

Economic Integration

Refrigeration Market Germany

Research for Beijer G&L

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1. Introduction

In our master thesis we want to investigate how the extensive and intensive trading is affecting Germany's air condition industry. We are going to focus on countries located in Europe and divide them in to five different sections. The data that we are using comes from OECD and the time length for the data set is from 1997-2007. Our thesis is divided into five different parts. We begin to explain how Germany has developed from a country with huge problems after the World War 2 to become Europe's largest economy. Part number three explains different types of models that are often connected to trade creation and trade diversion. We then continue with our results that we have found and give some comments about this. In the fifth section we have our own conclusions presented about the master thesis and what we think about the potential growth for this market.

1.1 Outline

The main objective is to see whether the economic integration in the 90's and in the early 00 have affected the trade pattern of Germany in air condition related products. Happenings that are interesting to study are the EU membership, how the development and expansion of infrastructure effects trading and how the period after the wall has affected Germany's trading. During the last decades trading has become easier for countries and we would like to study the effects from that on the branch for cooling systems and AC. When trading has become easier this might create new types of products and product segments, so the possibility of improvement among producers might increase.

2. Background information

In this section we will present a number of academic articles to give relevant background information about Germany and the German market. We will mainly focus on articles that analyze the developing process during the timed period 1997-2007.

2.1 Germany's fiscal policy during the 1990s

During the 1990s Germany had a very small influence on the economic activity. To be able to finance the merger between west and east they had to borrow money. This meant that Germany didn't follow its fiscal-policy. A small economic growth made the fiscal situation even worse. Germany needed a fiscal policy that was able to take macroeconomic trends into account and of course it's not possible to completely take cyclical fluctuations away. By cutting the spending and use some stabilisers such as taxation and transfer systems this could harm the effects from a crisis.ⁱ

2.2 Economic trends in Germany

The economy situation in Germany has been increasing during the last years. Exports have been quite low before the 1999s, but have seen a recovery. Companies in Germany will have a great position on the global market for businesses. A conclusion to this is that Germany has been developing a great wage payment system for the recent years. The domestic demand has been increasing and German firms will see a gain in market shares. On the other hand, the increased domestic demand will just affect the disposable income slightly. In the eastern parts of Germany the economy recovery will be slow. Many of the industry sectors show little or no sign of recovery. The constructing sector in East Germany is getting smaller and this affects the economy badly. So there is still going to be a gap in the economy between East and West Germany.ⁱⁱ

Even though that the crisis in Asia didn't affected Germany very hard they face a hard time with a high degree of unemployment compared to USA and France. The only way to decrease the unemployment is to improve economic activity for companies in Germany. Other modern states have shown that it's possible to increase employment with a higher economical activity. One country that has managed to this is France. Germany hasn't had the same economical growth for a couple of years compared to

France and USA. To increase the demand for labour Germany needs to have a persistent and dynamic rise during the whole system. Reforms in different forms won't help Germany to get rid of their unemployment problem they need to get the whole system to work harder. Now when the demand for products are raising Germany could put policies in such a way that they will get an increase in the economical activity. This will help them to minimize the rate of unemployment.ⁱⁱⁱ

2.3 The German economy in 2001

There are a few signs on the market which shows an increasing economical activity. The downturn in world economy has affected Germany's export. On the other hand Germany saw an upswing in the import sector even though that the euro was deprecating and a downturn in the economy. Domestic demand has gone down quite a bit and the reason is because a high oil price.^{iv}

The construction sector in Germany has had a hard time and this have affected East Germany much more than West. This is an explanation to why East Germany's GDP still is behind West Germany's. There is some sort of signs on the market that the manufacturing industry in East Germany is catching up a bit with the industry in West Germany.^v

2.4 German Restructures (Published 2003)

Germany has during most of the post-war time been the most important engine for European economic expansion. However during late 1990s Germany has experienced a very small and some years a barely existing economic growth. Of the other 11 nations that during 2003 had adopted the Euro, Germany was the country with the smallest economic growth.^{vi}

The in many ways most important part of the German economy is the country's trade and export. In the beginning of the 21st century Germany even surpassed the much bigger nation USA in export. This is especially remarkable considering Germany's population of barely 82 million (2010 estimate), compared to the US population of almost 310 million (2010 estimate). The demand for German export products has

increased almost four times as much as the domestic demand for German products and goods. This skewed balance between domestic and foreign demand is also a liability to Germany's continued growth and prosperity. During the latest decade the US-dollar have been weekend towards the Euro and also during the latest financial crises the US-dollar did slightly worse than the Euro. There is a risk for Germany that this will make German goods more expensive than the competing American goods on the international market. This risk has a potential to inflict a great impact in the German economy since the country at least during the last almost two decades is very dependent on export.^{vii}

Germany exceeded already back in 2003 its agreed limit of budget deficit. Ever since the fall of the iron-curtain East Europe have continued to be a hefty bill for the German taxpayers, as the former Soviet state still soaks up large amounts of social welfare.^{viii}

2.5 European Monetary Union (EMU) and the single currency

There have been mainly two camps in the Euro debate. One side stressing the negative implications the Euro can bring to individual countries that no longer are in control of their monetary policy and therefore will have a harder time handling often dynamic economic shocks. The other side argues mainly the positive side of a single currency, that trade will increase and be easier, that the Euro countries will have an easier time handle international economics shock, that the Euro will be a long needed counterpart to the US-dollar etc.^{ix}

Results presented by Linda W. Cooper and Aleksander Tomic suggest that both proponents will be pleased. On one hand the result shows that the Euro have become a strong counterpart towards the US-dollar and is nowadays a commonly used currency for international trade. Since awhile back the value of the Euro has surpassed the dollar and has since then stayed ahead. It can also be argued that the differentiation that two main currencies as the Euro and the dollar mean has helped ease the negative effects of the recent financial crisis.^x

The use of a single currency among the majority of the EU-countries has also shown some negative effects on individual countries. It is very likely that some of these countries would be able to handle different country-specific economic shocks more efficiently if they were allowed to be in control of their own monetary policies. To sum up the Euro has also highlighted the difficulties to unify often very heterogenic countries with a monolithic monetary policy controlled by the European Central Bank (ECB). The deficit ceilings given by The Stability and Growth pact that the ECB is imposing has proven too loose for some countries and too tight for others.^{xi}

The main threat against the Euro is not if it has been effective and given the results that its proponents claimed, it has accomplished that and more, much thanks to the very successful job of the ECB. No, its main threat and obstacle comes from country specific politics and the lack of feeling unity and homogeneity among the population of the EU.^{xii}

2.7 Today's situation in Germany

The economic situation has had an impact on the government. They are now focusing on stabilising the economy, instead of balancing the budget. An even bigger challenge is to create a better situation for the banks, so that they can lend money to firms and private people. A financial aid package of €500bn was established in 2008 which should help banks to get rid of their bad assets and to create more liquidity in the financial market. Many business sectors have been affected by the crisis and it has been the car industry that has suffered the most.^{xiii}

The crisis costs a lot for the whole world. To help banks not to bail out the only way is to make the tax payers finance it. Many countries are trying to put much higher pressure on the tax heavens, Germany has got a leading role in this task. The European central bank (ECB) has downgraded the refinanced rate several times during the crisis. But they have also said that they don't want to bring down the rate to zero. ECB have announced that they are going to buy €60bn of euro-denominated bonds. This action together with handing out liquidity to the banks will probably make the economical recovery easier. Soon ECB will raise the interest rate because economic signs show positive trends. All the biggest economies in the world are expected to have a hard time during the recession and some economic indicators are worse than after the WW 2.^{xiv}

The biggest threat for a recovery in the real economy is the banks. They are under hard pressure and need to get a much better structure in their balance sheets. If they can't lend out money the whole economy is going to suffer. A slowing economical growth is affecting the bank's assets in a negative way. Oil prices have gone down because of the weak economic growth.^{xv}

Exports are going to be affected in a negative way and this stands for a large amount of the German GDP. The consumer demand will not be influenced that much because the households in Germany have got strong balance sheets and they don't rely on credits from banks. But the government will still support consumers and that's why they are trying to stimulate the measures. Businesses will have a hard time to find financing for different purposes. It's a much tighter situation on the market for credits which means that the supply of investment funding is not what it used to be before the credit crunch. Expectations about an increase in corporate failures seem to be a consequence after the crisis. Many of the German banks have a bit of exposure to eastern Europe but not as much as Sweden and Austria.^{xvi}

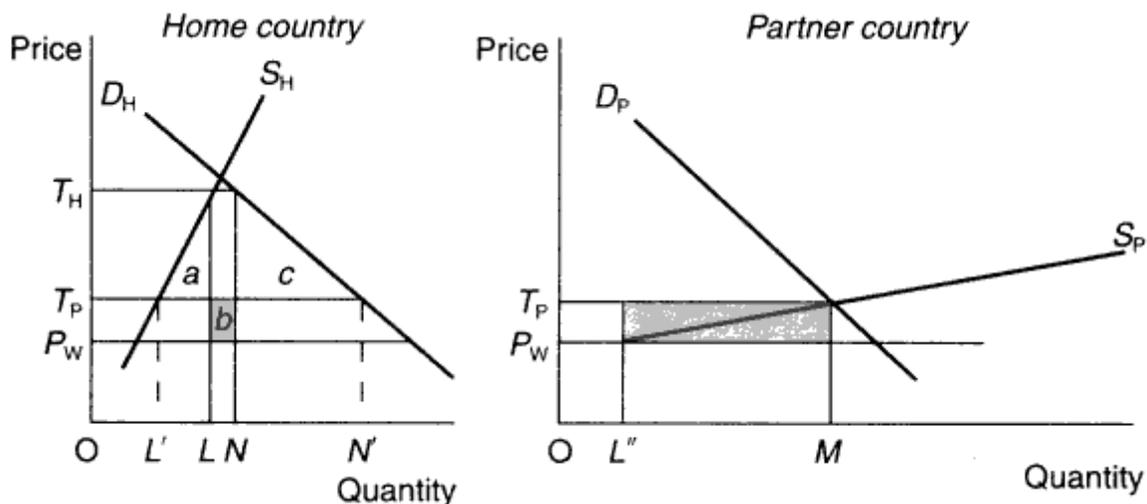
3 Facts about trade creation

To get a better insight in the main part of this thesis we will in this section highlight the most important effects of economic integration on trade and also discuss the importance of intra-industry trade.

In the 1950s a new era of international trading begun, an activity that was considered negative for trading was the reduction of trade barriers. Other things such as creation of common policies and instruments were rated as positive effects for trading. One of the best examples in modern times of a both negative and positive integration is the single market inside EU. When we are going to analyse Germany the focus is going to be both on the negative and positive trade integration for air condition related products.

When people are focusing on economic trade integration they often think of trade creation and trade diversion. A famous economist Jacob Viner explains trade creation as changing to a more efficient importer compared to the one they had before and trade diversion is the other way around i.e. a shift from an efficient importer to a less efficient importer. Viner also analysed how a customs union is affecting the supply and which impact this have got depending on different conditions. A customs union could also have a negative impact on the economy and this has Viner showed. In his work he explained a preferential trade agreement (PTA) as a customs union.^{xvii}

A free trade area (FTA) is another type of trading arrangement between countries, which has the same effects as the single market, EMU and the expansion. The main goal for an FTA is to keep trade barriers to countries who are not a member of the FTA and also to take away the trade barriers inside the FTA. This situation creates a trade deflection, which means that the tariffs are so high on products produced outside the FTA that they can't compete in a fair way with an identical product produced inside the FTA. Products that are imported from outside the FTA need to be transformed before other member states are allowed to use them and this is called rules of origin.



In the figure above H and P are two countries that illustrate the trade creation effects when they both participate in a FTA. The supply S_H and S_P are similar which also the demands in the different countries are, D_H and D_P . P_W stands for the world price and $P_W T_H$ is the tariff level in country H before the integration and this will lead to a price of T_H . Country P had an tariff level of $P_W T_P$ before the integration which leads to a price of T_P . Before the foundation of an FTA country H imported the difference between L and N from the rest of the World to the price P_W and the customs revenue is $LN * P_W T_H$.

After they have formed an FTA the country's will have a common supply at the price level T_P . Country H has got a higher demand and lower supply after the creation of an FTA. To get rid of their deficit of $L'N'$ they now have to import from country P which in the figure is stated as $L''M$. To meet the domestic demand inside the FTA country P would have to import from the rest of the World. Consumption effect c and production effect a for country H symbolize the trade creation because they now import from a producer which is more efficient compared to the other one. The trade diversion which is represented by b is less than the trade creation, which means that the FTA makes a welfare impact. If the trade diversion would exceed the trade creation for any of the countries they would face a welfare loss.

3.1 Specialization Patterns

A FTA and a customs union have many things in common, because they are both about reducing trade costs between Germany and other EU-members. Some of the main goals for the single market and the EMU are to create jobs, increase the welfare inside the EU and also to take down barriers between the countries involved so that it increases the transparency. If they improve some or all of the main goals above this would lead to an increase in employment and economic growth.^{xviii}^{xix} The main difference between them is that in a customs union they have a common external tariff against the rest of the World, which means that they don't have any rules of origin.^{xx}

3.2 The effects of specialization

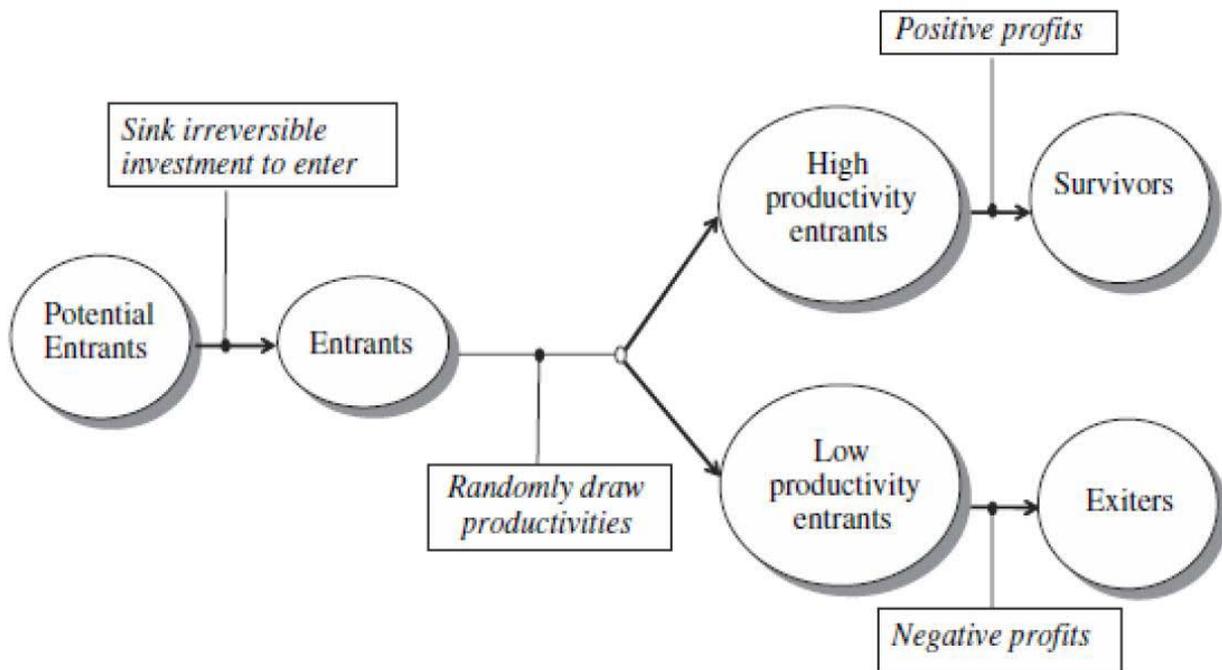
The most common theory today is the comparative advantage theory. Countries will specialize in areas which they have some kind of advantage in compared to other countries i.e. they will focus on a product that they produce more effectively than any other. After integration the market will improve because countries are focusing on products which they produce most effectively. Comparative advantage is also included in the neoclassical theory; the founders are Heckscher and Ohlin. Free trade areas make input much more mobile and this will all the included countries benefit from.

Traditional trade theory and specialization may be driven by comparative advantage due to differences in endowments (H-O model) or productivity. Countries will be a part of an international trade and that will give countries different types of comparative advantages. A common name for this situation in economics is inter-industry trade.

During the 1960s and 1970s there were many people who questioned the theory and a new type of theory called preference similarity hypothesis emerged. This theory was later on known as intra-industry trade. The difference between this new theories compared to the older ones are that they include determinants such as technology and economics of scale. Scientists have located a style that intra-industry trade often occur between countries with a high GDP, today it stands for 60% of all the intra-trade inside the EU.^{xxi}^{xxii}

3.3 Trade patterns with heterogeneous firms

To analyse the effects of trade liberalisation on resource allocation inside an industry a model called heterogeneous firms evolved. It shows how productivity increases after the least productive firm has left the market.^{xxiii}



The picture above illustrates what happens when the least productive firm doesn't exist on the market any more. When a firm decides to enter a market they face a fixed sunk cost. A firm needs to have a high productivity level before it makes the entrance into the new market. The sunk cost will determine which company that will be able to export and the reason is because it's endogenous.

Firms that are involved in exporting will gain a higher profit compared to businesses that choose to stay on the domestic market. A firm that are exporting will gain a higher level of productivity because they now face a larger demand. The least efficient firm will not be able to compete against a more efficient company, which will lead to that the efficient company will take over the market.^{xxiv}

Heterogeneity between corporations is involved in another model where removed trade barriers affect traded goods differently, depending on their structure of the goods. Firms that get involved in intra-trade often become very specialist. When companies are trying to introduce a new product to a country they are more sensible for trade barriers. If a business instead chooses to compete with an already existing product on the market they will be less sensitive to trade barriers. Extensive margin is when a firm launches a new product on a market and the other situation is when a firm competes with an already existing product on the market, which is named as intensive margin.^{xxv}

Many papers that have been published investigate effects from trade liberalization and the impact from extensive and intensive margins. Results show an increasing impact of from both margins. Developed countries often have a growth in the extensive margin, when increasing trade liberalization is implemented, but developed countries are often very bad at keeping this relationship steady. So instead it often ends up with a longer relationship and a higher growth in the intensive margin.^{xxvi}

Results from different academic papers show that trade liberalization leads to growth at the extensive margin. They show that trade creation is due to an expansion of the extensive as well as the intensive margin of trade. The country itself with its domestic industry is affecting the growth more compared to the reduction of trade barriers. NAFTA and CUSFTA are two FTAs that show a growth in the intensive margin, which doesn't comport with the results from the papers.^{xxvii}

One study that is investigating exports from 90 developed countries to 102 developed and developing countries during 1995-2004 show that 80 percent of the exports are dominated by the intensive margin. The geographical regions that are in the study are showing that the largest reason for increased export is intensive margin. A similar study was realised in 2002 with a smaller sample, but the results found was pretty similar to the other paper.^{xxviii}

To sum up, we expect that the deepening integration of the German economy with other EU members since the 1990 will lead to a general trade creation. Trade specialization due to comparative advantages

and economies of scale may, however, lead to an increased German imports and/or exports. And this expansion (or contraction if Germany has a comparative disadvantage) may in a world with heterogeneous firms lead driven by trade in more products (i.e. the extensive margin of trade) or by more trade in already traded products (i.e. the intensive margin of trade).^{xxix}

4 Germany's Import and Export of Air Conditioning Products

4.1 Introduction

We will be looking on data over the import and export of Air Conditioning products to and from Germany. More specifically we have chosen to focus on three categories; 841510: Air conditioning machines window or wall types, self-contained, 841520: Air Conditioning Machines of a Kind Used for Persons in Motor Vehicles, 841590: Parts of air conditioning machines. The code in-front of the product category name is the identification code-system that OECD uses to categorize different products so that they are related to the correct sub-categorize. The reason for this choice is that we wanted to look closer at a product range that has some relevance for Beijer Ref. The company is one of the leading European companies within the refrigeration industry. We also feel that narrowing our research and to only look at one industry category (Air Condition) will make our results both more specific and relevant_as we would like to investigate the extensive and the intensive margin of trade of economic integration.

4.2 Method

We have used the OECD database to collect the export and import data. We have chosen to solely focus on Germany's trade with European countries, including non-EU countries. The reason for why we choose to include countries that doesn't belong to the EU is because we want to see how the EU is affecting trade between members and non members. It is also important to add that a few countries did not have the required data. Furthermore some countries only have data during certain time periods and not for the entire 1996-2007 period like the majority of the presented countries. We are primarily focusing on the data showing the value of the imported and exported goods. The main purpose of our research is to compare the difference in the trade flows between the year 1996 and 2007 (with the exception of a few countries). We will then discuss some possible underlying reason for the potential change or lack thereof, with a focus on how the integration since the 1990 has affected Germany's development. . We will also discuss why some countries have experienced a great increase in trade between themselves and Germany, while others have a decreased trade flow or an unchanged one.

4.3 Results

The single market period between 1996 and 2000.

Partner country	Export change %-change			Import change %-change		
	Total	Due to the extensive margin (%)	Due to the intensive margin (%)	Total	Due to the extensive margin (%)	Due to the intensive margin (%)
Neighbour	58,9	23,9	76,1	11995,5	2,4	97,6
East-European	2569,9	90,8	9,2	24051,4	2,5	97,5
Not Neighbouring Countries	2470,4	96,4	3,6	735,8	40,9	59,1
Nordic Countries	245,8	65,1	34,9	579,6	15,9	84,1
British Islands	62,2	53,9	46,1	1408,2	0,0	100,0
EUR-Countries	3014,6	95,4	4,6	7500,7	3,3	96,7
Non-EUR-Countries	111,0	64,1	35,9	859,3	38,6	61,4

The single market period between 2000 and 2003 EMU-Phase.

Partner country	Export change %-change			Import change %-change		
	Total	Due to the extensive margin (%)	Due to the intensive margin (%)	Total	Due to the extensive margin (%)	Due to the intensive margin (%)
Neighbour	13,8	37,1	62,9	865,4	31,7	68,3
East-European	252,8	84,5	15,5	1701,0	32,6	67,4
Not Neighbouring Countries	191,1	31,8	68,2	183,0	13,1	86,9
Nordic Countries	36,7	90,5	9,5	-48,6	28,3	71,7
British Islands	499,3	37,1	62,9	43,4	15,7	84,3
EUR-Countries	105,6	56,2	43,8	134,3	14,8	85,2
Non-EUR-Countries	215,4	35,3	64,7	837,6	30,1	69,9

The single market period between 2004 and 2007 Expansion EU.

Partner country	Export change %-change			Import change %-change		
	Total	Due to the extensive margin (%)	Due to the intensive margin (%)	Total	Due to the extensive margin (%)	Due to the intensive margin (%)
Neighbour	387,0	57,1	42,9	2970,9	12,2	87,8
East-European	939,9	77,1	22,9	511,6	82,6	17,4
Not Neighbouring Countries	283,6	11,4	88,6	5709,7	70,7	29,3
Nordic Countries	534,1	4,4	95,6	1612,5	94,2	5,8
British Islands	102,7	82,6	17,4	18430,7	99,8	0,2
EUR-Countries	198,0	23,6	76,4	6525,8	52,3	47,7
Non-EUR-Countries	670,4	51,9	48,1	869,1	91,6	8,4

1996-2007	Avg. Export (%)	Avg. Import (%)
Neighbour	935,8	47180,9
East-European	1967,7	93061,8
Not Neighbouring Countries	2199,8	49866,5
Nordic Countries	1092,1	9097,0
British Islands	1797,7	134,0
EUR-Countries	2125,6	71376,3
Non-EUR-Countries	1192,1	5509,1

1996-2000	Avg. Export (%)	Avg. Import (%)
Neighbour	58,9	11995,5
East-European	1729,4	24025,8
Not Neighbouring Countries	2473,3	662,3
Nordic Countries	245,8	419,5
British Islands	59,3	1408,2
EUR-Countries	2755,5	7445,9
Non-EUR-Countries	115,5	829,0

2000-2003 (EMU phase)	Avg. Export (%)	Avg. Import (%)
Neighbour	13,8	866,4
East-European	177,1	1690,3
Not Neighbouring Countries	193,8	121,7
Nordic Countries	40,0	-30,2
British Islands	502,2	-2,4
EUR-Countries	77,7	100,8
Non-EUR-Countries	225,6	800,4

2004-2007 (Exp. EU)	Avg. Export (%)	Avg. Import (%)
Neighbour	387,0	2970,9
East-European	939,9	511,6
Not Neighbouring Countries	278,8	5437,6
Nordic Countries	534,1	1613,0
British Islands	101,3	18430,7
EUR-Countries	197,7	6274,6
Non-EUR-Countries	664,4	869,1

4.4 Discussion

Intensive part

Intensive trading is when two countries are increasing their trading between them. If we compare the phase 1996-2000 with 2000-2003 when EMU was invented, we find some quite interesting results. Almost all trading was increasing much more during the time before the EMU, the only section that was increasing more during 2000-2003 in both export and import was Non-EUR-countries. It could be quite easy to say that the EMU has had much less impact on the trading between Germany and the other countries located in the EU, but it's a bit tricky to draw that conclusion because a 20% increase during one time period could be less than a 10% increase in the next time period when we are looking at the real numbers.

When we are keeping that in mind we could draw some further conclusions about the results presented down under. The expansion of EU has meant a lot to the trading for Germany and the countries that are a part of it. We see that all the sections have increased their trading after the expansion of the EU during the time period 2004-2007. This means that a higher economic integration between the countries inside the EU has been successful. Things such as the euro and the EMU have been key factors to an increased economic integration, for the EU.

4.4.1 Neighboring countries

In this section we have focused on the countries that are located next to Germany. Often in discussions about economic integration and trading the length between the countries should have a certain impact on how much they trade with each other. Table show that the export from Germany to neighbor countries is quite small compared to the other categories that we are investigating. Many different reasons could explain why the export levels between these countries are on such a low level. One explanation to this quite weird result could be that the countries have got a high level of domestic products. This conclusion is based on how much Germany is importing from their neighbor countries.

The euro is often considered as an instrument that is increasing trading between countries, because of less transaction costs. Most of the countries that are neighbors with Germany don't use the euro as the national currency. So this could be one solution for why Germany is not importing so much from this area. Many of the neighboring countries are considered to be high developing such as Holland, Belgium and France. This also has some impact on the trading because they have been trading before and West Europe hasn't had the same type of evolution as East Europe during the period 1997-2007. Many countries from the Soviet Union are developing in a rapid way this puts quite a pressure on countries from West Europe. A longer discussion about this could be found under the headline East-European Countries.

4.4.2 Non-neighboring countries

Now we are focusing on countries that are not located next to Germany but they are still a part of the EU. In this section 13 countries are represented compared to the section with neighboring countries that are 9, this will of course have some impact on the results. We see that the export from Germany is increasing quite a lot compared to the section with neighbor countries. This gives us a solution that the length between the countries not necessarily always matters when countries are interacting in trading. Maybe this theorem has a much more significant impact if the countries that are in the not-neighboring countries group were located in Asia instead of Europe, unfortunately that is not included in our research. Some countries that are not directly located to Germany are using the euro which helps them to trade and also there could be one or more countries that are having comparative advantage in this industry section compared to the neighbors. Important to focus on is also that this group has got four more countries included which have got some impact on the results.

4.4.3 East-European Countries

This section stands for most of Germany's import. Many important things have happened in East-Europe after the Soviet Union collapsed. Politicians and lawmakers have played a very important role in forming a good climate for business and also increasing the living standards for the people. This has worked as a catalyst to help the countries develop and become more alike the countries located in West Europe. These things have made it possible to increase trading between West and East Europe. Unfortunately we couldn't find any data to all the countries that belonged to the Soviet Union, but we can easily see that both import and export to this sector have seen an upturn during the past decade.

The average wage is less in East Europe compared to the countries located in West Europe, which means that the production cost could be less in East Europe. This should have an impact on why Germany chooses to import so much from countries located in the east part of Europe. Its many years since the wall went down and people are able to get a high education which increases the productivity. This together with a quite cheap uneducated workforce could make some comparative advantage.

4.4.4 Nordic countries

Since 1997 both the export and import haven't gone up that much compared to other regions, such as countries located in East Europe. Trading between Germany and the Nordic region has been quite high during many years, because of a quite friendly situation between the two parts. If we more closely look at the specific countries in the Nordic section, we can see that trading have gone done in Denmark and Finland. The biggest increase could be found between Sweden and Germany. The countries that are included in the Nordic group are all highly developed and are in many ways the same as Germany. It's only one of the countries Finland that are using the Euro; this could be a factor of why they are not trading so much with each other. In this case trading between the only neighbor's country that is included in the Nordic section and Germany is quite small, compared to Sweden. This result also shows us that the length between the countries inside Europe in this industry section doesn't affect trading so much.

The climate situation in the Nordic region is often colder than other regions in Europe. This could be a reason for why the country's doesn't focus that much on producing products in this industry area. Finland and Sweden are both quite big on the mobile phone market, so much of the research at the University's focus on this. Sweden is also big in the car manufacturing business, which also stands for a lot of the focus in the Swedish economy. So another conclusion is that the production inside a country depends a lot on what the research is focusing on and how the country look like. For instance both Sweden and Finland are two countries that have a low grade of inhabitants and are covering quite a big part of land area. This means that the distance between the people is long and that's why they are focusing on mobile phones.

4.4.5 British Islands

From the charts above we can see that out of all the seven categories “British Islands” is by far the category of countries that have the smallest change in export with an average increase less below the other country-categories. It is however important to notice that the category only includes two countries, United Kingdom and Ireland. This can be set in comparison to the other categories that include up to 15 countries, something that undoubtedly might affect the results. It is also important to note that the export from Germany to these two countries has increased to a considerably high amount during the period.

Furthermore there might be many underlying reasons for the import from the British Isle to be relatively low. One might be that the know-how and production of AC related products are not that great on the British Isle. Fact is that the weather does not make it necessary for its habitants to develop and use Air condition units. This is something that can be set in contrast to many of Germany’s neighboring countries. Most of which are inland countries, giving them on an average warmer summers (and winters) compared to European countries mainly situated near the coast. Hence the incitement for Ireland and UK should be less than for e.g. Czech Republic or Belgium, both countries of which experienced a much greater export to Germany. It is however reasonable that this different is also based on a lot of other factors. For instance in the case of Finland also a country with relatively low temperatures year around, their export to Germany has increased substantially during the researched time period. That said it should be dually noted that the average import of the three categories has still increased towards Germany, with over 150 % during 1996 to 2007. This is however a very small increase compared to other often smaller countries e.g. Belgium and Austria, both of which have experienced an increase of over 2500 % in export towards Germany.

It is remarkable though, two big trade-nations like the UK and Germany do not have a greater trade in this often very High-Tec industry. Historically the British Islands and Germany have been trading partners (with the exception of course during the two world wars). Ever since the end of World War Two the trade between back then Western Germany and the UK has been significant. After the fall of the wall that separated the capitalist West Germany and the communist East Germany the trade that the west had enjoyed now also expanded to the potentially enormous and in many cases untapped markets of East Germany. Because of natural reasons, primarily buyer power and a during the communist era much closed market, the demand for AC related products in former Soviet states proved to be very high. Even

to this date there is still in many cases an asymmetric relation between the demands in eastern part of what is today the EU and the western parts. The demand is and has certainly been significant in west European countries, this combined with a greater purchasing power still makes the west European market very lucrative, a trend we have a hard time believing will decrease within any near future. That put aside it is still interesting that a region like the British Islands that historically been productive financially very strong, especially the UK have not exported more AC related products to Germany, a country that after the fall of the Wall had a big new untapped market that opened up.

Our results rather show that it is primarily often poorer nations (with some exceptions) e.g. Poland, Czech Republic, Portugal that has had a significant export of AC related products to Germany. This result does not however necessarily suggest that the development of these products is primarily made in the exporting countries. One hypothesis can be that the development and research is done in one of the richer countries and that it is rather the manufacturing and assembling procedure that is being conducted in for instance Poland.

In the next part we will also discuss the potential effect that the Euro has to trade in-between Euro-states. It should be noted that this might also be an affecting factor to the relatively small increase in trade volumes between the British Islands and Germany. The vast majority of the trade from this region is undeniably from the UK, a country that has not adopted the Euro. Ireland does however use the Euro, but is a financially and population wise significantly weaker partner and is also famously one of the so called PIIGS-nation, Portugal, Ireland, Italy, Greece, Spain. All of which are considered the financially weakest and most unstable nations that uses the Euro and are often blamed to bring down the benefits of the Euro rather than strengthen it.

4.4.6 Euro-countries

It is very interesting to note that the import from other Euro-countries is more than twelve times as much compared to from non-Euro-countries. This would strongly suggest that the Euro in-fact does significantly boost trade between Euro countries and it would solely based on this result be very beneficial for nations near or within the Euro-area to adopt the currency collaboration. It should also be noted that the average export to other Euro-countries is almost twice as high as compared to non-Euro-countries. With the exception of Poland, Denmark and Czech Republic the rest of Germany's neighboring countries are members of the currency-collaboration. Furthermore the Danish krona is pegged with the

Euro, so there are undoubtedly similarities between the monetary policies in Euro countries and Denmark.

One of the main purposes of the Euro has been to make trade more easy and efficient. Based on our results concerning the AC-industry this seems to be the case. A single currency makes trade easy primarily because buyer and seller do not need to worry about currency fluctuation. It is however fairly normal that international trade is being conducted in either USD or EUR. A difference in the case of EU countries using Euros is that the buyer and sellers normal day to day expenses regardless if they are private or business is that they are made in Euros. Therefore it's more easy for instance for a seller to know exactly what he or she might be able to afford and what impact the revenue will bring if a product is sold at a certain Euro-price.

Another possible underlying reason for the significant increase in trade volumes among Euro-countries compared to non-Euro-countries is a potential historical high level of trade in-between the nations, even before the currency-collaboration. EMU is as previously mentioned mainly developed to promote trade; it's therefore not unreasonable to suggest that the majority of the countries using Euro have had a high level of trade even before the adoption of the Euro. Furthermore countries that do have a high level of trade and value the development and expansion of this should have a greater insentive to adopt the Euro and take advantage of its potential and often proven benefits regarding trade.

4.4.7 Non-Euro-countries

Our results show that non-Euro countries experience a significant lower level of trade towards Germany. The increase of AC related products to Germany is like previously stated almost twelve times lower for non-Euro-countries compared to Euro-countries. Interesting to notice is that East-European countries are in-fact the category that has experienced the highest increase in trade during the 1996-2007 time scope. Many of the East-European countries do however not use the Euro, something that makes the results even more remarkable. This would suggest that Non-Euro-countries near Germany do have a high degree of trade, especially export to Germany. While Non-Euro-countries (within Europe) that are geographically not near Germany have a significant lower level of trade. It's primarily these countries that bring down the average.

4.4.8 Extensive part

Extensive trading is when two countries start to trade because of some economic integration, for instance if they join the EU or they start to using the euro.

1996-2000

During this time period we could see that in most of the countries included in this study there have been an intensive trading. Some countries such as Belgium and Luxembourg stand out a bit because their trading became extensive 1998 and 1999. If we are looking at Finland and Greece they are intensive in all areas except from air conditioning machines of a kind used for persons in motor vehicles, which is interesting because the climates in the countries are very different. Other countries for instance Slovak Republic and Portugal have some intensive parts that become extensive during this time period and the other way around.

2000-2003

One very interesting thing that could be noted from the data set is that almost all the countries goes from intensive trading to extensive trading between 2002 and 2004 in two of the products that we are investigating. We don't really know why this thing occurs but it would be good if someone could explain this further, that have got more knowledge about economic integration and trade theory.

2004-2007

In this time period many of the countries goes from extensive trading to intensive trading. This is interesting because it means that one of the largest economies in the World didn't trade anything in this sector, which they are more or less world leading in.

5 Conclusion

Our results would thereby suggest that it is the often proven important factors for trade that do the most impact, geographic location of trading countries as well as easy and effective transactions, e.g. EMU. Other than these factors it is also some basic factors like demand, East-European countries for instance seem to have for natural reasons a relatively high level of demand for AC-related products. This combined with a relatively low-cost labor seem to be some underlying reasons to these countries high increase in export to Germany during late 1990s and early 2000. The strong side of West-European countries is that they are financially strong with a high level of purchasing power and an undeniable still significant demand for AC-related products.

When the population in the World are increasing and if the researchers have delivered correct conclusions about the climate change, then the demand for AC-related products will increase. This will affect companies such as Beijer G&L in a positive way because they will try to deliver to the demand level, which will affect their income in a positive way. As an affect of increased income, often the profit for companies will increase. Many of the countries that are in a face where they are developing a lot are also warmer compared to most of the countries located in Europe and North America. Therefore are these developing countries attractive for companies in the AC-related industry to invest in.

It's quite amazing that during the time period 2002-2004 there are almost no trading that are occurring. This is a very weird finding, because Per Bertland told us during a meeting that the market for AC-related products is one of the largest in the World. We believe that many of the countries have forgotten to send in facts about this business area. If this is not the case then there definitely should be some people who should investigate this finding further more.

6 Appendix

6.1 Data for Category 2 (1996-2000)

Commodity and its unit number
841510: Air conditioning machines window or wall types, self-contained
841520: Air Conditioning Machines of A Kind Used For Persons In Motor Vehicles
841590: Parts of air conditioning machines

6.1.1 Category 1 (1996-2007) Chart 1 of 4

Country	Commodity	Type	%-Change	Note	Avg. Total Imp/Exp
Austria	841510	Imports	2349,8		Avg. Import
		Exports	595,4		2508,7
	841520	Imports	4944,1		Avg. export
		Exports	163,4		311,5
	841590	Imports	232,3		
		Exports	175,7		
Belgium	841510	Imports	8369,3	From 1999 to 2007	Avg. Import
		Exports	355,6	From 1999 to 2007	2883,9
	841520	Imports	-87,5	From 1999 to 2007	Avg. export
		Exports	703,7	From 1999 to 2007	366,0
	841590	Imports	370,1	From 1999 to 2007	
		Exports	38,7	From 1999 to 2007	
Czech Republic	841510	Imports	1513,1		Avg. Import
		Exports	574,3		359869,3
	841520	Imports	1074088,7		Avg. export
		Exports	5170,7		2118,7
	841590	Imports	4006,1		
		Exports	611,1		
Denmark	841510	Imports	389,8		Avg. Import
		Exports	3529,7		74,9
	841520	Imports	-99,6		Avg. export
		Exports	-41,8		1159,1
	841590	Imports	-65,5		
		Exports	-10,6		
Finland	841510	Imports	8800,2		Avg. Import
		Exports	522,9		3007,0
	841520	Imports			Avg. export
		Exports	-71,6		362,2
	841590	Imports	221,0		
		Exports	635,2		

6.1.2 Category 1 (1996-2007) Chart 2 of 4

Country	Commodity	Type	%-Change	Note	Avg. Total Imp/Exp
France	841510	Imports	-59,0		Avg. Import
		Exports	1856,0		28,2
	841520	Imports	-27,3		Avg. export
		Exports	533,8		782,6
	841590	Imports	170,9		
		Exports	-42,0		
Greece	841510	Imports	-90,4	from 1996 to 2006	Avg. Import
		Exports	7518,2		30,7
	841520	Imports			Avg. export
		Exports	-65,4		2505,8
	841590	Imports	182,5		
		Exports	64,5		
Hungary	841510	Imports	-11,9		Avg. Import
		Exports	1351,0		1637,3
	841520	Imports	4406,1	from 1997 to 2007	Avg. export
		Exports	860,6		815,4
	841590	Imports	517,8		
		Exports	234,5		
Iceland	841510	Imports			Avg. Import
		Exports	31,3	From 2005 to 2007	129,8
	841520	Imports			Avg. export
		Exports	88,2		91,0
	841590	Imports	389,3	From 1997 to 2000	
		Exports	153,5		
Ireland	841510	Imports	23,7		Avg. Import
		Exports	224,6	From 2001 to 2007	109,2
	841520	Imports	294,7		Avg. export
		Exports	-80,2		263,4
	841590	Imports	9,1		
		Exports	645,9		
Italy	841510	Imports	1083,0		Avg. Import
		Exports	3414,1		446,0
	841520	Imports	106,8		Avg. export
		Exports	293,7		1254,2
	841590	Imports	148,2		
		Exports	54,7		

6.1.3 Category 1 (1996-2007) Chart 3 of 4

Country	Commodity	Type	%-Change	Note	Avg. Total Imp/Exp
Luxembourg	841510	Imports	250,0	From 2006 to 2005	Avg. Import
		Exports	2519,3	From 1999 to 2007	121,9
	841520	Imports	140,5	From 1999 to 2007	Avg. export
		Exports	354,0	From 1999 to 2007	994,3
	841590	Imports	-24,9	From 1999 to 2007	
		Exports	109,6	From 1999 to 2007	
Netherlands	841510	Imports	684,3		Avg. Import
		Exports	1704,6		1152,6
	841520	Imports	2458,3		Avg. export
		Exports	-82,6		569,2
	841590	Imports	315,1		
		Exports	85,6		
Norway	841510	Imports	816,4		Avg. Import
		Exports	5319,0		248,6
	841520	Imports	-38,8	From 1999 to 2007	Avg. export
		Exports	389,3		2143,6
	841590	Imports	-31,8		
		Exports	722,6		
Poland	841510	Imports	9593,0		Avg. Import
		Exports	2473,3		10750,2
	841520	Imports	14284,7	From 1997 to 2007	Avg. export
		Exports	1238,3		1273,2
	841590	Imports	8372,9		
		Exports	108,0		
Portugal	841510	Imports	151,6	From 1996 to 1999	Avg. Import
		Exports	8045,6		556110,9
	841520	Imports	690,1	From 1996 to 2006	Avg. export
		Exports	-81,6		2752,3
	841590	Imports	1667491,0	From 1997 to 2007	
		Exports	292,9		
Slovak Republic	841510	Imports	-96,4	From 2005 to 2007	Avg. Import
		Exports	9258,8	From 1997 to 2007	-9,5
	841520	Imports	-7,6	From 1997 to 2006	Avg. export
		Exports	277,2	From 1998 to 2007	3663,6
	841590	Imports	75,5		
		Exports	1454,9		

6.1.4 Category 1 (1996-2007) Chart 4 of 4

Country	Commodity	Type	%-Change	Note	Avg. Total Imp/Exp
Spain	841510	Imports	76,5		Avg. Import
		Exports	33994,3		113,8
	841520	Imports	-5,5		Avg. export
		Exports	1055,9		11689,1
	841590	Imports	270,5		
		Exports	17,1		
Sweden	841510	Imports	90768,0		Avg. Import
		Exports	660,9		31553,9
	841520	Imports	3863,2		Avg. export
		Exports	1024,7		703,6
	841590	Imports	30,3		
		Exports	425,4		
Switzerland	841510	Imports	97,9		Avg. Import
		Exports	3171,8		132,6
	841520	Imports	211,8		Avg. export
		Exports	-48,4		1070,6
	841590	Imports	88,0		
		Exports	88,5		
Turkey	841510	Imports	3151,1		Avg. Import
		Exports	165,0		4636,1
	841520	Imports	9155,1		Avg. export
		Exports	-26,0		140,8
	841590	Imports	1602,0		
		Exports	283,4		
United Kingdom	841510	Imports	455,8		Avg. Import
		Exports	2411,7		158,8
	841520	Imports	-26,4		Avg. export
		Exports	7485,9		3332,0
	841590	Imports	47,0		
		Exports	98,5		

6.2 Data for Category 2 (1996-2000)

Commodity and its unit number
841510: Air conditioning machines window or wall types, self-contained
841520: Air Conditioning Machines of A Kind Used For Persons In Motor Vehicles
841590: Parts of air conditioning machines

6.2.1 Category 2 (1996-2000) Chart 1 of 4

Country	Commodity	Type	%-Change	Note	Avg. Total Imp/Exp
Austria	841510	Imports	7,2		Avg. Import
		Exports	-55,7		-32,4
	841520	Imports	-41,0		Avg. export
		Exports	332,9		98,1
	841590	Imports	-63,4		
		Exports	17,2		
Belgium	841510	Imports	-55,3	From 1999 to 2000	Avg. Import
		Exports	-61,8	From 1999 to 2000	-52,1
	841520	Imports	-63,7	From 1999 to 2000	Avg. export
		Exports	-8,8	From 1999 to 2000	19,8
	841590	Imports	-37,4	From 1999 to 2000	
		Exports	129,9	From 1999 to 2000	
Czech Republic	841510	Imports	-69,1		Avg. Import
		Exports	353,3		92158,7
	841520	Imports	276170,4		Avg. export
		Exports	147,0		195,5
	841590	Imports	374,9		
		Exports	86,1		
Denmark	841510	Imports	-94,9		Avg. Import
		Exports	89,0		-31,2
	841520	Imports	-47,0		Avg. export
		Exports	-0,4		18,8
	841590	Imports	48,2		
		Exports	-32,1		
Finland	841510	Imports	3092,6		Avg. Import
		Exports	-70,7		1254,5
	841520	Imports		No data	Avg. export
		Exports	-20,0		33,6
	841590	Imports	670,9		
		Exports	191,4		

6.2.2 Category 2 (1996-2000) Chart 2 of 4

Country	Commodity	Type	%-Change	Note	Avg. Total Imp/Exp
France	841510	Imports	-67,7		Avg. Import
		Exports	-46,1		21,7
	841520	Imports	100,9		Avg. export
		Exports	30,5		-16,5
	841590	Imports	32,0		
		Exports	-33,9		
Greece	841510	Imports		Only 1996	Avg. Import
		Exports	-85,8		-9,0
	841520	Imports		no data	Avg. export
		Exports	-36,7		-46,4
	841590	Imports	-27,0		
		Exports	-16,8		
Hungary	841510	Imports	-30,5		Avg. Import
		Exports	-24,1		295,8
	841520	Imports	878,7	From 1997 to 2000	Avg. export
		Exports	7,1		-14,0
	841590	Imports	39,2		
		Exports	-25,1		
Iceland	841510	Imports		no data	Avg. Import
		Exports		no data	129,8
	841520	Imports		no data	Avg. export
		Exports		Only 1996	-20,3
	841590	Imports	389,3	From 1997 to 2000	
		Exports	-60,8		
Ireland	841510	Imports		Only 1996	Avg. Import
		Exports		no data	-31,2
	841520	Imports	-98,4		Avg. export
		Exports	-89,2	From 1996 to 1999	11,5
	841590	Imports	4,7		
		Exports	123,8		
Italy	841510	Imports	-69,3		Avg. Import
		Exports	50,6		0,7
	841520	Imports	52,0		Avg. export
		Exports	-23,8		5,4
	841590	Imports	19,3		
		Exports	-10,8		

6.2.3 Category 2 (1996-2000) Chart 3 of 4

Country	Commodity	Type	%-Change	Note	Avg. Total Imp/Exp
Luxembourg	841510	Imports		no data	Avg. Import
		Exports	268,2	From 1999 to 2000	289,6
	841520	Imports	40,5	From 1999 to 2000	Avg. export
		Exports	-49,1	From 1999 to 2000	92,8
	841590	Imports	828,4	From 1999 to 2000	
		Exports	59,4	From 1999 to 2000	
Netherlands	841510	Imports	52,6		Avg. Import
		Exports	82,2		28,0
	841520	Imports	-18,4		Avg. export
		Exports	-75,4		5,5
	841590	Imports	49,7		
		Exports	9,6		
Norway	841510	Imports	-11,5		Avg. Import
		Exports	1842,7	From 1996 to 1998	26,0
	841520	Imports		Only 1999	Avg. export
		Exports	202,1	From 1996 to 1999	702,4
	841590	Imports	89,5		
		Exports	62,3		
Poland	841510	Imports	2563,1		Avg. Import
		Exports	-10,3		3597,6
	841520	Imports	7729,5	From 1997 to 2000	Avg. export
		Exports	41,3		11,5
	841590	Imports	500,1		
		Exports	3,6		
Portugal	841510	Imports	151,6	From 1997 to 1999	Avg. Import
		Exports	84039,0	From 1997 to 2000	2984,5
	841520	Imports	-69,3	From 1996 to 1999	Avg. export
		Exports	-97,3		27969,2
	841590	Imports	8871,2	From 1997 to 2000	
		Exports	-34,1		
Slovak Republic	841510	Imports		no data	Avg. Import
		Exports	19425,0	From 1997 to 1999	51,2
	841520	Imports		only 1997	Avg. export
		Exports		only 1998	6724,5
	841590	Imports	153,6		
		Exports	748,4		

6.2.4 Category 2 (1996-2000) Chart 4 of 4

Country	Commodity	Type	%-Change	Note	Avg. Total Imp/Exp
Spain	841510	Imports	-80,0		Avg. Import
		Exports	2180,0		133,0
	841520	Imports	402,7		Avg. export
		Exports	65,3		728,8
	841590	Imports	76,4		
		Exports	-59,1		
Sweden	841510	Imports	-45,4	From 1996 to 1999	Avg. Import
		Exports	-89,4		428,7
	841520	Imports	1271,5	From 1996 to 1999	Avg. export
		Exports	-40,0		228,4
	841590	Imports	60,0		
		Exports	814,8		
Switzerland	841510	Imports	-59,0		Avg. Import
		Exports	236,7		-46,9
	841520	Imports	-74,7		Avg. export
		Exports	-63,7		64,2
	841590	Imports	-7,1		
		Exports	19,5		
Turkey	841510	Imports	-50,8	From 1996 to 1999	Avg. Import
		Exports	-64,7		214,0
	841520	Imports	395,7		Avg. export
		Exports	-96,4		-58,9
	841590	Imports	297,3		
		Exports	-15,5		
United Kingdom	841510	Imports	3757,3		Avg. Import
		Exports	220,9		2847,6
	841520	Imports	4862,1		Avg. export
		Exports	45,2		107,1
	841590	Imports	-76,6		
		Exports	55,3		

6.3 Data for Category 3 (2000-2003 EMU-Phase)

Commodity and its unit number
841510: Air conditioning machines window or wall types, self-contained
841520: Air Conditioning Machines of A Kind Used For Persons In Motor Vehicles
841590: Parts of air conditioning machines

6.3.1 Category 3 (2000-2003 EMU-Phase) Chart 1 of 4

Country	Commodity	Type	%-Change	Note	Avg. Total Imp/Exp
Austria	841510	Imports	-38,9		Avg. Import
		Exports	11,8		8,0
	841520	Imports	-65,0		Avg. export
		Exports	-75,4		14,8
	841590	Imports	127,8		
		Exports	108,1		
Belgium	841510	Imports	389,5	From 2000 to 2001	Avg. Import
		Exports	-55,5	From 2000 to 2001	233,8
	841520	Imports	317,7		Avg. export
		Exports	-50,8		-12,5
	841590	Imports	-5,9		
		Exports	68,9		
Czech Republic	841510	Imports	149,4	From 2000 to 2001	Avg. Import
		Exports	-58,0	From 2000 to 2001	187,5
	841520	Imports	-40,7		Avg. export
		Exports	105,1		20,4
	841590	Imports	453,9		
		Exports	14,2		
Denmark	841510	Imports		Only 2000	Avg. Import
		Exports	-72,2	From 2000 to 2001	-53,0
	841520	Imports	-75,0	From 2000 to 2001	Avg. export
		Exports	-23,0		-18,6
	841590	Imports	-83,9		
		Exports	39,6		
Finland	841510	Imports	17,9	From 2000 to 2001	Avg. Import
		Exports	296,5	From 2000 to 2001	-23,8
	841520	Imports		no data	Avg. export
		Exports	-16,2		78,3
	841590	Imports	-89,4		
		Exports	-45,5		

6.3.2 Category 3 (2000-2003 EMU-Phase) Chart 2 of 4

Country	Commodity	Type	%-Change	Note	Avg. Total Imp/Exp
France	841510	Imports	-86,4	From 2000 to 2001	Avg. Import
		Exports	45,7	From 2000 to 2001	-17,8
	841520	Imports	-98,5		Avg. export
		Exports	-44,2		9,1
	841590	Imports	131,5		
		Exports	25,8		
Greece	841510	Imports		no data	Avg. Import
		Exports		only 2000	127,9
	841520	Imports		no data	Avg. export
		Exports	-2,1		60,2
	841590	Imports	383,7		
		Exports	182,6		
Hungary	841510	Imports	-16,2	From 2000 to 2001	Avg. Import
		Exports	-88,4	From 2000 to 2001	134,6
	841520	Imports	380,8		Avg. export
		Exports	-88,3		-70,3
	841590	Imports	39,2		
		Exports	-34,1		
Iceland	841510	Imports		no data	Avg. Import
		Exports		no data	0,0
	841520	Imports		no data	Avg. export
		Exports		no data	-21,9
	841590	Imports		only 2000	
		Exports	-65,7		
Ireland	841510	Imports		no data	Avg. Import
		Exports		only 2001	45,8
	841520	Imports		only 2000	Avg. export
		Exports	-94,0	From 2001 to 2003	-11,9
	841590	Imports	137,5		
		Exports	58,2		
Italy	841510	Imports	50,3	From 2000 to 2001	Avg. Import
		Exports	-72,0	From 2000 to 2001	32,0
	841520	Imports	-15,6		Avg. export
		Exports	-11,3		-22,6
	841590	Imports	61,5		
		Exports	15,4		

6.3.3 Category 3 (2000-2003 EMU-Phase) Chart 3 of 4

Country	Commodity	Type	%-Change	Note	Avg. Total Imp/Exp
Luxembourg	841510	Imports		no data	Avg. Import
		Exports	-64,6	From 2000 to 2001	-17,3
	841520	Imports	35,8		Avg. export
		Exports	188,3		31,1
	841590	Imports	-87,5		
		Exports	-30,4		
Netherlands	841510	Imports	-0,9	From 2000 to 2001	Avg. Import
		Exports	-82,7	From 2000 to 2001	-21,1
	841520	Imports	-31,6		Avg. export
		Exports	-43,2		-42,3
	841590	Imports	-30,7		
		Exports	-1,0		
Norway	841510	Imports	-34,7	From 2000 to 2001	Avg. Import
		Exports		only 2001	-35,5
	841520	Imports		only 2002	Avg. export
		Exports	-59,7	From 2001 to 2003	-26,5
	841590	Imports	-71,8		
		Exports	-19,8		
Poland	841510	Imports	-90,9	From 2000 to 2001	Avg. Import
		Exports	-65,3	From 2000 to 2001	6451,2
	841520	Imports	19153,1		Avg. export
		Exports	324,4		82,9
	841590	Imports	291,5		
		Exports	-10,4		
Portugal	841510	Imports		no data	Avg. Import
		Exports	-99,4	From 2000 to 2001	66,5
	841520	Imports			Avg. export
		Exports	476,8		170,7
	841590	Imports	199,4		
		Exports	134,7		
Slovak Republic	841510	Imports		no data	Avg. Import
		Exports		only 2001	-12,3
	841520	Imports		no data	Avg. export
		Exports	2025,4	From 2001 to 2003	675,4
	841590	Imports	-36,9		
		Exports	0,8		

6.3.4 Category 3 (2000-2003 EMU-Phase) Chart 4 of 4

Country	Commodity	Type	%-Change	Note	Avg. Total Imp/Exp
Spain	841510	Imports	-98,3	From 2000 to 2001	Avg. Import
		Exports	32,1	From 2000 to 2001	700,8
	841520	Imports	60,7		Avg. export
		Exports	-55,6		39,9
	841590	Imports	2139,9		
		Exports	143,0		
Sweden	841510	Imports		only 2001	Avg. Import
		Exports	323,9	From 2000 to 2001	-8,6
	841520	Imports		only 2001	Avg. export
		Exports	-56,6		126,9
	841590	Imports	-25,8		
		Exports	113,4		
Switzerland	841510	Imports	157,8	From 2000 to 2001	Avg. Import
		Exports	2,8	From 2000 to 2001	107,2
	841520	Imports	-27,9		Avg. export
		Exports	-24,6		6,4
	841590	Imports	191,7		
		Exports	40,9		
Turkey	841510	Imports		only 2001	Avg. Import
		Exports	-15,4	From 2000 to 2001	658,4
	841520	Imports	1823,4		Avg. export
		Exports	2607,4		935,0
	841590	Imports	151,9		
		Exports	212,9		
United Kingdom	841510	Imports	-83,1	From 2000 to 2001	Avg. Import
		Exports	-11,5	From 2000 to 2001	-50,7
	841520	Imports	-49,1		Avg. export
		Exports	3051,9		1016,4
	841590	Imports	-20,0		
		Exports	8,8		

6.4 Data for Category 4 (2004-2007 Expansion EU)

Commodity and its unit number
841510: Air conditioning machines window or wall types, self-contained
841520: Air Conditioning Machines of A Kind Used For Persons In Motor Vehicles
841590: Parts of air conditioning machines

6.4.1 Category 4 (2004-2007 Expansion EU) Chart 1 of 4

Country	Commodity	Type	%-Change	Note	Avg. Total Imp/Exp
Austria	841510	Imports	40,2		Avg. Import
		Exports	159,5		19781,4
	841520	Imports	59171,2		Avg. export
		Exports	13,0		57,7
	841590	Imports	132,8		
		Exports	0,6		
Belgium	841510	Imports	1331,5	From 2005 to 2007	Avg. Import
		Exports	835,1	From 2005 to 2007	434,9
	841520	Imports	-91,2		Avg. export
		Exports	1276,7		681,6
	841590	Imports	64,4		
		Exports	-67,1		
Czech Republic	841510	Imports	2051,9	From 2005 to 2007	Avg. Import
		Exports	119,3	From 2005 to 2007	793,0
	841520	Imports	276,5		Avg. export
		Exports	327,2		193,5
	841590	Imports	50,4		
		Exports	134,0		
Denmark	841510	Imports	131,6	From 2005 to 2007	Avg. Import
		Exports	1256,3	From 2005 to 2007	21,3
	841520	Imports	-92,0		Avg. export
		Exports	-4,4		401,7
	841590	Imports	24,3		
		Exports	-46,9		
Finland	841510	Imports	30,1	From 2005 to 2007	Avg. Import
		Exports	140,0	From 2005 to 2007	-4,0
	841520	Imports		only 2005	Avg. export
		Exports	-52,0		91,7
	841590	Imports	-42,0		
		Exports	187,2		

6.4.2 Category 4 (2004-2007 Expansion EU) Chart 2 of 4

Country	Commodity	Type	%-Change	Note	Avg. Total Imp/Exp
France	841510	Imports	664,0	From 2005 to 2007	Avg. Import
		Exports	522,0	From 2005 to 2007	698,0
	841520	Imports	1439,0		Avg. export
		Exports	433,2		302,3
	841590	Imports	-9,0		
		Exports	-48,4		
Greece	841510	Imports		only 2006	Avg. Import
		Exports	583,8	From 2005 to 2007	-13,9
	841520	Imports		no data	Avg. export
		Exports	-49,7		156,5
	841590	Imports	-41,7		
		Exports	-64,8		
Hungary	841510	Imports	983,3	From 2005 to 2007	Avg. Import
		Exports	5154,8	From 2005 to 2007	380,0
	841520	Imports	109,0		Avg. export
		Exports	372,3		1879,5
	841590	Imports	47,6		
		Exports	111,4		
Iceland	841510	Imports		no data	Avg. Import
		Exports	31,3	From 2005 to 2007	0,0
	841520	Imports		no data	Avg. export
		Exports		only 2007	109,1
	841590	Imports		no data	
		Exports	296,0		
Ireland	841510	Imports	16750,0	From 2005 to 2007	Avg. Import
		Exports	3,2	From 2005 to 2007	36776,9
	841520	Imports	93650,0	From 2005 to 2007	Avg. export
		Exports		only 2007	5,8
	841590	Imports	-69,2		
		Exports	14,1		
Italy	841510	Imports	59,0	From 2005 to 2007	Avg. Import
		Exports	7,8	From 2005 to 2007	32,0
	841520	Imports	31,1		Avg. export
		Exports	304,6		101,5
	841590	Imports	6,0		
		Exports	-7,8		

6.4.3 Category 4 (2004-2007 Expansion EU) Chart 3 of 4

Country	Commodity	Type	%-Change	Note	Avg. Total Imp/Exp
Luxembourg	841510	Imports	250,0	From 2005 to 2006	Avg. Import
		Exports	159,7	From 2005 to 2007	980,2
	841520	Imports	2742,9	From 2005 to 2007	Avg. export
		Exports	575,7		245,4
	841590	Imports	-52,2		
		Exports	0,7		
Netherlands	841510	Imports	195,0	From 2005 to 2007	Avg. Import
		Exports	126,4	From 2005 to 2007	198,5
	841520	Imports	361,7		Avg. export
		Exports	12,6		54,2
	841590	Imports	39,0		
		Exports	23,7		
Norway	841510	Imports	16950,0	From 2005 to 2007	Avg. Import
		Exports	332,0	From 2005 to 2007	5643,1
	841520	Imports	-97,8		Avg. export
		Exports	234,6		289,2
	841590	Imports	77,2		
		Exports	301,0		
Poland	841510	Imports	2583,3	From 2005 to 2007	Avg. Import
		Exports	4155,3	From 2005 to 2007	879,8
	841520	Imports	-81,1		Avg. export
		Exports	207,1		1457,5
	841590	Imports	137,0		
		Exports	10,1		
Portugal	841510	Imports		no data	Avg. Import
		Exports	327,3	From 2005 to 2007	6589,5
	841520	Imports	35,5	From 2005 to 2006	Avg. export
		Exports	-82,1		102,5
	841590	Imports	19733,0		
		Exports	62,3		
Slovak Republic	841510	Imports	-96,4	From 2005 to 2007	Avg. Import
		Exports	125,0	From 2005 to 2007	-6,2
	841520	Imports	-8,1	From 2005 to 2006	Avg. export
		Exports	-5,1		229,0
	841590	Imports	85,8		
		Exports	567,1		

6.4.4 Category 4 (2004-2007 Expansion EU) Chart 4 of 4

Country	Commodity	Type	%-Change	Note	Avg. Total Imp/Exp
Spain	841510	Imports	46100,0	From 2005 to 2007	Avg. Import
		Exports	211,7	From 2005 to 2007	15309,4
	841520	Imports	-83,3		Avg. export
		Exports	854,3		349,0
	841590	Imports	-88,3		
		Exports	-18,9		
Sweden	841510	Imports	1447,9	From 2005 to 2007	Avg. Import
		Exports	594,4	From 2005 to 2007	791,4
	841520	Imports	885,4		Avg. export
		Exports	3543,2		1354,0
	841590	Imports	40,9		
		Exports	-75,7		
Switzerland	841510	Imports	3,1	From 2005 to 2007	Avg. Import
		Exports	78,7	From 2005 to 2007	1,7
	841520	Imports	11,0		Avg. export
		Exports	243,3		103,5
	841590	Imports	-8,9		
		Exports	-11,4		
Turkey	841510	Imports	103,8	From 2005 to 2007	Avg. Import
		Exports	284,7	From 2005 to 2007	20,5
	841520	Imports	-76,6		Avg. export
		Exports	253,4		188,1
	841590	Imports	34,2		
		Exports	26,1		
United Kingdom	841510	Imports	-54,3	From 2005 to 2007	Avg. Import
		Exports	546,9	From 2005 to 2007	84,5
	841520	Imports	-95,5		Avg. export
		Exports	65,4		196,8
	841590	Imports	403,4		
		Exports	-21,8		

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