SLOVENIA AND THE EU
A Study on Integration, Trade and Specialization

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Abstract

Numerous economists have emphasized the crucial role that economic integration and the abolishment of trade barriers play for the economic development of individual countries and regions as a whole. The focus of this thesis is Slovenia’s integration with the European Union and the static welfare effects in terms of trade creation and trade diversion that have come from the expanded economic cooperation. Moreover, the form of specialization in Slovenia’s trade patterns, that is to say, Slovenia’s specialization in inter- or intra-industry is analyzed. Theoretical studies of relevant forms of economic integration as well as empirical statistical examinations are carried out in order to depict the development of Slovenia’s trade during and after the accession period. The results have shown clear signs of trade creation and less significant trade diversion effects related to integration with the European Union. The manufacture industry sector SITC7 Machinery and transport equipment represents the greatest increase in exports during this period. Moreover, specialization in intra-industry trade is clearly noticeable. Also here, the highest levels of specialization can be seen in the motor vehicle industry. All this indicates exceedingly positive effects from integration with the European Union.

Keywords: Slovenia, European Union, EU, economic integration, trade creation, trade diversion, specialization, intra-industry trade
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<tbody>
<tr>
<td>CEE</td>
<td>Central and East European States</td>
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<td>CEFTA</td>
<td>Central European Free Trade Agreement</td>
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<td>CET</td>
<td>Common External Tariff</td>
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<td>CMEA</td>
<td>Council for Mutual Economic Assistance</td>
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<td>CN</td>
<td>Combined Nomenclature</td>
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<tr>
<td>CU</td>
<td>Customs Union</td>
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<tr>
<td>EC</td>
<td>European Community</td>
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<td>ECOWAS</td>
<td>European Community of West African States</td>
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<td>EEC</td>
<td>European Economic Community</td>
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<tr>
<td>EFTA</td>
<td>European Free Trade Association</td>
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<td>EMU</td>
<td>Economic and Monetary Union</td>
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<td>EU</td>
<td>European Union</td>
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<td>FTA</td>
<td>Free Trade Area</td>
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<td>FYS</td>
<td>Former Yugoslav States</td>
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<td>GATT</td>
<td>General Agreement on Tariffs and Trade</td>
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<td>IIT</td>
<td>Intra-Industry Trade</td>
</tr>
<tr>
<td>MERCOSUR</td>
<td>Mercado Común Del Sur (Southern Common Market)</td>
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<td>MFN</td>
<td>Most Favored Nation</td>
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<td>NAFTA</td>
<td>North American Free Trade Agreement</td>
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<td>SFRY</td>
<td>Socialist Federal Republic of Yugoslavia</td>
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<td>SITC</td>
<td>Standard International Trade Classification</td>
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<td>SORS</td>
<td>Statistical Office of the Republic of Slovenia</td>
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<td>UN</td>
<td>United Nations</td>
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1. INTRODUCTION

The Republic of Slovenia became an independent state after the breakup from the former Yugoslavia in 1991. The country’s transition from a central planned economy toward a market economy system was one of the smoothest among the Central and Eastern European states during the economic and political transformations in the early 1990s. In 2005, Slovenia had a GDP per capita at the same level as Greece, Ireland, and Portugal. This positive economic development was partially achieved through the successful reorientation towards its Western European trading partners and eventually through a beneficial European Union-integration. Nevertheless, Slovenia managed to uphold and over time even improve its trade links to Eastern Europe as well as the Balkan states. The issues regarding trade liberalization between Slovenia and the European Union during the accession period were of particular significance. This resulted in an association agreement including but not limited to provisions on removal of trade barriers, above all abolishment of customs duties and quantitative restrictions. The gradual trade liberalization was fully completed as Slovenia with nine other European economies joined the European Union in May 2004.

This is a study on economic integration and specialization, using Slovenia and the European Union as an empirical example. The theories of international economic integration, opening of borders, and removal of trade barriers are of great importance when analyzing the expansion of the European Union towards the Eastern and Central European states. Economic integration has been one of the main instruments for the European Union to help the new members reach even higher political stability and economic prosperity, at the same time as providing also the older members with a greater market access and larger economies of scale.

1.1 Statement of purpose

This paper will analyze how Slovenia’s integration with the European Union has influenced the country’s trade and specialization. The association agreement and trade policies between the two regions as well as the effects these have had on the trade development are essential points in this study. The analysis will attempt to conclude any positive or negative welfare affects from trade in terms of trade creation or trade diversion. Bearing in mind that Slovenia has been engaged in a pre-accession period with EU since 1996 and that a free trade area allowing for tariff barriers to be removed has been in place since then, also this period will be taken into consideration. A second objective is to examine in what direction Slovenia’s
specialization has gone, that is to say, has Slovenia experienced the same specialization in intra-industry trade that is increasingly present in trade between EU-members, and in which industrial sectors.

1.2 Disposition

This thesis starts with a brief overview of the economic situation in former Yugoslavia prior to disintegration. Furthermore, Slovenia’s first years of independence are portrayed in an economic and political context, followed by a presentation of the country’s economic policies during the accession period. Chapter three explicates the provisions and obligations of Slovenia and the European Union during accession, as well as the overall liberalization process during this period, as presented in the Association Agreement. The next chapter defines the theory behind the two most common forms of integration, free trade areas and customs unions, as well as provides the reader with an explanation of specialization theory and intra-industry trade. Chapter five focuses solely on trade policies of Slovenia with an initial presentation of Slovenia’s trade development during its time as a republic in former Yugoslavia. It carries on by depicting Slovenia’s trade flows with different regions of the world for the last thirteen years. Chapter six is a study on trade development solely between Slovenia and the EU. The trade is scrutinized by using disaggregated data on two- and three-digit levels, the latter focusing on Slovenia’s main trading sector, i.e. motor vehicles. In chapter seven, an empirical analysis on specialization in intra-industry trade is carried out in order to determine if Slovenia has experienced product differentiation in its production and managed to take advantage of larger economies of scale. Lastly, the paper is summarized and conclusions are made regarding the findings of this study, followed by suggestions for further research.

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1 The aggregated data used in the empirical study is collected from the Statistical Office of the Republic of Slovenia, while the disaggregated statistics come from the European Union’s statistical database, Eurostat. If nothing else stated, the examined period is 1995-2005.
2. BACKGROUND

This chapter provides a short presentation of Slovenia’s economic and international trade background. The history is important in order to understand Slovenia’s economic situation before the integration with the EU. Economic policies as well as trade patterns during Slovenia’s time as a republic in former Yugoslavia are presented followed by an overview of the economic challenges Slovenia was facing during its transition towards a market economy. Finally, Slovenia’s trade polices and changes in applied tariff rates during the country’s accession period to the European Union are described.

2.1 Economic policies in former Yugoslavia

During the period 1943-1991 Slovenia was one of six republics that together formed the Socialist Federal Republic of Yugoslavia (SFRY). Early on in the SFR Yugoslavia’s history the idea of collective agricultural policies was abandoned and most of the agricultural land was privatized. SFR Yugoslavia distanced itself politically from the Soviet Union and a unique form of socialism was introduced with social ownership and self-management of companies. Neither the capital owners nor the state could run enterprises but this power was given to the working class. Central planning was eliminated and economic systems with commercial banking as well as monetary and fiscal policies were introduced.

SFR Yugoslavia maintained economic relations with most economies of the world, whereas the country’s main trading partner was the European Economic Community (EEC) followed by the Eastern European states under CMEA. 2 During the last decade before dissolution, a great majority of SFR Yugoslavia’s exports was concentrated to manufacturing, particularly within the areas of electrical machinery and metal products. Main imports were petroleum, chemicals, and transport equipment. 3

The economy as a whole reached its peak during the 1960s as the country experienced annual economic growth that reached 6 percent. The growth could be sustained for another decade thanks to the high levels of foreign borrowing. However, this foreign debt in combination with stagnating exports led to a significant trade deficit and a collapse of the national currency

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3 Statistics of Foreign Trade of the SFR Yugoslavia, 1981
in the early 1980s. The inflation and economic crisis in SFR Yugoslavia contributed to rising conflicts between the republics, culminating in the secession of Slovenia and Croatia in June, 1991.

2.2 Slovenia’s transition to a market economy
As a direct result from the disintegration of SFR Yugoslavia and the civil war that many of the republics suffered in the years 1992-1995, Slovenia experienced vast trade losses when losing access to the ex-Yugoslav markets. This, in combination with the legacy of a serious debt crisis and an overall increasing economic depression in 1992 induced a rapid economic reform towards a full-fledged market economy. The main steps taken in the economic reform were privatization and restructuring that unlike the earlier Yugoslav focus on import substitution now relied on an export oriented development strategy (Damijan and Majcen 2002, 1375) as well as restrictive fiscal and monetary policies (WTO 2002, 4).

The country succeeded early on in the last decade to rapidly redirect its trade mainly towards the European Union (EU) as well as other Central and East European (CEE) countries and managed to have a smooth transition to a market economy. Slovenia had in fact one of the most efficient economic transformations in comparison to the other CEE countries who joined the European Union in 2004 (Kitsing 2003, 9). The country’s GDP per capita was 13 807 EUR in 2005 and its annual real growth has since independence averaged 4%. Slovenia’s exports right after independence were mainly within the areas of manufacturing and intermediate goods and the same trading pattern could be seen in Slovenia’s imports in the beginning of 1990s. Trade with the EU mainly consisted of chemicals, machinery, metal products. This was the economic situation by the time that Slovenia started the preparations for a membership in the World Trade Organization (WTO) and for EU-accession.

2.3 Trade policy during the accession period
As already mentioned, soon after Slovenia’s independence, the country started the economic liberalization process and could as early as in 1992 apply for a membership in the GATT. Slovenia was confirmed as a GATT member during the Uruguay round in 1994, whereby the state committed to bind 100% of its tariff lines and thereby significantly ease its levels of trade protection. The average MFN tariff rate for imports in Slovenia was 12.3% in 1994. The increasing geographical orientation of Slovenia’s trading patterns towards the Western

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4 Intermediate goods are goods manufactured and used in further manufacturing, processing, or resale.
European economies culminated in the establishment of an accession agreement in 1996 which secured a free-trade area between Slovenia and the EU. While waiting the ratification of the Europe Agreement, an Interim Agreement was introduced that annulled all Slovene duties and quantitative restrictions on exports to the EU. During this period, Slovenia was additionally engaged in several other bilateral trade agreements, the most important ones being free trade agreements with EFTA\(^5\), CEFTA\(^6\), the Baltic States and three former Yugoslav republics. Considering the high share of Slovenia’s trade within these preferential trade agreements, Slovene exports and imports that were directly affected by the MFN tariff were merely 15% of total trade (WTO 2002, 37). The MFN tariff levels in 1994 and 2001 are compared in Table 2.1. In comparison to the tariff schedule applied in SFR Yugoslavia, Slovenia decreased its overall import duties by 27%. Also the fact that the MFN tariff rates have been lowered gradually since the country joined the WTO could ensure a diminishing risk of trade diversion in respect to the accession to the EU. The average MFN tariff in 2001 was 10.8%, the highest being in the agricultural sector where the applied tariff was 15.3%. The tariff rate applied on industry goods was 9.5%. The average rate however was still higher than the common tariff rate in the EU, which was 6.6% in 2001. This opened the possibility for further trade creation, especially in the industry sector where the EU MFN tariff in 2001 was 4.1%.

\[\begin{array}{|c|c|c|}
\hline
 & 1994 & 2001 \\
\hline
\text{Average} & 12.3 & 10.8 \\
\text{Agriculture} & 6.8. & 15.3 \\
\text{Industry} & n.a. & 9.5 \\
\hline
\end{array}\]


The fact that Slovenia was a republic in SFR Yugoslavia, a country with a much more liberal form of socialism compared to the other CEE states that joined the EU in 2004, opened for a swifter stabilization period and a smoother transition to a market economy. Also the beneficial location and closeness to the EU, being the country’s main trading partner, contributed to the positive economic development and freed Slovenia from the complicated task of redirecting its international trade towards new economic regions (see Appendix I).

\(^5\) European Free Trade Association (EFTA) members: Iceland, Liechtenstein, Norway, and Switzerland
\(^6\) Central European Free Trade Agreement (CEFTA) members in 1996: Czech Republic, Hungary, Poland, Slovak Republic, and Slovenia
Many of the former Soviet republics had to make larger adjustments when beginning to focus their trade relations towards the West instead of as earlier towards the CMEA states. When it comes to its GDP per capita, Slovenia quickly rose to the same level as many of the old EU members, e.g. Portugal and Greece (Kitsing 2003, 6). Consequently Slovenia could concentrate on preparing for EU-membership through privatization as well as extensive reforms of institutional and legal structures, thus becoming a permanent member of the EU in May 2004.
3. SLOVENIA AND THE EUROPEAN UNION

The following chapter focuses on the trade liberalization process between Slovenia and the European Union. It begins by describing the association agreement created between the two regions and the most important elements in the agreement. The chapter also lays forth the obligations of Slovenia and the EU respectively according to the agreement, followed by a closer analysis of the rules of origin.

3.1. The Europe Agreement

Following the great extent of political and economic restructuring in many CEE states in the early 1990s, the EU started preparations for deeper economic integration with those countries who desired to become EU members and were prepared to meet such criteria as the rule of law, human rights, and a functioning market economy (Agenda 2000). By initiating association agreements (also called Europe Agreements) with ten candidate countries the EU induced further stabilization of these economies. The Agreements were developed according to criteria that applied to all the candidates on an equal basis, but at the same time took into consideration the special conditions of each applicant. The main purposes of the deepening cooperation between the EU and the CEE states were on one hand to facilitate further trade relations and to strengthen a political dialogue, and on the other to provide the candidate countries with the financial and technical assistance needed for accession to the EU. The enforcement of an association agreement signified in fact the realization of a free trade area between the EU and each of the candidate countries, the liberalization of exports and imports, along with the establishment of rules of origin. Taking into consideration the practical need of the candidate countries to a longer amendment process, the EU was the first to cut its tariff levels vis-à-vis the CEE countries. Tariffs in the industrial sector were phased out early on in the liberalization process while the agricultural tariffs were abolished as late as 2003 (Senior Nello 2005). However, bearing in mind that albeit rising trade with agricultural products, Slovenia’s agricultural trade in 1999 was no more than 2% of total trade (SORS 2000), and the economy was thus not seriously affected by this unhurried liberalization.

The Europe Agreement between Slovenia and the EU (henceforth called the Agreement) was signed in June 1996 into force in February 1999.\(^7\) During this transition period an Interim Agreement was in place that allowed for quick elimination of all quotas and duties on exports

\(^7\) All information concerning the agreement is taken directly from the European Agreement, 1999, if nothing else is stated.
of industrial goods. The Agreement covered such areas as movement of workers, the right of establishment, supply of services, competition regulations, movement of capital, cultural and financial cooperation, and free movement of goods. There are also several protocols and annexes accompanying the Agreement covering such relevant areas as the definition of originating products, intellectual property and special provisions. Special attention has also been given to the particular economic cooperation between Slovenia and Italy. The parts affecting Slovenia’s trade in goods are of certain importance to this thesis and will be analyzed in more depth. These paragraphs focus on all ranges of goods, although additional protocols in the Agreement have been dedicated to the further detailed descriptions of trade in textiles and clothing, and more importantly, trade in agricultural products and fisheries. For the designation of goods and merchandise which are being traded with between the EU and in this case Slovenia, products are classified according to the Combined Nomenclature (CN). The articles covering free movement of goods are accompanied by certain safeguard clauses and authorized restrictions of trade in cases where imports to Slovenia could seriously injure domestic producers or cause danger to national security or health.

3.2. Customs duties and quantitative restrictions under the Agreement

The free trade area was established during a transition period, and was finally signed in February 1999. This meant for the both parts the abolishing of practically all restrictions to trade, the most important being customs duties and quantitative restrictions. The various quantitative restrictions between Slovenia and the EU took effect in connection to the signing of the Agreement whereas a great part of the tariffs were instead phased out over shifting periods of time. Both types of restrictions were however eliminated by January 2001.

<table>
<thead>
<tr>
<th>Year</th>
<th>Slovenia</th>
<th>EU</th>
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<tbody>
<tr>
<td>1996</td>
<td>Some customs duties eliminated</td>
<td>Greater part of customs duties eliminated</td>
</tr>
<tr>
<td>2000</td>
<td>Greater part of customs duties eliminated</td>
<td>Customs on base metals, electrical machinery, and vehicles eliminated</td>
</tr>
<tr>
<td>2001</td>
<td>Customs on steel, electrical machinery, and vehicles eliminated</td>
<td></td>
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</tbody>
</table>

Source: Official Journal of the European Communities, 1999

The successive reduction of customs duties for Slovenia and the EU are presented in table 3.1. The obligations of the EU were stricter than that of Slovenia. The EU was not considered to
have the same need for adjustment to the economic integration as was Slovenia. The former had thus eliminated most of its customs duties on imports from Slovenia as early as in 1996. The remaining duties, mostly affecting imports of base metals and electrical machinery were eliminated by January 2000. As for elimination of duties on imports into Slovenia originating in the EU, only a smaller part of the customs was abolished in the first stages of integration. The country was exempted from abolishment of most duties until year 2000 when such products as rubber, leather, some base metals, as well as electrical machinery and vehicles started to being imported free of duties. One year later, remaining duties were abolished, where most of these duties were on chemicals, mineral products, and plastics. By January 2001 the commitments under the Europe Agreement regarding the reduction and elimination of customs duties were fully implemented. The obligations set upon the both parties are further discussed in the following paragraphs.

i. Obligations of Slovenia

Within the scope of the provisions presented in the Agreement, it has been taken into account that giving Slovenia’s greater needs for administrative and institutional adjustment to the economic integration with the EU, the implementations of Slovenia’s obligations were more gradual. Some duties on imports of industrial products were eliminated as the Agreement was signed in 1996. Nonetheless, customs duties on such products as mineral and chemical products, base metals, footwear, rubber and plastics, as well as automotive products were progressively reduced in five or six stages covering a period of six years. The last duties on industrial products were thus abolished in January 2001. Imported agricultural products originating in the EU were subject to customs duties averaging 60% of the then applied MFN tariff. At the same time Slovenia applied tariff quotas on fisheries with EU origin ranging up to 12.5%. Slovenia was also obligated to eliminate any charges on exports that restricted trade with the EU, with the exemption of customs duties on fuel wood which needed to be gradually eliminated by January 1998. Regarding quantitative restrictions, all quotas on imports from the EU within the areas of industrial products, agriculture, and fisheries were abolished in 1996.
ii. Obligations of the EU

Unlike Slovenia, a great majority of goods imported from the EU were free of customs duties when the Agreement was signed, with the exemption of certain products that were considered sensitive to trade, namely textiles, agriculture and a few other sectors. Exempted industrial products were rubber and plastics, footwear, base metals, and electric machinery for which the tariff ceilings were raised gradually and ultimately removed by the year 2000. Special provisions for trade in coal and steel, textile products, and agricultural products were applied. Coal and steel products were to be traded duty free as early as 1996 whereas tariff ceilings on textiles and clothing where raised and eliminated within the first two years after the Agreement came into force. As regards to agricultural trade, once the Agreement was signed, customs duties on imports originating in Slovenia were gradually reduced and by 2000, the average duty was 30% of the applied MFN tariff for most goods. However there were still some products, e.g. honey and cucumbers that were subject to customs duties ranging from 80% to 97% of the applied MFN tariff. All quantitative restrictions on imports from Slovenia and customs duties on exports were abolished by the end of 1996. A number of fishery products imported from Slovenia were also granted tariff quotas, namely trout as well as preserved and prepared fish. Nevertheless the conclusion can be made that nearly all exports from Slovenia to the EU were free from such trade restrictions as customs duties and quantitative restrictions. It has been estimated that more than 99% of EU imports of Slovenian origin were duty and quota free in 2001 (WTO 2002).

iii. Common obligations

According to the Agreement, neither Slovenia nor the EU is allowed to use any charges equivalent to customs duties. They cannot introduce new restrictions to trade or increase the already existing one. Both parts were also obliged to reduce duties and increase tariff ceilings more rapidly as long as their national economic situation allowed it. Furthermore, all provisions for customs duties are also to be applied to any fiscal restrictions, and so any price discrimination between products that could endanger trade between the EU and Slovenia was prohibited.

3.3. Provisions regarding the rules of origin

The Europe Agreement defines the meaning of “originating products” and the requirements needed to be fulfilled for a product to be considered as originating in the EU or Slovenia. For instance, any product that is wholly obtained in the EU or Slovenia is considered an
originating product. Products considered to be wholly obtained in the EU and Slovenia are mineral products, vegetable products, live animals, and fisheries. Furthermore, if materials incorporated in a product from the EU or Slovenia are not wholly obtained there, but have undergone significant and sufficient processing in any of the two regions, the product can also be regarded as an originating product. The implication of sufficient processing of a product varies between product groups. The individual requirements are presented in an annex to the Agreement where the value of non-originating materials used in the manufacturing of a product may not exceed levels ranging from 20% to 50% of the product price, in order for the manufactured product to benefit from originating status. There are also territorial requirements introduced in the Agreement that among others state that any acquiring of originating status must be at all times accomplished in the EU or Slovenia. In addition, products being traded with between the EU and Slovenia need to be accompanied by a movement certificate or any document that can describe the product. On the subject of cumulation of origin\(^8\), the Agreement states that any product obtained in the EU is to be considered as originating there even though they incorporate materials originating in Slovenia, any of the other nine candidate countries, EFTA, or Turkey, without having to have undergone any certain level of processing. The same provisions apply for Slovenia vis-à-vis the EU or any of the above mentioned partner states. These regulations came into force in January 1997 as part of the new Europe wide system for harmonization of the rules of origin (WTO 2002, 22). The provisions regarding cumulation of origin do thereby affect not only the EU and Slovenia, but also other European trading partners, thus indirectly creating a wider ranging free trade area for European states. This harmonization of rules of origin can be seen as a way for the EU to facilitate further trade between different European regions with which the EU has bilateral trade agreements, and at the same time encourage other forms of economic cooperation, for instance foreign direct investment.

3.4. From a free trade agreement to a single market

The free trade area (FTA) under the Europe Agreement provided Slovenia with far-reaching trade liberalization and economic integration with the EU. The latter provided Slovenia with technical and financial assistance to make the preparations for EU-accession and the adoption of common laws and regulations as smooth as possible. The first five years after signing of the Agreement, trade between the EU and Slovenia grew by an average of 7.6% annually,

\(^8\) When showing that a product in fact is a product of origin, it must be proven that non-originating materials used in the manufacturing of the originating product have undergone a certain level of working or processing.
making the EU Slovenia’s fastest growing market for two-way trade (WTO 2000). The gradual phasing out of mutual trade restriction measures, most importantly customs duties, can be seen as one of the main factors affecting the positive development. Nonetheless, the FTA provided a step towards positive integration\(^9\) between Slovenia and the EU, when common policies and long-term objectives were established. Slovenia’s accession to the EU in 2004 meant the creation of a single market, which implies not only the establishment of a customs union, with the Common External Tariff, but also free movement of capital and labor, as well as removal of such non-tariff barriers to trade as public procurement and technical standards. Moreover, Slovenia is as from January 2007 the first of the twelve new members to join the Economic and Monetary Union (EMU), thus implementing the euro as the national currency.

Returning to the transition from a FTA to a customs union (CU), this signified the removal of the rules of origin. Furthermore, the risk of trade diversion decreases when rules of origin are abolished, since these easily can be made too complex. However many other factors need to be taken into consideration when evaluating the levels of trade creation and diversion, after a trade policy has been replaced, such factors as tariff levels, institutional structures and the size of the economic region.

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4. THE THEORY OF ECONOMIC INTEGRATION

The theory of economic integration will be clarified in this chapter, and the various forms of integration will shortly be presented. More importantly, the theoretical static effects arising from integration are explained. The chapter will mainly focus on the two forms of integration most relevant to this thesis, free trade area and customs union. The welfare effects of the transition from a free trade area to a customs union are also explicated. Conclusively, an overview of the theory of specialization and intra-industry trade is presented, as this will be useful for the later empirical analysis on Slovenia’s specialization.

4.1. Economic Integration

International economic integration has been around in the global trade discussion since half a century back and such main regional trade areas as EU, NAFTA, MERCOSUR, and ECOWAS\textsuperscript{10} have evolved over time. Economic integration is defined as the gathering of independent countries into larger economic and trading blocs.\textsuperscript{11} As is presented later in this chapter, these economic blocs come in different shapes, but they can also have varying objectives, i.e. increased competition, economies of scale, and improved terms of trade. However, also non-economic objectives can be in place, for instance stronger collective negotiation power as well as improved security and upholding of peace. Depending on the intentions, economic integration can come in the form of a free trade area (FTA), where tariffs and quotas are removed between member states but trade policies towards rest of the world stay on a national level. A deeper level of integration is a customs union where common external trade policies are introduced. These types of economic regional integration are further analyzed below, seen from the perspectives of Slovenia and the EU. Economists, with Tinbergen in the lead, have also made a distinction between positive and negative integration, (earlier mentioned in chapter 3) where negative integration simply means the removal of barriers while positive integration takes the cooperation a step further by introducing common legal and economic structures (Senior Nello 2005). The main advocate of positive integration has been the EU with its advanced customs union as well as the development of the Single Market and removal of non-tariff barriers, which are seen as obstacles to freer trade between the member economies.

\textsuperscript{10} NAFTA: North American Free Trade Area, MERCOSUR: Common Market of the South, ECOWAS: Economic Community of West African States.
\textsuperscript{11} If nothing else is stated, the information in this chapter has been collected from Robson, 1998, chapters 1-3.
One of the pioneers in analyzing the static effects of economic integration on welfare was Jacob Viner who in the 1950s developed the theories of trade creation and trade diversion. Trade creation refers to the net welfare gain that a country obtains when instead of producing a good domestically starts importing it from the cheaper and more efficient trade partner. Trade diversion, on the other hand is the possible welfare loss that a country suffers when replacing imports from a cheaper producer outside of the integrated region with a less efficient and more expensive producer in the partner country. When determining the net welfare outcomes of the economic region, the amounts of trade creation and trade diversion, respectively need to be compared. There are however various factors affecting the levels of trade creation and diversion, e.g. tariff level as well as the amount of trade existing between the trade partners before and after integration. Moreover, a larger integrated area leaves less risk for trade diversion and a larger possibility for trade creation. All of the above mentioned are in fact factors which stand in favor of a successful integration between Slovenia and the EU, particularly when taking into consideration that the EU was Slovenia’s largest trade partner even before the accession period (see previous chapters). Such factors as complementing economic structures in addition to the supply and demand elasticity of the economies also play a role in deciding the welfare effects from economic integration.

As presented in the previous chapter, Slovenia had a Europe Agreement with the EU before accession, which signified a free trade area between the two regions. This free trade area was replaced by a customs union in 2004, opening up for a more positive integration process between the two economic regions. It is thus essential to lay out the theories for free trade areas and customs unions before examining the welfare effects on the Slovene economy of its accession to the EU.

4.2. Free Trade Area

The most common integration form in the world today is a free trade area (FTA). Countries involved in the integration process remove all direct barriers to trade but keep their own trade policies and tariff levels towards the rest of the world. This is also called negative integration, seeing as the only step taken towards integration is the removal of trade barriers between the FTA members. A common example of a FTA is NAFTA where Canada, Mexico and the United States from the beginning only aimed towards this simplest form of integration. Moreover, it is not necessary for the partner countries to develop common institutions and other trade instruments to make the FTA successful, as is the case for a customs union. More
importantly, the first stage of integration between the EU and Slovenia consisted of a FTA through the creation of the Europe Agreement.

The other significant characteristic of a FTA is the presence of rules of origin which are developed so that free trade between the partners is limited to products which have their origin in the FTA. The necessity of rules of origin comes from the risk of trade deflection. This phenomenon occurs when an external producer exports to the FTA member with the lowest tariff rate and is thus able to access the whole FTA market without having to pay any further custom charges. Hence, the rules of origin regulate the classification of originating status, degree of processing of incorporating materials, and cumulation of goods (Europe Agreement, 1999). These rules can often be made very complicated, as to the extent that they constitute limitations to free trade. They are often affected by domestic companies and other interest groups, an action that can result in a stronger trade diversion effect. Rules of origin in a FTA can consequently damage efforts for deepened cooperation between the FTA members and furthermore obstruct the possibility of taking in new members to the FTA.

A partial analysis is used to explain the welfare effects of a FTA on the member countries as well as on the rest of the world. It is a simplified model making assumptions of perfect competition, no transportation costs, and tariffs as the only barrier to trade. The partial model looks exclusively at static effects, excluding other important dynamic effects of integration, e.g. economies of scale, factor productivity, as well as technological progress. The assumptions of two countries forming a FTA are made, A being the home country and B the partner country. The effects on rest of the world will also be shortly analyzed. It is assumed that country B has prohibitive tariffs before integration, which keeps out any external imports, while country A trades with the rest of the world under a certain tariff level. This further simplifies the model and leaves the focus on potential trade creation or trade diversion effects.
The graphs in Figure 4.1 illustrate the supply and demand curves for a given product. $D_A$ is country A’s demand curve for the product and $S_A$ is the supply curve. Similarly, the conditions for country B are shown in the right graph, where $D_B$ is the demand curve and $S_B$ is the supply curve. The world supply price is indicated by $P_W$. It is further assumed that the demand for the product in both countries is the same whereas country B is a more efficient producer. Country B’s prohibitive tariff level prior to integration, represented by $T_B$ is therefore relatively lower than that of country A, illustrated by $T_A$ in the figure. For country A, the triangles $a$, the production effect, and $b$, the consumption effect, represent trade creation, while the shaded area $b$ is the trade diversion effect resulting from any excess expenditure on the partner B for the initial import. As country A’s demand cannot be fully satisfied by the domestic production, but will instead be covered by imports from the partner country to the price $T_B$. Country B on the other hand will satisfy its domestic demand by importing from the rest of the world to the price $P_W$. The equilibrium price in the FTA would equal to the lower of the two prices before integration, in this case $T_B$.

In this example, it can be expected that the trade creation effect will be larger than the trade diversion effect. For country A, the trade creation effect comes from increased consumption and cost saving on the initially domestic production which is replaced by cheaper imports. It is clear that this trade creation more than offsets the trade diversion effect, and thus creating a welfare gain for country A. Since country B did not trade with the rest of the world before the FTA was introduced, also the production in the country will not change, seeing that the price is unchanged. The state will however gain new tariff revenue represented.
in the model by the shaded area. Therefore, also country B will experience a welfare gain. As for the rest of the world, it can be expected that as long as exports to the integrated area are larger after than before integration, the overall welfare effect will be positive. This result for the trade partners outside of the FTA will moreover be enhanced by the indirect trade deflection, which arises from having unequal tariff levels within the economic integration. If a member state’s demand is not satisfied by the supply provided within the FTA, additional imports will come from rest of the world.

As far as Slovenia and the EU are concerned, this theoretical example can be applied to their integration process, namely that the trade creation effects from the FTA can be expected to outweigh the trade diversion effects. Seeing as Slovenia still was adjusting to a free market economy before the accession, from earlier being a part of the relatively closed SFR Yugoslavia, the risk of trade diversion can be minimized. Furthermore, Slovenia did not only engage in a FTA area with the EU but also with the other nine EU candidates. The integration was thus wide-ranging, leaving more room for trade creation. It has also been earlier mentioned that the EU was Slovenia’s main trading partner even in the country’s first years of independence, which is another aspect in favor of a positive welfare effect. However, Slovenia’s tariff rate was higher before the integration than the common rate used in the EU at that time (10.8% and 6.6% respectively), which would imply that some trade diversion effects could be seen. Nevertheless, the overall welfare effect is intuitively positive regarding integration between Slovenia and the EU. The presumably increased trade will also leave room for more efficient resource allocation and increased production in Slovenia. Thus, when looking at the trade theory, extensive trade creation is to be expected.

4.3. Customs Union

By joining the EU, Slovenia also changed its trading relations with the EU from a FTA to a customs union. This meant the elimination of the rules of origin and hence, further trade liberalization. A customs union by definition signifies the removal of direct barriers to trade between member states as well as a common external tariff on imports. The common tariff can be set at any desired level but is theoretically defined as an average of the individual countries’ tariff rates. The theory regarding trade creation and trade diversion will be used in explaining the effects of a customs union. Country A and country B create a customs union while a third country represents the rest of the world. In the partial analysis model, the same assumptions for simplification of the model will be made as for a FTA. There is perfect
competition as well as balanced trade. There are no transport costs and no effect on the terms of trade conditions. It is furthermore assumed that tariffs are the only barriers to trade. For the purpose of the case study made in this thesis, the example of a customs union will differ from the one of a FTA in the way that both countries engaging in the customs union have open trade prior to integration. That is to say, none of the countries have prohibitive tariffs.

Figure 4.2 Customs union in country A and B

Similar to the example of a FTA, countries A’s and B’s supply and demand curves for a tariff averaging customs union are depicted in figure 4.2. The tariff is as already mentioned set as an average of the member countries’ tariff levels before integration, represented in the figure by \(CET\). For country A there is an additional supply curve, \((S_{A}+IM_{A})\) representing the supply curve for the product originating in the customs union. This shift comes from the fact that country A is not as efficient in production as country B is and starts importing more from the partner instead. Country A experiences a saving on production cost as well as a gain in expanded consumption. This trade creation is represented by the triangles \(a\) and \(c\). The trade diversion, area \(b\) in the graph, is a result from country A shifting its imports from the rest of the world to the more expensive producer, country B. Although the new tariff level \(CET\) implies a rise in price for country B and consequently a consumption loss as well as raised production costs, triangles \(d\) and \(e\), these costs are offset by the new tariff income, shown by the shaded area in the graph for country B.

To be able to determine if the customs union has positive or negative trade effects, it is necessary to compare the trade creation that comes from increased consumption and saving on
production cost with the trade diversion that arises when country A starts to import from the less efficient partner producer instead of from the rest of the world. In this example, it is shown that trade creation offsets trade diversion for country A, leaving the country with a positive net welfare effect. Meanwhile, country B experiences an increase in prices and thus a consumption loss, which in combination with the extra resources used for production represents the trade diversion. Country B would however gain new tariff incomes which to some extent would offset the negative welfare effect. The effect on the rest of the world is negative, since they lose their imports to the integrated region. The scale of this effect will however depend on the changes in tariff rates. The higher the tariff rate prior to the customs union and the lower it is after integration, the less negative will be the impact on economies excluded from the customs union. The same applies to the level of trade between the integrated economies and the third country. Less trade between the both parts prior to integration will damage the third country less once the customs union is created.

Some other statements made for the case of a FTA are also valid for customs unions when analyzing the welfare impact of economic integration. A larger integrated area, for instance, with a greater amount of countries involved, will have stronger trade-creating effects than a smaller region. This is in fact valid for the integration of Slovenia to the EU which in the year 2007 has 27 member economies. Taking into consideration that Slovenia’s tariff level was higher before than after joining the EU, also indicates a trade creating effect for the country. Moreover, the competitiveness of the member states between themselves will affect the amount of trade creation. In the case of Slovenia and the EU, they both for instance have large production volumes in machinery and transport equipment, relative to total production, which opens for reallocation effects and further trade creation (WTO 2002).

4.4. Making the choice and realizing the transition

The above mentioned generalizations are indeed valid explanations for trade creation and trade diversion effects. It is however vital to this thesis to mention the importance of individual case studies when determining impact on welfare from economic integration. Nevertheless, there are general statements which can be made in the case of welfare effects and changed conditions for these when making the transition from a FTA to a customs union.

From a static welfare point of view, a FTA can be seen as a preferable form of integration, seeing as it usually has a less negative effect on the third country, owing to unchanged
external tariff rates. What a FTA primarily achieves is liberalization of trade between the member states and in some cases also increased trade with the rest of the world through indirect trade deflection. The customs union, on the other hand, usually causes more harm to external trade by strongly focusing trade towards the trade partner. Furthermore, the customs tariff can succeed many of the individual members’ earlier tariff rates, presenting an even greater risk of trade diversion. There are however other dynamic effects that need to be taken into consideration when examining welfare results from regional integration. The static welfare model ignores the changes in terms of trade that arise from altered trading patterns. Since the formation of a customs union reduces the demand for import from the rest of the world, the union’s terms of trade with the rest of the world will consequently improve when causing a fall in import price and thus diminishing or even offsetting the trade diversion. Taking the example of the EU integration, since it is a wide-ranging economic area, the world price is expected to fall and thus further increase the positive welfare effect. The FTA can also be more trade-diverting due to the rules of origin, which when made too complex can reduce the welfare effects significantly. There are also arguments in favor of a customs union which are more relevant to Slovenia’s accession to the EU, for instance the fact that a FTA cannot advance towards a single market due to the rules of origin which need to be in place so that direct trade deflection is prevented. The rules of origin could moreover obstruct the accession of new members to the union because of the complexity of product origin regulations.

4.5 Specialization and intra-industry trade

When analyzing the various theories on economic integration, these often tend to be separated in two groups, the classic orthodox theories and a second group which attempts to broaden the perspective and focus on factors affecting trade, not included in the orthodox model. The orthodox approach focuses mainly on the static welfare gains, earlier used in this chapter as welfare effects of free trade areas and customs unions were examined. According to this theory, increased trade between countries in the presence of economic integration induces specialization effects according to differences in comparative advantage. Countries start to trade in different products, producing economically most efficient product and importing goods which the trading partners can produce to a lower cost. This as a result gives rise to inter-industry trade within the created trading bloc. However, these classical theories do not succeed in explaining the increased trade in intra-industrial products that can be seen in the world today. The modern theory attempts to explain the effects of integration with an assumption of imperfect competition and thereof the presence of, for instance, monopoly or
oligopoly firms, with economies of scale and larger variety as a result (Robson 1998, 38). Owing to economies of scale and product differentiation, intra-industry trade is getting increasingly important, signifying trade between similar economies, with products from the same type of industry, and thus creating more competitive production structures. Furthermore, specialization can be separated into groups of horizontal and vertical specialization. When consumer demand across member states is similar and economies of scale are widespread, companies will profit from horizontal specialization, that is to say production of a certain end product. Vertical specialization, on the other hand signifies intra-industry trade in intermediate inputs for further processing. This type of specialization has increased as it has become easier for multinational companies to outsource thanks to lower barriers to trade (Hummels et al 1998, 81).

It is nevertheless important not to exclude the welfare effects of trade creation and trade diversion from the discussion of specialization and intra-industry specialization. As this thesis attempts to verify, it is the amount of trade creation in relations to the negative effect of trade diversion in economic integration which determines if an integrated area will have a positive effect on the individual country and the integrated area as a whole. Standing by the thesis’ purpose statement of analyzing the welfare effect on Slovenia’s economy from EU integration, it is once more emphasized that merely the theoretical analysis is not sufficient to determine the integration effects. The theory provides an initial insight and a primary understanding of the issue; however an empirical country analysis needs to be carried out. In view of the fact that Slovenia’s integration with the EU-society goes beyond a customs union, and also involves a common market as well as a single market, these higher levels of integration are inevitably going to leave a positive mark on the net welfare effect of the union.
5. SLOVENIA’S TRADE DEVELOPMENT ON AN AGGREGATED LEVEL

In this chapter, the focus lays on Slovenia’s exports and imports during the period 1995-2005. To provide a general picture, the country’s trade patterns before independence as well as during the first years as a market economy are presented. The chapter goes on by depicting Slovenia’s trade patterns during the accession period as well as the first years as a member of the EU. The trade analysis on an aggregated level covers the years 1995-2005 and examined by using the United Nations’ Standard International Trade Classification (SITC). The study remains on the one-digit aggregated level, while the following chapter focuses on a deeper disaggregated study of Slovenia’s trade patterns. The main statistics source for this chapter has been the Statistical Office of the Republic of Slovenia.

5.1. Trade development prior to independence

As early as at the end of the 1970s, a great part of SFR Yugoslavia’s trade was with industrially developed economies and primarily with Western Europe. In 1979, the country’s exports to the European Economic Community (EEC) and other developed European states arose to 37% of total exports. In this period, SFR Yugoslavia’s imports from this region were 47% (OECD, 1980). At the end of the 1980s, Western European economies started to further liberalize their trade and open up their economies towards developing nations, in particular towards former communist states in Eastern Europe that showed signs of commitment to a more liberalized economic policies. The trade relations with the European Community (EC) increased further, making the EC a natural trading partner for SFR Yugoslavia and after disintegration, also for Slovenia. During its time as a republic in SFR Yugoslavia, trade with Western Europe was particularly beneficial for Slovenia, seeing as the republic’s northern location allowed Slovene firms to be in close contact with their western customers. When also bearing in mind that Slovenia was by far the most developed of the Yugoslav republics, it was only natural that it inherited the already extensive trade relations with the EC. One should not forget, however, that a majority of Slovenian manufacturing, with the country still a part of SFR Yugoslavia, was exported to the other former Yugoslav republics (Mrak et al 2004, 336), giving Slovenia a later advantage over other states in exports to this region, as the EU member with best knowledge of the local markets.
5.2. Trade development after independence

Once the disintegration of SFR Yugoslavia took place, Slovenia’s economy, and mainly the country’s manufacturing sector experienced a tremendous loss in the former Yugoslav domestic market, with sales to the other republics falling from $6.6 billions in 1990 to merely $1.5 billions in 1992 (Damijan, and Majcen 2002, 1373). This in combination with increasing macroeconomic imbalances led to a deep recession in 1992, which was one of the incentives for the Slovene government to embark on an economic reform aimed at introducing macroeconomic elements which would move the country towards a fully developed market economy. The first years of independence were thus characterized by domestic economic reforms and extensive privatization projects. Once the transition was underway, the integration into CEFTA\(^\text{12}\) boosted trade with the Central European members, doubling their share in Slovenia’s trade since independence (WTO 2002). Nevertheless, trade was even more than earlier reoriented towards the European Union by preparations for an Accession Agreement, at same time as stronger commitments to the WTO were made. Largest trade partners have since independence been Germany, Austria, France, and Italy. However, as political and economic stabilization started to spread in the former Yugoslav republics, Slovenia experienced an increase in trade with these economies, Croatia today being Slovenia’s fourth largest trading partner (SORs 2006). By the end of the 1990s, the stagnation with the other former Yugoslav countries came to a halt and started to show an uprising trend, particularly in the case of Slovenia’s exports to the region. In the beginning of this century, unemployment started to sink, which raised domestic demand in the country and triggered increasing imports, enlarging the gap in the trade balance.

<table>
<thead>
<tr>
<th></th>
<th>Exports</th>
<th>Imports</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU25</td>
<td>64</td>
<td>73</td>
</tr>
<tr>
<td>Former Yugoslavia**</td>
<td>23</td>
<td>15</td>
</tr>
<tr>
<td>Rest of Europe</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Rest of the world</td>
<td>8</td>
<td>8</td>
</tr>
</tbody>
</table>

Source: Statistical Office of the Republic of Slovenia (SORs). Author’s own calculations
* SORS, Slovenia in Figures, Ljubljana 2006
Note: ** includes Bosnia and Herzegovina, Croatia, FYR Macedonia, Montenegro, and Serbia

\(^{12}\) CEFTA: Central European Free Trade Area
For simplification of trade flows analysis between Slovenia and the different regions, the time after independence has been divided in two periods, presented in table 5.1. The first period from independence until the end of the last decade is symbolized by a steep upward trend for trade with the EU, both for exports and imports, whereas Slovenia in the years after 1999 has reoriented some of its trade back towards the former Yugoslav states (FYS). Nevertheless, as the table shows, the EU has even from the first years of Slovenia’s independence been the country’s main trading partner. Trade with the EU in the first period grew by an average of 10% per year and increased from 64% to 73% of total trade, which was a direct result of Slovenia’s policies of swift economic and political integration with the EU. As was the case for SFR Yugoslavia before the disintegration, Austria, Germany, France, and Italy remained Slovenia’s main EU partners, accounting for more than 50% of the trade balance. However, the expanded EU trade relations came at the expense of exports and imports with the FYS, which due to the political conflict and instability lapsed from one third of Slovenia’s total trade in 1990 to the lowest point of 15% of exports and 5% of imports in 1993. When looking at Slovenia’s exports in the second period, these were increasingly coming from FYS and other European economies. This can be in part explained by increased political and economic stability in the former Yugoslav region. Another explanation can be the FTA agreements which Slovenia established with former Yugoslav states as well as many other non-EU members. Consequently, exports from the EU suffered a loss in the second period. Damijan (2004) argues that this is a result from export specialization towards the FYS in some Slovenian manufacturing sectors that tend to be less competitive in the EU market (Chapter in Mrak et al 2004, 342). Slovenia gives therefore a picture of double specialization, where the industry sector can be split in two, the main sector being machinery and transport equipment which are being directed towards the EU market. The other sector consisting of agriculture, food, and paper has a much higher attractiveness in FYS due to Slovenia’s earlier mentioned knowledge of these markets. Slovenia can thus take even higher prices and in that way somewhat increase the importance of the otherwise rather small agricultural sector. Slovenia’s specialization will however be further discussed in the following subchapters. Meanwhile, export to other European countries as well as to the rest of the world remained relatively unchanged for the first period, while a large increase in imports from the rest of the world occurred, mainly owing to an import growth from China and Turkey. However, these imports stagnated in the second period, as imports from the EU kept its positive development.

13 By 2000, Slovenia had signed FTA agreements with Bosnia and Herzegovina, Croatia, FYR Macedonia, Israel, Turkey, Romania, Bulgaria, and the EFTA members. Source: WTO 2002, 25.
increasing from 63% to 81% in the studied period. Important sources to the import increase are the development of FTA between Slovenia and the EU prior to accession, as well as Austria, one of Slovenia’s most important trading partners, joining the EU. A shift in domestic demand coming from Slovenia’s positive economic development can also be seen as a reason for increased EU imports.  

**Figure 5.1 Slovenia’s trade development with the EU**

The Europe Agreement between Slovenia and the EU came into force in January 1996, and in combination with the agreement on cumulation of rules of origin which was signed the same year (see chapter 3), this eased trade relations and boosted both exports and imports between the two regions. Seeing as the Europe Agreement was initially asymmetrical in favor of Slovenia’s exports to the EU, customs duties on Slovenia’s industrial products exported to the EU markets were almost fully abolished in 1997. Slovenia on the other hand, did not have to start to remove a greater part of its customs duties until the year 2000, according to the Agreement. Due to this fact, one would expect positive terms of trade results for Slovenia in the first stage of the trade liberalization. Even though there was a slight improvement in the country’s trade balance\(^\text{15}\), the real increases in trade flows were not shown until 2001. Probable explanations for this development could be full implementation of the FTA and creation of a single European trading bloc. Both took place early on in 2001. By January 2002, all customs duties on industrial products were eliminated on both sides and trade with the EU took off in a much quicker pace. Import growth in 2003 was 21%, which was an improvement by 61% from one year earlier. The corresponding number for exports in the

\(^{14}\) Since independence, Slovenia has had a real GDP growth of 56% and GDP per capita is currently at $17,170 placing Slovenia at a development level equal to such EU-members as Greece, Spain, and Portugal. Source: SORS, 2006

\(^{15}\) Slovenia’s export/import ratio improved from 88% in 1996 to 90% in 1998. Source: SORS
same period was a 55% increase. Consequently, this was also the period when Slovenia’s imports started growing faster than exports. This can be explained by the improved trade relations with the former Yugoslav nations, as Slovenia’s share in trade flows with this region started improving at the end of the 1990s.

**Figure 5.2 and 5.3 Slovenia's trade flows with the EU and the rest of the world**

![Graph](image)

Source: SORS. Author’s own calculations

The development of Slovenia’s trade flows with the EU and the rest of the world is presented in figures 5.2 and 5.3, where exports to and imports from the EU clearly have been increasing more rapidly than with the rest of the world. When observing the export development, one can see that the gap between the two trading regions was larger in the first half of the estimated period. Why the difference has decreased can be ascribed to the increasing trade with Slovenia’s former Yugoslav trading partners. The picture is even clearer for Slovenia’s imports, where the relations with the rest of the world have only started to rise in the past few years, while imports from the EU have had a strong up going trend since 2001. Moreover, as Slovenia joined the EU, it also adopted the EU Common External Tariff, a factor that will have a positive long run effect on Slovenia’s trade development. It can furthermore be expected that increasing exports will be a continuous trend in Slovenia for some years to come, seeing as Slovenia joining the European Union’s single currency will certainly diminish transaction costs for Slovene industries exporting to the main trading partners in the EU.

**5.3 Slovenia’s trade patterns on an aggregated level**

This thesis has thus far presented a great increase in trade flows between Slovenia and the EU. Some causes for this development have been Slovenia’s clear policy reorientation towards EU integration, as well as its sound economic progress and efficient transition to a market
economy. However, bearing in mind the prominent transition through which Slovenia has gone, it can also be expected that a certain level of alterations in trade among the different manufacturing sectors have happened. To examine which industries have attributed most to trade growth, and hence to see if any trade creation has taken place in Slovenia, the development of the ten SITC sectors will be analyzed in an aggregated level.

5.3.1 Slovenia’s export patterns

Slovenia has experienced a 54% increase in total exports since 1995. The share of Slovenia’s exports to the EU had its peak at the end of the last decade, reaching 73% of total exports in 1999, but has even since then not gone under 68% of the total export quote. Furthermore, Slovenia’s FTA agreements with the former Yugoslav states has also allowed for an increase in exports to this area. How the development of exports by sections has changed as from integration with the EU is presented below.

<table>
<thead>
<tr>
<th>SITC</th>
<th>Classification</th>
<th>1995</th>
<th>2000</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Food and live animals</td>
<td>3.1</td>
<td>2.2</td>
<td>2.3</td>
</tr>
<tr>
<td>1</td>
<td>Beverages and tobacco</td>
<td>0.6</td>
<td>1.3</td>
<td>0.4</td>
</tr>
<tr>
<td>2</td>
<td>Crude materials, inedible, except fuels</td>
<td>2.0</td>
<td>1.9</td>
<td>2.2</td>
</tr>
<tr>
<td>3</td>
<td>Mineral fuels, lubricants and related materials</td>
<td>1.1</td>
<td>0.9</td>
<td>2.1</td>
</tr>
<tr>
<td>4</td>
<td>Animal and vegetable oils, fats and waxes</td>
<td>0.0</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>5</td>
<td>Chemical products</td>
<td>10.1</td>
<td>11.2</td>
<td>13.0</td>
</tr>
<tr>
<td>6</td>
<td>Manufactured goods classified by material</td>
<td>29.5</td>
<td>27.3</td>
<td>25.2</td>
</tr>
<tr>
<td>7</td>
<td>Machinery and transport equipment</td>
<td>31.2</td>
<td>35.9</td>
<td>39.2</td>
</tr>
<tr>
<td>8</td>
<td>Miscellaneous manufactured articles</td>
<td>22.3</td>
<td>19.3</td>
<td>15.4</td>
</tr>
<tr>
<td>9</td>
<td>Commodities and transactions not classified elsewhere</td>
<td>0.1</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Author’s own calculations

In 1995, Slovenia was still in its first stages of transition. In this first analyzed period, there were three groups of industrial products that stood for more than 80% of Slovenia’s total export, the largest one being *SITC7 Manufacturing and transport equipment*, and covering 31.2% of the total production for export. The other two larger contributors to Slovenia’s exports are *SITC6 Manufactured goods classified by materials* and *SITC8 Miscellaneous manufactured articles*.  

27
manufactured articles. It is also worth mentioning that the group SITC5 Chemical products stands alone for a majority of the remaining 17% that do not fall in the three larger sections.

During the second measured period, Slovenia had already established a strong trade relation to the EU, where as earlier mentioned 73% of total export value went to the EU markets. In the years 1995-2000, most of the smaller groups had started to lose their importance for the country’s net income coming from exports, at the same time as the gap between the various sections had started to increase. Slovenia’s manufacturing had thus started to show first signs of specialization towards a single industry. The changes in the less significant commodity groups were mostly irrelevant, with the exception of SITC0 Food and live animals, which from 1995 decreased in value by a percentage point. This development was to a degree expected, as food and live animals were affected by the EU agricultural policies, which allowed for liberalization of agriculture in a slower pace and under special regulations. Even the two larger sections, SITC6 Manufactured goods classified by materials and SITC8 Miscellaneous manufactured articles, had decreased their export share to 27.3% and 19.3% respectively. Especially the change in the first mentioned group can be explained through the special regulations for textile products that existed until year 2005. Nevertheless, an increase in value for SITC5 Chemical products was seen, from 10.1% to 11.2% in year 2000, a development that probably can be ascribed to exports to other regions, considering the European Union’s later elimination of customs duties on chemicals. However, the group representing the largest increase in exports, from 31.2% to 35.9%, was SITC7 Manufacturing and transport equipment. Although not a large initial increase in exports, Slovenia still showed signals of specializing in manufacturing, which could have been expected considering that it was in this sector that the EU as its main trading partner preceded with the fastest liberalization process.

The third time period 2000-2005 does not bring about any bigger changes in the previous pattern. In fact, the changes in Slovenia’s export behavior for the first five years analyzed are further being supported by the developments during the final period. There are several smaller sections which are showing positive results, however SITC7 Machinery and transport equipment is still the only group presenting a strong increase in share of total exports. During the final years measured, SITC7 showed additional improvements, rising to 39.2% of total exports. The strongest decrease occurred in SITC8 Miscellaneous manufactured articles. Being one of the most important industrial sectors for export prior to integration with the EU,
this group now seems to have the fastest decline, decreasing to 15.4% from the initial 22.3%. Where this change is coming from is hard to state, as SITC8 is a group with very differentiated commodities. An additional fall in SITC6 Manufactured goods classified by material occurred, leaving the sector with a 25.2% export share in 2005. What is yet more surprising is that the agricultural sector represented in SITC0 Food and live animals seems to be gaining a fraction of its earlier export value. It has earlier in this chapter been mentioned that Slovenia has showed signs of reorienting their more sensitive industries to trade with the EU back towards the former Yugoslav markets, in particular Croatia and Bosnia and Herzegovina, where Slovenia indeed has a comparative advantage over other EU economies. This can certainly be a possible explanation for the export increase of agricultural as well as chemical products. The latter sector additionally gained in share of total exports, by increasing to 13%.

Conclusively, Slovenia’s exports presented through the different SITC sections seem to be going towards specialization in SITC7 Machinery and transport equipment. This could have been expected, taking into consideration that large parts of this sector were liberalized early on in trade with the EU. Seeing as the EU is Slovenia’s by far largest trading partner, it is not surprising that the swift removal of customs duties in this group has had a positive effect on Slovenia’s exports. Although still the second largest group of exports, SITC6 Manufactured goods classified by material continues to drop in share of total exports. As earlier stated, this could be caused by the special regulations for clothes and textiles, usually considered as sensitive products in trading. It is furthermore difficult to draw any clear conclusions on the heavy decline in exports of SITC8 Miscellaneous manufactured articles, as this group consists of various types of product lines. The other smaller sections do not play a vital role in Slovenia’s exports and will thus not be analyzed further.

5.3.2 Slovenia’s import patterns

The integration with the EU and the removal of barriers to trade between Slovenia and its most important trading partner has boosted the country’s imports, especially during the last period which is analyzed. Imports to the EU have grown much faster than to other trading regions, something that could be attributed to the fact that there is not only a customs union in place with the EU, but also a single market, allowing for the removal of non-tariff barriers to trade. Total increase in imports for Slovenia during the analyzed period has been 52%, whereas imports to the EU grew by 55%.
### Table 5.3 Imports by sections of the SITC, percent

<table>
<thead>
<tr>
<th>SITC</th>
<th>Classification</th>
<th>1995</th>
<th>2000</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td><strong>Food and live animals</strong></td>
<td>6.3</td>
<td>5.1</td>
<td>5.2</td>
</tr>
<tr>
<td>1</td>
<td><strong>Beverages and tobacco</strong></td>
<td>0.6</td>
<td>0.6</td>
<td>0.6</td>
</tr>
<tr>
<td>2</td>
<td><strong>Crude materials, inedible, except fuels</strong></td>
<td>6.4</td>
<td>5.4</td>
<td>5.3</td>
</tr>
<tr>
<td>3</td>
<td><strong>Mineral fuels, lubricants, and related materials</strong></td>
<td>6.5</td>
<td>9.1</td>
<td>10.6</td>
</tr>
<tr>
<td>4</td>
<td><strong>Animal and vegetable oils, fats and waxes</strong></td>
<td>0.4</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>5</td>
<td><strong>Chemical products</strong></td>
<td>12.1</td>
<td>12.4</td>
<td>12.8</td>
</tr>
<tr>
<td>6</td>
<td><strong>Manufactured goods classified by material</strong></td>
<td>19.7</td>
<td>21.9</td>
<td>22.6</td>
</tr>
<tr>
<td>7</td>
<td><strong>Machinery and transport equipment</strong></td>
<td>35.5</td>
<td>34.1</td>
<td>32.6</td>
</tr>
<tr>
<td>8</td>
<td><strong>Miscellaneous manufactured articles</strong></td>
<td>10.6</td>
<td>11.0</td>
<td>9.9</td>
</tr>
<tr>
<td>9</td>
<td><strong>Commodities and transactions not classified elsewhere</strong></td>
<td>1.9</td>
<td>0.1</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Author’s own calculations

Slovenia’s imports in 1995 were mainly spread over four of the SITC sections, the main one being *SITC7 Machinery and transport equipment*, representing 35.5% of total imports. The other larger groups were, similarly to the export development, *SITC6 Manufactured goods classified by materials*, *SITC5 Chemical products*, and *SITC8 Miscellaneous manufactured articles*, which together amount to 42% of total imports. The remaining imports are primarily divided between the groups *SITC0 Food and live animals*, *SITC2 Crude materials, inedible, except fuels*, and *SITC3 Mineral fuels, lubricants, and related materials*.

By the year 2000, the import situation had not changed considerably, apart from the import being more evenly divided between the four dominating sections. They had in fact together increased their share of total imports, reaching nearly 80% in 2000. While *SITC7 Machinery and transport equipment* reduced its total import share to 34.1%, the remaining three sections progressed, albeit maximum increase by merely 2%. The greatest change can however be seen in *SITC3 Mineral fuels, lubricants, and related materials*, as this group experienced an increase by 29% during the years 1995-2000. In the same period, *SITC0 Food and live animals* decreased in value, a development that most certainly can be ascribed to the fact that this sector is one of the most protected ones in Slovenia’s imports from the EU. In this respect, one can make the assumption that the import increase for *SITC6*, which also is seen
as a group of sensitive products regarding trade with the EU, can be attributed to the increased trade with Asia that occurred during this period (see page 24).

The development that could be seen for the period 1995-2000 applies without any larger alterations also to the last studied period, 2000-2005. Apart from an additional increase for SITC3 Mineral fuels, lubricants, and related materials to 10.6%, the remaining smaller SITC groups have experienced diminishing value, and will thus not play an important role for deeper trade analysis. There has during this period, as during the earlier one, occurred a raise in imports of products falling in the groups SITC5 and SITC6, while SITC7 Machinery and transport equipment keeps decreasing its share of total imports. Furthermore, Slovenia has experienced a fall in imports of SITC8 Miscellaneous manufactured articles, which presents an overall negative development for this commodity group. Due to the diverse products in this section, it is difficult to show what has caused the fall of in SITC8.

Although experiencing a negative development in imports of industrial products falling into the group SITC7 Machinery and transport equipment, this remains Slovenia’s most important commodity group of imports. Seeing as the strongest increase in Slovenia’s exports has been in this section, it can be assumed that Slovenia has started to specialize in intra-industrial trade. This argument is additionally supported when examining Slovenia’s imports solely from the EU, which is the most interesting trading partner to analyze, considering that 81% of Slovenia’s imports came from this region in 2005. SITC7 was the commodity group with the most positive development in 2005, with a 35% share of imports from the EU (Eurostat 2006, 110). The trade patterns with the EU are studied more in detail on a disaggregated level in the following chapter. Slovenia has moreover experienced a total increase of 39% during 1995-2005 in the commodity sector SITC3 Mineral fuels, lubricants, and related materials, which can be explained by Slovenia’s strong economic and industrial development and thus an increase in demand for mineral fuels. Furthermore it can be noted that the normally sensitive sectors in regards to trade with the EU, that is SITC5 Chemical products and SITC6 Manufactured goods classified by materials, have strengthened their share of total imports to 12.8% and 22.6% respectively since the integration with the EU began. As previously mentioned, one can assume that the change in value accrues to imports from other trading regions, presumably Asia or the former Yugoslav states. Nevertheless, Slovenia seems to have continued to keep industrial products falling into the group SITC7 as the most important source of imports.
5.4 Welfare effects for Slovenia’s total trade in terms of trade creation and trade diversion on an aggregated level

Through the creation of the FTA between Slovenia and the EU, and in particular through the establishment of the customs union that followed in 2004, Slovenia has undergone certain redirections and reorientations of its trade flows. According to the integration theory presented in the previous chapter, reorientation of trade through the creation of an economically integrated area may result in trade creation through the access of a larger market, but also cause trade diversion away from economies excluded from the economic integration. As the aggregated data has presented, the trade diversion has proven not to be extensive in the case of Slovenia and the EU. Moreover, there are several other factors speaking in favor of positive welfare effects from the integration. This subchapter will therefore examine the possibilities of trade creation or the risks of trade diversion for Slovenia, seen from the aggregated results earlier presented in this chapter.

As Slovenia’s economy has grown, and over time started to economically catch up with some of the older members of the EU, the country has seen remarkable increases in exports and imports, as well as improved terms of trade. Since Slovenia committed to the path towards EU membership by signing the Europe Agreement in 1996, the country’s exports and imports have increased by 54% and 52% respectively. Not surprisingly, the strongest increases have been observed for the trade flows with the EU, although the rise in imports from the EU has increased more than exports to the region. Share of total exports that went to the EU markets, although not as high as at the end of the last decade, are still showing improvements, increasing from 64% in 1992 to 68% in 2005. Why the share of exports going to the EU are not even higher can be explained by Slovenia’s regaining export share in the former Yugoslav markets, as in fact Croatia and Bosnia and Herzegovina are two of Slovenia’s most important exporting regions. During the years 1992-2005, exports to other countries in Europe not included in the two earlier groups are also increasing. The outlook for imports from the EU is all the better, with EU shares of Slovenia’s total imports rising from 63% to 81% in 13 years. Owing to the standardization of rules of origin, as well as Slovenia’s ever larger focus on closeness to its trading partners, trade with the rest of the world has diminished. However, the analysis in this chapter has shown that trade has not only increased with the EU, but also with the other European economies, particularly regarding Slovenia’s exports. At the same time, Slovenia has undergone significant consolidation to the European Union’s customs procedures, which further facilitated import flows. Therefore the conclusion can be made that
there is an overall positive development and clear signs of trade creation as a result from the economic integration, at the same time as the trade diversion effects have been limited.

In the aggregated sector analysis, it is evident that exports in the industrial sector *SITC7 Machinery and transport equipment* has had the most positive progress, and has been the strongest contributor to Slovenia’s sound export development. Although *SITC7* has been losing import shares in total imports, it remains the most important import group with the EU (Mrak et al 2004, 342). It is as a result creating increased intra-industrial trade, which is a sign of Slovenia starting to specialize in this commodity area. The fact that also the EU is specialized in this industry sector creates competition and increased trade creation effects. Seeing as customs duties in this sector were initially low and also removed in an early stage of integration to the EU (which for example is not the case for the agricultural sector and for chemical products), this should have minimized the trade diverting effects and opened for additional trade creation.

During the time that the Europe Agreement was in place, the rules of origin could have signified a risk of trade diversion away from Slovenia’s non-EU trading partners. However, bearing in mind that Slovenia during this period had numerous preferential agreements with other trading partners and regions, this should be enough to minimize the trade diversion. This was proven by the increasing trade with other European economies outside of the EU. In particular Slovenia’s good knowledge of the former Yugoslav states has boosted trade with this region, resulting in trade creation effects. Furthermore, the rules of origin as well as borders controls were removed in connection with Slovenia’s accession to the EU in 2004, allowing for even smoother trade flows with the country’s closest trading partners in the north. Also Slovenia’s conformity to the Euro-area as of January 2007 will certainly diminish transaction costs and further increase trade.
6. SLOVENIA’S TRADE DEVELOPMENT ON A DISAGGREGATED LEVEL

To get a better idea of potential specialization in the Slovenian industry after the accession process got under way, Slovenia’s trade flows with the EU will be given a closer analysis. The top ten industrial groups are first presented on a disaggregated two-digit level, covering the period 1995-2005. This breakdown is next followed up by a three-digit level study of the SITC commodity group most traded with the EU, namely SITC7 Machinery and transport equipment. The chapter also analyses the welfare effects from the possible industry specialization for the two disaggregated levels respectively.

6.1 Slovenia’s trade with the EU on a two-digit disaggregated level

While Slovenia’s trade patterns with the whole world were scrutinized in the previous chapter, a more detailed picture of the country’s trade with the EU is presented on a two-digit SITC level. All industries are covered in an attempt to localize the sectors that have experienced the most positive development in trade between the regions.

6.1.1 Export patterns on a two-digit disaggregated level

Slovenia’s main commodity groups in exports to the EU are summarized in table 6.1, by presenting the top ten SITC classifications for the period 1995-2005. For every commodity group, the share of total exports to the EU is displayed.

Slovenia’s ten main export groups in 1995 collectively covered 65% of total exports to the EU. All ten of the sub-groups originated from the commodity groups SITC6 Manufactured goods classified by materials, SITC7 Machinery and transport equipment, and SITC8 Miscellaneous manufactured articles.

As SITC78 Road vehicles, SITC77 Electrical machinery, apparatus, and appliances thereof, and SITC74 General industry machinery all are part of the main trade creation group on an aggregated level, Slovenia showed already in the beginning of its pre-accession period strength in the industries of machinery and transport equipment. Together, these three sub-groups represented 28% of total exports to the EU.
<table>
<thead>
<tr>
<th>SITC</th>
<th>Classification</th>
<th>1995</th>
<th>SITC</th>
<th>Classification</th>
<th>2000</th>
<th>SITC</th>
<th>Classification</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>78</td>
<td>Road vehicles</td>
<td>13.87</td>
<td>78</td>
<td>Road vehicles</td>
<td>15.71</td>
<td>78</td>
<td>Road vehicles</td>
<td>20.27</td>
</tr>
<tr>
<td>84</td>
<td>Articles of apparel and clothing</td>
<td>10.75</td>
<td>77</td>
<td>Electrical machinery, apparatus, and</td>
<td>11.82</td>
<td>77</td>
<td>Electrical machinery, apparatus, and appliances</td>
<td>10.27</td>
</tr>
<tr>
<td></td>
<td>accessories</td>
<td></td>
<td></td>
<td>appliances thereof</td>
<td></td>
<td></td>
<td>thereof</td>
<td></td>
</tr>
<tr>
<td>77</td>
<td>Electrical machinery, apparatus, and</td>
<td>9.74</td>
<td>82</td>
<td>Furniture, bedding, mattresses…</td>
<td>7.42</td>
<td>82</td>
<td>Furniture, bedding, mattresses…</td>
<td>7.96</td>
</tr>
<tr>
<td></td>
<td>appliances thereof</td>
<td></td>
<td></td>
<td>accessories</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>82</td>
<td>Furniture, bedding, mattresses…</td>
<td>5.97</td>
<td>84</td>
<td>Articles of apparel and clothing</td>
<td>5.44</td>
<td>74</td>
<td>General industrial machinery and equipment</td>
<td>5.23</td>
</tr>
<tr>
<td></td>
<td>accessories</td>
<td></td>
<td></td>
<td>accessories</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>69</td>
<td>Manufactures of metals</td>
<td>4.70</td>
<td>68</td>
<td>Non-ferrous metals</td>
<td>4.76</td>
<td>68</td>
<td>Non-ferrous metals</td>
<td>4.72</td>
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<tr>
<td>74</td>
<td>General industrial machinery</td>
<td>4.15</td>
<td>69</td>
<td>Manufactures of metals</td>
<td>4.72</td>
<td>67</td>
<td>Iron and steel</td>
<td>4.24</td>
</tr>
<tr>
<td>65</td>
<td>Textile yarn, fabrics, and made-up</td>
<td>4.12</td>
<td>74</td>
<td>General industrial machinery</td>
<td>4.38</td>
<td>69</td>
<td>Manufactures of metals</td>
<td>4.07</td>
</tr>
<tr>
<td></td>
<td>articles</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>63</td>
<td>Cork and wood manufactures</td>
<td>4.04</td>
<td>64</td>
<td>Paper, paperboard, and articles</td>
<td>3.85</td>
<td>54</td>
<td>Medical and pharmaceutical prod.</td>
<td>3.41</td>
</tr>
<tr>
<td></td>
<td>thereof</td>
<td></td>
<td></td>
<td>thereof</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>64</td>
<td>Paper, paper boards, and articles</td>
<td>3.85</td>
<td>67</td>
<td>Iron and steel</td>
<td>3.44</td>
<td>89</td>
<td>Miscellaneous manufactures n.e.s.</td>
<td>3.01</td>
</tr>
<tr>
<td></td>
<td>thereof</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>67</td>
<td>Iron and steel</td>
<td>3.88</td>
<td>65</td>
<td>Textile yarn, fabrics, and made-up</td>
<td>3.41</td>
<td>71</td>
<td>Power generating machinery and equipment</td>
<td>2.84</td>
</tr>
<tr>
<td></td>
<td>articles</td>
<td></td>
<td></td>
<td>articles</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>65.07</strong></td>
<td><strong>Total</strong></td>
<td></td>
<td><strong>64.95</strong></td>
<td><strong>Total</strong></td>
<td></td>
<td><strong>66.02</strong></td>
</tr>
</tbody>
</table>

Source: Eurostat. Author’s own calculations
Worth mentioning is also that products falling in the sub-groups SITC84 Articles of apparel and clothing accessories, SITC82 Furniture, bedding, and mattresses, SITC65 Textile yarn, fabrics, and made-up articles, and SITC67 Iron and steel all were commodities liberalized at a later stage of the integration process, according to the Europe Agreement. They were thus so called sensitive products, with completed abolition of customs duties at the latest by 2001 (see chapter 3). In 1995, these sub-groups were 25% of total exports.

By the year 2000, the top ten sub-groups’ share of total exports had not changed in comparison to five years earlier, but had remained at 65%. Slovenia’s main commodity groups exported to the EU had furthermore stayed in the same SITC sections, with the exemption of increased exports of SITC68 Non-ferrous metals. However, there had been extensive redistributions between the sub-sections, as Slovenia started to increase its exports of machinery and road vehicles.

Exports falling in the earlier mentioned sensitive groups had also decreased by 5 percentage points to 20% in 2000. Most of these sub-groups had lost immense shares in total exports, where the largest decrease was seen for SITC84 Articles of apparel and clothing accessories. This group of commodities lost nearly 50% of its earlier export share. Moreover the goods in SITC67 Iron and steel as well as SITC65 Textile yarn, fabrics, and related products lost percentage points in comparison to the first year measured. However, SITC82 Furniture, bedding, and mattresses increased their share of exports to the EU, and have thus not been negatively affected by the gradual customs duty reductions applied to EU imports from Slovenia.

The most important change in Slovenia’s export patterns to the EU over the period 1995-2000 was the already mentioned increase in exports of commodities falling in SITC7 Machinery and transport equipment. The three sub-sections increased their share from 28% in 1995 to 32% in 2000, with the largest increase in SITC78 Road vehicles. This raise in transport equipment is the clearest sign of Slovenia’s specialization in transport equipment as well as in electrical and industrial machinery regarding the country’s exports to the EU.

It is during the last years of Slovenia’s export development that the country has shown clearest signs of specialization. Overall, Slovenia’s top ten SITC commodities on a two-digit level have increased their share of total exports to the EU by merely one percentage point.
during the period 2000-2005. However, the percentage increase in share of total exports for the group *SITC7 Machinery and transport equipment* at the top ten lists has been 29% for the period 1995-2005, which certainly indicates specialization in Slovenia’s industrial exports. Meanwhile, the sub-sections that have been affected by slower trade liberalization have lost a significant share of total exports to the EU.

As for the sensitive products, one could expected that these sub-sections would experience an increased share on the list of top ten commodities exported to the EU, as nearly all industrial trade was liberalized by 2002. However, when observing Slovenia’s exports on a two-digit disaggregated level, the sensitive products in *SITC84 Articles of apparel and clothing accessories* as well as *SITC65 Textile yarn, fabrics, and made-up articles* lost the 9% share of exports that they held in year 2000. Furthermore, Slovenia could uphold the strong exports of commodities falling in *SITC82 Furniture, bedding, and mattresses*, as this sub-group managed to keep its place as the third largest export section to the EU on a two-digit level. Exports of *SITC67 Iron and steel* have however been increased to 4.24%, as this group regained its lost shares of total exports from Slovenia’s trade period prior to EU integration.

Slovenia’s exports to the EU of products in *SITC64 Paper, paperboards, and articles thereof* have decreased, and have instead been replaced by products in other SITC commodity groups, one of them being *SITC89 Miscellaneous manufactures*. What is more interesting is that Slovenia’s strong overall export increase of products in *SITC5 Chemicals and related products* are starting to show in the country’s exports to the EU. In 2005, commodities in *SITC54 Medical and pharmaceutical products* held 3.41% of total exports to the EU.

As to Slovenia’s main exports, these fall into the already mentioned sector, *SITC7 Machinery and transport equipment*. As was ten years ago, the largest sub-group for exports is still *SITC78 Road vehicles*, where the share of total exports has increased from 13.87% in 1995 to 20.27% in 2005. Although the value of *SITC77 Electrical machinery, apparatus, and appliances thereof* has decreased slightly the past few years, overall the development has been positive for the measured period. The same positive result has been noted for *SITC74 General industrial machinery and equipment*, as this sub-section was the fourth largest export group for Slovenia in 2005. Also a forth *SITC7* group has had a positive outcome. Slovenia has experienced increases of exports of *SITC71 Power generating machinery and equipment*. Taken as a whole, these four *SITC7* sub-commodity groups together make up 39% of
Slovenia’s exports to the EU, an improvement by 11 percentage points from 1995. The conclusion can thus be made that, just as it has been presented on an aggregated level, Slovenia has specialized towards industrial production within the commodity group \textit{SITC7}. This specialization has been yet clearer on the two-digit disaggregated level, more specifically when focusing on Slovenia’s exports to the other EU member economies.

\textbf{6.1.2 Import patterns on a two-digit disaggregated level}

Turning to Slovenia’s imports, it has earlier been shown that the commodity group \textit{SITC7 Machinery and transport equipment}, in relation to Slovenia’s total imports on an aggregated level, has been losing percentage shares. It will now be examined if the country’s specialization in the above mentioned industrial sector could also be seen in its imports, when concentrating on imports from the EU on a two-digit disaggregated level. This is significant to analyze as to determine if there has been advancement in intra-industrial trade between Slovenia and the other EU members during the accession. The period 1995-2000 is therefore also used in this analysis.

Slovenia’s main imports from the EU in 1995 in the first stage of integration consisted to a great part of products from the commodity group \textit{SITC7 Machinery and transport equipment}. Five of the ten main sub-sections on a two-digit level came from this group. Overall, these top-ten commodity groups amounted to 54\% of Slovenia’s total imports from the EU.

As in the case of Slovenia’s exports in 1995, textile products and apparel still played a noteworthy role for imports from the EU. \textit{SITC65 Textile yarn, fabrics, and related products} and \textit{SITC84 Articles of apparel and clothing accessories}, together with other sectors sensitive to trade with the EU, such as \textit{SITC69 Manufactures of metals} and \textit{SITC67 Iron and steel} made up 17\% of total imports. However, it was in 1995 clear that imports from the EU were mainly transport equipment as well as other electrical and industry specific machinery. To give a few examples, \textit{SITC78 Road vehicles} was the most important source of imports, with 14.87\% share of total imports. Furthermore imports of products in the commodity groups \textit{SITC72 General industrial machinery equipment}, \textit{SITC77 Electrical machinery, apparatus, and appliances}, as well as \textit{SITC72 Machinery specialized for specific industries} amounted to 15\%. Jointly, the five sub-sections falling into \textit{SITC7} represent 33\% of Slovenia’s imports from the EU.
<table>
<thead>
<tr>
<th>SITC</th>
<th>Classification</th>
<th>1995</th>
<th>SITC</th>
<th>Classification</th>
<th>2000</th>
<th>SITC</th>
<th>Classification</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>78</td>
<td>Road vehicles</td>
<td>14.87</td>
<td>78</td>
<td>Road vehicles</td>
<td>12.81</td>
<td>78</td>
<td>Road vehicles</td>
<td>12.93</td>
</tr>
<tr>
<td>65</td>
<td>Textile yarn, fabrics, and related products</td>
<td>7.50</td>
<td>77</td>
<td>Electrical machinery, apparatus, and appliances</td>
<td>6.59</td>
<td>33</td>
<td>Petroleum, petroleum products, and related materials</td>
<td>6.16</td>
</tr>
<tr>
<td>74</td>
<td>General industrial machinery equipment n.e.s.</td>
<td>5.71</td>
<td>33</td>
<td>Petroleum and petroleum products</td>
<td>5.68</td>
<td>77</td>
<td>Electrical machinery, apparatus, and appliances</td>
<td>6.14</td>
</tr>
<tr>
<td>77</td>
<td>Electrical machinery, apparatus, and appliances</td>
<td>4.92</td>
<td>74</td>
<td>General industrial machinery</td>
<td>5.49</td>
<td>67</td>
<td>Iron and steel</td>
<td>6.00</td>
</tr>
<tr>
<td>72</td>
<td>Machinery specialized for particular industries</td>
<td>4.69</td>
<td>67</td>
<td>Iron and steel</td>
<td>5.31</td>
<td>74</td>
<td>General industrial machinery</td>
<td>4.73</td>
</tr>
<tr>
<td>89</td>
<td>Miscellaneous manufactures n.e.s.</td>
<td>3.79</td>
<td>69</td>
<td>Manufactures of metals</td>
<td>4.18</td>
<td>69</td>
<td>Manufactures of metals</td>
<td>4.00</td>
</tr>
<tr>
<td>69</td>
<td>Manufactures of metals n.e.s.</td>
<td>3.60</td>
<td>65</td>
<td>Textile yarn, fabrics, made up materials….</td>
<td>3.90</td>
<td>65</td>
<td>Textile yarn, fabrics, made up articles…</td>
<td>3.22</td>
</tr>
<tr>
<td>67</td>
<td>Iron and steel</td>
<td>3.47</td>
<td>84</td>
<td>Articles of apparel and clothing accessories</td>
<td>3.47</td>
<td>72</td>
<td>Machinery specialized for particular industries</td>
<td>3.06</td>
</tr>
<tr>
<td>71</td>
<td>Power-generating machinery and equipment</td>
<td>2.89</td>
<td>72</td>
<td>Machinery specialized for certain industries</td>
<td>3.31</td>
<td>89</td>
<td>Miscellaneous manufactures</td>
<td>3.04</td>
</tr>
<tr>
<td>84</td>
<td>Articles of apparel and clothing accessories</td>
<td>2.52</td>
<td>89</td>
<td>Miscellaneous manufactures</td>
<td>2.77</td>
<td>71</td>
<td>Power-generating machinery</td>
<td>2.74</td>
</tr>
<tr>
<td>Total</td>
<td>53.96</td>
<td>Total</td>
<td>53.51</td>
<td>Total</td>
<td>52.02</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Eurostat. Author’s own calculations
After the Europe Agreement came into force in 1997, special provisions were put up for agricultural products, base metals, electrical machinery, vehicles, as well as textile commodities. Seeing as Slovenia even prior to integration did not have much trade in agriculture with the EU, imports of products in this section did not significantly affect overall trade flows between the two regions. Furthermore, imports of SITC65 Textile yarn, fabrics, and made-up materials lost nearly 50% percent of its earlier import value, whereas SITC84 Articles of apparel and clothing accessories increased by one percentage point.

Imports of SITC77 Electrical machinery, apparatus, and appliances increased from 4.92% to 6.59% in 2000. However, imports of all other sub-sections in the commodity group SITC7 fell, decreasing the overall import value to 28% in 2000. As already mentioned, electrical machinery and road vehicles were two of the commodity groups that were subject to gradual elimination of customs duties on imports into Slovenia, something that certainly may have affected inflows into Slovenia. Conversely, imports of SITC67 Iron and steel and SITC69 Manufactures increased their share of total imports. Just as the import increase of SITC33 Petroleum and petroleum products, this can be explained by Slovenia’s increased specialization during the period 1995-2000 and thereof increased demand for base metals and input materials for production.

Slovenia’s imports from the EU grew rapidly during the years 1995-2005, faster than imports from any other economic region in the world. The overall import increase from the EU was 55%. Accordingly, one would assume that import shares of the most common sub-groups would increase. This is however not the case for Slovenia, as the top ten commodity groups for imports lost share from 54% to 52% of total imports from the EU.

The variation between different SITC groups has also increased, although they are concentrated to industrial products and input material necessary for production. For instance, SITC65 Textile yarn, fabrics, and made-up articles, and SITC89 Miscellaneous manufactures jointly decreased in shares of total imports from 11.29% to 6.26% during the years 1995-2005. SITC84 Articles of apparel and clothing accessories is no longer among the ten most imported commodity groups. This is a further sign of Slovenia’s increased specialization.

In view of the fact that trade between Slovenia and the EU was almost completely liberalized by the end of 2002, and that Slovenia has increased production as well as exports of products
in SITC7, the expected development on the two-digit SITC level would be increased imports of products in this SITC group. Nonetheless, SITC78 Road vehicles, SITC74 General industrial machinery, SITC72 Machinery specialized for particular industries, and SITC71 Power-generating machinery have all lost shares of total imports. The only SITC7 subsection where Slovenia has observed increased import shares has been SITC77 Electrical machinery, apparatus, and appliances. Imports of SITC77 have grown from 4.92% to 6.14% during the examined period. On the whole, sub-groups of SITC7 have lost shares on the top-ten list, from 33% in 1995 to 30% in 2005. It is however important to keep in mind that the main SITC group regarding imports from the EU in 2005 on an aggregated level was SITC7. This supports the argument that Slovenia has in fact specialized within this specific production section.

6.1.3 Welfare effects for Slovenia’s total trade on a two-digit disaggregated level in terms of trade creation and trade diversion

When observing Slovenia’s export development on a disaggregated level, it is evident that the trade creation effects seen in exports to the EU for the years 1995-2005 have their origin in products that are a part of the commodity group SITC7 Machinery and transport equipment. With four of the top ten sub-groups exported to the EU, this SITC sector held 43% of total exports to the EU in 2005. More specifically, Slovenia has specialized in exports SITC78 Road vehicles, SITC77 Electrical machinery, apparatus, and appliances, SITC74 General industrial machinery, and SITC71 Power generating machinery and equipment. It is in fact increased trade with similar products which can generate higher competition and thus trade creation (Robson 1998, 38ff). Therefore, future positive results from Slovenia’s integration to the EU can be expected. The results from the analysis of Slovenia’s imports from the EU do not as clearly show evidence of trade creation within the commodity group SITC7, as most of the SITC7 sub-groups have lost shares among the top ten imported commodity groups. The four sub-sections are however the same as for Slovenia’s exports, which clearly shows that the country in fact is increasingly trading with intra-industry products with its main trading partner. Seeing as the sectors falling in SITC7 are also by far the strongest export as well as import groups for the EU as a whole, this suggests strong possibilities for increased intra-industry trade between Slovenia and the other EU economies, which in turn can give rise to additional trade creation effects.
6.2 Trade with the EU on a three-digit disaggregated level

Thus far, this thesis has illustrated how the development of Slovenia’s trade, particularly with the EU, has gone in a direction of trade creating specialization in the SITC7 section *Machinery and transport equipment*. As the trade patterns have been examined on a two-digit disaggregated level, the ever increasing specialization in road vehicles and electrical machinery could be confirmed. Nevertheless, the manufacturing section SITC7 consists of more sub-sections, for instance the two above mentioned as well as power-generating machinery and office machines. It is therefore interesting to complete further analysis of this specialized area and to observe if the larger parts of trade with the EU have been in a particular industry. For that reason, Slovenia’s SITC7 trade with the EU is examined in more detail. The last section of this chapter attempts to summarize the findings and distinguish if exports and imports have been evolving in the same industry, and accordingly showing evidence of intra-industrial trade with the EU.

6.2.1 Exports on a three-digit disaggregated level

In view of the fact that Slovenia has specialized in exports of machinery and transport equipment, it makes this SITC commodity group of special interest for static welfare and intra-industry specialization. This sub-chapter therefore presents the changes in export patterns to the EU on a three-digit disaggregated level over the period 1995-2005.

**Table 6.3  Top five export groups to the EU, three-digit level 1995 and 2005, percent of total SITC7 exports**

<table>
<thead>
<tr>
<th>1995</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>781  Motor cars designed for transport of persons</td>
<td>781  Motor cars designed for transport of persons</td>
</tr>
<tr>
<td>775  Household-type electrical and non-electrical equipment</td>
<td>775  Household-type electrical and non-electrical equipment</td>
</tr>
<tr>
<td>778  Electrical machinery and apparatus n.e.s.</td>
<td>778  Electrical machinery and apparatus n.e.s.</td>
</tr>
<tr>
<td>716  Rotating electric plant and parts thereof</td>
<td>716  Rotating electric plant and parts thereof</td>
</tr>
<tr>
<td>784  Parts and accessories of motor vehicles</td>
<td>784  Parts and accessories of motor vehicles</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1995</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>30.83</td>
<td>34.10</td>
</tr>
<tr>
<td>15.76</td>
<td>12.01</td>
</tr>
<tr>
<td>5.94</td>
<td>8.21</td>
</tr>
<tr>
<td>5.70</td>
<td>6.32</td>
</tr>
<tr>
<td>5.14</td>
<td>4.98</td>
</tr>
</tbody>
</table>

Source: Eurostat. Author’s own calculations
When broken down in a three-digit level table, Slovenia’s exports in 1995 show large productions of road vehicles being exported to the EU. 36% of top five SITC7 exports on a three-digit level came from the commodity groups SITC781 Motorcars designed for transport of persons and SITC784 Parts and accessories of motor vehicles. Furthermore, SITC778 Electrical machinery and apparatus n.e.s. is primarily associated with electrical parts and appliances used in motor vehicle manufacturing. The other large group of exports was household apparatus, which in form of SITC775 Household-type electrical and non-electrical equipment held 12% of total SITC7 exports. The reason for this is that Slovenia already during its time as a republic in SFR Yugoslavia produced household appliances under the internationally acknowledged name Gorenje, which still plays an important role in Slovenia’s manufacturing. A fifth strong export group in 1995 was SITC716 Rotating electric plant and parts thereof.

By 2005, Slovenia’s main sub-groups of SITC7 being exported to the EU were fairly unchanged, aside from SITC784 Parts and accessories of motor vehicles falling off the top-five list of main export sectors, and instead being replaced by SITC786 Trailers and semitrailers. Together with SITC781 and SITC778\(^\text{16}\), Slovenia’s exports of commodities in the automotive industry had risen to 48% of main SITC7 exports. At the same time, exports of household appliances falling under SITC775 had lost 4% of their export share; this group however still plays a traditionally important role in Slovenia’s manufacturing. Slovenia is showing clear evidence of export specialization in motor vehicles, which also can be interpreted as a sign of Slovenia moving towards higher-value-added production and specialization in capital intensive industries, a main one being the automotive industry (WTO 2002, 66).\(^\text{17}\) This is generally a development that has been noticeable for many of new EU members in Central and Eastern Europe, where the increasing capital intensive production further has induced FDI inflows to this region (Barell and Holland 2000, 479). It is also worth mentioning that that the specialization in automotives has partially taken the shape of intermediate goods that can later be used in production of an end product (see explanation of vertical specialization in chapter 4). As the import development of SITC7 is studied, possible vertical specialization will be even more evident.

\(^{16}\) When examined on a five-digit disaggregated level, Slovenia’s exports to the EU in 2005 of the commodity group SITC778 were mainly in the sectors SITC778.31 and SITC778.35, both which are mainly electrical starting and signaling equipment used for motor vehicles.

\(^{17}\) It has in chapter five been presented that Slovenia also has increased its exports of chemical products to the whole world on an aggregated level also have, another capital intensive industry.
6.2.2 Imports on a three-digit disaggregated level

Similarly to Slovenia’s exports, a breakdown of the import development from its main trading partner is crucial when determining the type of trade specialization that has occurred since Slovenia started the integration process with the EU. Imports of products in the main aggregated commodity group are broken down and the five main three-digit level groups for 1995 and 2005 respectively are presented.

Table 6.4 Top five import groups to the EU, three-digit level
1995 and 2005, percent of total SITC7 imports

<table>
<thead>
<tr>
<th>1995</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>781</td>
<td>781</td>
</tr>
<tr>
<td>Motor cars for transport of persons</td>
<td>Motor cars and for transport of persons</td>
</tr>
<tr>
<td>20.98</td>
<td>15.89</td>
</tr>
<tr>
<td>784</td>
<td>784</td>
</tr>
<tr>
<td>Parts and accessories of motor vehicles</td>
<td>Parts and accessories of motor vehicles</td>
</tr>
<tr>
<td>10.44</td>
<td>12.77</td>
</tr>
<tr>
<td>713</td>
<td>713</td>
</tr>
<tr>
<td>Internal combustion piston engines</td>
<td>Internal combustion piston engines</td>
</tr>
<tr>
<td>5.19</td>
<td>5.90</td>
</tr>
<tr>
<td>728</td>
<td>728</td>
</tr>
<tr>
<td>Other machinery and equipment</td>
<td>Other machinery and equipment</td>
</tr>
<tr>
<td>4.51</td>
<td>5.29</td>
</tr>
<tr>
<td>782</td>
<td>782</td>
</tr>
<tr>
<td>Motor vehicles for the transport of goods</td>
<td>Motor vehicles for the transport of goods</td>
</tr>
<tr>
<td>4.22</td>
<td>5.29</td>
</tr>
<tr>
<td>752</td>
<td>752</td>
</tr>
<tr>
<td>Automatic data-processing machines</td>
<td>Automatic data-processing machines</td>
</tr>
<tr>
<td>4.18</td>
<td>4.18</td>
</tr>
</tbody>
</table>

Source: Eurostat. Author’s own calculations

Even more than for Slovenia’s exports, the country’s import development shows a specialization in motor vehicles and related appliances in the automobile industry. In 1995, four of the five most imported commodity groups under Slovenia’s specialized area SITC7 fell in the category of automotives. The four sub-sections SITC781 Motor cars and other motor vehicles for transport of persons, SITC784 parts and accessories of motor vehicles, SITC713 Internal combustion engines, and SITC782 Motor vehicles for the transport of goods together make up 41% of all imported products under the most important group SITC7. SITC728 Other machinery and equipment consists of rather heterogeneous products and these results are therefore ambiguous.

During the period 1995-2005, these four sub-groups of SITC7 had remained the most imported ones, and by 2005 only SITC728 had been replaced by SITC752 Automatic data-

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18 Nearly all imports of SITC713, when broken down to a five-digit disaggregated level show imports of diesel engines and other combustion engines used for automobiles. This goes for imports in 1995 as well as in 2005.
processing machines. The import increase of SITC728, which mainly consists of office equipment, is a sign of specialization in a more advanced industry and extended use of capital-intensive products. However, Slovenia’s imports of SITC781 have decreased significantly, from the earlier 21% to 16% of main SITC7 imports in 2005. At the same time, imports of SITC784 have been stepped up by nearly three percentage points. This increase in imports of automotive parts, in combination with the augmented exports of motor vehicles, is clearly signaling increased intra-industrial trade with products in the commodity group SITC78 Motor vehicles, where Slovenia is importing auto parts and then to a larger extent exporting motor cars and trailers.

6.2.3 Welfare effects for Slovenia’s trade on a three-digit disaggregated level in terms of trade creation and trade diversion

The commodity group SITC7 Machinery and transport equipment, which is where Slovenia’s trade with the EU has expanded the most, has hence been the most interesting one for a deeper analysis, for which the three-digit disaggregated SITC statistics will be used. The major export increase has been within the sub-section SITC781, a development that parenthetically also has emerged in Slovenia’s trade with other regions in the world (Eurostat). This indicates that Slovenia’s EU integration has not resulted in trade diversion towards the member states and away from other trading partners, but instead stimulated Slovenia’s exports of the specialized products. Overall, the five most exported products have increased their share of total SITC7 exports by 3%. The trade creation effect is not as evident for the most imported sub-groups, as imports of SITC781 have decreased with 5%. Nevertheless, imports of the other three sub-groups which have been examined and which can be associated with automobile manufacture have collectively increased their share of SITC7 imports by the same amount.

The signals of intra-industry trade between Slovenia and the EU that have been noticeable on the aggregated as well as two-digit disaggregated analysis are again being confirmed on this three-digit disaggregated level of the SITC7 group. This specialization can as already mentioned result in trade creation effects, something that certainly is apparent in the case of Slovenia.19 How the intra-industrial specialization within the motor vehicle industry has evolved over the past eleven years will be further examined in the next chapter.

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19 The increase of Slovenia’s trade with the EU during the period 1995-2005 has been 43% for products falling into commodity group SITC781 and as much as 68% for SITC784. Source: Eurostat
7. SPECIALIZATION IN INTRA-INDUSTRY TRADE

It has been explained in section 4.5 that economic integration may give rise to economies of scale and production of differentiated products. Theory also suggests that the trade creation effects of integration will be more extensive, the more the production differentiation is subject to economies of scale, that is to say, the welfare effects will be greater when trade in products from the same industry increases (Grubel & Lloyd, 1975). In the case of Slovenia and the EU, it has in chapter 6 been illustrated that precisely this development is observable to a high degree, ever since the initial stages of the integration process. This increasing trade with competitive commodities raises the notion that specialization in intra-industry trade between Slovenia and the EU has occurred.

Chapter 7 attempts to more in depth examine the specialization that has occurred in Slovenia’s trade with the EU. By calculating the level of intra-industry specialization for the crucial commodity group SITC7 Machinery and transport equipment, it is possible to conclude if Slovenia through increased intra-industry trade has managed to utilize its access to the greater EU-market and accordingly larger economies of scale. First, the measurement used for intra-industry calculation is presented. Thereafter, Slovenia’s overall most important commodity group, SITC78 Road vehicles is tested for inter- and intra-industry trade levels. This is followed by a comparative study on three different sub-groups to SITC7 using a three-digit disaggregation. The last section is a short discussion on the findings.

7.1 Measuring intra-industry trade

The most common measurement used when examining specialization in intra-industry trade is the one presented by Grubel and Lloyd (1975). It calculates the level of specialization by connecting total trade, inter-industry trade, and intra-industry trade in a specific industry. Total trade is given by the sum of exports and imports in industry \(i\), \((X_i + M_i)\), while inter-industry trade is net exports or net imports as a share of total trade. Inter-industry trade can therefore be written as followed:

\[
\text{Inter-industry trade} = \frac{|X_i - M_i|}{X_i + M_i}
\]  

(7.1)

A country’s intra-industry trade (IIT) is the total trade value that remains after the inter-industry trade of the sector had been subtracted, i.e. \((X_i + M_i) - |X_i - M_i|\). It is also
convenient to define the measure as percentage of total trade and thus make comparisons between industries possible. This would consequently give us:

\[ IIT = 1 - \frac{|X_i - M_i|}{(X_i + M_i)} \]  

(7.2)

Accordingly, the Gruber&Lloyd (G&L) index is defined as a variable between 0 and 1. When the specialization value is 0, this implies that all traded commodities for a specific country and in a specific industry sector come from inter-industry specialization. On the contrary, when reaching 1, all trade is intra-industrial and by definition, trade then fully consists of similarly produced commodities. The G&L index is very useful when determining levels of IIT and can be used for trade between countries as well as groups of countries. However, a discussion can always be made regarding the definition of an industry. Various classifications of commodities can be applied, for instance the Harmonized System, Combined Nomenclature, or SITC. Furthermore, chapter 6 has shown that Slovenia’s specialization in motor vehicles was not concentrated merely to trade with products falling in the commodity group \textit{SITC78 Motor vehicles}, but commodities used in production of automotives were partially coming from \textit{SITC71 Power-generating equipment}, which makes the definition of an industry even more crucial. Nonetheless, considering the scope of this paper, the study on intra-industry trade will be concentrated to the sector that so far has been the main focus of this thesis, i.e. \textit{SITC7 Machinery and transport equipment} and the definition of the automotive industry will be limited to the sub-group \textit{SITC78 Motor vehicles} on a two-digit disaggregated level. The disaggregation on a three-digit level will go a step further and divide the group \textit{SITC78} into sub-industries of motor cars and parts used in production of motor vehicles.

7.2 Inter- and intra-industry trade in Slovenia’s main trading sector on a two-digit disaggregated level

By examining the intra-industry trade patterns, it is possible to distinguish to what extent Slovenia’s exports to and imports from the EU have been carried out in the same industries. This examination is initially carried out by doing a short analysis of Slovenia’s trade with the EU on a two-digit disaggregated level. The focus will be on the commodity sector \textit{SITC78 motor vehicles}. 
Figure 7.1 Inter-and intra-industry trade between Slovenia and the EU for SITC78 Road vehicles, 1995-2005, percent

Source: Eurostat. Author’s own calculations

Figure 7.1 exemplifies the specialization in inter- and intra-industry trade between Slovenia and the EU for Slovenia’s main export and import group on a two-digit disaggregated level. This distribution was calculated according to the Grubel&Lloyd index illustrated in the formulas 7.1 and 7.2. Not surprisingly, specialization is dominated by intra-industry trade. It is however clear that the low disaggregation to two-digits when examining the road vehicle industry results in figures that show extremely high IIT as share of total trade. This could also be observed when trade with the EU was presented in the sub-chapter 6.1, where both exports and imports were dominated by the commodity sector SITC78. The IIT share of total trade saw an 8% increase from 87% in 1995 to 95% in 2005, reaching its highest point in 2001. This significantly high outcome makes it even more interesting to examine Slovenia’s IIT specialization on a three-digit disaggregated level, for the purpose of localizing the most advanced sectors in trade with the EU.

7.3 Intra-industry trade in Slovenia’s main trading sector on a three-digit SITC level

Given the outcomes of the Slovenia-EU trade on a three-digit disaggregated level in chapter 6, one would expect to see falling intra-industry specialization in the commodity group most traded with, i.e. SITC781 Motor cars designed for transport of persons, seeing as exports in this sector have increased while imports diminished during the period 1995-2005. In addition, the three-digit disaggregation illustrated significant changes in two other major trading sectors – SITC775 Household-type electrical and non-electrical equipment and SITC784 Parts and accessories of motor vehicles. These three industries are therefore particularly interesting to study from an intra-industry specialization perspective. Figure 7.2 depicts the development of
Slovenia’s IIT specialization in the industries SITC781, SITC784, and SITC775. As in the earlier analysis, the G&L index for intra-industry specialization in formula 7.2 is applied for the examination.

Figure 7.2 Intra-industry trade between Slovenia and the EU for SITC781, SITC784, and SITC775, 1995-2005, percent

![Intra-industry trade between Slovenia and the EU for SITC781, SITC784, and SITC775, 1995-2005, percent](image)

Source: Eurostat. Author’s own calculations

The assumptions made about changes in specialization are proven to be right, in particular for the industry sectors falling into the previously studied commodity group SITC78. While the share of total SITC7 exports for the sub-group SITC781 rose for the years 1995-2005, the import share in the same sector decreased with 5 percentage points. Figure 7.2 illustrates the negative correlation between these two factors, expressed in IIT. Although this specific sector has seen improvements in its IIT, the overall development has been negative as IIT decreased from 96% in 1995 to 85% in 2005. The advancement of IIT in SITC784 is all the more interesting, as this is the sector with the most noteworthy change. Specialization in IIT for this sub-sector of the automotive industry has advanced from 53% in 1995 to 77% in 2005, representing a total increase of 30%. As SITC784 represents one of the main trading groups for Slovenia on a three-digit disaggregated level, one would presume that this is similarly the group with the highest level of IIT specialization. A relatively small, nevertheless a steady increase in IIT is also detectable in Slovenia’s IIT patterns for the sector SITC775. The rise from 35% to 44% during the examined period indicates that the long-established industry of domestic appliances still plays a vital role in Slovenia’s trade with its EU-partners.

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20 Appendix II illustrates the distribution of inter- and intra-industry trade for the three industry sectors separately.
7.4 Summary
What can be extracted from the two-digit disaggregated level is mainly that Slovenia’s specialization in the motor vehicle industry vis-à-vis trade with the EU has been subjected to exceptionally high levels in IIT, even during the first phase of integration. This makes the closer study all the more central. As the IIT in products falling under SITC781 have experienced a descending trend, the conclusion can be made that Slovenia’s trade with the EU has moved towards vertical specialization, i.e. specialization in intermediate goods that are being exported for further manufacture in other EU-countries and later re-imported as various types of motor vehicles. This could be observed in the trade-flow analysis in section 6.2. As regards to the high IIT upsurge for the industry sector SITC784, it is obvious that is here that Slovenia has primarily exploited economies of scale by having access to the larger EU-market through removal of trade barriers with the country’s main trading partners. It is in this matter that Slovenia can achieve higher trade liberalization and lower adjustment costs (Greenaway 1988, 275).
8. SUMMARY AND CONCLUDING REMARKS

The purpose of this thesis was to analyze Slovenia’s integration with the EU and the welfare effects on the Slovene economy, in terms of trade creation and trade diversion. Furthermore the intention was to examine in which industries or industry has Slovenia specialized and what form of specialization has had the strongest advance. To answer the first question, a historical background of Slovenia’s economic policies prior to EU-accession has been presented as well as requirements for accession put on the EU candidates. For all of the twelve new EU members, the accession to the European Union was crucial, above all as a way for the countries to reach higher political stability and economic prosperity. Some of the most important economic criteria for accession were commitments to the aim of an economic and monetary union and a functioning market economy. Slovenia’s specific political background as a republic in former Yugoslavia, were a “milder” form of socialism with self-management and social ownership was applied allowed Slovenia to have a much smoother and more effective transition to a market economy than most of the other Central and East European states.

Once preparations for EU-accession got around, Slovenia could fully focus on meeting the obligations in the Europe Agreement, primarily regarding gradual elimination of customs duties. As the country’s tariff levels prior to integration were higher than the European Union’s, and since the more hurried trade liberalization was in sectors most significant for Slovenia’s exports, for instance automotive and other machinery production, this allowed for extensive trade creation for Slovenia. Since Slovenia had a greater need for adjustment to the economic integration, its import duties on products from the EU were liberalized in a later stage of integration that those of the EU. Moreover, the cumulation of origin covering numerous EU trading partners outside of the Union’s borders provided Slovenia with an even wider free trade area. By making the transition from a free trade area to a customs union in 2004, Slovenia abandoned its earlier trade politics and joined the trade policies of the EU, applying common customs duties on commodities from non-member trading partners as well as adopting EU-policy in such areas as agriculture and steel.

This paper has used the theory of economic integration for analysis of the economic welfare effects that arise when countries and regions engage in this deeper form of trade cooperation. The two forms of integration most relevant to the case study on Slovenia and the EU are free trade areas and customs unions. According to theory, the expected static welfare effects with
one open economy and the other initially closed are trade creation effects for the both integrated members. The transition from the free trade area to a customs union that Slovenia underwent when joining the EU in 2004 could have had a negative effect on its trading partners outside the EU. However, the aggregated empirical study on Slovenia’s trade patterns showed that although the biggest trade increase has been with the EU, particularly exports from other regions in the world have been flourishing and thus weakening the trade diversion effects of the economic integration. Moreover, the empirical research has confirmed that the highest levels of trade creation have been within manufacturing, more specifically within the commodity group *SITC7 Machinery and transport equipment*. At the same time, products for which trade barriers have been liberalized later on during the accession period, such as agricultural and textile products have largely lost share in total export and import values.

When examining Slovenia’s trade patterns with the EU on a disaggregated level, it was clear that the object of the country’s specialization was the sub-industry to the commodity group *SITC7*. As both exports and imports of products in this sector have increased, the conclusion can be made that Slovenia’s firms have focused on vertical specialization, that is to say manufacture of intermediate goods used for further production as well as intra-industry trade. Moreover, the motor vehicle industry is a sector that requires large amounts of skilled labor and capital intensive production, a verification that Slovenia is moving towards economic standards similar to the levels of its Western European trading partners.

An issue regarding Slovenia’s specialization in motor vehicles that can be further scrutinized is to what extent this industry has welcomed foreign direct investment, and how this inflow is expected to evolve as the economic and monetary integration with the EU deepens. One could assume that the relatively cheaper labor force that is available in Slovenia in comparison to the western EU-partners, nevertheless skilled labor force, would attract further inflows of FDI into the country’s manufacture industry. Until now it has been the banking sector that has attracted most of the FDI (WTO 2002). However, the overall FDI development in Slovenia has been relatively weaker than in other CEE economies. One explanation to this has been the method of privatization, which has focused on internal takeovers and capital controls of domestic ownership, not leaving much room for foreign investment. Nevertheless, Slovenia has experienced changes in institutional structures and privatization policies in recent years, which makes FDI in automotive and related industries all the more appealing for more exhaustive analysis.
9. REFERENCES


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Sources of data

Eurostat-Comext, European Commission

10. APPENDIX

Appendix I  Map over Europe

- European Union members
- Non-European Union members
Appendix II  Inter- and intra-industry trade on a three-digit disaggregated level

Inter- and intra-industry trade for
SITC781 Motor cars designed for transport of persons

Source: Eurostat. Author’s own calculations

Inter- and intra-industry trade for
SITC784 Parts and accessories of motor vehicles

Source: Eurostat. Author’s own calculations
Inter- and intra-industry trade for
SITC775 Household-type electrical and non-electrical equipment

Source: Eurostat. Author’s own calculations