAGE SHARE for 1990–1993 US (%)	FORECAST MEX EX to the US (USD bn)
1990	11.1084	84.8053	1.3075	0.0380	0.7852	0.4843	0.3419	0.9259	0.3383		2.3182	

1991	10.3365	83.4855	1.4044	0.0384	0.7790	0.5869	0.3718	0.9331				
1992	10.5067	92.6125	3.8873	0.0467	3.1962	0.6444	0.4449	3.4511				
1993	10.8138	97.2479	4.1930	0.0210	3.8536	0.3184	0.1946	3.9627				
1994	11.0185	102.7152	5.1538	0.0400	4.3695	0.7442	0.3631	4.2540		0.0373		2.3812
1995	11.6417	106.4131	7.6973	0.0750	6.1680	1.4543	0.6438	5.7963		0.0394		2.4669
1996	11.1869	107.7268	9.5155	0.1243	8.2285	1.1626	1.1109	7.6383		0.0378		2.4973
1997	12.8509	119.7917	12.8576	0.1577	11.3578	1.3421	1.2270	9.4813		0.0435		2.7770
1998	13.1610	126.7034	14.0222	0.1658	12.7162	1.1402	1.2596	10.0362		0.0445		2.9372
1999	12.7264	130.2442	15.6452	0.1658	14.3404	1.1390	1.3027	11.0104		0.0431		3.0193
2000	13.2182	141.2443	16.8015	0.1558	15.3947	1.2510	1.1788	10.8994		0.0447		3.2743
2001	12.6922	135.6055	14.5694	0.1503	12.8450	1.5741	1.1842	9.4724		0.0429		3.1436
2002	12.6176	136.2523	14.0364	0.1464	12.5550	1.3351	1.1603	9.2145		0.0427		3.1586
2003	13.2064	141.3332	13.0749	0.1511	12.2961	0.6276	1.1443	8.7001		0.0447		3.2764
2004	14.2668	148.5591	12.9547	0.1925	11.8709	0.8914	1.3489	7.9907		0.0483		3.4439
2005	15.0870	153.5409	12.4606	0.2016	11.4842	0.7749	1.3359	7.4796		0.0510		3.5594
2006	15.9220	155.5026	10.8377	0.1939	9.9843	0.6594	1.2178	6.4207		0.0539		3.6049
2007	16.7753	155.1217	9.2661	0.1699	8.3279	0.7684	1.0125	5.3686		0.0568		3.5960
2008	16.7854	145.6095	8.3952	0.1407	7.4966	0.7579	0.8382	5.1485		0.0568		3.3755
2009	14.9718	125.6405	6.9944	0.1096	6.1986	0.6861	0.7322	4.9336		0.0506		2.9126
2010	16.6160	144.2757	7.6893	0.1353	6.6724	0.8816	0.8142	4.6248		0.0562		3.3446
2011	18.1562	151.6901	8.2509	0.1400	6.9534	1.1575	0.7709	4.5840		0.0614		3.5165
2012	17.9376	150.6484	8.2940	0.1313	6.9579	1.2047	0.7320	4.6187		0.0607		3.4923
2013	18.5914	154.2487	8.4262	0.1405	7.0717	1.2139	0.7559	4.5846		0.0629		3.5758

5	Manufactured goods classified by material											
Year	CAN IMP TOTAL (USD bn)	US IMP TOTAL (USD bn)	MEX EX TOTAL (USD bn)	MEX EX to CAN (USD bn)	MEX EX to the US (USD bn)	MEX EX to ROW (USD bn)	MEX EX SHARE in CAN IMP (%)	MEX EX SHARE in US IMP (%)	AVERAGE SHARE for 1990–1993 CAN (%)	FORE-CAST MEX EX to CAN (USD bn)	AVERAGE SHARE for 1990–1993 US (%)	FORECAST MEX EX to the US (USD bn)
1990	12.6316	62.9392	1.9934	0.0255	1.4888	0.4792	0.2015	2.3655	0.1340		3.4909	
1991	12.2124	58.9793	1.8459	0.0139	1.4924	0.3396	0.1142	2.5304				
1992	12.5603	61.0134	3.1512	0.0158	2.7907	0.3448	0.1258	4.5739				
1993	13.2738	66.5487	3.2378	0.0125	2.9907	0.2345	0.0945	4.4941				
1994	13.5948	72.4867	3.2961	0.0286	2.7923	0.4752	0.2101	3.8521		0.0182		2.5305
1995	14.7171	80.5598	4.1119	0.0320	3.3398	0.7400	0.2176	4.1458		0.0197		2.8123
1996	14.3039	80.3975	4.6255	0.0479	3.9745	0.6032	0.3348	4.9435		0.0192		2.8066
1997	16.0305	84.3133	5.1859	0.0553	4.4585	0.6722	0.3450	5.2880		0.0215		2.9433
1998	16.2284	90.8304	5.6060	0.0859	4.6095	0.9105	0.5291	5.0749		0.0217		3.1708
1999	16.4492	98.4162	5.9953	0.0860	5.0641	0.8452	0.5231	5.1456		0.0220		3.4357
2000	17.3104	107.5490	5.9582	0.0823	5.0174	0.8585	0.4757	4.6652		0.0232		3.7545
2001	16.0488	96.7067	5.2535	0.0699	4.4017	0.7819	0.4354	4.5516		0.0215		3.3760
2002	16.5416	97.0429	5.4110	0.0610	4.7569	0.5931	0.3689	4.9018		0.0222		3.3877
2003	17.3749	100.3272	5.3652	0.0552	4.7242	0.5858	0.3179	4.7087		0.0233		3.5024
2004	19.5732	117.1331	6.2228	0.0598	5.5056	0.6574	0.3056	4.7003		0.0262		4.0890
2005	21.0734	121.9713	7.0088	0.0654	6.1007	0.8427	0.3103	5.0018		0.0282		4.2579
2006	23.4972	127.4192	8.8078	0.0876	7.7303	0.9899	0.3730	6.0668		0.0315		4.4481
2007	25.0401	122.8919	9.4496	0.2346	7.4525	1.7626	0.9368	6.0642		0.0335		4.2901
2008	26.7080	113.6159	10.7226	0.2888	7.8622	2.5717	1.0812	6.9200		0.0358		3.9663

2009	24.1873	85.9600	10.9109	0.3587	8.5436	2.0086	1.4830	9.9390		0.0324		3.0008
2010	30.2532	107.9392	14.7428	0.5835	11.1354	3.0238	1.9289	10.3164		0.0405		3.7681
2011	34.6881	120.4352	18.7148	0.6900	14.1578	3.8670	1.9892	11.7556		0.0465		4.2043
2012	31.8951	116.1182	18.4019	0.7089	13.8039	3.8892	2.2224	11.8878		0.0427		4.0536
2013	30.1134	119.5106	15.4042	0.6122	11.6537	3.1383	2.0331	9.7512		0.0403		4.1720
6	**Metals and metal products**											
Year	CAN IMP TOTAL (USD bn)	US IMP TOTAL (USD bn)	MEX EX TOTAL (USD bn)	MEX EX to CAN (USD bn)	MEX EX to the US (USD bn)	MEX EX to ROW (USD bn)	MEX EX SHARE in CAN IMP (%)	MEX EX SHARE in US IMP (%)	AVERAGE SHARE for 1990–1993 CAN (%)	FORE-CAST MEX EX to CAN (USD bn)	AVERAGE SHARE for 1990–1993 US (%)	FORECAST MEX EX to the US (USD bn)
1990	13.1471	51.4361	3.1275	0.0082	2.2391	0.8801	0.0626	4.3532	0.1682		6.0885	
1991	12.2379	46.0882	3.0162	0.0257	2.0707	0.9197	0.2103	4.4930				
1992	12.1106	46.3418	4.2369	0.0292	3.1732	1.0346	0.2407	6.8474				
1993	13.1520	49.2688	4.8732	0.0210	4.2669	0.5854	0.1593	8.6605				
1994	15.5733	62.2033	5.2090	0.0466	4.1744	0.9880	0.2992	6.7109		0.0262		3.7873
1995	17.6371	67.4301	8.3108	0.1075	5.4661	2.7371	0.6097	8.1064		0.0297		4.1055
1996	16.5368	66.9058	8.2726	0.0525	5.8229	2.3972	0.3178	8.7031		0.0278		4.0736
1997	19.5448	71.7260	9.5890	0.0801	7.2166	2.2923	0.4100	10.0613		0.0329		4.3670
1998	20.1851	77.2062	9.1972	0.1340	7.3841	1.6792	0.6637	9.5641		0.0340		4.7007
1999	19.6654	72.9600	8.2583	0.1191	7.1075	1.0317	0.6054	9.7416		0.0331		4.4422
2000	22.9597	81.1264	9.4785	0.1192	8.1480	1.2113	0.5192	10.0436		0.0386		4.9394
2001	18.3013	69.7962	9.1377	0.0991	8.0471	0.9915	0.5417	11.5294		0.0308		4.2496
2002	18.9463	71.0331	9.2908	0.1113	8.2135	0.9660	0.5877	11.5629		0.0319		4.3249

2003	19.3434	70.6212	8.6211	0.1068	7.2685	1.2458	0.5520	10.2922		0.0325		4.2998
2004	24.5414	101.2410	11.2238	0.1330	9.4099	1.6809	0.5418	9.2946		0.0413		6.1641
2005	28.0817	111.8900	12.9958	0.1164	10.1656	2.7138	0.4144	9.0854		0.0472		6.8124
2006	31.4895	138.0020	15.3365	0.0813	11.3111	3.9442	0.2581	8.1963		0.0530		8.4023
2007	31.3837	135.8589	16.9152	0.1126	11.9590	4.8436	0.3587	8.8025		0.0528		8.2718
2008	33.1724	140.1347	17.4925	0.1443	11.5617	5.7865	0.4351	8.2504		0.0558		8.5321
2009	21.8324	81.3401	11.5552	0.1188	7.7639	3.6725	0.5441	9.5450		0.0367		4.9524
2010	28.4885	105.2366	14.6808	0.2424	9.3331	5.1053	0.8510	8.8687		0.0479		6.4073
2011	31.7375	123.2360	17.4328	0.2998	11.1892	5.9438	0.9446	9.0795		0.0534		7.5032
2012	32.5634	126.3997	16.8099	0.4069	11.4043	4.9987	1.2496	9.0224		0.0548		7.6959
2013	30.5042	118.5837	16.7918	0.2752	11.3046	5.2120	0.9023	9.5330		0.0513		7.2200
7	**Means of transport and parts thereof**											
Year	CAN IMP TOTAL (USD bn)	US IMP TOTAL (USD bn)	MEX EX TOTAL (USD bn)	MEX EX to CAN (USD bn)	MEX EX to the US (USD bn)	MEX EX to ROW (USD bn)	MEX EX SHARE in CAN IMP (%)	MEX EX SHARE in US IMP (%)	AVERAGE SHARE for 1990–1993 CAN (%)	FORE-CAST MEX EX to CAN (USD bn)	AVERAGE SHARE for 1990–1993 US (%)	FORECAST MEX EX to the US (USD bn)
1990	44.9250	149.0890	5.8503	0.0104	5.3160	0.5239	0.0232	3.5657	1.5635		5.0442	
1991	45.2889	141.3820	7.5399	1.1967	5.8468	0.4964	2.6423	4.1355				
1992	44.1690	144.5129	9.7169	0.7761	8.2302	0.7105	1.7571	5.6952				
1993	44.6314	153.1733	11.6745	0.8173	10.3857	0.4715	1.8312	6.7804				
1994	49.0361	169.8233	13.5245	1.2475	11.2081	1.0689	2.5441	6.5999		0.7667		8.5662
1995	50.3756	173.3446	19.2870	1.6713	16.3096	1.3061	3.3176	9.4088		0.7876		8.7438
1996	50.4561	174.6094	25.0377	1.5682	21.2939	2.1756	3.1081	12.1951		0.7889		8.8076

1997	59.6692	187.2773	26.3534	1.3004	23.1572	1.8957	2.1794	12.3652		0.9329		9.4466
1998	59.4053	203.8917	29.7393	0.5339	27.2347	1.9707	0.8987	13.3574		0.9288		10.2846
1999	63.6233	237.2640	34.1490	2.4887	29.0120	2.6483	3.9116	12.2277		0.9947		11.9680
2000	64.1424	254.5453	39.2835	2.2255	34.9200	2.1380	3.4697	13.7186		1.0028		12.8397
2001	58.9784	244.4768	37.9547	2.1949	33.4841	2.2757	3.7215	13.6962		0.9221		12.3318
2002	63.1740	250.9649	37.3306	1.9921	33.6227	1.7159	3.1533	13.3974		0.9877		12.6591
2003	64.6059	250.7132	35.2924	1.6991	31.5308	2.0624	2.6300	12.5765		1.0101		12.6464
2004	67.8861	264.7054	36.1372	1.0978	33.3790	1.6604	1.6172	12.6099		1.0614		13.3522
2005	73.2576	266.3404	39.4870	1.3519	34.8255	3.3096	1.8454	13.0756		1.1454		13.4346
2006	77.5623	277.5744	47.2661	1.3632	41.0080	4.8949	1.7576	14.7737		1.2127		14.0013
2007	82.3504	274.0864	48.7847	1.6065	39.4189	7.7593	1.9508	14.3819		1.2875		13.8254
2008	74.6107	242.4130	48.7265	1.7067	37.7881	9.2317	2.2874	15.5883		1.1665		12.2277
2009	54.9568	167.7158	37.8298	1.8402	30.4896	5.5000	3.3484	18.1793		0.8592		8.4599
2010	70.4208	222.5838	56.5878	2.5032	44.9760	9.1087	3.5546	20.2063		1.1010		11.2275
2011	75.0369	239.0232	67.3861	3.1108	50.7683	13.5071	4.1456	21.2399		1.1732		12.0567
2012	79.6368	276.5090	74.1524	3.1116	56.8296	14.2112	3.9073	20.5525		1.2451		13.9476
2013	80.5987	286.0801	80.7400	3.2107	65.2358	12.2935	3.9835	22.8033		1.2601		14.4304

8	Other manufactured goods											
Year	CAN IMP TOTAL (USD bn)	US IMP TOTAL (USD bn)	MEX EX TOTAL (USD bn)	MEX EX to CAN (USD bn)	MEX EX to the US (USD bn)	MEX EX to ROW (USD bn)	MEX EX SHARE in CAN IMP (%)	MEX EX SHARE in US IMP (%)	AVERAGE SHARE for 1990–1993 CAN (%)	FORE-CAST MEX EX to CAN (USD bn)	AVERAGE SHARE for 1990–1993 US (%)	FORECAST MEX EX to the US (USD bn)
1990	11.9087	60.4189	0.6472	0.0072	0.4733	0.1668	0.0602	0.7833	0.1273		3.2855	
1991	11.9978	60.5078	0.7690	0.0176	0.6059	0.1455	0.1466	1.0014				
1992	12.9676	66.5502	3.6519	0.0258	3.4792	0.1468	0.1991	5.2280				
1993	13.6035	71.1558	4.4918	0.0141	4.3613	0.1165	0.1033	6.1292				
1994	14.8002	76.5858	5.1148	0.0495	4.7845	0.2809	0.3342	6.2472		0.0188		2.5162
1995	15.4980	83.0127	5.6847	0.0713	5.2489	0.3645	0.4597	6.3230		0.0197		2.7273
1996	15.1271	86.7922	7.2415	0.0683	6.6965	0.4768	0.4513	7.7155		0.0193		2.8515
1997	16.9873	95.9509	9.1798	0.0836	8.4790	0.6172	0.4921	8.8368		0.0216		3.1524
1998	18.1872	104.4759	10.4179	0.0826	9.7156	0.6197	0.4541	9.2994		0.0232		3.4325
1999	19.7152	113.3385	11.2677	0.0673	10.5994	0.6009	0.3416	9.3520		0.0251		3.7237
2000	20.9470	125.6361	13.3029	0.0610	12.6721	0.5698	0.2912	10.0864		0.0267		4.1277
2001	19.3425	118.9869	13.9399	0.0559	12.9277	0.9563	0.2890	10.8648		0.0246		3.9093
2002	18.8484	123.9025	14.9967	0.0529	14.1255	0.8183	0.2805	11.4005		0.0240		4.0708
2003	19.8524	131.6006	14.9213	0.0547	14.0772	0.7894	0.2756	10.6969		0.0253		4.3237
2004	22.2019	143.7701	15.8800	0.0931	14.6406	1.1463	0.4192	10.1833		0.0283		4.7235
2005	23.4376	150.2752	17.8763	0.1856	16.5844	1.1063	0.7920	11.0360		0.0298		4.9372
2006	25.0458	155.1265	18.8481	0.2059	17.4472	1.1951	0.8220	11.2470		0.0319		5.0966
2007	26.7754	162.4877	18.8850	0.2768	17.3669	1.2414	1.0336	10.6881		0.0341		5.3385

2008	27.2520	157.7060	19.0614	0.2734	17.3793	1.4087	1.0034	11.0201		0.0347		5.1814
2009	23.6171	132.4697	16.3564	0.2671	14.8556	1.2337	1.1310	11.2144		0.0301		4.3522
2010	26.7368	153.8083	18.9339	0.3713	17.2902	1.2724	1.3887	11.2414		0.0340		5.0533
2011	27.9281	157.5477	19.6816	0.3562	18.0632	1.2622	1.2754	11.4652		0.0356		5.1762
2012	29.0706	166.7522	21.6204	0.4935	19.6646	1.4623	1.6975	11.7927		0.0370		5.4786
2013	28.5123	169.6764	23.2895	0.4792	21.3395	1.4708	1.6807	12.5766		0.0363		5.5746
9	**Other**											
Year	CAN IMP TOTAL (USD bn)	US IMP TOTAL (USD bn)	MEX EX TOTAL (USD bn)	MEX EX to CAN (USD bn)	MEX EX to the US (USD bn)	MEX EX to ROW (USD bn)	MEX EX SHARE in CAN IMP (%)	MEX EX SHARE in US IMP (%)	AVERAGE SHARE for 1990–1993 CAN (%)	FORE-CAST MEX EX to CAN (USD bn)	AVERAGE SHARE for 1990–1993 US (%)	FORECAST MEX EX to the US (USD bn)
1990	1.1342	7.6916	0.1129	0.0018	0.1006	0.0105	0.1583	1.3079	0.2969		1.8672	
1991	0.7413	6.6090	0.1234	0.0028	0.1032	0.0174	0.3795	1.5619				
1992	0.7223	6.8674	0.1729	0.0031	0.1520	0.0178	0.4272	2.2140				
1993	0.7290	7.9218	0.1974	0.0016	0.1889	0.0069	0.2227	2.3851				
1994	0.7775	7.8906	0.2138	0.0038	0.1937	0.0163	0.4887	2.4546		0.0023		0.1473
1995	0.7491	8.5480	0.2210	0.0039	0.1939	0.0232	0.5225	2.2681		0.0022		0.1596
1996	0.7492	47.7760	0.2838	0.0050	0.2484	0.0304	0.6618	0.5200		0.0022		0.8921
1997	0.8406	52.9635	0.3568	0.0084	0.3084	0.0399	1.0051	0.5824		0.0025		0.9889
1998	0.8733	62.1895	0.3686	0.0074	0.3226	0.0386	0.8466	0.5187		0.0026		1.1612
1999	0.9415	13.4768	0.4396	0.0076	0.3986	0.0334	0.8117	2.9574		0.0028		0.2516
2000	0.9806	15.1115	0.6049	0.0074	0.4264	0.1710	0.7570	2.8217		0.0029		0.2822
2001	0.9465	14.3045	0.6754	0.0085	0.4935	0.1734	0.9021	3.4498		0.0028		0.2671
2002	0.9895	14.1405	1.1702	0.0080	0.4165	0.7457	0.8083	2.9457		0.0029		0.2640

2003	1.1255	13.4594	0.6086	0.0095	0.4654	0.1337	0.8398	3.4580		0.0033		0.2513
2004	6.7076	15.4327	0.7941	0.0109	0.5339	0.2493	0.1621	3.4594		0.0199		0.2882
2005	7.0391	82.2421	1.2808	0.0105	0.6035	0.6667	0.1492	0.7339		0.0209		1.5356
2006	7.7440	86.3849	1.5345	0.0090	0.6524	0.8731	0.1158	0.7553		0.0230		1.6130
2007	9.1550	88.9073	11.6223	0.0086	0.5506	11.0631	0.0940	0.6193		0.0272		1.6601
2008	9.9093	86.7168	1.9987	0.1604	1.6698	0.1685	1.6186	1.9256		0.0294		1.6192
2009	7.3228	72.3311	1.8390	0.1604	1.4586	0.2200	2.1902	2.0165		0.0217		1.3506
2010	8.4854	74.2195	2.1270	0.2338	1.6994	0.1938	2.7547	2.2897		0.0252		1.3858
2011	9.3396	77.4226	2.9859	0.2737	2.4723	0.2399	2.9305	3.1933		0.0277		1.4456
2012	9.5346	83.8515	5.0059	0.3468	3.9633	0.6958	3.6378	4.7265		0.0283		1.5657
2013	10.5444	88.7408	4.0071	0.4143	3.1929	0.3998	3.9296	3.5980		0.0313		1.6570
10	**Electrical and electronic devices**											
Year	CAN IMP TOTAL (USD bn)	US IMP TOTAL (USD bn)	MEX EX TOTAL (USD bn)	MEX EX to CAN (USD bn)	MEX EX to the US (USD bn)	MEX EX to ROW (USD bn)	MEX EX SHARE in CAN IMP (%)	MEX EX SHARE in US IMP (%)	AVERAGE SHARE for 1990–1993 CAN (%)	FORE-CAST MEX EX to CAN (USD bn)	AVERAGE SHARE for 1990–1993 US (%)	FORECAST MEX EX to the US (USD bn)
1990	22.6808	105.9836	1.4218	0.0253	1.0549	0.3415	0.1117	0.9954	0.1980		8.7800	
1991	23.2773	106.9101	1.4857	0.0377	1.1936	0.2544	0.1618	1.1164				
1992	23.8021	115.9225	18.9790	0.0735	18.3349	0.5706	0.3088	15.8165				
1993	25.1618	127.6332	22.2193	0.0528	21.9425	0.2241	0.2098	17.1918				
1994	28.8478	151.2210	26.5399	0.1300	25.7257	0.6842	0.4505	17.0120		0.0571		13.2772
1995	32.8820	177.7029	31.0599	0.1768	29.9962	0.8869	0.5377	16.8800		0.0651		15.6024
1996	32.2843	173.0131	35.3910	0.1882	34.1235	1.0793	0.5830	19.7231		0.0639		15.1906
1997	34.9213	180.0775	40.9673	0.2303	39.4787	1.2582	0.6596	21.9232		0.0692		15.8108

1998	35.6777	184.6214	45.7084	0.4229	43.9453	1.3402	1.1853	23.8029		0.0707		16.2098
1999	39.3441	208.0089	53.3113	0.2908	51.5564	1.4640	0.7392	24.7857		0.0779		18.2632
2000	45.1431	256.5427	64.3153	0.3960	62.4705	1.4487	0.8772	24.3509		0.0894		22.5245
2001	34.2340	207.1510	56.9610	0.4067	53.0896	3.4647	1.1880	25.6285		0.0678		18.1879
2002	30.5025	202.8746	54.9174	0.3480	49.0865	5.4829	1.1408	24.1955		0.0604		17.8124
2003	30.6911	206.3803	52.5452	0.3317	50.3463	1.8671	1.0808	24.3949		0.0608		18.1202
2004	34.7529	235.7352	58.2174	0.5061	55.6612	2.0501	1.4564	23.6117		0.0688		20.6976
2005	37.3540	255.7419	63.2319	1.1893	58.3352	3.7075	3.1837	22.8102		0.0740		22.4542
2006	40.1894	272.9853	72.3902	1.6681	65.8589	4.8631	4.1506	24.1254		0.0796		23.9682
2007	41.9800	280.0053	71.5510	1.9246	65.0931	4.5333	4.5845	23.2471		0.0831		24.5845
2008	42.8160	273.3522	81.8742	2.3743	70.9862	8.5137	5.5453	25.9688		0.0848		24.0004
2009	36.4056	234.2161	65.6038	3.9235	55.2523	6.4280	10.7771	23.5903		0.0721		20.5642
2010	44.1427	278.1998	76.5298	4.2879	64.2238	8.0181	9.7136	23.0855		0.0874		24.4260
2011	47.0012	291.6952	73.4550	2.7588	62.5784	8.1179	5.8696	21.4533		0.0931		25.6109
2012	46.0498	299.6983	76.0715	2.3206	64.2546	9.4963	5.0394	21.4398		0.0912		26.3136
2013	45.4387	302.9088	78.2850	2.1525	66.8887	9.2438	4.7372	22.0821		0.0900		26.5955
11	**Machinery and equipment**											
Year	CAN IMP TOTAL (USD bn)	US IMP TOTAL (USD bn)	MEX EX TOTAL (USD bn)	MEX EX to CAN (USD bn)	MEX EX to the US (USD bn)	MEX EX to ROW (USD bn)	MEX EX SHARE in CAN IMP (%)	MEX EX SHARE in US IMP (%)	AVERAGE SHARE for 1990–1993 CAN (%)	FORE-CAST MEX EX to CAN (USD bn)	AVERAGE SHARE for 1990–1993 US (%)	FORECAST MEX EX to the US (USD bn)
1990	37.6628	121.9445	5.0004	0.1778	4.1295	0.6931	0.4722	3.3864	0.8741		3.8315	
1991	35.4857	117.8266	4.7547	0.3719	3.1343	1.2485	1.0481	2.6601				
1992	35.6243	129.4122	7.3217	0.3378	5.6074	1.3765	0.9483	4.3330				
1993	38.4785	143.9011	8.1763	0.3955	7.1182	0.6627	1.0277	4.9466				

1994	43.6387	169.6311	11.1156	0.7091	9.0027	1.4037	1.6251	5.3072		0.3814		6.4994
1995	47.2427	191.8834	13.4996	0.7656	10.7535	1.9805	1.6205	5.6042		0.4129		7.3520
1996	47.6615	197.2571	15.7299	0.8101	12.7989	2.1209	1.6997	6.4884		0.4166		7.5579
1997	54.6075	213.2512	19.1167	0.7272	15.6360	2.7535	1.3317	7.3322		0.4773		8.1707
1998	56.1731	224.7029	21.9591	0.6216	18.2134	3.1241	1.1066	8.1055		0.4910		8.6095
1999	58.8473	236.7085	26.3614	1.0354	22.4089	2.9171	1.7595	9.4669		0.5144		9.0695
2000	60.5383	250.7098	30.0329	1.0990	25.9062	3.0277	1.8154	10.3332		0.5292		9.6059
2001	52.6518	217.0326	31.1632	0.7284	26.4864	3.9483	1.3834	12.2039		0.4602		8.3156
2002	49.6456	212.7398	30.5862	0.6467	26.0830	3.8566	1.3026	12.2605		0.4339		8.1511
2003	51.2764	219.1239	31.5561	0.7246	27.4985	3.3330	1.4130	12.5493		0.4482		8.3957
2004	55.6037	251.2056	34.9068	0.5706	31.7780	2.5581	1.0262	12.6502		0.4860		9.6249
2005	60.9999	269.6062	33.5212	0.6447	29.3500	3.5266	1.0569	10.8862		0.5332		10.3300
2006	64.5315	286.1309	36.6640	0.7305	31.2894	4.6441	1.1320	10.9353		0.5641		10.9631
2007	66.3483	292.9735	36.2313	0.8136	30.7975	4.6203	1.2262	10.5120		0.5799		11.2253
2008	65.2442	280.3220	35.9322	0.7986	30.9577	4.1759	1.2240	11.0436		0.5703		10.7405
2009	50.6886	227.5133	31.4111	0.9314	27.2452	3.2345	1.8375	11.9752		0.4431		8.7172
2010	59.2452	275.3987	44.2602	1.3888	38.7508	4.1207	2.3441	14.0708		0.5179		10.5519
2011	66.6421	305.9737	49.6929	1.3409	43.5245	4.8275	2.0121	14.2249		0.5825		11.7234
2012	68.4571	315.3451	54.1980	1.3815	47.3817	5.4348	2.0181	15.0253		0.5984		12.0824
2013	65.6714	308.1760	53.4305	1.0956	46.8670	5.4679	1.6684	15.2079		0.5740		11.8078

Source: author's compilation based on OECD data.

Appendix 2. Forecasted value of Mexico's imports from the US and Canada for the period 1994–2013

1	Food, live animals, beverages and tobacco											
Year	CAN EX TOTAL (USD bn)	US EX TO-TAL (USD bn)	MEX IMP TOTAL (USD bn)	MEX IMP from CAN (USD bn)	MEX IMP from US (USD bn)	MEX IMP from ROW (USD bn)	MEX IMP SHARE in CAN EX (%)	MEX IMP SHARE in US EXP (%)	AVERAGE SHARE for 1990–1993 CAN (%)	FORECA-STED MEX IMP from CAN (USD bn)	AVERAGE SHARE for 1990–1993 US (%)	FORECA-STED MEX IMP from US (USD bn)
1990	19.8113	76.4741	8.0171	0.0941	5.2903	2.6327	0.4749	6.9177	1.3930		7.8441	
1991	19.7673	75.5377	7.4479	0.1791	5.6965	1.5722	0.9063	7.5413				
1992	21.3898	80.6713	9.6286	0.3637	7.1990	2.0658	1.7003	8.9239				
1993	19.4721	77.8473	8.9597	0.4850	6.2227	2.2520	2.4908	7.9934				
1994	20.6918	81.2224	10.8385	0.6204	7.7219	2.4962	2.9984	9.5071		0.2882		6.3712
1995	22.4343	92.7370	7.4250	0.4900	5.5094	1.4257	2.1841	5.9408		0.3125		7.2744
1996	24.4684	97.1608	10.5736	0.6126	8.1821	1.7789	2.5037	8.4212		0.3409		7.6214
1997	26.6244	89.2824	10.1254	0.5741	7.7242	1.8270	2.1563	8.6515		0.3709		7.0034
1998	24.7879	80.4067	11.0788	0.7805	8.3810	1.9173	3.1488	10.4232		0.3453		6.3072
1999	24.0836	75.2299	11.1446	0.7496	8.3441	2.0509	3.1127	11.0914		0.3355		5.9011
2000	24.7564	76.1760	12.1776	0.9022	8.9303	2.3450	3.6444	11.7233		0.3449		5.9753
2001	26.1357	73.9586	13.5998	1.0380	9.9569	2.6049	3.9715	13.4628		0.3641		5.8014
2002	25.1822	71.5216	13.9146	0.8626	10.3837	2.6684	3.4253	14.5182		0.3508		5.6102
2003	26.0828	76.9832	14.8847	0.9554	10.9981	2.9312	3.6630	14.2863		0.3633		6.0386
2004	29.4486	76.4851	16.0990	1.4611	10.9440	3.6939	4.9614	14.3087		0.4102		5.9996
2005	29.8245	76.6528	16.7041	1.1499	11.8036	3.7506	3.8555	15.3987		0.4155		6.0127
2006	32.2743	83.1401	18.1979	1.3483	13.0220	3.8277	4.1776	15.6627		0.4496		6.5216
2007	36.8413	102.3811	21.4185	1.5688	15.3640	4.4857	4.2584	15.0067		0.5132		8.0309
2008	43.5336	126.2226	24.7071	1.9106	18.1901	4.6064	4.3888	14.4111		0.6064		9.9010

2009	37.0197	109.5291	19.6382	1.4242	14.2964	3.9176	3.8470	13.0526		0.5157		8.5916
2010	40.6675	124.5519	21.8401	1.6979	15.7689	4.3733	4.1751	12.6605		0.5665		9.7700
2011	46.1473	143.1711	26.5576	2.1443	19.0467	5.3667	4.6466	13.3034		0.6429		11.2305
2012	48.0746	146.0860	24.3677	1.8281	17.7078	4.8319	3.8026	12.1215		0.6697		11.4591
2013	48.2359	147.2146	26.2619	1.9161	18.8555	5.4903	3.9724	12.8082		0.6719		11.5477
2	**Chemicals, rubber and plastic products**											
Year	CAN EX TOTAL (USD bn)	US EX TOTAL (USD bn)	MEX IMP TOTAL (USD bn)	MEX IMP from CAN (USD bn)	MEX IMP from US (USD bn)	MEX IMP from ROW (USD bn)	MEX IMP SHARE in CAN EXP (%)	MEX IMP SHARE in US EXP (%)	AVERAGE SHARE for 1990–1993 CAN (%)	FORECASTED MEX IMP from CAN (USD bn)	AVERAGE SHARE for 1990–1993 US (%)	FORECASTED MEX IMP from US (USD bn)
1990	22.2162	87.1054	7.4460	0.0933	5.0540	2.2987	0.4198	5.8021	0.6857		8.6559	
1991	20.5706	92.7861	8.8985	0.1537	5.8940	2.8508	0.7470	6.3523				
1992	20.5045	93.6204	13.8032	0.1553	10.3027	3.3453	0.7572	11.0047				
1993	19.8481	92.4950	14.7073	0.1625	10.6040	3.9408	0.8190	11.4644				
1994	22.4590	102.5169	17.2522	0.2186	12.3044	4.7293	0.9733	12.0023		0.1540		8.8737
1995	26.6152	116.7722	17.2068	0.2256	12.6739	4.3072	0.8478	10.8535		0.1825		10.1077
1996	26.6002	116.9367	20.2291	0.2461	16.0159	3.9672	0.9251	13.6962		0.1824		10.1219
1997	29.2099	128.6816	24.2735	0.2751	19.3798	4.6186	0.9419	15.0603		0.2003		11.1385
1998	27.6740	124.4290	26.1969	0.3835	19.4471	6.3663	1.3856	15.6291		0.1898		10.7704
1999	28.3133	126.7146	28.7915	0.4032	21.7102	6.6781	1.4239	17.1332		0.1942		10.9683
2000	31.0948	141.1905	32.4645	0.5113	24.5719	7.3814	1.6442	17.4033		0.2132		12.2213
2001	30.3251	134.6339	31.1341	0.4990	22.2483	8.3868	1.6457	16.5250		0.2079		11.6537
2002	30.4294	133.6577	32.3526	0.4782	22.5319	9.3425	1.5714	16.8579		0.2087		11.5692

2003	32.7769	144.6029	34.7786	0.5299	23.8034	10.4453	1.6167	16.4612		0.2248		12.5166
2004	38.8410	166.7916	38.2668	0.7097	25.7076	11.8495	1.8272	15.4130		0.2663		14.4373
2005	45.6011	173.9266	42.0971	0.8553	27.6796	13.5621	1.8757	15.9145		0.3127		15.0549
2006	49.8102	190.9065	46.0298	0.9982	29.8699	15.1617	2.0040	15.6463		0.3416		16.5246
2007	55.0881	209.6303	47.7389	1.1784	30.3581	16.2024	2.1392	14.4817		0.3778		18.1453
2008	59.2386	230.5681	49.6613	1.4323	30.3182	17.9108	2.4178	13.1494		0.4062		19.9577
2009	43.7471	202.5351	39.4443	0.9695	24.1627	14.3121	2.2162	11.9301		0.3000		17.5312
2010	50.9616	237.7051	49.7213	1.3501	30.5394	17.8318	2.6493	12.8476		0.3495		20.5755
2011	59.9787	252.9785	54.7210	1.4430	33.1085	20.1695	2.4058	13.0875		0.4113		21.8975
2012	55.7420	250.1023	57.0995	1.5867	34.4605	21.0522	2.8466	13.7785		0.3822		21.6485
2013	55.1523	248.6064	57.6397	1.5472	35.0676	21.0249	2.8052	14.1057		0.3782		21.5191
3	**Mineral fuels, lubricants, petroleum products**											
Year	CAN EX TOTAL (USD bn)	US EX TO-TAL (USD bn)	MEX IMP TOTAL (USD bn)	MEX IMP from CAN (USD bn)	MEX IMP from US (USD bn)	MEX IMP from ROW (USD bn)	MEX IMP SHARE in CAN EXP (%)	MEX IMP SHARE in US EXP (%)	AVERAGE SHARE for 1990–1993 CAN (%)	FORECA-STED MEX IMP from CAN (USD bn)	AVERAGE SHARE for 1990–1993 US (%)	FORECA-STED MEX IMP from US (USD bn)
1990	23.2241	30.3859	3.4893	0.0005	2.8766	0.6122	0.0023	9.4668	0.2076		12.2354	
1991	23.7876	30.3104	4.0472	0.0372	3.2683	0.7417	0.1565	10.7829				
1992	23.4849	26.5940	4.8330	0.1091	3.9452	0.7787	0.4646	14.8350				
1993	24.5700	23.5554	4.2450	0.0509	3.2640	0.9301	0.2070	13.8567				
1994	24.4892	20.4805	3.8360	0.0391	2.8846	0.9124	0.1596	14.0845		0.0508		2.5059
1995	25.7877	22.5410	3.6640	0.0396	3.0832	0.5411	0.1537	13.6784		0.0535		2.7580

1996	30.9982	18.2023	4.5086	0.0270	4.0626	0.4190	0.0871	22.3194		0.0643		2.2271
1997	31.9672	18.3833	6.8704	0.0300	5.8661	0.9742	0.0940	31.9100		0.0664		2.2493
1998	25.2842	14.4542	6.3639	0.0272	4.9791	1.3576	0.1074	34.4476		0.0525		1.7685
1999	28.3595	20.3499	6.7592	0.0310	5.4190	1.3093	0.1093	26.6289		0.0589		2.4899
2000	49.5612	27.7357	7.1815	0.0476	5.6706	1.4634	0.0960	20.4450		0.1029		3.3936
2001	49.1538	25.4168	6.9871	0.0390	5.3342	1.6139	0.0793	20.9871		0.1020		3.1098
2002	41.3202	15.1846	5.7662	0.0608	4.3588	1.3466	0.1471	28.7056		0.0858		1.8579
2003	55.6195	17.8378	7.2071	0.0535	5.8317	1.3219	0.0963	32.6928		0.1155		2.1825
2004	65.2007	23.3879	9.3056	0.1017	7.0195	2.1844	0.1560	30.0134		0.1353		2.8616
2005	86.8759	31.5363	14.5224	0.1674	9.9764	4.3786	0.1927	31.6345		0.1803		3.8586
2006	89.5639	40.3896	16.7335	0.2514	10.0974	6.3847	0.2807	25.0000		0.1859		4.9418
2007	98.0789	47.2225	21.8142	0.1018	12.0918	9.6205	0.1038	25.6061		0.2036		5.7778
2008	136.2143	83.0218	31.5977	0.1742	18.7310	12.6925	0.1279	22.5615		0.2827		10.1580
2009	78.2615	59.6588	17.1163	0.1118	11.7526	5.2518	0.1429	19.6997		0.1625		7.2995
2010	98.4415	86.5053	25.7041	0.1918	18.1124	7.3999	0.1949	20.9379		0.2043		10.5842
2011	120.2066	134.1203	36.2713	0.1886	28.8186	7.2641	0.1569	21.4871		0.2495		16.4101
2012	117.6575	139.5542	33.8327	0.0843	27.4641	6.2843	0.0717	19.6799		0.2442		17.0750
2013	119.8236	148.4267	32.9095	0.0953	26.3448	6.4694	0.0796	17.7494		0.2487		18.1605

4	Textiles, clothes, footwear, and accessories											
Year	CAN EX TOTAL (USD bn)	US EX TOTAL (USD bn)	MEX IMP TOTAL (USD bn)	MEX IMP from CAN (USD bn)	MEX IMP from US (USD bn)	MEX IMP from ROW (USD bn)	MEX IMP SHARE in CAN EXP (%)	MEX IMP SHARE in US EXP (%)	AVERAGE SHARE for 1990–1993 CAN (%)	FORECASTED MEX IMP from CAN (USD bn)	AVERAGE SHARE for 1990–1993 US (%)	FORECASTED MEX IMP from US (USD bn)
1990	2.8113	25.3222	2.3338	0.0196	1.4415	0.8727	0.6955	5.6928	0.9869		11.2317	
1991	2.7837	26.0954	2.9144	0.0295	1.7156	1.1693	1.0608	6.5744				
1992	3.0672	26.5582	5.8082	0.0315	4.1028	1.6739	1.0268	15.4483				
1993	3.3689	26.5268	6.5881	0.0392	4.5656	1.9833	1.1647	17.2114				
1994	3.9184	30.2002	7.7552	0.0388	5.4265	2.2899	0.9907	17.9684		0.0387		3.3920
1995	4.5050	34.6333	6.8415	0.0468	5.6880	1.1066	1.0394	16.4236		0.0445		3.8899
1996	5.1840	34.4981	8.4832	0.0497	7.5372	0.8963	0.9587	21.8482		0.0512		3.8747
1997	6.1183	37.1479	11.0034	0.0569	9.6415	1.3050	0.9299	25.9544		0.0604		4.1723
1998	6.2051	35.6531	12.9144	0.0705	10.8041	2.0398	1.1360	30.3034		0.0612		4.0044
1999	6.4008	32.1061	14.1999	0.1129	11.8828	2.2042	1.7640	37.0109		0.0632		3.6061
2000	6.7295	35.6951	15.5497	0.1634	12.4666	2.9198	2.4277	34.9252		0.0664		4.0092
2001	6.2753	32.3468	14.3894	0.1817	10.9115	3.2962	2.8958	33.7329		0.0619		3.6331
2002	6.2466	30.3688	13.9321	0.1742	10.0019	3.7560	2.7883	32.9349		0.0617		3.4109
2003	6.2560	31.2752	13.7180	0.1446	9.5228	4.0505	2.3120	30.4485		0.0617		3.5127
2004	6.4642	32.8023	13.4861	0.1713	8.9787	4.3361	2.6496	27.3722		0.0638		3.6843
2005	6.2992	31.9871	13.3158	0.1802	8.0991	5.0366	2.8603	25.3198		0.0622		3.5927
2006	6.1068	32.3593	12.8121	0.1735	7.2289	5.4097	2.8407	22.3396		0.0603		3.6345

2007	5.6301	31.0407	11.8443	0.1402	6.2374	5.4668	2.4902	20.0942		0.0556		3.4864
2008	4.8064	30.4268	11.3148	0.1218	5.4245	5.7686	2.5339	17.8280		0.0474		3.4174
2009	3.8428	24.6170	8.8298	0.0875	4.1986	4.5437	2.2773	17.0558		0.0379		2.7649
2010	4.5405	31.2876	10.6136	0.1242	5.0686	5.4207	2.7360	16.2002		0.0448		3.5141
2011	4.8415	36.6092	12.1950	0.1368	5.6355	6.4228	2.8247	15.3936		0.0478		4.1118
2012	4.8811	34.0276	12.2218	0.1713	5.2081	6.8424	3.5089	15.3056		0.0482		3.8219
2013	5.0392	34.5367	12.6735	0.1959	5.3920	7.0856	3.8874	15.6125		0.0497		3.8791
5	**Manufactured goods classified by material**											
Year	CAN EX TOTAL (USD bn)	US EX TO-TAL (USD bn)	MEX IMP TOTAL (USD bn)	MEX IMP from CAN (USD bn)	MEX IMP from US (USD bn)	MEX IMP from ROW (USD bn)	MEX IMP SHARE in CAN EXP (%)	MEX IMP SHARE in US EXP (%)	AVERAGE SHARE for 1990–1993 CAN (%)	FORECA-STED MEX IMP from CAN (USD bn)	AVERAGE SHARE for 1990–1993 US (%)	FORECA-STED MEX IMP from US (USD bn)
1990	39.1044	45.9887	2.7295	0.0829	2.1307	0.5160	0.2120	4.6330	0.2132		6.6426	
1991	35.8646	50.0445	3.2932	0.0709	2.5190	0.7033	0.1977	5.0335				
1992	37.4411	51.7639	5.5792	0.0483	4.6520	0.8789	0.1291	8.9870				
1993	39.3870	59.0579	6.0150	0.1236	4.6755	1.2159	0.3139	7.9168				
1994	43.9785	56.0881	7.3056	0.2464	5.5955	1.4637	0.5603	9.9763		0.0937		3.7257
1995	51.8942	63.5783	6.1728	0.1769	5.1433	0.8526	0.3408	8.0897		0.1106		4.2232
1996	48.3119	61.9651	6.4193	0.0587	5.7220	0.6386	0.1215	9.2342		0.1030		4.1161
1997	47.5168	61.5285	7.4000	0.0849	6.4401	0.8750	0.1787	10.4668		0.1013		4.0871
1998	44.9921	57.5724	8.4789	0.1444	7.0703	1.2642	0.3209	12.2807		0.0959		3.8243
1999	48.4648	57.8574	9.3632	0.2587	7.6980	1.4065	0.5337	13.3052		0.1033		3.8432

2000	50.9362	64.1450	10.6314	0.3622	8.5059	1.7633	0.7111	13.2604		0.1086		4.2609
2001	44.5084	57.9661	9.8366	0.4191	7.2463	2.1712	0.9417	12.5010		0.0949		3.8504
2002	42.5480	53.8535	9.8120	0.3328	6.8317	2.6475	0.7821	12.6858		0.0907		3.5773
2003	43.8514	56.0772	10.0210	0.2900	6.7527	2.9782	0.6614	12.0418		0.0935		3.7250
2004	52.0310	61.2426	10.6028	0.3502	6.9703	3.2823	0.6731	11.3814		0.1109		4.0681
2005	51.9314	66.6525	11.0512	0.3807	6.9755	3.6949	0.7332	10.4654		0.1107		4.4274
2006	51.3717	78.8991	11.9445	0.4830	7.4900	3.9714	0.9403	9.4931		0.1095		5.2409
2007	48.7229	90.9601	12.3651	0.5500	7.7713	4.0438	1.1288	8.5436		0.1039		6.0421
2008	46.8568	101.6793	11.8530	0.5655	7.4443	3.8433	1.2068	7.3213		0.0999		6.7541
2009	35.6183	81.6749	9.3391	0.3642	6.3412	2.6338	1.0224	7.7639		0.0759		5.4253
2010	48.8697	102.2572	11.2244	0.3979	7.5527	3.2738	0.8142	7.3860		0.1042		6.7925
2011	55.0590	123.8681	11.7232	0.3916	7.7105	3.6212	0.7112	6.2247		0.1174		8.2280
2012	49.8330	120.2261	11.6474	0.3224	7.6759	3.6491	0.6470	6.3845		0.1062		7.9861
2013	51.5508	120.1681	11.7186	0.3242	7.5763	3.8181	0.6288	6.3048		0.1099		7.9823
6	**Metals and metal products**											
Year	CAN EX TOTAL (USD bn)	US EX TO-TAL (USD bn)	MEX IMP TOTAL (USD bn)	MEX IMP from CAN (USD bn)	MEX IMP from US (USD bn)	MEX IMP from ROW (USD bn)	MEX IMP SHARE in CAN EXP (%)	MEX IMP SHARE in US EXP (%)	AVERAGE SHARE for 1990–1993 CAN (%)	FORECA-STED MEX IMP from CAN (USD bn)	AVERAGE SHARE for 1990–1993 US (%)	FORECA-STED MEX IMP from US (USD bn)
1990	18.1189	30.4430	4.2375	0.0871	2.8529	1.2974	0.4809	9.3714	0.7774		16.9745	
1991	17.2128	32.0540	5.4532	0.0800	3.5804	1.7929	0.4645	11.1698				
1992	17.4071	29.1891	9.4744	0.1900	7.0829	2.2015	1.0913	24.2657				

1993	17.3416	28.4678	9.2179	0.1861	6.5736	2.4583	1.0731	23.0912				
1994	19.2128	31.4663	10.6030	0.1887	7.2481	3.1662	0.9820	23.0345		0.1494		5.3413
1995	23.3564	39.5171	10.2007	0.1709	7.7108	2.3190	0.7318	19.5125		0.1816		6.7078
1996	22.9107	38.1732	12.3568	0.1756	10.0879	2.0933	0.7664	26.4267		0.1781		6.4797
1997	24.0400	41.0046	14.7752	0.1993	12.0556	2.5202	0.8291	29.4007		0.1869		6.9603
1998	22.8965	38.9704	16.8701	0.2945	12.0373	4.5383	1.2860	30.8884		0.1780		6.6150
1999	21.6962	37.3813	18.0621	0.4103	13.3272	4.3246	1.8911	35.6520		0.1687		6.3453
2000	23.6299	42.7942	20.7706	0.4396	15.0775	5.2535	1.8604	35.2326		0.1837		7.2641
2001	21.2164	37.3406	18.0234	0.4894	12.5367	4.9973	2.3067	33.5740		0.1649		6.3384
2002	21.9595	35.8498	17.1995	0.5071	11.6527	5.0396	2.3095	32.5043		0.1707		6.0853
2003	22.5714	38.3002	16.9841	0.5212	11.3990	5.0640	2.3089	29.7623		0.1755		6.5013
2004	29.1384	45.1735	20.9716	0.8386	12.8597	7.2733	2.8781	28.4673		0.2265		7.6680
2005	32.3259	52.9070	23.0478	0.8773	13.5794	8.5911	2.7140	25.6665		0.2513		8.9807
2006	41.2291	63.5206	27.4572	1.0457	15.4167	10.9948	2.5363	24.2704		0.3205		10.7823
2007	48.9191	71.2740	27.7741	1.0554	16.2699	10.4487	2.1575	22.8273		0.3803		12.0984
2008	45.4567	80.9904	29.1002	1.1572	16.4769	11.4661	2.5456	20.3443		0.3534		13.7477
2009	25.6626	57.7690	19.8034	0.8438	11.0158	7.9438	3.2882	19.0686		0.1995		9.8060
2010	34.8272	71.8815	26.7090	1.2240	14.8304	10.6547	3.5146	20.6317		0.2708		12.2015
2011	38.5265	84.2634	30.4674	1.4382	16.2919	12.7373	3.7329	19.3346		0.2995		14.3033
2012	34.4382	83.0652	32.6581	1.5058	17.1249	14.0274	4.3724	20.6162		0.2677		14.0999
2013	32.3111	79.5667	30.5443	1.4622	16.8484	12.2336	4.5255	21.1752		0.2512		13.5061

7	Means of transport and parts thereof											
Year	CAN EX TOTAL (USD bn)	US EX TOTAL (USD bn)	MEX IMP TOTAL (USD bn)	MEX IMP from CAN (USD bn)	MEX IMP from US (USD bn)	MEX IMP from ROW (USD bn)	MEX IMP SHARE in CAN EXP (%)	MEX IMP SHARE in US EXP (%)	AVERAGE SHARE for 1990–1993 CAN (%)	FORECASTED MEX IMP from CAN (USD bn)	AVERAGE SHARE for 1990–1993 US (%)	FORECASTED MEX IMP from US (USD bn)
1990	54.2771	112.2914	2.8096	0.0403	2.0762	0.6931	0.0743	1.8489	0.0935		1.9508	
1991	51.7323	123.8694	3.1254	0.0336	2.1342	0.9577	0.0649	1.7229				
1992	53.6329	130.8761	4.5298	0.0318	2.9437	1.5543	0.0593	2.2493				
1993	60.4069	123.7004	3.8474	0.1060	2.4520	1.2894	0.1754	1.9822				
1994	66.9565	128.4166	6.3984	0.2790	4.4660	1.6534	0.4167	3.4777		0.0626		2.5052
1995	71.6419	122.5100	6.2796	0.1062	4.9334	1.2400	0.1483	4.0270		0.0670		2.3900
1996	69.3730	133.6860	10.3100	0.1452	8.7258	1.4390	0.2093	6.5271		0.0648		2.6080
1997	74.0791	150.7561	13.7351	0.1368	11.6483	1.9500	0.1847	7.7266		0.0692		2.9410
1998	77.1922	164.4025	15.9431	0.5156	12.7308	2.6967	0.6680	7.7437		0.0722		3.2072
1999	92.0508	155.9791	17.6547	0.8975	13.5964	3.1608	0.9750	8.7168		0.0860		3.0429
2000	90.3000	142.7039	24.0982	1.2956	17.4057	5.3969	1.4348	12.1971		0.0844		2.7839
2001	82.8340	140.6597	23.2519	1.3634	16.0610	5.8275	1.6459	11.4184		0.0774		2.7440
2002	81.7470	140.8996	24.4283	2.1225	15.2775	7.0283	2.5964	10.8429		0.0764		2.7487
2003	81.5680	136.5706	22.1884	1.4108	13.2643	7.5133	1.7297	9.7124		0.0762		2.6643
2004	86.7396	146.8041	23.8631	1.3740	13.8921	8.5970	1.5840	9.4630		0.0811		2.8639
2005	88.2452	163.7533	27.3276	1.9187	15.2130	10.1958	2.1743	9.2902		0.0825		3.1945
2006	86.7224	190.5830	30.0851	2.1391	16.6086	11.3374	2.4666	8.7146		0.0811		3.7179
2007	84.9125	212.2631	31.4994	2.0257	17.3504	12.1233	2.3856	8.1740		0.0794		4.1409

2008	66.9236	205.3193	30.1333	2.1627	16.2489	11.7217	3.2316	7.9139		0.0626		4.0054
2009	48.0734	93.4945	20.7183	1.3239	10.9595	8.4349	2.7538	11.7221		0.0449		1.8239
2010	63.2279	119.1402	27.1445	1.6747	14.9904	10.4794	2.6487	12.5822		0.0591		2.3242
2011	65.6712	137.5342	31.1766	1.7685	17.6272	11.7809	2.6930	12.8166		0.0614		2.6831
2012	73.5117	152.6605	34.6662	1.7201	19.4883	13.4578	2.3398	12.7658		0.0687		2.9781
2013	70.6469	150.0106	34.8946	1.7342	19.8359	13.3244	2.4548	13.2230%		0.0660		2.9264
8	**Other manufactured goods**											
Year	CAN EX TOTAL (USD bn)	US EX TO-TAL (USD bn)	MEX IMP TOTAL (USD bn)	MEX IMP from CAN (USD bn)	MEX IMP from US (USD bn)	MEX IMP from ROW (USD bn)	MEX IMP SHARE in CAN EXP (%)	MEX IMP SHARE in US EXP (%)	AVERAGE SHARE for 1990–1993 CAN (%)	FORECA-STED MEX IMP from CAN (USD bn)	AVERAGE SHARE for 1990–1993 US (%)	FORECA-STED MEX IMP from US (USD bn)
1990	4.8701	43.0582	2.6352	0.0188	1.8845	0.7319	0.3853	4.3767	0.7426		5.7281	
1991	4.6358	49.5830	3.5191	0.0394	2.3925	1.0872	0.8499	4.8252				
1992	5.1749	52.3902	5.1087	0.0341	3.6056	1.4690	0.6589	6.8823				
1993	5.7221	53.4756	5.3763	0.0616	3.6515	1.6633	1.0765	6.8283				
1994	7.0274	56.7563	6.7519	0.0908	4.3731	2.2879	1.2928	7.7051		0.0522		3.2511
1995	7.9959	61.4890	4.9094	0.0875	3.3358	1.4861	1.0948	5.4250		0.0594		3.5222
1996	9.1664	65.0548	5.8280	0.1158	4.6273	1.0849	1.2631	7.1129		0.0681		3.7264
1997	10.7415	71.4285	7.1449	0.0931	5.7770	1.2748	0.8667	8.0879		0.0798		4.0915
1998	11.7753	71.8368	7.8725	0.1023	5.4370	2.3332	0.8689	7.5685		0.0874		4.1149
1999	12.6747	72.8987	8.6201	0.1187	5.8021	2.6992	0.9368	7.9592		0.0941		4.1757
2000	14.9107	81.2627	9.9411	0.1591	6.9653	2.8167	1.0672	8.5714		0.1107		4.6548

2001	12.6734	76.8138	9.9935	0.2008	6.4633	3.3294	1.5843	8.4142		0.0941		4.4000
2002	12.3189	70.7120	10.3847	0.1547	6.4378	3.7922	1.2559	9.1043		0.0915		4.0505
2003	12.7199	72.7803	10.5012	0.1625	6.3010	4.0378	1.2772	8.6576		0.0945		4.1689
2004	13.9214	81.7085	11.4688	0.1773	5.9425	5.3490	1.2736	7.2727		0.1034		4.6804
2005	14.6372	85.2793	12.9092	0.2237	5.9243	6.7613	1.5284	6.9469		0.1087		4.8849
2006	15.0789	93.1262	17.0943	0.2510	6.2797	10.5636	1.6648	6.7432		0.1120		5.3344
2007	14.6086	98.8361	21.0111	0.2654	6.2704	14.4752	1.8169	6.3443		0.1085		5.6614
2008	13.8430	101.2988	20.6216	0.2955	6.4427	13.8834	2.1344	6.3601		0.1028		5.8025
2009	10.7503	92.4209	14.5839	0.2927	5.4430	8.8481	2.7230	5.8894		0.0798		5.2940
2010	11.9836	102.9027	16.7412	0.2802	6.2364	10.2246	2.3385	6.0604		0.0890		5.8944
2011	12.6938	106.4990	17.7188	0.3423	6.5160	10.8606	2.6963	6.1183		0.0943		6.1004
2012	12.3656	116.2643	18.3503	0.3453	7.0308	10.9742	2.7926	6.0472		0.0918		6.6597
2013	12.4122	116.6408	19.2081	0.3313	7.4890	11.3879	2.6689	6.4205		0.0922		6.6813
9	**Other**											
Year	CAN EX TOTAL (USD bn)	US EX TO-TAL (USD bn)	MEX IMP TOTAL (USD bn)	MEX IMP from CAN (USD bn)	MEX IMP from US (USD bn)	MEX IMP from ROW (USD bn)	MEX IMP SHARE in CAN EXP (%)	MEX IMP SHARE in US EXP (%)	AVERAGE SHARE for 1990–1993 CAN (%)	FORECA-STED MEX IMP from CAN (USD bn)	AVERAGE SHARE for 1990–1993 US (%)	FORECA-STED MEX IMP from US (USD bn)
1990	0.6139	5.2466	0.1394	0.0010	0.1030	0.0354	0.1570	1.9636	0.2199		3.0352	
1991	0.5836	5.4910	0.1788	0.0008	0.1306	0.0475	0.1286	2.3781				
1992	0.5626	4.7600	0.2494	0.0013	0.1787	0.0695	0.2224	3.7534				
1993	0.6723	4.7298	0.2606	0.0025	0.1913	0.0667	0.3716	4.0455				

1994	0.7387	4.4597	0.3351	0.0060	0.2203	0.1088	0.8102	4.9395		0.0016		0.1354
1995	0.8332	4.0942	0.2516	0.0050	0.1681	0.0785	0.5955	4.1062		0.0018		0.1243
1996	0.9753	32.8307	0.3023	0.0037	0.2459	0.0527	0.3827	0.7489		0.0021		0.9965
1997	1.2178	34.7544	0.3692	0.0032	0.3072	0.0587	0.2637	0.8841		0.0027		1.0549
1998	1.1852	35.4773	0.3752	0.0064	0.2674	0.1014	0.5415	0.7537		0.0026		1.0768
1999	1.3953	4.9892	0.3879	0.0076	0.2749	0.1053	0.5456	5.5102		0.0031		0.1514
2000	1.4422	6.5044	13.1047	0.0037	0.2938	12.8071	0.2591	4.5169		0.0032		0.1974
2001	1.3793	7.0962	1.5067	0.0050	0.2651	1.2365	0.3653	3.7359		0.0030		0.2154
2002	1.2404	5.0124	4.4921	0.0080	0.2758	4.2082	0.6486	5.5021		0.0027		0.1521
2003	1.2157	5.2907	1.7216	0.0072	0.2688	1.4457	0.5894	5.0809		0.0027		0.1606
2004	18.2024	6.4641	2.7468	0.0089	0.2833	2.4546	0.0487	4.3833		0.0400		0.1962
2005	21.0218	43.5139	3.2582	0.0089	0.2978	2.9515	0.0425	0.6844		0.0462		1.3207
2006	20.5428	46.8406	4.2649	0.0094	0.3065	3.9489	0.0460	0.6544		0.0452		1.4217
2007	20.1849	53.2747	19.1966	0.0093	0.3278	18.8595	0.0462	0.6153		0.0444		1.6170
2008	19.5844	52.0907	5.6829	0.1553	1.1988	4.3288	0.7928	2.3013		0.0431		1.5810
2009	15.3692	124.0459	5.3151	0.1287	1.4524	3.7339	0.8375	1.1709		0.0338		3.7650
2010	14.0268	131.5985	6.7525	0.1780	1.9174	4.6572	1.2688	1.4570		0.0308		3.9942
2011	14.9011	136.6225	8.2690	0.2526	2.3506	5.6657	1.6951	1.7205		0.0328		4.1467
2012	15.0516	149.7264	11.3113	0.4088	5.0303	5.8722	2.7159	3.3597		0.0331		4.5444
2013	15.9584	160.7231	9.3368	0.2259	3.2601	5.8507	1.4158	2.0284		0.0351		4.8782

10	Electrical and electronic devices											
Year	CAN EX TOTAL (USD bn)	US EX TOTAL (USD bn)	MEX IMP TOTAL (USD bn)	MEX IMP from CAN (USD bn)	MEX IMP from US (USD bn)	MEX IMP from ROW (USD bn)	MEX IMP SHARE in CAN EXP (%)	MEX IMP SHARE in US EXP (%)	AVERAGE SHARE for 1990–1993 CAN (%)	FORECASTED MEX IMP from CAN (USD bn)	AVERAGE SHARE for 1990–1993 US (%)	FORECASTED MEX IMP from US (USD bn)
1990	10.0415	72.7564	5.5123	0.0747	3.1967	2.2409	0.7436	4.3937	1.3788		10.1647	
1991	10.1722	83.8449	6.7785	0.1061	3.8597	2.8126	1.0434	4.6034				
1992	10.4752	89.9879	18.7901	0.1545	14.6552	3.9804	1.4753	16.2857				
1993	10.2378	100.6412	20.8017	0.2307	15.4746	5.0964	2.2530	15.3760				
1994	11.4746	118.5680	24.9674	0.2378	18.1387	6.5909	2.0724	15.2981		0.1582		12.0521
1995	13.3456	140.5217	26.6498	0.1870	21.0904	5.3725	1.4009	15.0086		0.1840		14.2836
1996	15.6388	144.6125	31.0695	0.3940	27.6611	3.0145	2.5192	19.1277		0.2156		14.6994
1997	18.7894	161.0935	37.1112	0.2781	32.5474	4.2857	1.4799	20.2040		0.2591		16.3747
1998	18.3623	155.1418	42.9515	0.3400	34.4226	8.1888	1.8518	22.1878		0.2532		15.7697
1999	20.4470	170.1562	50.4669	0.4498	39.2704	10.7467	2.1999	23.0790		0.2819		17.2959
2000	28.5424	200.7144	62.6165	0.7903	47.9309	13.8953	2.7689	23.8802		0.3935		20.4020
2001	18.7846	161.3241	56.9074	0.5203	37.4443	18.9428	2.7697	23.2106		0.2590		16.3981
2002	15.7932	143.4341	50.0604	0.3803	29.7686	19.9115	2.4080	20.7542		0.2178		14.5796
2003	15.4746	142.9712	47.2349	0.4236	26.9633	19.8480	2.7373	18.8593		0.2134		14.5326
2004	19.4377	154.3164	54.5111	0.5605	24.7981	29.1525	2.8833	16.0697		0.2680		15.6858
2005	20.2606	154.7583	57.6928	0.6956	21.9379	35.0594	3.4332	14.1756		0.2794		15.7307
2006	21.4365	168.9044	65.5052	0.8027	22.8244	41.8781	3.7447	13.5132		0.2956		17.1686

2007	21.3390	165.7938	55.8699	0.7028	20.0524	35.1146	3.2937	12.0948		0.2942		16.8524
2008	19.4636	164.5985	69.6557	0.9606	21.7620	46.9331	4.9353	13.2212		0.2684		16.7309
2009	15.3562	134.7942	59.5586	1.0519	16.3606	42.1461	6.8503	12.1375		0.2117		13.7014
2010	15.5852	160.4270	75.0114	1.0176	20.0581	53.9358	6.5294	12.5029		0.2149		16.3069
2011	15.8922	163.3873	77.9100	0.7516	21.3723	55.7861	4.7294	13.0807		0.2191		16.6078
2012	15.1724	163.6179	77.9915	0.7102	21.5930	55.6883	4.6807	13.1972		0.2092		16.6313
2013	14.0835	164.9678	83.3710	0.8511	22.0236	60.4964	6.0432	13.3502		0.1942		16.7685
11	**Machinery and equipment**											
Year	CAN EX TOTAL (USD bn)	US EX TO-TAL (USD bn)	MEX IMP TOTAL (USD bn)	MEX IMP from CAN (USD bn)	MEX IMP from US (USD bn)	MEX IMP from ROW (USD bn)	MEX IMP SHARE in CAN EXP (%)	MEX IMP SHARE in US EXP (%)	AVERAGE SHARE for 1990–1993 CAN (%)	FORECA-STED MEX IMP from CAN (USD bn)	AVERAGE SHARE for 1990–1993 US (%)	FORECA-STED MEX IMP from US (USD bn)
1990	17.3013	125.9160	9.9525	0.0738	6.9774	2.9013	0.4264	5.5413	0.8938		6.5133	
1991	15.9584	137.0338	11.8599	0.1452	7.9945	3.7203	0.9096	5.8339				
1992	16.2359	140.2790	16.5154	0.1410	10.8511	5.5232	0.8687	7.7354				
1993	17.9055	142.8118	16.0383	0.2454	9.9145	5.8784	1.3705	6.9424				
1994	21.1752	155.6439	19.0844	0.2881	11.6513	7.1450	1.3606	7.4859		0.1893		10.1375
1995	24.7187	172.7718	16.6053	0.4123	10.0856	6.1075	1.6679	5.8375		0.2209		11.2531
1996	25.1391	182.3933	22.3510	0.3384	16.0690	5.9436	1.3462	8.8101		0.2247		11.8797
1997	28.2410	204.3126	28.1514	0.3317	20.5833	7.2364	1.1747	10.0744		0.2524		13.3074
1998	29.6272	194.6410	31.7160	0.5592	19.4640	11.6929	1.8873	9.9999		0.2648		12.6775
1999	30.1788	192.1536	34.9647	0.6863	21.9564	12.3220	2.2740	11.4265		0.2697		12.5155
2000	32.3795	215.1057	34.2963	0.7376	22.9328	10.6259	2.2779	10.6612		0.2894		14.0104

2001	29.5117	190.9783	36.0045	0.8094	21.3284	13.8666	2.7427	11.1680		0.2638		12.4389
2002	27.6466	168.3856	36.1778	0.6336	19.4606	16.0836	2.2917	11.5572		0.2471		10.9674
2003	27.7631	165.4036	36.8315	0.7148	18.4844	17.6322	2.5748	11.1754		0.2481		10.7732
2004	31.9156	183.6061	41.5145	0.8129	19.5541	21.1474	2.5472	10.6501		0.2853		11.9587
2005	33.2662	198.2851	42.7958	0.8978	20.1657	21.7323	2.6989	10.1701		0.2973		12.9148
2006	34.5831	210.0967	45.9012	1.0077	21.5960	23.2975	2.9138	10.2791		0.3091		13.6841
2007	37.5920	223.9347	46.3334	1.0637	21.4145	23.8553	2.8295	9.5628		0.3360		14.5854
2008	37.1987	230.6156	49.6404	1.2837	21.9923	26.3645	3.4509	9.5363		0.3325		15.0206
2009	28.5657	167.0021	40.1840	1.3332	16.5007	22.3501	4.6672	9.8805		0.2553		10.8773
2010	29.9031	196.2480	50.6507	1.0599	20.3293	29.2615	3.5445	10.3590		0.2673		12.7821
2011	32.5946	213.5093	56.3590	1.1326	22.6447	32.5818	3.4747	10.6059		0.2913		13.9064
2012	33.3180	212.9544	62.0551	1.3523	25.6298	35.0730	4.0586	12.0354		0.2978		13.8703
2013	31.1816	207.1400	62.6521	1.1636	25.0652	36.4234	3.7317	12.1006		0.2787		13.4915

Source: author's compilation based on OECD data.