The Relationship between Spatial Interdependencies in the European Union and the Trade - II

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Abstract: The article treats the links between exports of EU countries and relative distances between them. Mostly there are linear regressions equations that modeling the export relative to the spatial relations between states.

Keywords: graph; European Union; trade; export; import

JEL Classification: F21

1. Introduction

In the previous paper we analyzed the dependence of European Union countries imports on exports depending on their closeness.

Thus, after the construction of a graph of links between countries, we determined the minimum length between these roads, then we built a normalized matrix based on inverse distance (in the sense of graph theory and not actual distances). Considering the situation of global exports of those countries we multiplied (for each individual year) their values with the dependence degree of EU countries obtaining a virtual import value of each country. After this, we performed regression analysis in which we correlate these data with real data virtual obtaining in most cases, links expressing linear dependence of imports to exports of other countries. Finally, we compared the regression coefficients (with meanings of percentage) with actual percentages of UE-exports in each country commenting, finally, differences emerged.

In what follows, we will analyze the reverse dependence of exports on imports of other countries according to their closeness. All theoretical concepts and primary

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results on the degrees of connection matrix between countries are concretely explained in the first part of this article.

2. The Analysis of the Exports of EU Countries

In this section we shall analyze the relations between the import of EU countries and exports of each of them.

In Appendix A.1 and A.2 we have the tables of imports of European Union countries during 2004-2015.

Multiplying the matrix G with the values from tables A.1 and A.2, we find the tables A.3-A.6 in Appendix A.2.

Because not all imports from one country will be transferred to the EU reference country, we shall search if there is a linear dependence between real exports and computed exports (after the results from tables A.3-A.6).

In the case of **Austria**, from Appendix A.7 we can see that is a strong link between the two groups of indicators (R^2=0.9687), having finally:

EX_AT(t)=0.021IM_BE(t)+0.014IM_BG(t)+0.021IM_HR(t)+0.014IM_CY(t)+0.0419IM_CZ(t)+ 0.021IM_DK(t)+0.0084IM_EE(t)+0.0105IM_FI(t)+0.021IM_FR(t)+0.0419IM_DE(t)+ 0.021IM_EL(t)+0.0419IM_HU(t)+0.0105IM_IE(t)+0.0419IM_IT(t)+0.0105IM_LV(t)+ 0.014IM_LT(t)+0.021IM_LU(t)+0.021IM_MT(t)+0.021IM_NL(t)+0.021IM_PL(t)+0.0105IM_PT(t) +0.021IM_RO(t)+0.0419IM_SK(t)+0.0419IM_SI(t)+0.014IM_ES(t)+0.014IM_SE(t)+0.014IM_UK(t)+15293.754

where EX_ means real exports, IM_ means real imports, t – the reference time and the abbreviations for countries are the usual: Austria – AT, Belgium – BE, Bulgaria – BG, Croatia – HR, Cyprus – CY, Czech Republic – CZ, Denmark – DK, Estonia – EE, Finland – FI, France – FR, Germany – DE, Greece – EL, Hungary – HU, Ireland – IE, Italy – IT, Latvia – LV, Lithuania – LT, Luxembourg – LU, Malta – MT, Netherlands – NL, Poland – PL, Portugal – PT, Romania – RO, Slovakia – SK, Slovenia – SI, Spain – ES, Sweden – SE, United Kingdom – UK.

A comparison of regression coefficients and percentages exports into studied countries (Source: http://atlas.media.mit.edu/en/profile/country - column Real in Table 1) indicates that there are no large differences except Croatia (8.90% vs. 2.10%) and Slovenia (8.40% vs. 4.19%). Also, we can see that the real imports of EU-countries from Austria are in general below of those suggested by the regression equation which means that exports are below the potential offered by its geographic position.

The average distance between real data and those from the regression is: 1.32%.

Table 1. The correlation between the coefficients of regression and the real imports of EU-countries in Austria (in percent) in 2013

Country	Regression	Real	Country	Regression	Real
Austria	-	-	**Italy**	4.19%	2.50%
Belgium+Luxembourg	4.20%	0.64%	**Latvia**	1.05%	1.20%
Bulgaria	1.40%	2.70%	**Lithuania**	1.40%	0.85%
Croatia	2.10%	8.90%	**Malta**	2.10%	0.53%
Czech Republic	4.19%	3.10%	**Netherlands**	2.10%	0.48%
Denmark	2.10%	1.00%	**Poland**	2.10%	1.80%
Estonia	0.84%	0.74%	**Portugal**	1.05%	0.48%
Finland	1.05%	0.87%	**Romania**	2.10%	3.90%
France	2.10%	1.10%	**Slovakia**	4.19%	2.90%
Germany	4.19%	3.90%	**Slovenia**	4.19%	8.40%
Greece	2.10%	0.97%	**Spain**	1.40%	0.71%
Hungary	4.19%	6.10%	**Sweden**	1.40%	1.20%
Ireland	1.05%	1.60%	**United Kingdom**	1.40%	0.73%

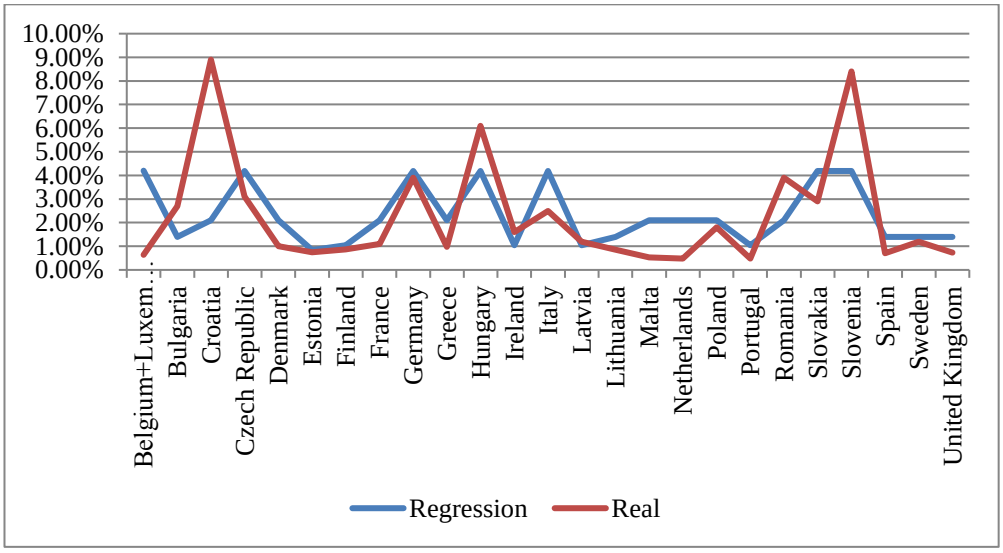

Figure 1. The relationship between imports based on distances and the real imports in 2013 in Austria (in percent)

Because in the upper analysis we have Durbin Watson statistic d=0.8443 therefore a positive autocorrelation of errors for the limits of autocorrelation: (0,0.97) and ρ - the autocorrelation coefficient of errors has value ρ= 0.528085453 we shall make another regression analysis for the set of data: Exports-computed-new(t)=Exports-

computed(t)-ρ·Exports-computed(t-1) and Imports-real-new(t)= Imports-real(t)-ρ·Imports-real(t-1) (table A.8). Finally, we obtain the equation of regression:

EX_AT(t)=0.5281EX_AT(t-1)+0.IM_AT(t)+0.IM_AT(t-1)+0.0228IM_BE(t)-0.0121IM_BE(t-1)+ 0.0152IM_BG(t)-0.0081IM_BG(t-1)+0.0228IM_HR(t)-0.0121IM_HR(t-1)+0.0152IM_CY(t)-0.0081IM_CY(t-1)+0.0457IM_CZ(t)-0.0241IM_CZ(t-1)+0.0228IM_DK(t)-0.0121IM_DK(t-1)+ 0.0091IM_EE(t)-0.0048IM_EE(t-1)+0.0114IM_FI(t)-0.006IM_FI(t-1)+0.0228IM_FR(t)-0.0121IM_FR(t-1)+0.0457IM_DE(t)-0.0241IM_DE(t-1)+0.0228IM_EL(t)-0.0121IM_EL(t-1)+ 0.0457IM_HU(t)-0.0241IM_HU(t-1)+0.0114IM_IE(t)-0.006IM_IE(t-1)+0.0457IM_IT(t)-0.0241IM_IT(t-1)+0.0114IM_LV(t)-0.006IM_LV(t-1)+0.0152IM_LT(t)-0.0081IM_LT(t-1)+ 0.0228IM_LU(t)-0.0121IM_LU(t-1)+0.0228IM_MT(t)-0.0121IM_MT(t-1)+0.0228IM_NL(t)-0.0121IM_NL(t-1)+0.0228IM_PL(t)-0.0121IM_PL(t-1)+0.0114IM_PT(t)-0.006IM_PT(t-1)+ 0.0228IM_RO(t)-0.0121IM_RO(t-1)+0.0457IM_SK(t)-0.0241IM_SK(t-1)+0.0457IM_SI(t)-0.0241IM_SI(t-1)+0.0152IM_ES(t)-0.0081IM_ES(t-1)+0.0152IM_SE(t)-0.0081IM_SE(t-1)+ 0.0152IM_UK(t)-0.0081IM_UK(t-1)+2372.02

In the case of **Belgium**, from Appendix A.4 we can see that is a strong link between the two groups of indicators (R^2=0.9846), having finally:

EX_BE(t)=0.0497IM_AT(t)+0.0248IM_BG(t)+0.0248IM_HR(t)+0.0248IM_CY(t) +0.0497IM_CZ(t)+0.0497IM_DK(t)+0.0198IM_EE(t)+0.0248IM_FI(t)+0.0992IM_FR(t)+ 0.0992IM_DE(t)+0.0331IM_EL(t)+0.0331IM_HU(t)+0.0497IM_IE(t)+0.0497IM_IT(t)+ 0.0248IM_LV(t)+0.0331IM_LT(t)+0.0992IM_LU(t)+0.0331IM_MT(t)+0.0992IM_NL(t)+ 0.0497IM_PL(t)+0.0331IM_PT(t)+0.0248IM_RO(t)+0.0331IM_SK(t)+0.0331IM_SI(t)+ 0.0497IM_ES(t)+0.0331IM_SE(t)+0.0992IM_UK(t)+33128.7758

Also, in the case of **Luxembourg**, from Appendix A.5 we can see that practically is not a link between the two groups of indicators (R^2=0.0018) therefore we will immerse the data into those of Belgium.

A comparison of regression coefficients and percentages exports into studied countries (Source: http://atlas.media.mit.edu/en/profile/country - column Real in Table 2) indicates that there are no large differences except Germany (5% vs. 9.92% - figure 2) and United Kingdom (5.2% vs. 9.92%) for which the imports are much below the distance. Also, we can see that the real imports of EU-countries from Belgium and Luxembourg are below of those suggested by the regression equation which means that imports are below the potential offered by its geographic position.

The average distance between real data and those from the regression is: 1.86 %.

Table 2.The correlation between the coefficients of regression and the real imports of EU-countries in Belgium+Luxembourg (in percent) in 2013

Country	Regression	Real	Country	Regression	Real
Austria	4.97%	1.90%	**Italy**	4.97%	4.50%
Belgium+Luxembourg	-	-	**Latvia**	2.48%	1.70%
Bulgaria	2.48%	2.00%	**Lithuania**	3.31%	3.30%
Croatia	2.48%	1.70%	**Malta**	3.31%	1.30%
Czech Republic	4.97%	2.10%	**Netherlands**	9.92%	9.70%
Denmark	4.97%	3.30%	**Poland**	4.97%	2.70%
Estonia	1.98%	1.50%	**Portugal**	3.31%	2.20%
Finland	2.48%	2.70%	**Romania**	2.48%	2.30%
France	9.92%	8.40%	**Slovakia**	3.31%	1.20%
Germany	9.92%	5.00%	**Slovenia**	3.31%	1.70%
Greece	3.31%	3.20%	**Spain**	4.97%	2.90%
Hungary	3.31%	2.30%	**Sweden**	3.31%	4.30%
Ireland	4.97%	2.20%	**United Kingdom**	9.92%	5.20%

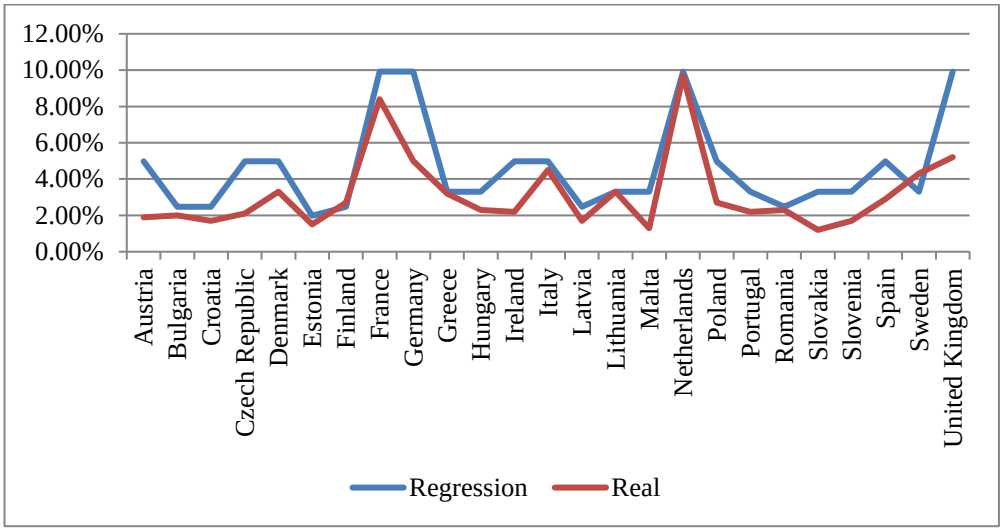

Figure 2. The relationship between imports based on distances and the real imports in 2013 in Austria (in percent)

In the case of **Bulgaria**, from Appendix A.6 we can see that is a strong link between the two groups of indicators (R^2=0.8730), having finally:

EX_BG(t)=0.0108IM_AT(t)+0.0081IM_BE(t)+0.0108IM_HR(t)+0.0162IM_CY(t)
+
0.0081IM_CZ(t)+0.0065IM_DK(t)+0.0046IM_EE(t)+0.0046IM_FI(t)+0.0108IM_
FR(t)+
0.0081IM_DE(t)+0.0325IM_EL(t)+0.0162IM_HU(t)+0.0065IM_IE(t)+0.0162IM_
IT(t)+
0.0054IM_LV(t)+0.0065IM_LT(t)+0.0081IM_LU(t)+0.0108IM_MT(t)+0.0065IM
_NL(t)+
0.0081IM_PL(t)+0.0065IM_PT(t)+0.0325IM_RO(t)+0.0108IM_SK(t)+0.0108IM_
SI(t)+
0.0081IM_ES(t)+0.0054IM_SE(t)+0.0081IM_UK(t)-22905.4187

A comparison of regression coefficients and percentages imports from studied countries (Source: http://atlas.media.mit.edu/en/profile/country - column Real in Table 3) indicates that there are no large differences, therefore we can see that the real imports of EU-countries from Bulgaria are closer to those suggested by the regression equation which means that imports depend preferential from the potential offered by its geographic position.

The average distance between real data and those from the regression is: 0.62%.

Table 3. The correlation between the coefficients of regression and the real imports of EU-countries in Bulgaria (in percent) in 2013

Country	Regression	Real	Country	Regression	Real
Austria	1.08%	0.32%	**Italy**	1.62%	0.64%
Belgium+Luxembourg	1.62%	0.21%	**Latvia**	0.54%	0.19%
Bulgaria	-	-	**Lithuania**	0.65%	0.21%
Croatia	1.08%	0.33%	**Malta**	1.08%	0.19%
Czech Republic	0.81%	0.23%	**Netherlands**	0.65%	0.13%
Denmark	0.65%	0.14%	**Poland**	0.81%	0.26%
Estonia	0.46%	0.15%	**Portugal**	0.65%	0.28%
Finland	0.46%	0.10%	**Romania**	3.25%	2.70%
France	1.08%	0.20%	**Slovakia**	1.08%	0.25%
Germany	0.81%	0.31%	**Slovenia**	1.08%	0.42%
Greece	3.25%	3.00%	**Spain**	0.81%	0.21%
Hungary	1.62%	0.36%	**Sweden**	0.54%	0.09%
Ireland	0.65%	0.07%	**United Kingdom**	0.81%	0.10%

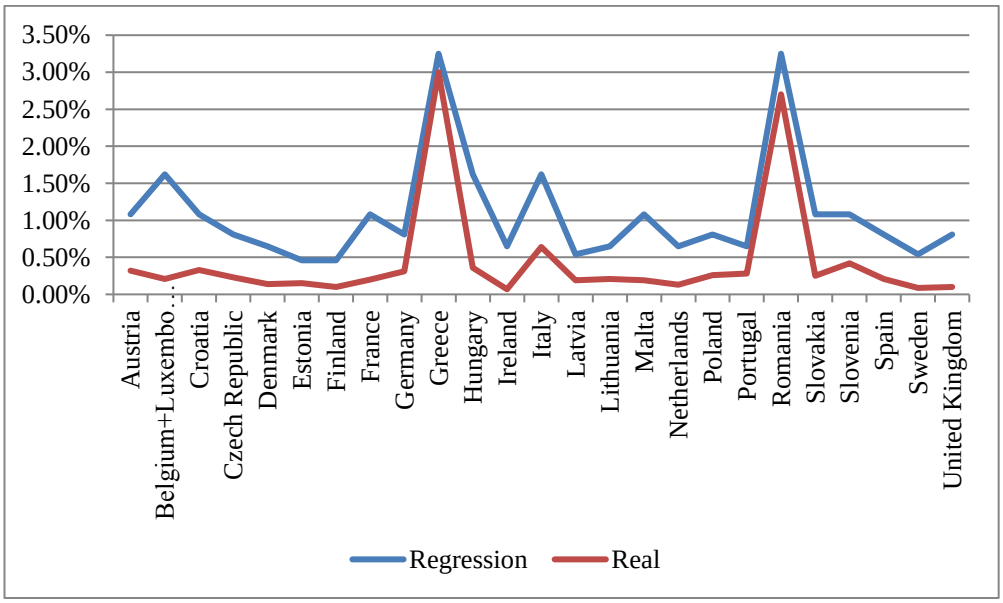

Figure 3. The relationship between imports based on distances and the real imports in 2013 in Bulgaria (in percent)

In the case of **Croatia**, from Appendix A.7 we can see that is a strong link between the two groups of indicators (R^2=0.9170), having finally:

EX_HR(t)=0.0039IM_AT(t)+0.002IM_BE(t)+0.0026IM_BG(t)+0.002IM_CY(t)+0.0026IM_CZ(t)+ 0.002IM_DK(t)+0.0013IM_EE(t)+0.0013IM_FI(t)+0.0026IM_FR(t)+0.0026IM_DE(t)+ 0.0026IM_EL(t)+0.0078IM_HU(t)+0.0016IM_IE(t)+0.0039IM_IT(t)+0.0016IM_LV(t)+ 0.002IM_LT(t)+0.002IM_LU(t)+0.0026IM_MT(t)+0.002IM_NL(t)+0.0026IM_PL(t)+ 0.0016IM_PT(t)+0.0039IM_RO(t)+0.0039IM_SK(t)+0.0078IM_SI(t)+0.002IM_ES(t)+ 0.0016IM_SE(t)+0.002IM_UK(t)-1510.5281

Let note that we have a small autoregression (d=0.7535) and P-Value for the Intercept is 0.16. If we shall try to eliminate the autoregression we shall find again d=0.5860 (much worth) and a P-Value for the Intercept 0.61. Therefore, we shall let the first regression which is much better than the second.

A comparison of regression coefficients and percentages imports from studied countries (Source: http://atlas.media.mit.edu/en/profile/country - column Real in Table 4) indicates that there are no large differences except Slovenia (figure 4) which is absolutely normal because of their former membership to Yugoslavia. Also, we can see that the real imports of EU-countries from Croatia are closer to those suggested by the regression equation which means that imports depend preferential from the potential offered by its geographic position.

The average distance between real data and those from the regression is: 0.30 %.

Table 4. The correlation between the coefficients of regression and the real imports of EU-countries in Croatia (in percent) in 2013

Country	Regression	Real	Country	Regression	Real
Austria	0.39%	0.44%	**Italy**	0.39%	0.36%
Belgium+Luxembourg	0.40%	0.05%	**Latvia**	0.16%	0.04%
Bulgaria	0.26%	0.15%	**Lithuania**	0.20%	0.03%
Croatia	-	-	**Malta**	0.26%	1.10%
Czech Republic	0.26%	0.09%	**Netherlands**	0.20%	0.04%
Denmark	0.20%	0.04%	**Poland**	0.26%	0.07%
Estonia	0.13%	0.22%	**Portugal**	0.16%	0.02%
Finland	0.13%	0.04%	**Romania**	0.39%	0.16%
France	0.26%	0.03%	**Slovakia**	0.39%	0.19%
Germany	0.26%	0.11%	**Slovenia**	0.78%	4.00%
Greece	0.26%	0.20%	**Spain**	0.20%	0.02%
Hungary	0.78%	0.28%	**Sweden**	0.16%	0.04%
Ireland	0.16%	0.01%	**United Kingdom**	0.20%	0.04%

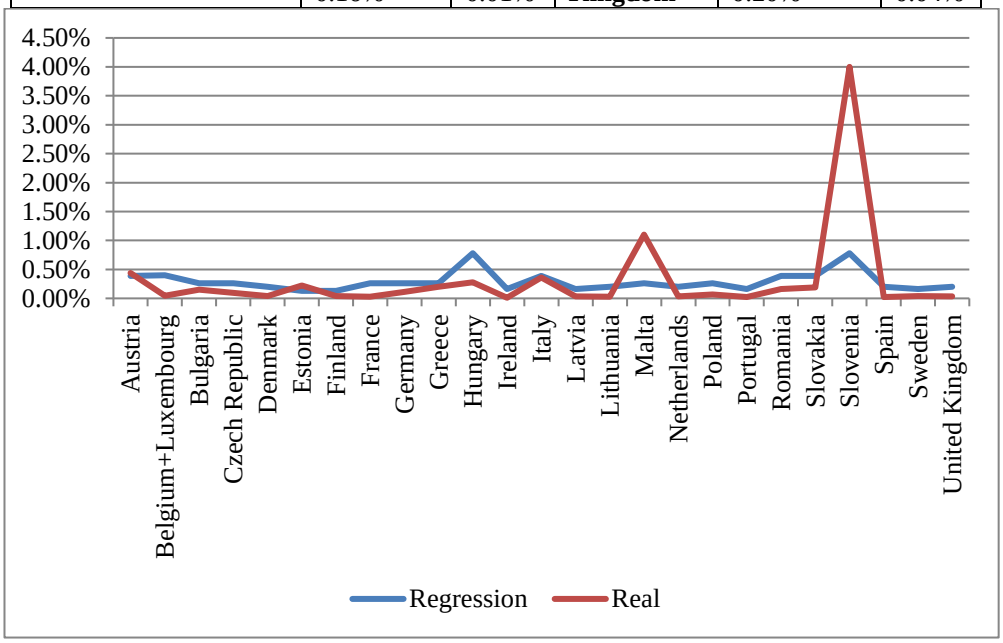

Figure 4. The relationship between imports based on distances and the real imports in 2013 in Croatia (in percent)

In the case of **Cyprus**, from Appendix A.8 we can see that is a weak link between the two groups of indicators (R^2=0.6655), having finally:

EX_CY(t)=0.0005IM_AT(t)+0.0004IM_BE(t)+0.0007IM_BG(t)+0.0004IM_HR(t)+ 0.0004IM_CZ(t)+0.0003IM_DK(t)+0.0002IM_EE(t)+0.0002IM_FI(t)+0.0005IM_FR(t)+ 0.0004IM_DE(t)+0.0014IM_EL(t)+0.0004IM_HU(t)+0.0003IM_IE(t)+0.0007IM_IT(t)+ 0.0002IM_LV(t)+0.0002IM_LT(t)+0.0004IM_LU(t)+0.0005IM_MT(t)+0.0003IM_NL(t)+ 0.0003IM_PL(t)+0.0003IM_PT(t)+0.0005IM_RO(t)+0.0004IM_SK(t)+0.0005IM_SI(t)+ 0.0004IM_ES(t)+0.0002IM_SE(t)+0.0004IM_UK(t)-457.8204

Let note that we have a P-Value for the Intercept 0.25 therefore we will reject the null hypothesis with a probability almost 0.75.

In the case of **Czech Republic**, from Appendix A.9 we can see that is a strong link between the two groups of indicators (R^2=0.9308), having finally:

EX_CZ(t)=0.0804IM_AT(t)+0.0402IM_BE(t)+0.02IM_BG(t)+0.0268IM_HR(t)+0.02IM_CY(t)+ 0.0402IM_DK(t)+0.02IM_EE(t)+0.02IM_FI(t)+0.0402IM_FR(t)+0.0804IM_DE(t)+0.0268IM_EL(t) +0.0402IM_HU(t)+0.02IM_IE(t)+0.0402IM_IT(t)+0.0268IM_LV(t)+0.0402IM_LT(t)+ 0.0402IM_LU(t)+0.0268IM_MT(t)+0.0402IM_NL(t)+0.0804IM_PL(t)+0.02IM_PT(t)+ 0.0268IM_RO(t)+0.0804IM_SK(t)+0.0402IM_SI(t)+0.0268IM_ES(t)+0.0268IM_SE(t)+ 0.0268IM_UK(t)-86039.0944

A comparison of regression coefficients and percentages imports from studied countries (Source: http://atlas.media.mit.edu/en/profile/country - column Real in Table 5) indicates that there are many differences (real vs. predicted imports) like Austria (3.90% vs. 8.04%), Belgium+Luxembourg (0.98% vs. 8.04%), Germany (3.90% vs. 8.04%), Poland (3.90% vs. 8.04%) and Slovakia (14% vs. 8.04%) in the last case being absolutely normal because of their former membership to Czechoslovakia.

Also, we can see that the real imports of EU-countries from Czech Republic are under to those suggested by the regression equation which means that imports not use the potential offered by its geographic position.

The average distance between real data and those from the regression is: 2.18%.

Table 5. The correlation between the coefficients of regression and the real imports of EU-countries in Czech Republic (in percent) in 2013

Country	Regression	Real	Country	Regression	Real
Austria	8.04%	3.90%	**Italy**	4.02%	1.20%
Belgium+Luxembourg	8.04%	0.98%	**Latvia**	2.68%	1.50%
Bulgaria	2.00%	2.10%	**Lithuania**	4.02%	1.60%
Croatia	2.68%	1.90%	**Malta**	2.68%	0.21%
Czech Republic	-	-	**Netherlands**	4.02%	0.99%
Denmark	4.02%	1.40%	**Poland**	8.04%	3.90%

Estonia	2.00%	1.10%	**Portugal**	2.00%	0.61%
Finland	2.00%	1.10%	**Romania**	2.68%	2.80%
France	4.02%	1.20%	**Slovakia**	8.04%	14.00%
Germany	8.04%	3.90%	**Slovenia**	4.02%	2.30%
Greece	2.68%	0.47%	**Spain**	2.68%	1.10%
Hungary	4.02%	4.00%	**Sweden**	2.68%	1.30%
Ireland	2.00%	0.72%	**United Kingdom**	2.68%	1.20%

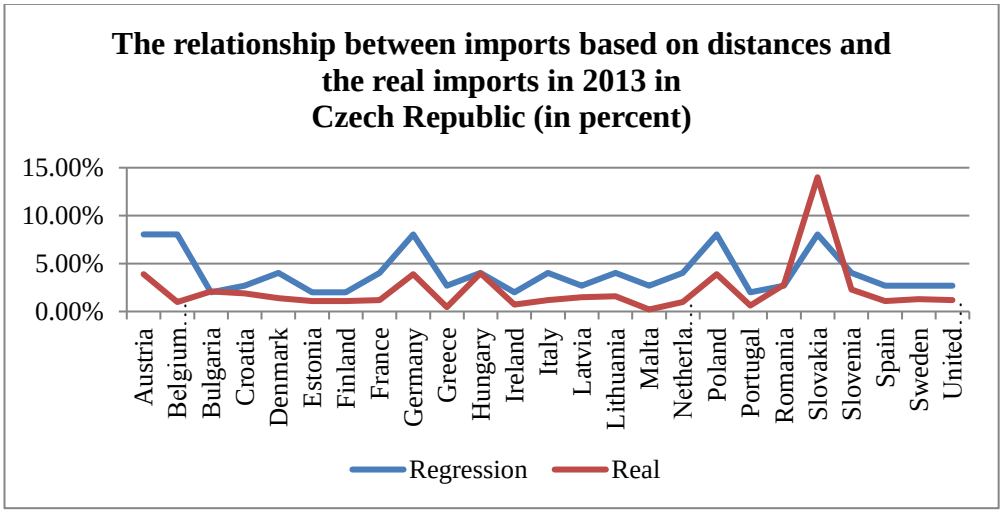

Figure 5. The relationship between imports based on distances and the real imports in 2013 in Czech Republic (in percent)

In the case of **Denmark**, from Appendix A.10 we can see that is a strong link between the two groups of indicators (R^2=0.9581), having:

EX_DK(t)=0.0117IM_AT(t)+0.0117IM_BE(t)+0.0047IM_BG(t)+0.0059IM_HR(t)+ 0.0047IM_CY(t)+0.0117IM_CZ(t)+0.0078IM_EE(t)+0.0117IM_FI(t)+0.0117IM_FR(t)+ 0.0235IM_DE(t)+0.0059IM_EL(t)+0.0078IM_HU(t)+0.0059IM_IE(t)+0.0078IM_IT(t)+ 0.0059IM_LV(t)+0.0078IM_LT(t)+0.0117IM_LU(t)+0.0059IM_MT(t)+0.0117IM_NL(t)+ 0.0117IM_PL(t)+0.0059IM_PT(t)+0.0059IM_RO(t)+0.0078IM_SK(t)+0.0078IM_SI(t)+ 0.0078IM_ES(t)+0.0235IM_SE(t)+0.0078IM_UK(t)+25237.4467

A comparison of regression coefficients and percentages imports from studied countries (Source: http://atlas.media.mit.edu/en/profile/country - column Real in Table 6) indicates that there are no large differences (real vs. predicted imports) except Sweden (8% vs. 0.78% - figure 6) which is absolutely normal as a consequence of commercial traditions that have bound these countries.

Unlike the other countries analyzed so far, one can see that in general, real imports are close to those provided by regression analysis, which shows a strong trade policy, taking into account the dependence on proximity.

The average distance between real data and those from the regression is: 0.78%.

Table 6. The correlation between the coefficients of regression and the real imports of EU-countries in Denmark (in percent) in 2013

Country	Regression	Real	Country	Regression	Real
Austria	1.17%	0.41%	**Italy**	0.78%	0.57%
Belgium+Luxembourg	2.34%	0.36%	**Latvia**	0.59%	2.00%
Bulgaria	0.47%	0.36%	**Lithuania**	0.78%	1.70%
Croatia	0.59%	1.20%	**Malta**	0.59%	0.60%
Czech Republic	1.17%	0.61%	**Netherlands**	1.17%	0.94%
Denmark	-	-	**Poland**	1.17%	1.20%
Estonia	0.78%	1.20%	**Portugal**	0.59%	0.43%
Finland	1.17%	3.20%	**Romania**	0.59%	0.83%
France	1.17%	0.50%	**Slovakia**	0.78%	0.36%
Germany	2.35%	1.20%	**Slovenia**	0.78%	0.31%
Greece	0.59%	0.94%	**Spain**	0.78%	0.54%
Hungary	0.78%	0.68%	**Sweden**	2.35%	8.00%
Ireland	0.59%	1.40%	**United Kingdom**	0.78%	1.40%

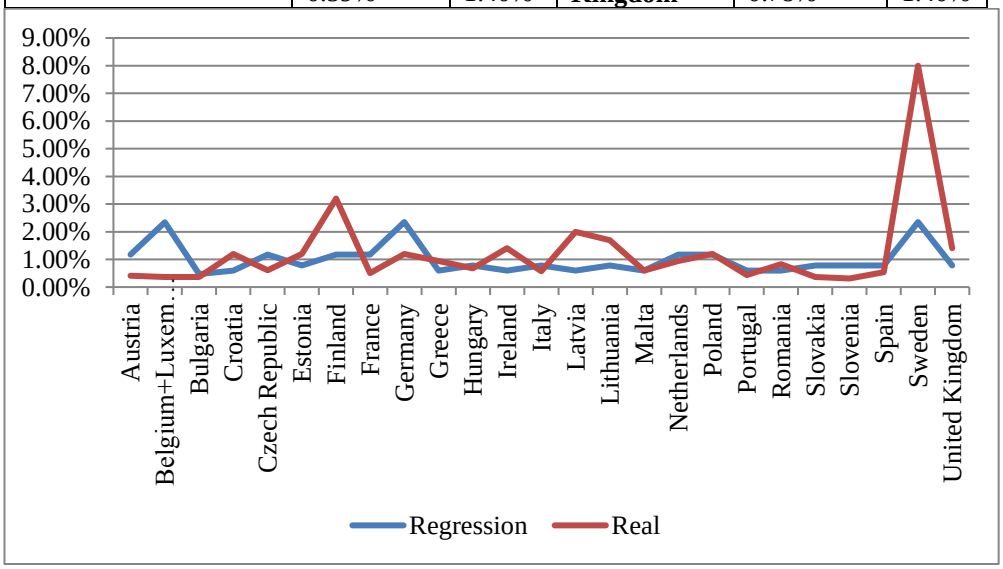

Figure 6. The relationship between imports based on distances and the real imports in 2013 in Denmark (in percent)

In the case of **Estonia**, from Appendix A.11 we can see that is a strong link between the two groups of indicators (R^2=0.9040), having:

EX_EE(t)=0.004IM_AT(t)+0.004IM_BE(t)+0.0028IM_BG(t)+0.0033IM_HR(t)+0.0025IM_CY(t)+ 0.0049IM_CZ(t)+0.0066IM_DK(t)+0.0198IM_FI(t)+0.004IM_FR(t)+0.0049IM_DE(t)+ 0.0028IM_EL(t)+0.004IM_HU(t)+0.0028IM_IE(t)+0.0033IM_IT(t)+0.0198IM_LV(t)+ 0.0099IM_LT(t)+0.004IM_LU(t)+0.0028IM_MT(t)+0.004IM_NL(t)+0.0066IM_PL(t)+ 0.0028IM_PT(t)+0.0033IM_RO(t)+0.0049IM_SK(t)+0.0033IM_SI(t)+0.0033IM_ES(t)+ 0.0099IM_SE(t)+0.0033IM_UK(t)-9027.2563

A comparison of regression coefficients and percentages imports from studied countries (Source: http://atlas.media.mit.edu/en/profile/country - column Real in Table 7) indicates that there are no large differences (real vs. predicted imports) except former Soviet Union countries – Latvia (6.70% vs. 1.98%) and Lithuania (2.50% vs. 0.99%) which is absolutely normal as a consequence of commercial traditions that have bound these countries.

Let note that in general, real imports were close, but under to those provided by regression analysis, which shows a trade policy depending on proximity of the EU-countries but not exploring all the possibilities of the minimal distances recovery.

The average distance between real data and those from the regression is: 0.57%.

Table 7. The correlation between the coefficients of regression andthe real imports of EU-countries in Estonia (in percent) in 2013

Country	Regression	Real	Country	Regression	Real
Austria	0.40%	0.03%	**Italy**	0.33%	0.03%
Belgium+Luxembourg	0.80%	0.08%	**Latvia**	1.98%	6.70%
Bulgaria	0.28%	0.09%	**Lithuania**	0.99%	2.50%
Croatia	0.33%	0.07%	**Malta**	0.28%	0.06%
Czech Republic	0.49%	0.05%	**Netherlands**	0.40%	0.07%
Denmark	0.66%	0.43%	**Poland**	0.66%	0.10%
Estonia	-	-	**Portugal**	0.28%	0.04%
Finland	1.98%	2.80%	**Romania**	0.33%	0.02%
France	0.40%	0.05%	**Slovakia**	0.49%	0.07%
Germany	0.49%	0.06%	**Slovenia**	0.33%	0.04%
Greece	0.28%	0.02%	**Spain**	0.33%	0.03%
Hungary	0.40%	0.03%	**Sweden**	0.99%	1.70%
Ireland	0.28%	0.04%	**United Kingdom**	0.33%	0.07%

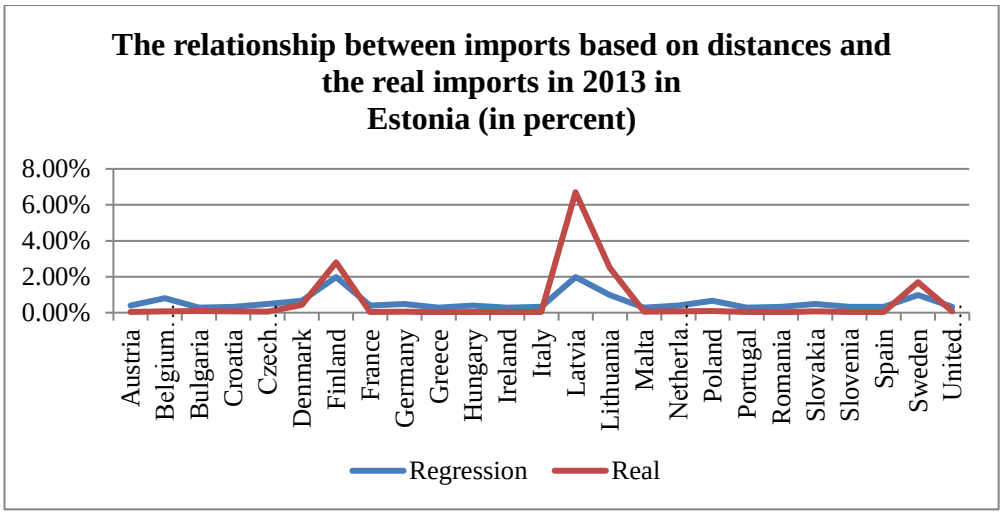

Figure 7. The relationship between imports based on distances and the real imports in 2013 in Estonia (in percent)

In the case of **Finland**, from Appendix A.12 we can see that is a very weak link between the two groups of indicators (R^2=0.1840), having:

EX_FI(t)=0.0042IM_AT(t)+0.0042IM_BE(t)+0.0024IM_BG(t)+0.0028IM_HR(t)
+0.0024IM_CY(t)+0.0042IM_CZ(t)+0.0084IM_DK(t)+0.0169IM_EE(t)+0.0042I
M_FR(t)+0.0056IM_DE(t)+
0.0028IM_EL(t)+0.0034IM_HU(t)+0.0028IM_IE(t)+0.0034IM_IT(t)+0.0084IM_
LV(t)+
0.0056IM_LT(t)+0.0042IM_LU(t)+0.0028IM_MT(t)+0.0042IM_NL(t)+0.0042IM
_PL(t)+
0.0028IM_PT(t)+0.0028IM_RO(t)+0.0034IM_SK(t)+0.0034IM_SI(t)+0.0034IM_
ES(t)+
0.0169IM_SE(t)+0.0034IM_UK(t)+37525.6209

A comparison of regression coefficients and percentages imports from studied countries (Source: http://atlas.media.mit.edu/en/profile/country - column Real in Table 8) indicates that there are no large differences (real vs. predicted imports) except Estonia (9.60% vs. 1.69%), Latvia (4.30% vs. 0.84%), Lithuania (1.90% vs. 0.56%) and Sweden (5.60% vs. 1.69%).

In general, real imports were close which shows a trade policy depending on proximity of the EU-countries.

The average distance between real data and those from the regression is: 0.76%.

Table 8. The correlation between the coefficients of regression and the real imports of EU-countries in Finland (in percent) in 2013

Country	Regression	Real	Country	Regression	Real
Austria	0.42%	0.32%	**Italy**	0.34%	0.39%
Belgium+Luxembourg	0.84%	0.59%	**Latvia**	0.84%	4.30%
Bulgaria	0.24%	0.19%	**Lithuania**	0.56%	1.90%
Croatia	0.28%	0.22%	**Malta**	0.28%	0.06%
Czech Republic	0.42%	0.27%	**Netherlands**	0.42%	0.82%
Denmark	0.84%	1.60%	**Poland**	0.42%	0.86%
Estonia	1.69%	9.60%	**Portugal**	0.28%	0.28%
Finland	-	-	**Romania**	0.28%	0.28%
France	0.42%	0.41%	**Slovakia**	0.34%	0.18%
Germany	0.56%	0.64%	**Slovenia**	0.34%	0.27%
Greece	0.28%	0.29%	**Spain**	0.34%	0.34%
Hungary	0.34%	0.29%	**Sweden**	1.69%	5.60%
Ireland	0.28%	0.22%	**United Kingdom**	0.34%	0.62%

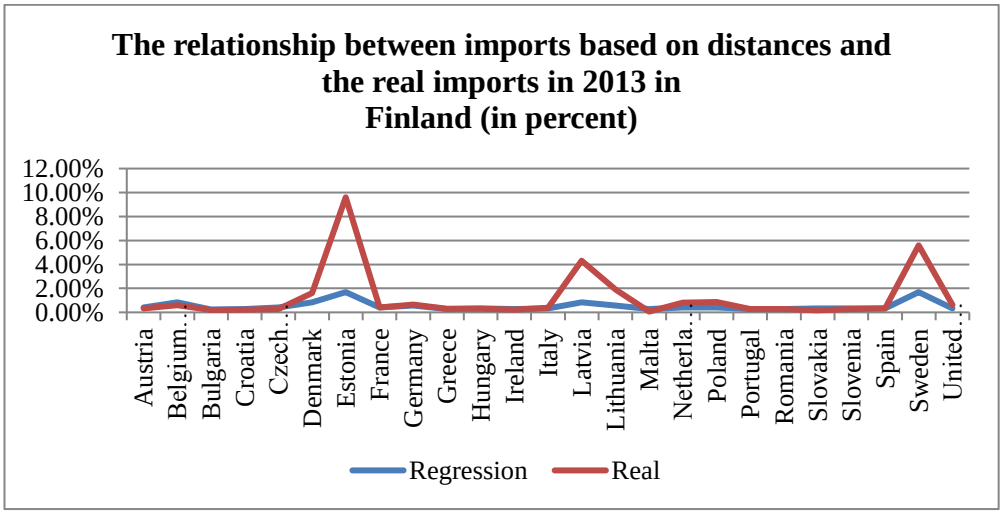

Figure 8. The relationship between imports based on distances and the real imports in 2013 in Finland (in percent)

In the case of **France**, from Appendix A.13 we can see that is a strong link between the two groups of indicators (R^2=0.9311), having:

EX_FR(t)=0.0444IM_AT(t)+0.0889IM_BE(t)+0.0296IM_BG(t)+0.0296IM_HR(t)+ 0.0296IM_CY(t)+0.0444IM_CZ(t)+0.0444IM_DK(t)+0.0178IM_EE(t)+0.0222IM_FI(t)+ 0.0889IM_DE(t)+0.0444IM_EL(t)+0.0296IM_HU(t)+0.0444IM_IE(t)+0.0889IM_IT(t)+

0.0222IM_LV(t)+0.0296IM_LT(t)+0.0889IM_LU(t)+0.0444IM_MT(t)+0.0444IM_NL(t)+ 0.0444IM_PL(t)+0.0444IM_PT(t)+0.0222IM_RO(t)+0.0296IM_SK(t)+0.0444IM_SI(t)+ 0.0889IM_ES(t)+0.0296IM_SE(t)+0.0889IM_UK(t)+158856.3841

A comparison of regression coefficients and percentages imports from studied countries (Source: http://atlas.media.mit.edu/en/profile/country - column Real in Table 9) indicates that there are no large differences (real vs. predicted imports) except Belgium+Luxembourg – under the distance between them (11% vs. 17.78%) and, on the other side, Romania (5.80% vs. 2.22%) and Portugal (6.30% vs. 4.44%) over the coefficients of regression.

Let note that in general, real imports were close to those provided by regression analysis.

The average distance between real data and those from the regression is: 1.22 %.

Table 9. The correlation between the coefficients of regression and the real imports of EU-countries in France (in percent) in 2013

Country	Regression	Real	Country	Regression	Real
Austria	4.44%	2.80%	**Italy**	8.89%	8.30%
Belgium+Luxembourg	17.78%	11.00%	**Latvia**	2.22%	1.80%
Bulgaria	2.96%	2.90%	**Lithuania**	2.96%	2.70%
Croatia	2.96%	2.20%	**Malta**	4.44%	7.10%
Czech Republic	4.44%	3.30%	**Netherlands**	4.44%	4.20%
Denmark	4.44%	3.20%	**Poland**	4.44%	3.90%
Estonia	1.78%	2.10%	**Portugal**	4.44%	6.30%
Finland	2.22%	3.20%	**Romania**	2.22%	5.80%
France	-	-	**Slovakia**	2.96%	3.00%
Germany	8.89%	7.20%	**Slovenia**	4.44%	4.20%
Greece	4.44%	4.90%	**Spain**	8.89%	10.00%
Hungary	2.96%	4.00%	**Sweden**	2.96%	4.20%
Ireland	4.44%	4.20%	**United Kingdom**	8.89%	6.20%

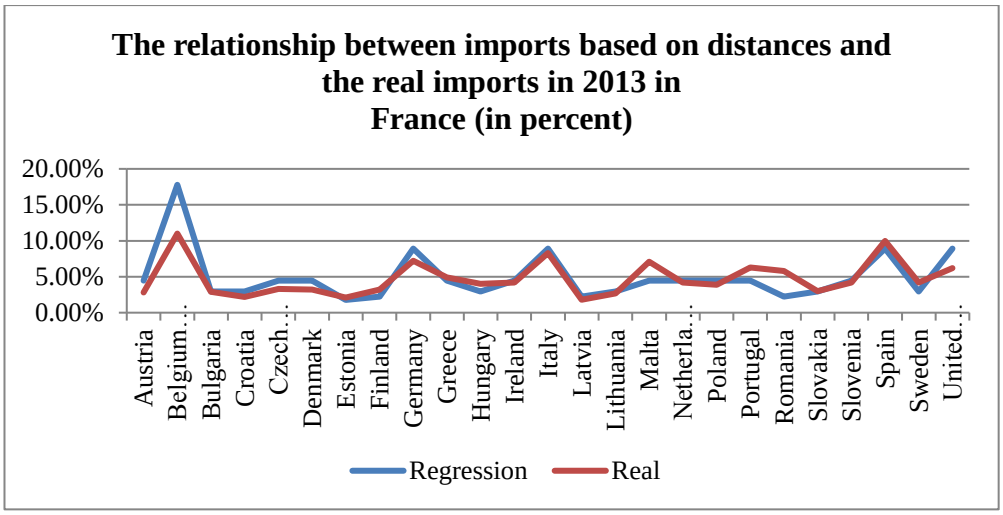

Figure 9

In the case of **Germany**, from Appendix A.14 we can see that is a strong link between the two groups of indicators (R^2=0.9681). The P-Value Analysis reveals for Intercept a great value (0.2002) which indicates a weak evidence against the null hypothesis. In fact, assuming the threshold of 79% we obtain the regression in the table A.19. Finally, we have:

EX_DE(t)=0.4463IM_AT(t)+0.4463IM_BE(t)+0.1114IM_BG(t)+0.1486IM_HR(t)
+
0.1114IM_CY(t)+0.4463IM_CZ(t)+0.4463IM_DK(t)+0.1114IM_EE(t)+0.1486IM
_FI(t)+
0.4463IM_FR(t)+0.1486IM_EL(t)+0.2228IM_HU(t)+0.1486IM_IE(t)+0.2228IM_
IT(t)+
0.1486IM_LV(t)+0.2228IM_LT(t)+0.4463IM_LU(t)+0.1486IM_MT(t)+0.4463IM
_NL(t)+
0.4463IM_PL(t)+0.1486IM_PT(t)+0.1486IM_RO(t)+0.2228IM_SK(t)+0.2228IM_
SI(t)+
0.2228IM_ES(t)+0.2228IM_SE(t)+0.2228IM_UK(t)-83740.245

A comparison of regression coefficients and percentages imports from studied countries (Source: http://atlas.media.mit.edu/en/profile/country - column Real in Table 10) indicates that there are many differences (real vs. predicted imports) between countries - Belgium+Luxembourg with a real percent of imports of 14% instead 89.26% (after regression), Czech Republic (26% vs. 44.63%), Denmark with 20% vs. 44.63%, France – 18% vs. 44.63%, Netherlands – 15% vs. 44.63%, Poland – 23% vs. 44.63%. We can easily see that these difference, maybe except

Poland, are encountered in the case of the very developed countries from the European Union, which have themselves a strong import.

Let note that in general, real imports were strong under to those provided by regression analysis, even Germany is the main engine of UE.

The average distance between real data and those from the regression is very high: 11.44 %.

Table 10. The correlation between the coefficients of regression and the real imports of EU-countries in Germany (in percent) in 2013

Country	Regression	Real	Country	Regression	Real
Austria	44.63%	38.00%	**Italy**	22.28%	15.00%
Belgium+Luxembourg	89.26%	14.00%	**Latvia**	14.86%	10.00%
Bulgaria	11.14%	10.00%	**Lithuania**	22.28%	10.00%
Croatia	14.86%	14.00%	**Malta**	14.86%	4.20%
Czech Republic	44.63%	26.00%	**Netherlands**	44.63%	15.00%
Denmark	44.63%	20.00%	**Poland**	44.63%	23.00%
Estonia	11.14%	9.30%	**Portugal**	14.86%	11.00%
Finland	14.86%	13.00%	**Romania**	14.86%	18.00%
France	44.63%	18.00%	**Slovakia**	22.28%	16.00%
Germany	-	-	**Slovenia**	22.28%	17.00%
Greece	14.86%	10.00%	**Spain**	22.28%	12.00%
Hungary	22.28%	24.00%	**Sweden**	22.28%	18.00%
Ireland	14.86%	9.20%	**United Kingdom**	22.28%	14.00%

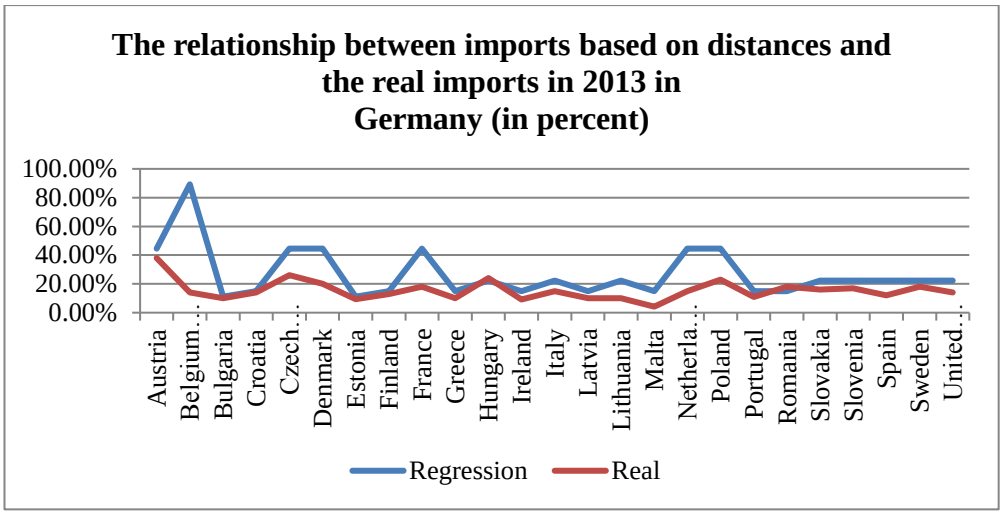

Figure 10

In the case of **Greece**, from Appendix A.15 we can see that is a strong link between the two groups of indicators (R^2=0.8716). We have:

EX_EL(t)=0.0114IM_AT(t)+0.0076IM_BE(t)+0.0228IM_BG(t)+0.0076IM_HR(t)
+
0.0228IM_CY(t)+0.0076IM_CZ(t)+0.0057IM_DK(t)+0.0033IM_EE(t)+0.0038IM
_FI(t)+
0.0114IM_FR(t)+0.0076IM_DE(t)+0.0076IM_HU(t)+0.0057IM_IE(t)+0.0228IM_
IT(t)+
0.0038IM_LV(t)+0.0046IM_LT(t)+0.0076IM_LU(t)+0.0114IM_MT(t)+0.0057IM
_NL(t)+
0.0057IM_PL(t)+0.0057IM_PT(t)+0.0114IM_RO(t)+0.0076IM_SK(t)+0.0114IM_
SI(t)+
0.0076IM_ES(t)+0.0046IM_SE(t)+0.0076IM_UK(t)-15317.9389

A comparison of regression coefficients and percentages imports from studied countries (Source: http://atlas.media.mit.edu/en/profile/country - column Real in Table 11) indicates that there are only one major difference (real vs. predicted imports) between countries – Bulgaria were real imports are 5.20% versus 2.28% from the regression.

Let note that in general, real imports were under to those provided by regression analysis, therefore the export of Greece not exploit all the opportunities generated by the distances.

The average distance between real data and those from the regression is low: 0.64 %.

Table 11. The correlation between the coefficients of regression and the real imports of EU-countries in Greece (in percent) in 2013

Country	Regression	Real	Country	Regression	Real
Austria	1.14%	0.14%	**Italy**	2.28%	0.64%
Belgium+Luxembourg	1.52%	0.09%	**Latvia**	0.38%	0.11%
Bulgaria	2.28%	5.20%	**Lithuania**	0.46%	0.12%
Croatia	0.76%	0.41%	**Malta**	1.14%	1.90%
Czech Republic	0.76%	0.16%	**Netherlands**	0.57%	0.12%
Denmark	0.57%	0.18%	**Poland**	0.57%	0.20%
Estonia	0.33%	0.11%	**Portugal**	0.57%	0.24%
Finland	0.38%	0.12%	**Romania**	1.14%	1.10%
France	1.14%	0.13%	**Slovakia**	0.76%	0.12%
Germany	0.76%	0.20%	**Slovenia**	1.14%	0.65%
Greece	-	-	**Spain**	0.76%	0.34%
Hungary	0.76%	0.10%	**Sweden**	0.46%	0.16%
Ireland	0.57%	0.08%	**United Kingdom**	0.76%	0.19%

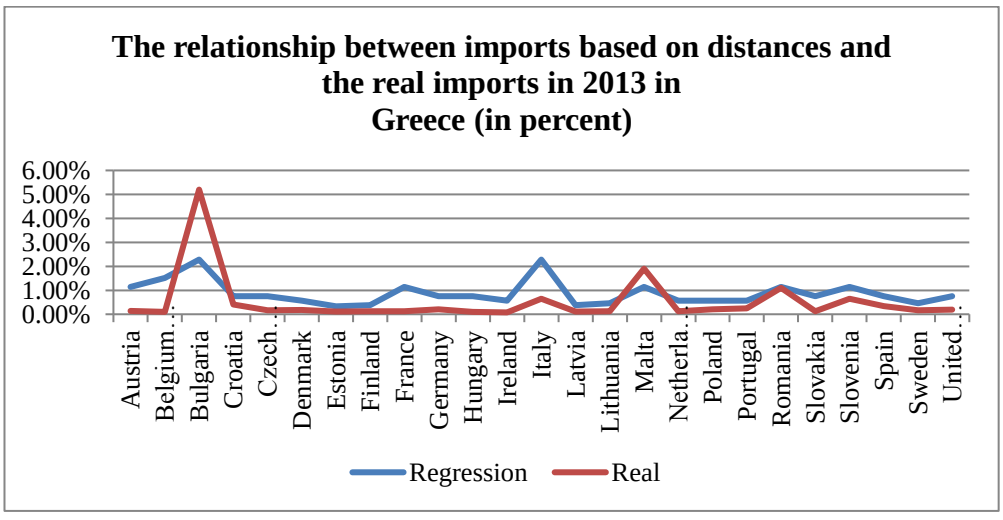

Figure 11

In the case of **Hungary**, from Appendix A.16 we can see that is a strong link between the two groups of indicators (R^2=0.9758). The P-Value Analysis reveals low values under 0.0003 which indicates a very strong evidence against the null hypothesis. Therefore, finally, we have:

EX_HU(t)=0.0583IM_AT(t)+0.0194IM_BE(t)+0.0291IM_BG(t)+0.0583IM_HR(t)+
0.0146IM_CY(t)+0.0291IM_CZ(t)+0.0194IM_DK(t)+0.0117IM_EE(t)+0.0117IM_FI(t)+
0.0194IM_FR(t)+0.0291IM_DE(t)+0.0194IM_EL(t)+0.0117IM_IE(t)+0.0291IM_IT(t)+
0.0146IM_LV(t)+0.0194IM_LT(t)+0.0194IM_LU(t)+0.0194IM_MT(t)+0.0194IM_NL(t)+
0.0291IM_PL(t)+0.0117IM_PT(t)+0.0583IM_RO(t)+0.0583IM_SK(t)+0.0583IM_SI(t)+
0.0146IM_ES(t)+0.0146IM_SE(t)+0.0146IM_UK(t)-25082.8642

A comparison of regression coefficients and percentages imports from studied countries (Source: http://atlas.media.mit.edu/en/profile/country - column Real in Table 12) indicates that there are not great differences (real vs. predicted imports) between countries, except Romania with real imports – 8.10% versus 5.83% after regression analysis. We can conclude that exports of Hungary are directed by territorial proximity criterion.

The average distance between real data and those from the regression is: 1.13%.

Table 12. The correlation between the coefficients of regression and the real imports of EU-countries in Hungary (in percent) in 2013

Country	Regression	Real	Country	Regression	Real
Austria	5.83%	2.90%	**Italy**	2.91%	1.10%
Belgium+Luxembourg	3.88%	0.40%	**Latvia**	1.46%	1.10%
Bulgaria	2.91%	2.90%	**Lithuania**	1.94%	0.79%
Croatia	5.83%	6.00%	**Malta**	1.94%	0.12%
Czech Republic	2.91%	2.50%	**Netherlands**	1.94%	0.51%
Denmark	1.94%	0.84%	**Poland**	2.91%	1.70%
Estonia	1.17%	1.20%	**Portugal**	1.17%	0.37%
Finland	1.17%	0.40%	**Romania**	5.83%	8.10%
France	1.94%	0.66%	**Slovakia**	5.83%	5.10%
Germany	2.91%	2.20%	**Slovenia**	5.83%	3.30%
Greece	1.94%	0.66%	**Spain**	1.46%	0.75%
Hungary	-	-	**Sweden**	1.46%	0.68%
Ireland	1.17%	0.30%	**United Kingdom**	1.46%	0.67%

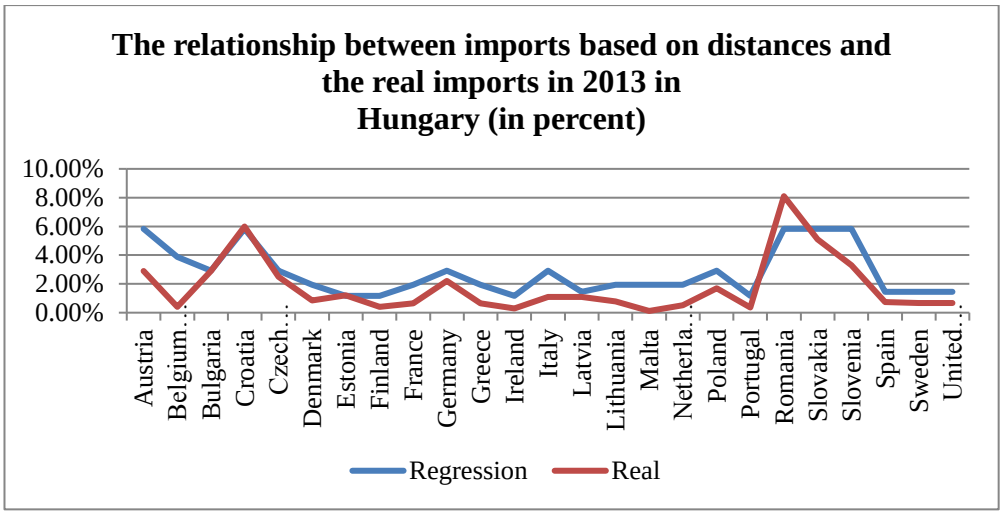

Figure 12

The case of **Ireland**, from Appendix A.17 is less relevant because R^2=0.3920, that is the linear regression analysis explains very slightly the phenomenon. Because P-Values are less then 0.03 the null hypothesis can be rejected with a significant probability (97%). We have also:

EX_IE(t)=0.0048IM_AT(t)+0.0097IM_BE(t)+0.0039IM_BG(t)+0.0039IM_HR(t)
+0.0039IM_CY(t)+0.0048IM_CZ(t)+0.0048IM_DK(t)+0.0028IM_EE(t)+0.0032I
M_FI(t)+0.0097IM_FR(t)+
0.0064IM_DE(t)+0.0048IM_EL(t)+0.0039IM_HU(t)+0.0064IM_IT(t)+0.0032IM_
LV(t)+
0.0039IM_LT(t)+0.0064IM_LU(t)+0.0048IM_MT(t)+0.0097IM_NL(t)+0.0048IM
_PL(t)+
0.0048IM_PT(t)+0.0032IM_RO(t)+0.0039IM_SK(t)+0.0048IM_SI(t)+0.0064IM_
ES(t)+
0.0039IM_SE(t)+0.0193IM_UK(t)+56109.6725

A comparison of regression coefficients and percentages imports from studied countries (Source: http://atlas.media.mit.edu/en/profile/country - column Real in Table 13) indicates that there are very little differences (real vs. predicted imports) between countries. We can conclude that exports of Ireland are directed by territorial proximity criterion.

The average distance between real data and those from the regression is: 0.36%.

Table 13. The correlation between the coefficients of regression and the real imports of EU-countries in Ireland (in percent) in 2013

Country	Regression	Real	Country	Regression	Real

Austria	0.48%	0.88%	**Italy**	0.64%	0.75%
Belgium+Luxembourg	1.61%	3.60%	**Latvia**	0.32%	0.24%
Bulgaria	0.39%	0.33%	**Lithuania**	0.39%	0.24%
Croatia	0.39%	0.33%	**Malta**	0.48%	0.23%
Czech Republic	0.48%	0.60%	**Netherlands**	0.97%	1.10%
Denmark	0.48%	1.30%	**Poland**	0.48%	0.67%
Estonia	0.28%	0.30%	**Portugal**	0.48%	0.97%
Finland	0.32%	0.78%	**Romania**	0.32%	0.73%
France	0.97%	1.30%	**Slovakia**	0.39%	0.26%
Germany	0.64%	0.88%	**Slovenia**	0.48%	0.29%
Greece	0.48%	0.62%	**Spain**	0.64%	1.20%
Hungary	0.39%	0.51%	**Sweden**	0.39%	1.20%
Ireland	-	-	**United Kingdom**	1.93%	3.00%

Figure 13

In the case of **Italy**, from Appendix A.18 we can see that is a strong link between the two groups of indicators (R^2=0.9671). On the other hand, P-Values Analysis reveals for Intercept a big value (0.1879) which indicates a small evidence against the null hypothesis. Therefore, finally, we have:

EX_IT(t)=0.1629IM_AT(t)+0.0816IM_BE(t)+0.0816IM_BG(t)+0.0816IM_HR(t)
+0.0816IM_CY(t)+0.0816IM_CZ(t)+0.0542IM_DK(t)+0.0272IM_EE(t)+0.0325I
M_FI(t)+0.1629IM_FR(t)+
0.0816IM_DE(t)+0.1629IM_EL(t)+0.0816IM_HU(t)+0.0542IM_IE(t)+0.0325IM_

LV(t)+
0.0407IM_LT(t)+0.0816IM_LU(t)+0.1629IM_MT(t)+0.0542IM_NL(t)+0.0542IM_PL(t)+
0.0542IM_PT(t)+0.0542IM_RO(t)+0.0816IM_SK(t)+0.1629IM_SI(t)+0.0816IM_ES(t)+
0.0407IM_SE(t)+0.0816IM_UK(t)+27138.5206

A comparison of regression coefficients and percentages imports from studied countries (Source: http://atlas.media.mit.edu/en/profile/country - column Real in Table 14) indicates that there are great differences (real vs. predicted imports) between almost all countries: Austria (6.20% vs. 16.29%), Belgium+Luxembourg (3.30% vs. 16.32%), France (7.50% vs. 16.29%), Greece (8% vs. 16.29%), Romania (11% vs. 5.42%) in this last case real imports of Romania being much upper than that of regression.

The average distance between real data and those from the regression is: 3.40%.

Table 14. The correlation between the coefficients of regression and the real imports of EU-countries in Italy (in percent) in 2013

Country	Regression	Real	Country	Regression	Real
Austria	16.29%	6.20%	**Italy**	-	-
Belgium+Luxembourg	16.32%	3.30%	**Latvia**	3.25%	3.00%
Bulgaria	8.16%	6.90%	**Lithuania**	4.07%	4.10%
Croatia	8.16%	13.00%	**Malta**	16.29%	18.00%
Czech Republic	8.16%	4.00%	**Netherlands**	5.42%	2.10%
Denmark	5.42%	3.60%	**Poland**	5.42%	5.30%
Estonia	2.72%	2.20%	**Portugal**	5.42%	5.10%
Finland	3.25%	2.60%	**Romania**	5.42%	11.00%
France	16.29%	7.50%	**Slovakia**	8.16%	3.40%
Germany	8.16%	5.10%	**Slovenia**	16.29%	15.00%
Greece	16.29%	8.00%	**Spain**	8.16%	6.20%
Hungary	8.16%	4.40%	**Sweden**	4.07%	3.00%
Ireland	5.42%	1.80%	**United Kingdom**	8.16%	4.00%

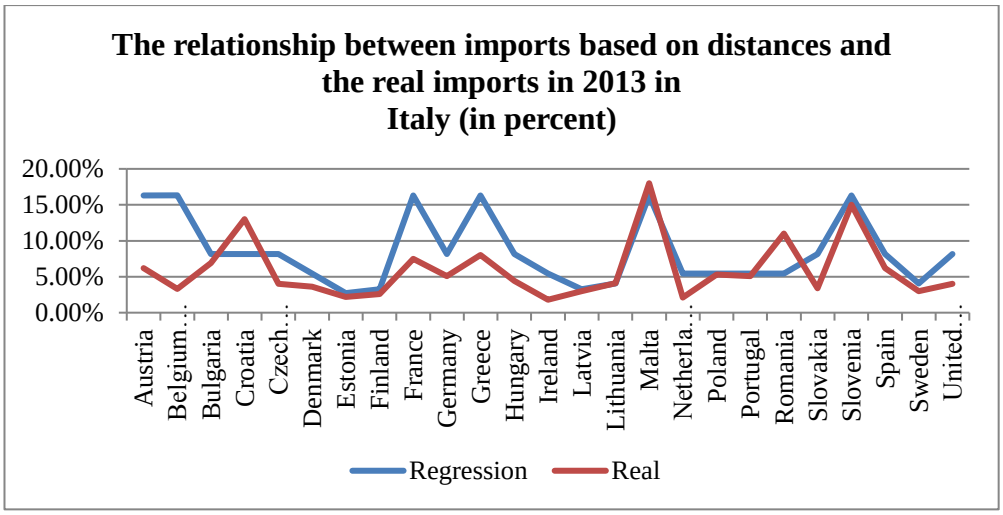

Figure 14

Durbin Watson statistical analysis reveals a positive autocorrelation of errors (d=0.7876 for the limits of autocorrelation: (0,0.97)). Because in the upper analysis we have ρ - the autocorrelation coefficient of errors having value ρ= 0.558744702 we shall make another regression analysis for the set of data: Imports-computed-new(t)=Imports-computed(t)-ρ·Imports-computed(t-1) and Imports-real-new(t)= Imports-real(t)-ρ·Imports-real(t-1) (table A.33). Finally, we obtain the equation of regression:

EX_IT(t)=0.5587EX_IT(t-1)+0.1808IM_AT(t)-0.101IM_AT(t-1)+0.0905IM_BE(t)-0.0506IM_BE(t-1)+0.0905IM_BG(t)-0.0506IM_BG(t-1)+0.0905IM_HR(t)-0.0506IM_HR(t-1)+ 0.0905IM_CY(t)-0.0506IM_CY(t-1)+0.0905IM_CZ(t)-0.0506IM_CZ(t-1)+0.0601IM_DK(t)-0.0336IM_DK(t-1)+0.0302IM_EE(t)-0.0169IM_EE(t-1)+0.0361IM_FI(t)-0.0201IM_FI(t-1)+ 0.1808IM_FR(t)-0.101IM_FR(t-1)+0.0905IM_DE(t)-0.0506IM_DE(t-1)+0.1808IM_EL(t)-0.101IM_EL(t-1)+0.0905IM_HU(t)-0.0506IM_HU(t-1)+0.0601IM_IE(t)-0.0336IM_IE(t-1)+ 0.0361IM_LV(t)-0.0201IM_LV(t-1)+0.0451IM_LT(t)-0.0252IM_LT(t-1)+0.0905IM_LU(t)-0.0506IM_LU(t-1)+0.1808IM_MT(t)-0.101IM_MT(t-1)+0.0601IM_NL(t)-0.0336IM_NL(t-1)+ 0.0601IM_PL(t)-0.0336IM_PL(t-1)+0.0601IM_PT(t)-0.0336IM_PT(t-1)+0.0601IM_RO(t)-0.0336IM_RO(t-1)+0.0905IM_SK(t)-0.0506IM_SK(t-1)+0.1808IM_SI(t)-0.101IM_SI(t-1)+ 0.0905IM_ES(t)-0.0506IM_ES(t-1)+0.0451IM_SE(t)-0.0252IM_SE(t-1)+0.0905IM_UK(t)-0.0506IM_UK(t-1)-5288.7694

In the case of **Latvia**, from Appendix A.19 we can see that is a strong link between the two groups of indicators (R^2=0.8850). On the other hand, P-Values Analysis

reveals for both coefficients of the regression small values which indicates a strong evidence against the null hypothesis. Therefore, finally, we have:

EX_LV(t)=0.0043IM_AT(t)+0.0043IM_BE(t)+0.0028IM_BG(t)+0.0034IM_HR(t)
+
0.0024IM_CY(t)+0.0057IM_CZ(t)+0.0043IM_DK(t)+0.0171IM_EE(t)+0.0085IM
_FI(t)+
0.0043IM_FR(t)+0.0057IM_DE(t)+0.0028IM_EL(t)+0.0043IM_HU(t)+0.0028IM
_IE(t)+
0.0034IM_IT(t)+0.0171IM_LT(t)+0.0043IM_LU(t)+0.0028IM_MT(t)+0.0043IM_
NL(t)+
0.0085IM_PL(t)+0.0028IM_PT(t)+0.0034IM_RO(t)+0.0057IM_SK(t)+0.0034IM_
SI(t)+
0.0034IM_ES(t)+0.0057IM_SE(t)+0.0034IM_UK(t)-11040.2738

A comparison of regression coefficients and percentages imports from studied countries (Source: http://atlas.media.mit.edu/en/profile/country - column Real in Table 15) indicates that there are not great differences (real vs. predicted imports) between countries except cases of close neighborhoods: Estonia (4.90% - real vs. 1.71% - regression) and Lithuania (6% - real vs. 1.71% - regression) therefore imports of Latvia are directed by territorial proximity criterion.

The average distance between real data and those from the regression is: 0.60%.

Table 15. The correlation between the coefficients of regression and the real imports of EU-countries in Latvia (in percent) in 2013

Country	Regression	Real	Country	Regression	Real
Austria	0.43%	0.03%	**Italy**	0.34%	0.03%
Belgium+Luxembourg	0.86%	0.05%	**Latvia**	-	-
Bulgaria	0.28%	0.06%	**Lithuania**	1.71%	6.00%
Croatia	0.34%	0.03%	**Malta**	0.28%	0.03%
Czech Republic	0.57%	0.10%	**Netherlands**	0.43%	0.11%
Denmark	0.43%	0.58%	**Poland**	0.85%	0.24%
Estonia	1.71%	4.90%	**Portugal**	0.28%	0.01%
Finland	0.85%	0.45%	**Romania**	0.34%	0.03%
France	0.43%	0.04%	**Slovakia**	0.57%	0.08%
Germany	0.57%	0.07%	**Slovenia**	0.34%	0.05%
Greece	0.28%	0.03%	**Spain**	0.34%	0.02%
Hungary	0.43%	0.03%	**Sweden**	0.57%	0.46%
Ireland	0.28%	0.06%	**United Kingdom**	0.34%	0.12%

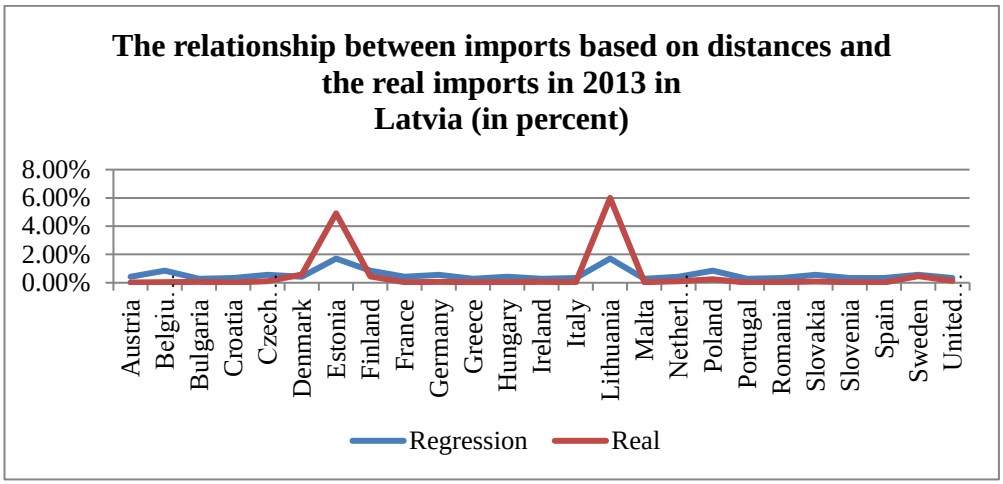

Figure 15

In the case of **Lithuania**, from Appendix A.20 we can see that is a strong link between the two groups of indicators (R^2=0.8827). On the other hand, P-Values Analysis reveals for both coefficients of the regression great values which indicates a strong evidence against the null hypothesis. Therefore, finally, we have:

EX_LT(t)=0.0088IM_AT(t)+0.0088IM_BE(t)+0.0053IM_BG(t)+0.0066IM_HR(t)
+
0.0044IM_CY(t)+0.0132IM_CZ(t)+0.0088IM_DK(t)+0.0132IM_EE(t)+0.0088IM
_FI(t)+
0.0088IM_FR(t)+0.0132IM_DE(t)+0.0053IM_EL(t)+0.0088IM_HU(t)+0.0053IM
_IE(t)+
0.0066IM_IT(t)+0.0265IM_LV(t)+0.0088IM_LU(t)+0.0053IM_MT(t)+0.0088IM_
NL(t)+
0.0265IM_PL(t)+0.0053IM_PT(t)+0.0066IM_RO(t)+0.0132IM_SK(t)+0.0066IM_
SI(t)+
0.0066IM_ES(t)+0.0066IM_SE(t)+0.0066IM_UK(t)-22155.7822

A comparison of regression coefficients and percentages imports from studied countries (Source: http://atlas.media.mit.edu/en/profile/country - column Real in Table 16) indicates that there are not great differences (real vs. predicted imports) between countries except cases of close neighborhoods: Estonia (6.20% - real vs. 1.32% - regression) and Latvia (18% - real vs. 2.65% - regression) therefore exports of Lithuania are directed by territorial proximity criterion.

The average distance between real data and those from the regression is: 1.39%.

Table 16. The correlation between the coefficients of regression and the real imports of EU-countries in Lithuania (in percent) in 2013

Country	Regression	Real	Country	Regression	Real
Austria	0.88%	0.07%	**Italy**	0.66%	0.11%
Belgium+Luxembourg	1.76%	0.10%	**Latvia**	2.65%	18.00%
Bulgaria	0.53%	0.17%	**Lithuania**	-	-
Croatia	0.66%	0.07%	**Malta**	0.53%	0.02%
Czech Republic	1.32%	0.18%	**Netherlands**	0.88%	0.18%
Denmark	0.88%	0.66%	**Poland**	2.65%	0.75%
Estonia	1.32%	6.20%	**Portugal**	0.53%	0.11%
Finland	0.88%	0.60%	**Romania**	0.66%	0.12%
France	0.88%	0.14%	**Slovakia**	1.32%	0.10%
Germany	1.32%	0.19%	**Slovenia**	0.66%	0.16%
Greece	0.53%	0.06%	**Spain**	0.66%	0.09%
Hungary	0.88%	0.19%	**Sweden**	0.66%	0.70%
Ireland	0.53%	0.17%	**United Kingdom**	0.66%	0.24%

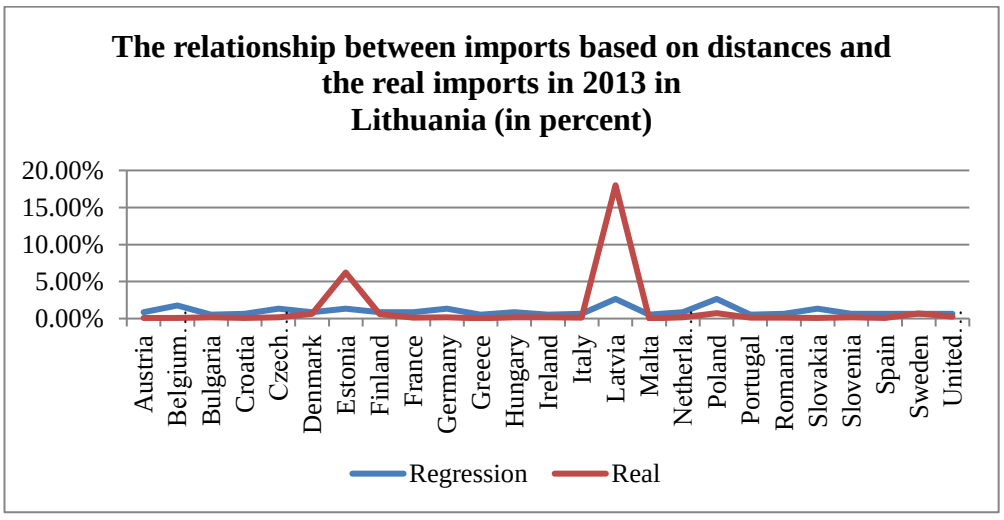

Figure 16

In the case of **Malta**, from Appendix A.21 we can see that is a very weak link between the two groups of indicators (R^2=0.4657). On the other hand, P-Values Analysis reveals for Intercept coefficient of the regression a great value – 0.9185

which indicates an almost null evidence against the null hypothesis. Finally, we have:

EX_MT(t)=0.0007IM_AT(t)+0.0005IM_BE(t)+0.0005IM_BG(t)+0.0005IM_HR(t)+
0.0005IM_CY(t)+0.0005IM_CZ(t)+0.0004IM_DK(t)+0.0002IM_EE(t)+0.0002IM_FI(t)+
0.0007IM_FR(t)+0.0005IM_DE(t)+0.0007IM_EL(t)+0.0005IM_HU(t)+0.0004IM_IE(t)+
0.0015IM_IT(t)+0.0002IM_LV(t)+0.0003IM_LT(t)+0.0005IM_LU(t)+0.0004IM_NL(t)+
0.0004IM_PL(t)+0.0004IM_PT(t)+0.0004IM_RO(t)+0.0005IM_SK(t)+0.0007IM_SI(t)+
0.0005IM_ES(t)+0.0003IM_SE(t)+0.0005IM_UK(t)+85.0799

A comparison of regression coefficients and percentages imports from studied countries (Source: http://atlas.media.mit.edu/en/profile/country - column Real in Table 17) indicates that there are not great differences (real vs. predicted imports) between countries except the case of Greece (0.25% vs. 0.07%) therefore imports of Malta are directed by territorial proximity criterion.

The average distance between real data and those from the regression is: 0.03 %.

Table 17. The correlation between the coefficients of regression and the real imports of EU-countries in Malta (in percent) in 2013

Country	Regression	Real	Country	Regression	Real
Austria	0.07%	0.01%	**Italy**	0.15%	0.06%
Belgium+Luxembourg	0.10%	0.01%	**Latvia**	0.02%	0.00%
Bulgaria	0.05%	0.03%	**Lithuania**	0.03%	0.01%
Croatia	0.05%	0.11%	**Malta**	-	-
Czech Republic	0.05%	0.05%	**Netherlands**	0.04%	0.02%
Denmark	0.04%	0.04%	**Poland**	0.04%	0.02%
Estonia	0.02%	0.01%	**Portugal**	0.04%	0.03%
Finland	0.02%	0.00%	**Romania**	0.04%	0.10%
France	0.07%	0.05%	**Slovakia**	0.05%	0.01%
Germany	0.05%	0.06%	**Slovenia**	0.07%	0.06%
Greece	0.07%	0.25%	**Spain**	0.05%	0.03%
Hungary	0.05%	0.02%	**Sweden**	0.03%	0.05%
Ireland	0.04%	0.03%	**United Kingdom**	0.05%	0.03%

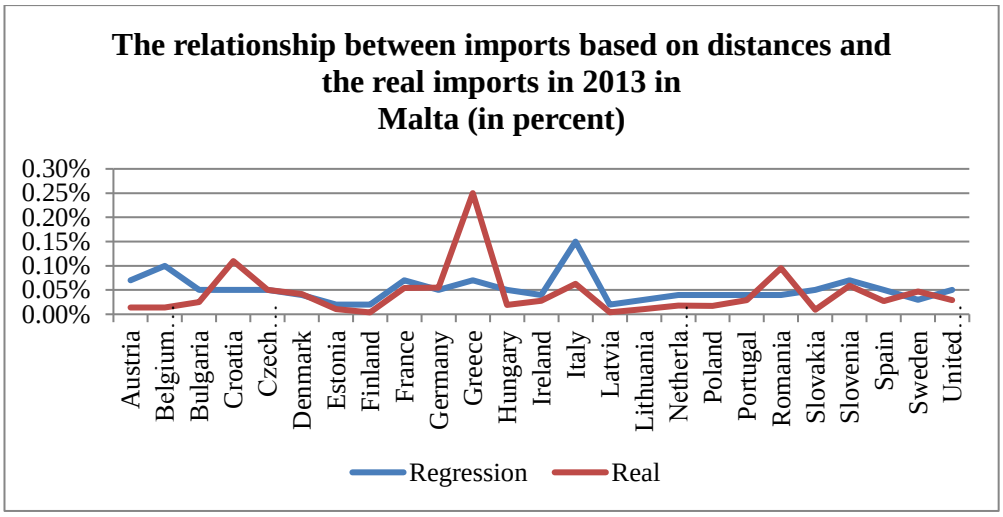

Figure 17

In the case of **Netherlands**, from Appendix A.22 we can see that is a strong link between the two groups of indicators (R^2=0.9550). On the other hand, P-Values Analysis reveals for both coefficients of the regression values under 0.006 which indicates a strong evidence against the null hypothesis. Therefore, we have:

EX_NL(t)=0.118IM_AT(t)+0.2359IM_BE(t)+0.0472IM_BG(t)+0.0591IM_HR(t)+
0.0472IM_CY(t)+0.118IM_CZ(t)+0.118IM_DK(t)+0.0472IM_EE(t)+0.0591IM_F
I(t)+0.118IM_FR(t)+
0.2359IM_DE(t)+0.0591IM_EL(t)+0.0786IM_HU(t)+0.118IM_IE(t)+0.0786IM_I
T(t)+
0.0591IM_LV(t)+0.0786IM_LT(t)+0.118IM_LU(t)+0.0591IM_MT(t)+0.118IM_P
L(t)+
0.0591IM_PT(t)+0.0591IM_RO(t)+0.0786IM_SK(t)+0.0786IM_SI(t)+0.0786IM_
ES(t)+
0.0786IM_SE(t)+0.2359IM_UK(t)-139596.1248

A comparison of regression coefficients and percentages imports from studied countries (Source: http://atlas.media.mit.edu/en/profile/country - column Real in Table 18) indicates that there are many and large differences between real and predicted imports: Austria (2.80% vs. 11.80%), Belgium+Luxembourg (20% vs. 35.39%), Czech Republic (3.60% vs. 11.80%), Germany (10% vs. 23.59%), United Kingdom (8.30% vs. 23.59%) which is absolutely normal as a consequence of commercial traditions that have bound these countries.

Unlike the other countries analyzed so far, one can see that in general, real imports were under those provided by regression analysis, which shows a weak trade policy on dependence from proximity.

The average distance between real data and those from the regression is very large: 4.98%.

Table 18. The correlation between the coefficients of regression and the real imports of EU-countries in Netherlands (in percent) in 2013

Country	Regression	Real	Country	Regression	Real
Austria	11.80%	2.80%	**Italy**	7.86%	5.80%
Belgium+Luxembourg	35.39%	20.00%	**Latvia**	5.91%	3.50%
Bulgaria	4.72%	2.60%	**Lithuania**	7.86%	5.20%
Croatia	5.91%	3.20%	**Malta**	5.91%	2.70%
Czech Republic	11.80%	3.60%	**Netherlands**	-	-
Denmark	11.80%	7.50%	**Poland**	11.80%	4.10%
Estonia	4.72%	2.40%	**Portugal**	5.91%	3.50%
Finland	5.91%	5.60%	**Romania**	5.91%	3.70%
France	11.80%	5.00%	**Slovakia**	7.86%	1.40%
Germany	23.59%	10.00%	**Slovenia**	7.86%	2.00%
Greece	5.91%	4.80%	**Spain**	7.86%	4.10%
Hungary	7.86%	3.80%	**Sweden**	7.86%	7.90%
Ireland	11.80%	6.20%	**United Kingdom**	23.59%	8.30%

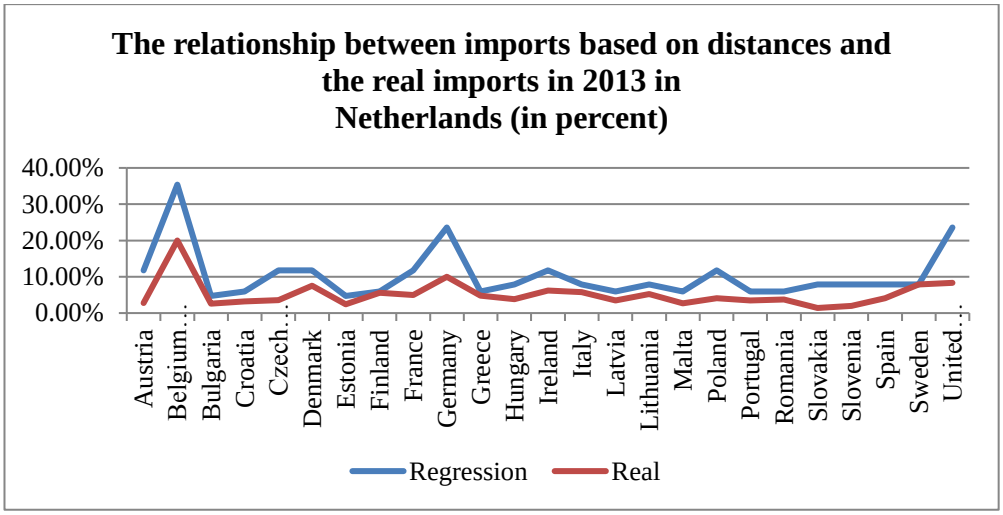

Figure 18

In the case of **Poland**, from Appendix A.23 we can see that is a strong link between the two groups of indicators (R^2=0.8915), having:

EX_PL(t)=0.056IM_AT(t)+0.056IM_BE(t)+0.028IM_BG(t)+0.0373IM_HR(t)+0.0225IM_CY(t)+
0.1122IM_CZ(t)+0.056IM_DK(t)+0.0373IM_EE(t)+0.028IM_FI(t)+0.056IM_FR(t)+
0.1122IM_DE(t)+0.028IM_EL(t)+0.056IM_HU(t)+0.028IM_IE(t)+0.0373IM_IT(t)+0.056IM_LV(t)+0.1122IM_LT(t)+0.056IM_LU(t)+0.028IM_MT(t)+0.056IM_NL(t)+0.028IM_PT(t)+
0.0373IM_RO(t)+0.1122IM_SK(t)+0.0373IM_SI(t)+0.0373IM_ES(t)+0.0373IM_SE(t)+
0.0373IM_UK(t)-122654.2762

A comparison of regression coefficients and percentages imports from studied countries (Source: http://atlas.media.mit.edu/en/profile/country - column Real in Table 19) indicates that there are many differences (real vs. predicted imports) like in the case of Belgium+Luxembourg (1.10% vs. 11.20%), Germany (3.90% vs. 11.22%), Slovakia (5.20% vs. 11.22%). For the other countries, one can see that in general, real imports were under those provided by regression analysis, which shows a trade policy based more on need and not on spatial proximity.

The average distance between real data and those from the regression is: 2.59%.

Table 19. The correlation between the coefficients of regression and the real imports of EU-countries in Poland (in percent) in 2013

Country	Regression	Real	Country	Regression	Real
Austria	5.60%	2.00%	**Italy**	3.73%	1.90%
Belgium+Luxembourg	11.20%	1.10%	**Latvia**	5.60%	8.70%
Bulgaria	2.80%	2.90%	**Lithuania**	11.22%	9.10%
Croatia	3.73%	2.20%	**Malta**	2.80%	0.52%
Czech Republic	11.22%	7.60%	**Netherlands**	5.60%	1.40%
Denmark	5.60%	3.50%	**Poland**	-	-
Estonia	3.73%	5.70%	**Portugal**	2.80%	0.88%
Finland	2.80%	2.20%	**Romania**	3.73%	4.40%
France	5.60%	1.60%	**Slovakia**	11.22%	5.20%
Germany	11.22%	3.90%	**Slovenia**	3.73%	2.40%
Greece	2.80%	1.00%	**Spain**	3.73%	1.40%
Hungary	5.60%	4.80%	**Sweden**	3.73%	3.30%
Ireland	2.80%	0.91%	**United Kingdom**	3.73%	2.00%

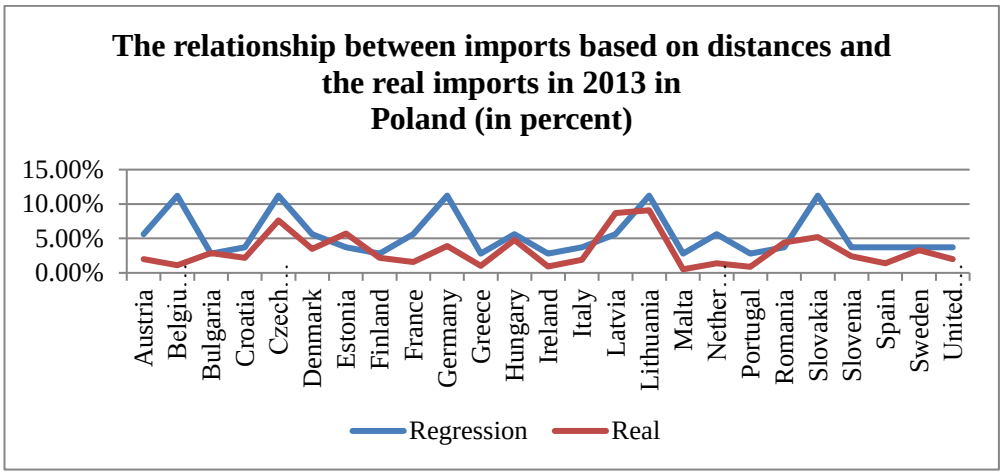

Figure 19

In the case of **Portugal**, from Appendix A.24 we can see that is a strong link between the two groups of indicators (R^2=0.9062), therefore we have:

EX_PT(t)=0.0092IM_AT(t)+0.0123IM_BE(t)+0.0074IM_BG(t)+0.0074IM_HR(t)
+0.0074IM_CY(t)+0.0092IM_CZ(t)+0.0092IM_DK(t)+0.0053IM_EE(t)+0.0062I
M_FI(t)+0.0184IM_FR(t)+
0.0123IM_DE(t)+0.0092IM_EL(t)+0.0074IM_HU(t)+0.0092IM_IE(t)+0.0123IM_
IT(t)+
0.0062IM_LV(t)+0.0074IM_LT(t)+0.0123IM_LU(t)+0.0092IM_MT(t)+0.0092IM
_NL(t)+
0.0092IM_PL(t)+0.0062IM_RO(t)+0.0074IM_SK(t)+0.0092IM_SI(t)+0.0369IM_
ES(t)+
0.0074IM_SE(t)+0.0123IM_UK(t)-13663.5342

A comparison of regression coefficients and percentages imports from studied countries (Source: http://atlas.media.mit.edu/en/profile/country - column Real in Table 20) indicates that there are close differences between real and predicted imports.

In general, real imports are under to those provided by regression analysis, which shows an insufficient trade policy on dependence from proximity.

The average distance between real data and those from the regression is small: 0.56%.

Table 20. The correlation between the coefficients of regression and the real imports of EU-countries in Portugal (in percent) in 2013

Country	Regression	Real	Country	Regression	Real
Austria	0.92%	0.34%	**Italy**	1.23%	0.45%
Belgium+Luxembourg	2.46%	0.46%	**Latvia**	0.62%	0.14%
Bulgaria	0.74%	0.23%	**Lithuania**	0.74%	0.16%
Croatia	0.74%	0.10%	**Malta**	0.92%	0.21%
Czech Republic	0.92%	0.33%	**Netherlands**	0.92%	0.46%
Denmark	0.92%	0.45%	**Poland**	0.92%	0.29%
Estonia	0.53%	0.18%	**Portugal**	-	-
Finland	0.62%	0.45%	**Romania**	0.62%	0.54%
France	1.84%	1.00%	**Slovakia**	0.74%	0.19%
Germany	1.23%	0.57%	**Slovenia**	0.92%	0.47%
Greece	0.92%	0.31%	**Spain**	3.69%	4.00%
Hungary	0.74%	0.27%	**Sweden**	0.74%	0.39%
Ireland	0.92%	0.31%	**United Kingdom**	1.23%	0.49%

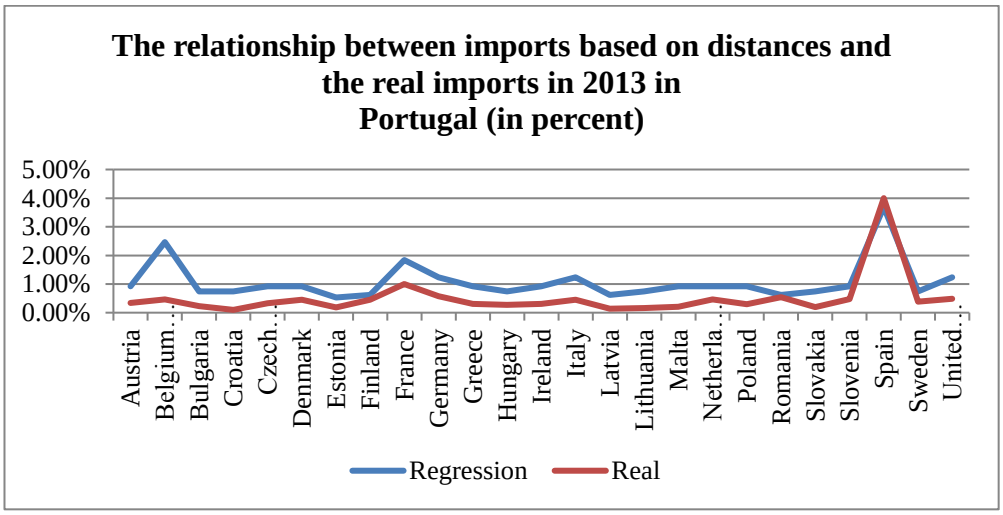

Figure 20

In the case of **Romania**, from Appendix A.25 we can see that is a strong link between the two groups of indicators (R^2=0.8507), having:

EX_RO(t)=0.0337IM_AT(t)+0.0168IM_BE(t)+0.0674IM_BG(t)+0.0337IM_HR(t)
+
0.0224IM_CY(t)+0.0224IM_CZ(t)+0.0168IM_DK(t)+0.0112IM_EE(t)+0.0112IM
_FI(t)+
0.0168IM_FR(t)+0.0224IM_DE(t)+0.0337IM_EL(t)+0.0674IM_HU(t)+0.0112IM
_IE(t)+
0.0224IM_IT(t)+0.0135IM_LV(t)+0.0168IM_LT(t)+0.0168IM_LU(t)+0.0168IM_
MT(t)+
0.0168IM_NL(t)+0.0224IM_PL(t)+0.0112IM_PT(t)+0.0337IM_SK(t)+0.0337IM_
SI(t)+
0.0135IM_ES(t)+0.0135IM_SE(t)+0.0135IM_UK(t)-43168.1268

A comparison of regression coefficients and percentages imports from studied countries (Source: http://atlas.media.mit.edu/en/profile/country - column Real in Table 21) indicates that there are no large differences (real vs. predicted imports) except Hungary (2.70% vs. 6.74%) from where one can see that in general, real imports are close to those provided by regression analysis, which shows a trade policy based almost entirely on spatial proximity.

The average distance between real data and those from the regression is: 1.45%

Table 21. The correlation between the coefficients of regression and the real imports of EU-countries in Romania (in percent) in 2013

Country	Regression	Real	Country	Regression	Real
Austria	3.37%	0.87%	**Italy**	2.24%	1.40%
Belgium+Luxembourg	3.36%	0.25%	**Latvia**	1.35%	0.17%
Bulgaria	6.74%	6.50%	**Lithuania**	1.68%	0.19%
Croatia	3.37%	0.72%	**Malta**	1.68%	0.36%
Czech Republic	2.24%	1.00%	**Netherlands**	1.68%	0.34%
Denmark	1.68%	0.30%	**Poland**	2.24%	0.76%
Estonia	1.12%	0.35%	**Portugal**	1.12%	0.32%
Finland	1.12%	0.29%	**Romania**	-	-
France	1.68%	0.84%	**Slovakia**	3.37%	1.20%
Germany	2.24%	1.00%	**Slovenia**	3.37%	0.94%
Greece	3.37%	1.20%	**Spain**	1.35%	0.46%
Hungary	6.74%	2.70%	**Sweden**	1.35%	0.42%
Ireland	1.12%	0.25%	**United Kingdom**	1.35%	0.38%

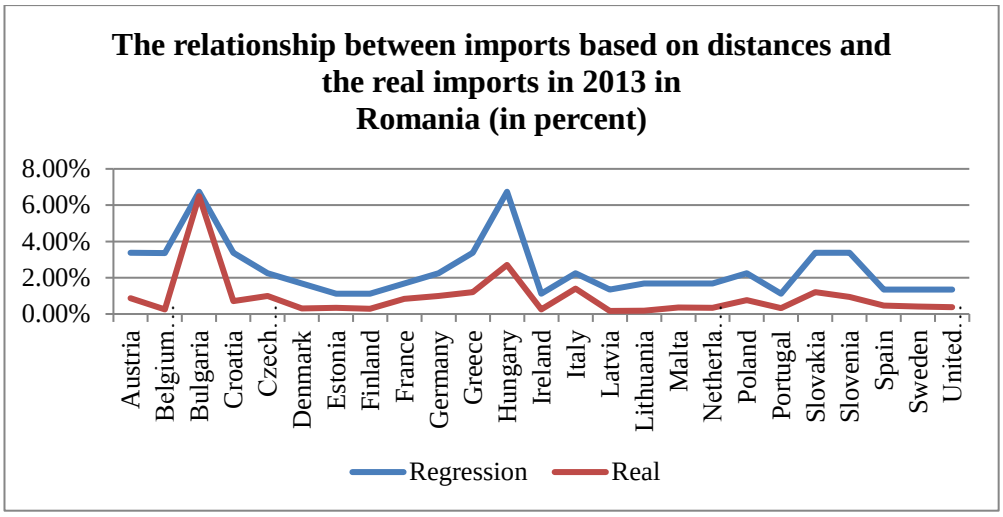

Figure 21

In the case of **Slovakia**, from Appendix A.26 we can see that is a strong link between the two groups of indicators (R^2=0.9166). On the other hand, P-Values Analysis reveals for both coefficients of the regression values under 0.0003 which indicates a strong evidence against the null hypothesis. Therefore, we have:

EX_SK(t)=0.0595IM_AT(t)+0.0198IM_BE(t)+0.0198IM_BG(t)+0.0298IM_HR(t)
+
0.0149IM_CY(t)+0.0595IM_CZ(t)+0.0198IM_DK(t)+0.0149IM_EE(t)+0.0119IM
_FI(t)+
0.0198IM_FR(t)+0.0298IM_DE(t)+0.0198IM_EL(t)+0.0595IM_HU(t)+0.0119IM
_IE(t)+
0.0298IM_IT(t)+0.0198IM_LV(t)+0.0298IM_LT(t)+0.0198IM_LU(t)+0.0198IM_
MT(t)+
0.0198IM_NL(t)+0.0595IM_PL(t)+0.0119IM_PT(t)+0.0298IM_RO(t)+0.0298IM_
SI(t)+
0.0149IM_ES(t)+0.0149IM_SE(t)+0.0149IM_UK(t)-54467.4082

A comparison of regression coefficients and percentages imports from studied countries (Source: http://atlas.media.mit.edu/en/profile/country - column Real in Table 22) indicates that there are no large differences between real and predicted imports.

In general, real imports are under to those provided by regression analysis, which shows an insufficient correlation of imports with distances.

The average distance between real data and those from the regression is small: 1.42%.

Table 22. The correlation between the coefficients of regression and the real imports of EU-countries in Slovakia (in percent) in 2013

Country	Regression	Real	Country	Regression	Real
Austria	5.95%	2.60%	**Italy**	2.98%	0.82%
Belgium+Luxembourg	3.96%	0.30%	**Latvia**	1.98%	1.10%
Bulgaria	1.98%	1.30%	**Lithuania**	2.98%	0.51%
Croatia	2.98%	1.60%	**Malta**	1.98%	0.23%
Czech Republic	5.95%	6.10%	**Netherlands**	1.98%	0.34%
Denmark	1.98%	0.82%	**Poland**	5.95%	2.40%
Estonia	1.49%	0.46%	**Portugal**	1.19%	0.28%
Finland	1.19%	0.39%	**Romania**	2.98%	2.40%
France	1.98%	0.62%	**Slovakia**	-	-
Germany	2.98%	1.40%	**Slovenia**	2.98%	1.50%
Greece	1.98%	0.28%	**Spain**	1.49%	0.52%
Hungary	5.95%	4.90%	**Sweden**	1.49%	0.71%
Ireland	1.19%	0.17%	**United Kingdom**	1.49%	0.60%

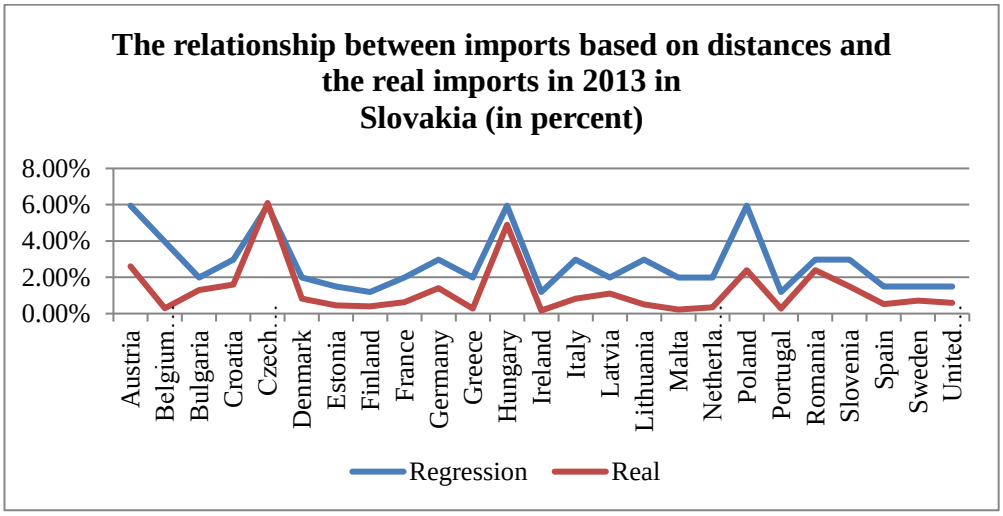

Figure 22

In the case of **Slovenia**, from Appendix A.27 we can see that is a strong link between the two groups of indicators (R^2=0.9414), having:

EX_SI(t)=0.0184IM_AT(t)+0.0061IM_BE(t)+0.0061IM_BG(t)+0.0184IM_HR(t)
+0.0061IM_CY(t)+0.0092IM_CZ(t)+0.0061IM_DK(t)+0.0031IM_EE(t)+0.0037I
M_FI(t)+0.0092IM_FR(t)+
0.0092IM_DE(t)+0.0092IM_EL(t)+0.0184IM_HU(t)+0.0046IM_IE(t)+0.0184IM_
IT(t)+
0.0037IM_LV(t)+0.0046IM_LT(t)+0.0061IM_LU(t)+0.0092IM_MT(t)+0.0061IM
_NL(t)+
0.0061IM_PL(t)+0.0046IM_PT(t)+0.0092IM_RO(t)+0.0092IM_SK(t)+0.0061IM_
ES(t)+
0.0046IM_SE(t)+0.0061IM_UK(t)-13714.9968

A comparison of regression coefficients and percentages imports from studied countries (Source: http://atlas.media.mit.edu/en/profile/country - column Real in Table 23) indicates that there are no large differences (real vs. predicted imports) except Croatia (which were a part from the former Yugoslavia) with 10% vs. 1.84% from where one can see that in general, real imports are close to those provided by regression analysis, which shows a trade policy based almost entirely on spatial proximity.

The average distance between real data and those from the regression is: 0.74 %.

Table 23. The correlation between the coefficients of regression and the real imports of EU-countries in Slovenia (in percent) in 2013

Country	Regression	Real	Country	Regression	Real
Austria	1.84%	1.30%	**Italy**	1.84%	0.70%
Belgium+Luxembourg	1.22%	0.07%	**Latvia**	0.37%	0.30%
Bulgaria	0.61%	0.64%	**Lithuania**	0.46%	0.30%
Croatia	1.84%	10.00%	**Malta**	0.92%	0.08%
Czech Republic	0.92%	0.50%	**Netherlands**	0.61%	0.09%
Denmark	0.61%	0.31%	**Poland**	0.61%	0.39%
Estonia	0.31%	0.20%	**Portugal**	0.46%	0.09%
Finland	0.37%	0.13%	**Romania**	0.92%	0.62%
France	0.92%	0.24%	**Slovakia**	0.92%	0.60%
Germany	0.92%	0.51%	**Slovenia**	-	-
Greece	0.92%	0.17%	**Spain**	0.61%	0.11%
Hungary	1.84%	1.10%	**Sweden**	0.46%	0.18%
Ireland	0.46%	0.04%	**United Kingdom**	0.61%	0.09%

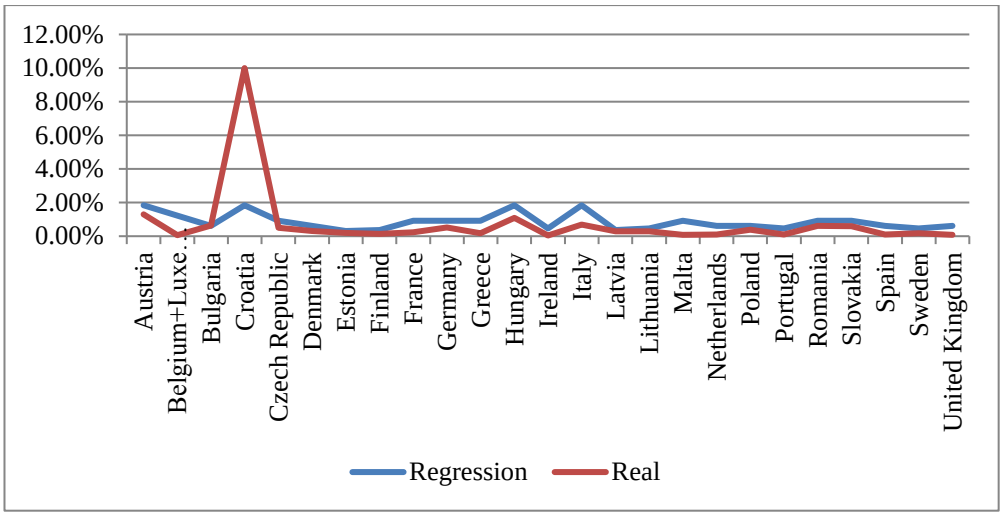

Figure 23. The relationship between imports based on distances and the real imports in 2013 in Slovenia (in percent)

In the case of **Spain**, from Appendix A.28 we can see that is a weak link between the two groups of indicators (R^2=0.8985). On the other hand, P-Values Analysis reveals for both coefficients of the regression values under 0.04 which indicates a strong evidence against the null hypothesis. Therefore, we have:

EX_ES(t)=0.0476IM_AT(t)+0.0713IM_BE(t)+0.0357IM_BG(t)+0.0357IM_HR(t)+0.0357 IM_CY(t)+0.0476IM_CZ(t)+0.0476IM_DK(t)+0.0239IM_EE(t)+0.0286IM_FI(t)+0.1428I M_FR(t)+
0.0713IM_DE(t)+0.0476IM_EL(t)+0.0357IM_HU(t)+0.0476IM_IE(t)+0.0713IM_IT(t)+ 0.0286IM_LV(t)+0.0357IM_LT(t)+0.0713IM_LU(t)+0.0476IM_MT(t)+0.0476IM_NL(t)+ 0.0476IM_PL(t)+0.1428IM_PT(t)+0.0286IM_RO(t)+0.0357IM_SK(t)+0.0476IM_SI(t)+ 0.0357IM_SE(t)+0.0713IM_UK(t)-71457.9694

A comparison of regression coefficients and percentages imports from studied countries (Source: http://atlas.media.mit.edu/en/profile/country - column Real in Table 24) indicates that there are no large differences between real and predicted imports except Belgium+Luxembourg (2% vs. 14.26%), France (6.50% vs. 14.28%), Germany (2.60% vs. 7.13%) and the traditional partner Portugal (27% vs. 14.28%) which is absolutely normal as a consequence of commercial traditions that have bound these countries.

In general, real imports are under to those provided by regression analysis, which shows an insufficient trade policy on dependence from proximity.

The average distance between real data and those from the regression is small: 3.32%.

Table 24. The correlation between the coefficients of regression and the real imports of EU-countries in Spain (in percent) in 2013

Country	Regression	Real	Country	Regression	Real
Austria	4.76%	1.60%	**Italy**	7.13%	4.40%
Belgium+Luxembourg	14.26%	2.00%	**Latvia**	2.86%	1.20%
Bulgaria	3.57%	5.10%	**Lithuania**	3.57%	1.70%
Croatia	3.57%	1.50%	**Malta**	4.76%	2.10%
Czech Republic	4.76%	1.70%	**Netherlands**	4.76%	1.60%
Denmark	4.76%	1.50%	**Poland**	4.76%	2.20%
Estonia	2.39%	0.85%	**Portugal**	14.28%	27.00%
Finland	2.86%	1.30%	**Romania**	2.86%	2.40%
France	14.28%	6.50%	**Slovakia**	3.57%	1.10%
Germany	7.13%	2.60%	**Slovenia**	4.76%	2.00%
Greece	4.76%	3.10%	**Spain**	-	-
Hungary	3.57%	1.80%	**Sweden**	3.57%	1.40%
Ireland	4.76%	1.60%	**United Kingdom**	7.13%	3.30%

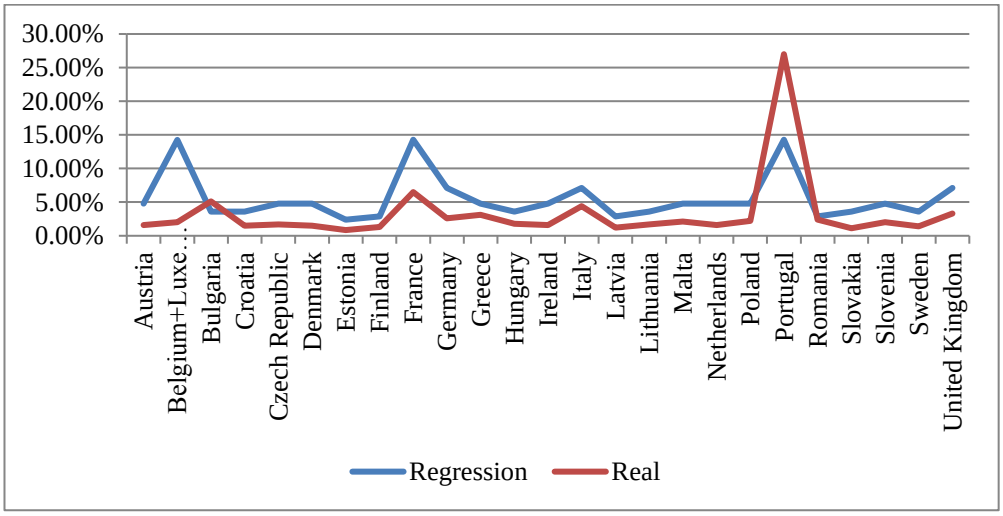

Figure 24. The relationship between imports based on distances and the real imports in 2013 in Spain (in percent)

In the case of **Sweden**, from Appendix A.29 we can see that is a weak link between the two groups of indicators (R^2=0.8346). On the other hand, P-Values Analysis

reveals for both coefficients of the regression values under 0.03 which indicates a strong evidence against the null hypothesis. Therefore, we have:

EX_SE(t)=0.0206IM_AT(t)+0.0206IM_BE(t)+0.0104IM_BG(t)+0.0124IM_HR(t)+0.0104 IM_CY(t)+0.0206IM_CZ(t)+0.0619IM_DK(t)+0.031IM_EE(t)+0.0619IM_FI(t)+0.0206IM _FR(t)+
0.031IM_DE(t)+0.0124IM_EL(t)+0.0155IM_HU(t)+0.0124IM_IE(t)+0.0155IM_IT(t)+ 0.0206IM_LV(t)+0.0155IM_LT(t)+0.0206IM_LU(t)+0.0124IM_MT(t)+0.0206IM_NL(t)+ 0.0206IM_PL(t)+0.0124IM_PT(t)+0.0124IM_RO(t)+0.0155IM_SK(t)+0.0155IM_SI(t)+ 0.0155IM_ES(t)+0.0155IM_UK(t)+32860.698

A comparison of regression coefficients and percentages imports from studied countries (Source: http://atlas.media.mit.edu/en/profile/country - column Real in Table 25) indicates that there are no large differences between real and predicted imports except Denmark (12% vs. 6.19%), Estonia (6.60% vs. 3.10%), Finland (11% vs. 6.19%) which is absolutely normal as a consequence of commercial traditions that have bound these countries.

In general, real imports are close to those provided by regression analysis, which shows a trade policy dependent from proximity.

The average distance between real data and those from the regression is small: 1.25%.

Table 25. The correlation between the coefficients of regression and the real imports of EU-countries in Sweden (in percent) in 2013

Country	Regression	Real	Country	Regression	Real
Austria	2.06%	0.97%	**Italy**	1.55%	0.87%
Belgium+Luxembourg	4.12%	2.00%	**Latvia**	2.06%	3.20%
Bulgaria	1.04%	0.61%	**Lithuania**	1.55%	3.20%
Croatia	1.24%	0.72%	**Malta**	1.24%	2.20%
Czech Republic	2.06%	0.96%	**Netherlands**	2.06%	1.60%
Denmark	6.19%	12.00%	**Poland**	2.06%	1.90%
Estonia	3.10%	6.60%	**Portugal**	1.24%	0.75%
Finland	6.19%	11.00%	**Romania**	1.24%	0.55%
France	2.06%	1.20%	**Slovakia**	1.55%	0.44%
Germany	3.10%	1.50%	**Slovenia**	1.55%	0.64%
Greece	1.24%	0.64%	**Spain**	1.55%	0.95%
Hungary	1.55%	0.97%	**Sweden**	-	-
Ireland	1.24%	0.95%	**United Kingdom**	1.55%	1.80%

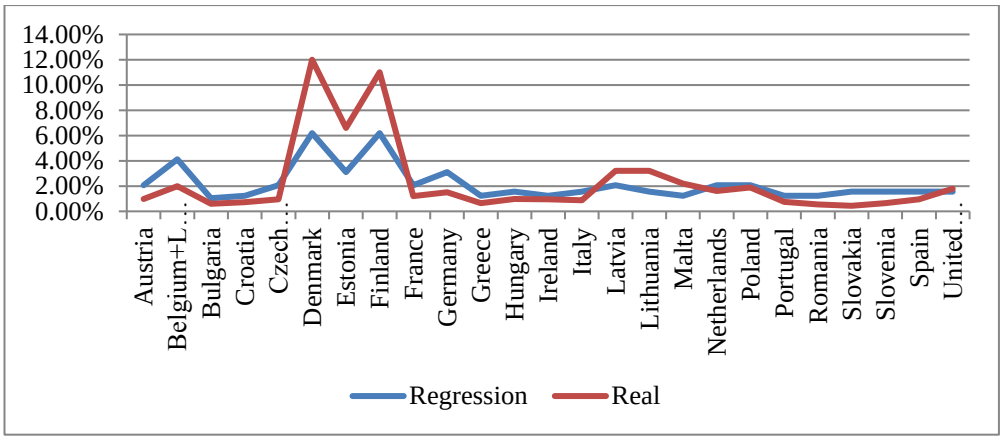

Figure 25. The relationship between imports based on distances and the real imports in 2013 in Sweden (in percent)

In the case of **United Kingdom**, from Appendix A.30 we can see that is a weak link between the two groups of indicators (R^2=0.4903). On the other hand, P-Values Analysis reveals for Intercept coefficient of the regression a high value – 0.6832 which indicates a less evidence against the null hypothesis. However, we have:

EX_UK(t)=0.0623IM_AT(t)+0.1869IM_BE(t)+0.0468IM_BG(t)+0.0468IM_HR(t)+ 0.0468IM_CY(t)+0.0623IM_CZ(t)+0.0623IM_DK(t)+0.0311IM_EE(t)+0.0374IM_FI(t)+ 0.1869IM_FR(t)+0.0934IM_DE(t)+0.0623IM_EL(t)+0.0468IM_HU(t)+0.1869IM_IE(t)+ 0.0934IM_IT(t)+0.0374IM_LV(t)+0.0468IM_LT(t)+0.0934IM_LU(t)+0.0623IM_MT(t)+ 0.1869IM_NL(t)+0.0623IM_PL(t)+0.0623IM_PT(t)+0.0374IM_RO(t)+0.0468IM_SK(t)+ 0.0623IM_SI(t)+0.0934IM_ES(t)+0.0468IM_SE(t)-56019.0344

A comparison of regression coefficients and percentages imports from studied countries (Source: http://atlas.media.mit.edu/en/profile/country - column Real in Table 26) indicates that there are no large differences between real and predicted imports except Belgium+Luxembourg (5.30% vs. 28.03%), France (4.40% vs. 18.69%), Ireland (34% vs. 18.69%) and Netherlands (6.60% vs. 18.69%).

In general, real imports are under those provided by regression analysis, which shows a trade policy dependents weak from proximity.

The average distance between real data and those from the regression is very high: 5.01%.

Table 26. The correlation between the coefficients of regression and the real imports of EU-countries in United Kingdom (in percent) in 2013

Country	Regression	Real	Country	Regression	Real
Austria	6.23%	1.50%	**Italy**	9.34%	2.70%
Belgium+Luxembourg	28.03%	5.30%	**Latvia**	3.74%	2.30%
Bulgaria	4.68%	1.50%	**Lithuania**	4.68%	2.30%
Croatia	4.68%	0.95%	**Malta**	6.23%	4.10%
Czech Republic	6.23%	1.90%	**Netherlands**	18.69%	6.60%
Denmark	6.23%	5.20%	**Poland**	6.23%	2.60%
Estonia	3.11%	3.60%	**Portugal**	6.23%	2.90%
Finland	3.74%	3.10%	**Romania**	3.74%	2.30%
France	18.69%	4.40%	**Slovakia**	4.68%	1.10%
Germany	9.34%	4.10%	**Slovenia**	6.23%	1.40%
Greece	6.23%	2.50%	**Spain**	9.34%	4.00%
Hungary	4.68%	1.80%	**Sweden**	4.68%	5.90%
Ireland	18.69%	34.00%	**United Kingdom**	-	-

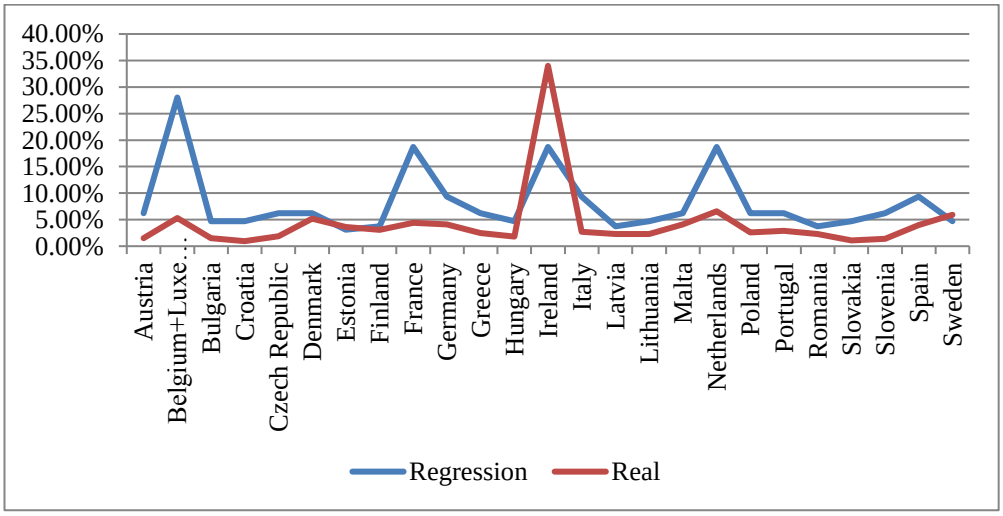

Figure 26. The relationship between imports based on distances and the real imports in 2013 in United Kingdom (in percent)

3. Conclusions

The above analysis reveals a number of interesting issues. Overall, exports of countries that have recently joined the European Union depend heavy on distances which shows still searches and settlements of trade policies.

On the other hand, the highly developed countries of the European Union have long commercial tradition which explains, in most cases, major differences compared to the theoretical results.

Another factor, again demonstrated numerically, is still the tight dependencies between countries that belonged to the now dismantled some states (such as the former Yugoslavia or Czechoslovakia).

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Appendix A.1

Table A.1. The imports of European Union countries (million of Euro) during 2004-2009

Country/ Year	2004	2005	2006	2007	2008	2009
Austria	96256	102283	109280	118962	125301	102569
Belgium	229574	256153	280053	300298	317043	254367
Bulgaria	11577	12473	15424	21862	25094	16876
Croatia	13241	14900	17105	18833	20817	15218
Cyprus	4420	5073	5518	6286	7237	5617
Czech Republic	56216	61483	74220	86224	96572	75314
Denmark	54787	60749	68100	71526	74356	59602
Estonia	6702	8229	10711	11439	10896	7270
Finland	41353	47234	55253	59616	62402	43655
France	378506	405164	431602	460315	487350	404098
Germany	575090	624465	722112	769779	805730	664143
Greece	44998	46382	52847	60130	64857	52087
Hungary	48580	53446	62331	69730	74069	55750
Ireland	49692	55112	58233	61162	57088	44955
Italy	285064	309032	352465	373340	382050	297609
Latvia	5701	6990	9191	11180	10975	7034
Lithuania	9957	12494	15429	17813	21144	13123
Luxembourg	16115	18170	21611	20452	21864	18160
Malta	2926	2988	3430	3503	3604	3210
Netherlands	256944	292415	331979	359443	394980	317718
Poland	72087	81697	101138	120912	141966	107155
Portugal	44173	51372	56295	59927	64194	51379
Romania	26235	32538	40746	51305	57148	38948
Slovak Republic	23988	27837	35828	44229	50253	39898
Slovenia	14159	16273	19227	23038	25180	19053
Spain	207656	232109	261784	284058	286105	210222
Sweden	80723	89781	101583	111803	114565	85945
United Kingdom	378293	417359	487951	465715	447228	372581

Source: http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tet00002

Table A.2. The imports of European Union countries (million of Euro) during 2010-2015

Country/ Year	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Austria	119943	137513	138942	138000	137001	140132
Belgium	295072	335447	341787	340093	342215	338750
Bulgaria	19245	23407	25460	25829	26118	26408
Croatia	15137	16281	16214	16581	17154	18558
Cyprus	6464	6234	5678	4754	5089	5016
Czech Republic	95536	109285	110066	108621	116203	126805
Denmark	62648	68724	71548	72728	74783	76957
Estonia	9268	12543	14077	13899	13775	13074
Finland	51899	60535	59517	58407	57769	54251
France	460941	517262	524918	513114	509299	515938
Germany	795666	901487	898857	889416	908575	946454
Greece	50741	48474	49291	46808	48004	43639
Hungary	66514	73592	74078	75379	78978	83487
Ireland	45467	47849	48855	54314	60721	66530
Italy	367390	401428	380292	361002	356939	368715
Latvia	8819	11703	13409	13451	13285	12900
Lithuania	17653	22826	24879	26208	25889	25397
Luxembourg	18713	20733	21437	20266	20099	20878
Malta	3818	4520	5135	4625	5132	5220
Netherlands	386834	426987	456824	444015	443689	456370
Poland	134306	151291	154934	156319	168366	174990
Portugal	58647	59551	56374	57013	58976	60162
Romania	46850	54943	54644	55328	58555	62976
Slovak Republic	49050	57358	60241	61543	61689	66289
Slovenia	22720	25525	24934	25129	25551	26789
Spain	246674	270550	262561	256455	270173	281298
Sweden	112352	127174	127985	120931	122132	124467
United Kingdom	445291	487905	541112	496977	519733	564190

Source: http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tet00002

Appendix A.2

Table A.3. The exports of European Union countries (million of Euro) as functions of the imports of the others during 2004-2006

Country	2004 real	2004 computed	2005 real	2005 computed	2006 real	2006 computed
Austria	96256.00	134274.34	102283.00	145144.30	109280.00	163308.32
Belgium	229574.00	168280.37	256153.00	181965.09	280053.00	203640.76
Bulgaria	11577.00	97539.61	12473.00	105496.59	15424.00	117953.41
Croatia	13241.00	104536.66	14900.00	113249.71	17105.00	127103.55
Cyprus	4420.00	109430.71	5073.00	118065.42	5518.00	131799.06
Czech Republic	56216.00	142231.31	61483.00	153721.18	74220.00	172523.57
Denmark	54787.00	159185.12	60749.00	171662.41	68100.00	192578.86
Estonia	6702.00	94182.42	8229.00	102068.89	10711.00	114758.79
Finland	41353.00	107039.52	47234.00	115847.36	55253.00	129609.59
France	378506.00	149152.16	405164.00	161945.60	431602.00	181850.19
Germany	575090.00	110371.47	624465.00	120132.94	722112.00	133499.08
Greece	44998.00	114109.28	46382.00	122738.43	52847.00	136750.83
Hungary	48580.00	99897.71	53446.00	108217.10	62331.00	121529.75
Ireland	49692.00	158847.80	55112.00	172900.92	58233.00	193624.52
Italy	285064.00	109119.50	309032.00	117461.56	352465.00	130580.83
Latvia	5701.00	99156.86	6990.00	107724.98	9191.00	121202.89
Lithuania	9957.00	114355.48	12494.00	124279.42	15429.00	140010.25
Luxembourg	16115.00	179623.09	18170.00	193138.27	21611.00	214993.46
Malta	2926.00	133613.97	2988.00	143637.64	3430.00	159947.50
Netherlands	256944.00	166365.41	292415.00	179651.26	331979.00	200940.53
Poland	72087.00	137614.28	81697.00	148635.53	101138.00	166851.64
Portugal	44173.00	142468.25	51372.00	153135.77	56295.00	170200.75
Romania	26235.00	93921.66	32538.00	101949.70	40746.00	114738.17
Slovak Republic	23988.00	108144.62	27837.00	117494.07	35828.00	132253.33
Slovenia	14159.00	121353.61	16273.00	130722.12	19227.00	146080.18
Spain	207656.00	145190.29	232109.00	155900.29	261784.00	173067.89

Sweden	80723.00	121133.34	89781.00	131094.94	101583.00	146826.96
United Kingdom	378293.00	155518.68	417359.00	167345.76	487951.00	184624.67

Table A.4. The exports of European Union countries (million of Euro) as functions of the imports of the others during 2007-2009

Country	**2007 real**	**2007 computed**	**2008 real**	**2008 computed**	**2009 real**	**2009 computed**
Austria	118962.00	176907.67	125301.00	182930.94	102569.00	149219.17
Belgium	300298.00	215163.02	317043.00	222080.13	254367.00	181641.42
Bulgaria	21862.00	126567.68	25094.00	131005.61	16876.00	107036.55
Croatia	18833.00	137148.87	20817.00	142058.14	15218.00	115848.48
Cyprus	6286.00	141032.66	7237.00	145597.14	5617.00	118779.95
Czech Republic	86224.00	186189.03	96572.00	192543.30	75314.00	157406.40
Denmark	71526.00	207068.28	74356.00	213454.28	59602.00	173774.68
Estonia	11439.00	123046.13	10896.00	127368.57	7270.00	102815.36
Finland	59616.00	138432.60	62402.00	143034.45	43655.00	116305.01
France	460315.00	193481.21	487350.00	198730.65	404098.00	162209.70
Germany	769779.00	142111.11	805730.00	148378.11	664143.00	121704.74
Greece	60130.00	146487.20	64857.00	150842.99	52087.00	122742.87
Hungary	69730.00	131484.30	74069.00	136498.92	55750.00	111404.33
Ireland	61162.00	201134.69	57088.00	207046.45	44955.00	168527.84
Italy	373340.00	138628.06	382050.00	143280.52	297609.00	117638.95
Latvia	11180.00	130242.39	10975.00	135292.63	7034.00	110066.30
Lithuania	17813.00	151113.59	21144.00	157097.81	13123.00	128578.65
Luxembourg	20452.00	229857.47	21864.00	236687.49	18160.00	193862.77
Malta	3503.00	171267.85	3604.00	176259.09	3210.00	143440.19
Netherlands	359443.00	211995.73	394980.00	216980.09	317718.00	177363.49
Poland	120912.00	179959.47	141966.00	186118.49	107155.00	152032.23
Portugal	59927.00	181101.41	64194.00	186714.92	51379.00	153424.26
Romania	51305.00	124088.28	57148.00	128751.78	38948.00	104921.34
Slovak Republic	44229.00	143385.23	50253.00	149224.56	39898.00	121732.08
Slovenia	23038.00	157337.52	25180.00	162381.38	19053.00	132118.07

Spain	284058.00	183146.81	286105.00	188383.85	210222.00	154049.35
Sweden	111803.00	157248.38	114565.00	162512.64	85945.00	132519.16
United Kingdom	465715.00	198856.54	447228.00	205855.63	372581.00	170066.39

Table A.5. The exports of European Union countries (million of Euro) as functions of the imports of the others during 2010-2012

Country	**2010 real**	**2010 computed**	**2011 real**	**2011 computed**	**2012 real**	**2012 computed**
Austria	119943.00	176301.76	137513.00	197272.02	138942.00	203979.11
Belgium	295072.00	214825.56	335447.00	239858.73	341787.00	248155.45
Bulgaria	19245.00	126358.33	23407.00	141589.04	25460.00	146278.39
Croatia	15137.00	136908.53	16281.00	153319.18	16214.00	158237.62
Cyprus	6464.00	139953.11	6234.00	156656.90	5678.00	162000.26
Czech Republic	95536.00	185918.34	109285.00	207610.16	110066.00	214684.39
Denmark	62648.00	206074.27	68724.00	230148.30	71548.00	237437.56
Estonia	9268.00	121928.77	12543.00	136457.66	14077.00	140887.27
Finland	51899.00	138251.06	60535.00	154936.31	59517.00	159716.34
France	460941.00	191839.00	517262.00	215338.68	524918.00	222024.95
Germany	795666.00	143395.27	901487.00	159964.35	898857.00	165724.24
Greece	50741.00	144347.37	48474.00	161491.27	49291.00	166685.95
Hungary	66514.00	131824.11	73592.00	147788.28	74078.00	152822.99
Ireland	45467.00	200087.12	47849.00	224617.18	48855.00	231677.47
Italy	367390.00	138454.59	401428.00	154553.68	380292.00	159445.94
Latvia	8819.00	130629.93	11703.00	146544.07	13409.00	151627.72
Lithuania	17653.00	152392.09	22826.00	170611.14	24879.00	176657.57
Luxembourg	18713.00	228154.77	20733.00	254390.36	21437.00	262500.10
Malta	3818.00	168470.98	4520.00	188193.60	5135.00	194442.21
Netherlands	386834.00	209184.44	426987.00	234304.69	456824.00	240551.39
Poland	134306.00	179769.32	151291.00	201255.02	154934.00	208042.68
Portugal	58647.00	180518.30	59551.00	202036.13	56374.00	208762.94
Romania	46850.00	124211.70	54943.00	139186.32	54644.00	143787.68
Slovak Republic	49050.00	144352.39	57358.00	161699.97	60241.00	167065.44

Slovenia	22720.00	155682.97	25525.00	173990.57	24934.00	179642.25
Spain	246674.00	180736.99	270550.00	201207.35	262561.00	207614.22
Sweden	112352.00	155738.58	127174.00	173854.84	127985.00	179526.99
United Kingdom	445291.00	198967.23	487905.00	220410.04	541112.00	228362.66

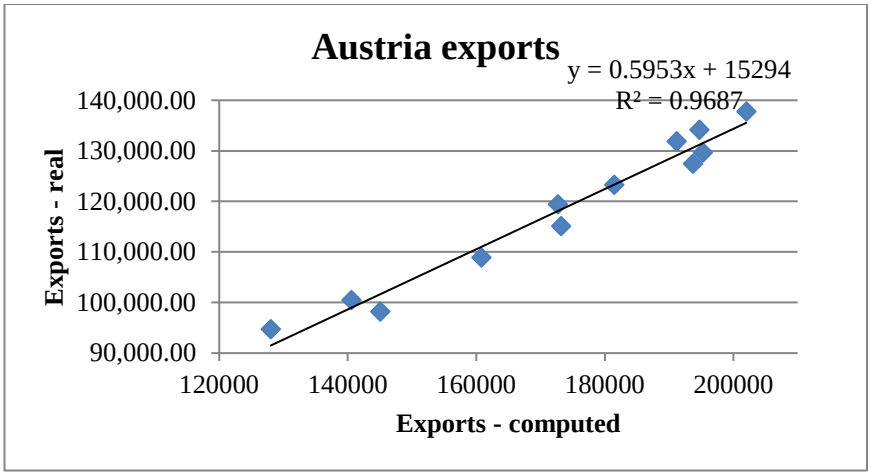
Table A.6. The exports of European Union countries (million of Euro) as functions of the imports of the others during 2013-2015

Country	**2013 real**	**2013 computed**	**2014 real**	**2014 computed**	**2015 real**	**2015 computed**
Austria	138000.00	205349.42	137001.00	209683.58	140132.00	220485.61
Belgium	340093.00	250989.30	342215.00	253562.71	338750.00	267145.90
Bulgaria	25829.00	148260.27	26118.00	150511.44	26408.00	157623.03
Croatia	16581.00	160060.43	17154.00	162783.82	18558.00	170843.60
Cyprus	4754.00	163881.80	5089.00	166062.30	5016.00	173848.59
Czech Republic	108621.00	216712.55	116203.00	220918.33	126805.00	232016.96
Denmark	72728.00	238504.13	74783.00	242830.66	76957.00	255029.18
Estonia	13899.00	141942.38	13775.00	143994.51	13074.00	150277.17
Finland	58407.00	160315.50	57769.00	162367.68	54251.00	169876.07
France	513114.00	225875.98	509299.00	228879.24	515938.00	240843.43
Germany	889416.00	167794.77	908575.00	169350.65	946454.00	175974.53
Greece	46808.00	168576.34	48004.00	170970.21	43639.00	179240.17
Hungary	75379.00	154661.07	78978.00	157694.35	83487.00	165352.31
Ireland	54314.00	237148.90	60721.00	236969.08	66530.00	248703.99
Italy	361002.00	161359.26	356939.00	163139.61	368715.00	171269.81
Latvia	13451.00	153254.29	13285.00	155837.21	12900.00	163126.93
Lithuania	26208.00	178774.20	25889.00	182519.48	25397.00	191946.03
Luxembourg	20266.00	264745.82	20099.00	268802.53	20878.00	282040.33
Malta	4625.00	196446.34	5132.00	199219.80	5220.00	208695.82
Netherlands	444015.00	244839.33	443689.00	247761.74	456370.00	262001.60
Poland	156319.00	209263.92	168366.00	213198.20	174990.00	223979.93
Portugal	57013.00	211739.86	58976.00	214414.45	60162.00	225020.11
Romania	55328.00	145250.28	58555.00	147743.20	62976.00	155037.36

Slovak Republic	61543.00	169041.84	61689.00	172986.95	66289.00	181873.40
Slovenia	25129.00	181301.13	25551.00	184356.69	26789.00	193306.57
Spain	256455.00	209570.21	270173.00	211744.11	281298.00	222302.06
Sweden	120931.00	181227.64	122132.00	184243.03	124467.00	192927.63
United Kingdom	496977.00	228483.51	519733.00	232194.00	414761.00	242093.07

Appendix A.3.

Table A.7. The regression analysis of the real exports of Austria in function of imports of the other EU countries (million of Euro)



SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.984200185
R Square	0.968650004
Adjusted R Square	0.965515005
Standard Error	2760.52265
Observations	12

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	2354572289	2354572289	308.97931	7.55161E-09

Residual	10	76204852.99	7620485.299			
Total	11	2430777142				
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	15293.75398	5920.421406	2.583220506	0.02726525	2102.233023	28485.27493
X Variable 1	0.595316325	0.033867496	17.57780731	7.55161E-09	0.519854841	0.67077781
RESIDUAL OUTPUT			DURBIN-WATSON STATISTIC:			0.844346728
Observation	Predicted Y	Residuals				
1	91510.88273	3192.11727				
2	98977.3758	1490.624197				
3	111003.9562	-2090.95621				
4	118095.5726	1291.42736				
5	123320.7414	-61.74142028				
6	101644.9109	-3430.910866				
7	118411.0903	-3332.090293				
8	130612.8128	-3150.812763				
9	131548.013	-1869.013038				
10	129098.328	2786.671969				
11	131197.9968	2975.003195				
12	135555.3194	2199.680601				

Table A.8. The regression analysis of the real exports of Austria, after eliminating the autoregression, in function of imports of the other EU countries (million of Euro)

SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.978625399
R Square	0.957707671
Adjusted R Square	0.953008524
Standard Error	2127.036434
Observations	11

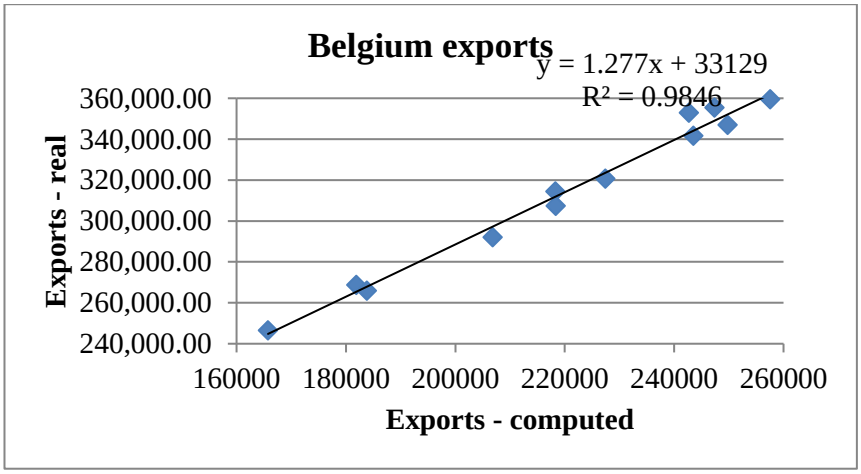
ANOVA

	df	SS	MS	F	Significance F	
Regression	1	922069663.7	922069663.7	203.8045502	1.73225E-07	
Residual	9	40718555.92	4524283.991			
Total	10	962788219.6				
	Coefficients	Standard Error	t Stat	P-value	Lower 43.0%	Upper 43.0%
Intercept	2372.020002	4015.793257	0.590672838	0.569273351	4.545994527	4739.494009
X Variable 1	0.648743087	0.045442876	14.27601311	1.73225E-07	0.621952657	0.675533517

RESIDUAL OUTPUT			DURBIN-WATSON STATISTIC:	1.938372124
Observation	Predicted Y	Residuals		
1	49704.51802	752.2052848		
2	58513.61911	-2656.308447		
3	59320.63454	2550.994473		
4	60933.66368	-721.2017006		
5	34305.55949	-1182.844392		
6	65050.3984	-1836.783122		
7	68698.58951	-2008.135405		
8	62695.8897	-327.7177623		
9	59488.16959	3915.236895		
10	63186.01471	1340.435269		
11	66726.07155	174.1189065		

Appendix A.4

Table A.9. The regression analysis of the real exports of Belgium in function of imports of the other EU countries (million of Euro)



SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.992286064
R Square	0.984631633
Adjusted R Square	0.983094797
Standard Error	5058.483974
Observations	12

ANOVA

	df	SS	MS	F	Significance F
Regression	1	16394071764	16394071764	640.6872407	2.12343E-10
Residual	10	255882601.1	25588260.11		
Total	11	16649954365			

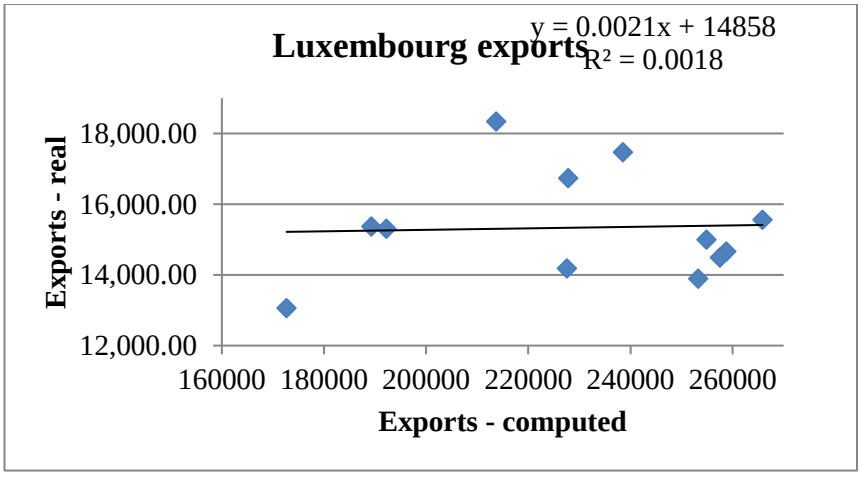
	Coefficients	Standard Error	t Stat	P-value	Lower 95.0%	Upper 95.0%
Intercept	33128.77583	11208.48087	2.955688305	0.014393895	8154.724131	58102.82753
X Variable 1	1.276977324	0.050449881	25.31180042	2.12343E-10	1.164567984	1.389386665

RESIDUAL OUTPUT		DURBIN-WATSON STATISTIC:	1.943349066
Observation	Predicted Y	Residuals	

1	244779.9778	1783.022219
2	265403.7234	3331.276561
3	297263.5032	-5176.503186
4	311847.8867	2601.113253
5	323543.1985	-2738.1985
6	267891.122	-1905.12203
7	311958.6645	-4428.66453
8	344073.2523	-2355.252332
9	352120.0483	-5031.048322
10	343071.9872	9884.012819
11	349004.2492	6523.750809
12	362053.3868	-2488.386763

Appendix A.5

Table A.10. The regression analysis of the real exports of Luxembourg in function of imports of the other EU countries (million of Euro)

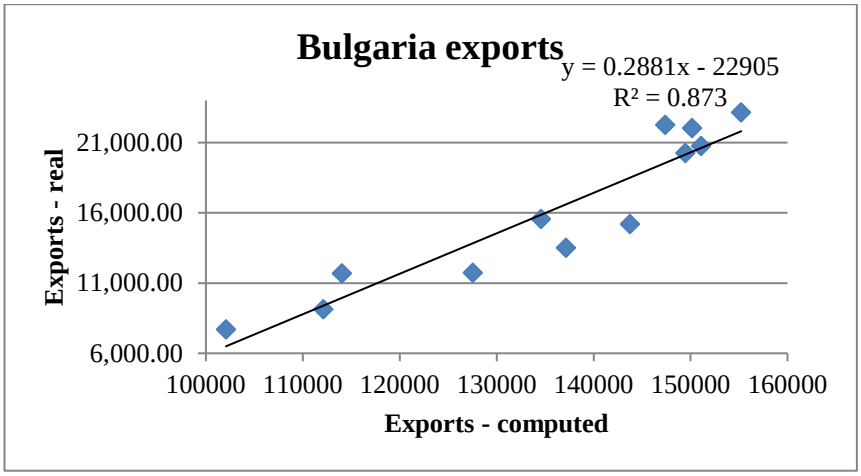


SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.042767701
R Square	0.001829076
Adjusted R Square	-0.097988016
Standard	1594.80033

Error						
Observations	12					
ANOVA						
	df	SS	MS	F	Significance F	
Regression	1	46605.75198	46605.75198	0.018324279	0.895007617	
Residual	10	25433880.91	2543388.091			
Total	11	25480486.67				
	Coefficients	Standard Error	t Stat	P-value	Lower 10.0%	Upper 10.0%
Intercept	14857.87413	3557.059584	4.17701019	0.001896703	14399.40405	15316.34421
X Variable 1	0.002081943	0.015379968	0.135367199	0.895007617	9.96162E-05	0.00406427
RESIDUAL OUTPUT			DURBIN-WATSON STATISTIC:			0.994809279
Observation	Predicted Y	Residuals				
1	15217.33961	-2157.339608				
2	15251.88702	114.1129808				
3	15302.75447	3034.245529				
4	15332.15996	1401.840039				
5	15354.46351	2115.536494				
6	15258.07093	40.92906829				
7	15331.58838	-1151.588384				
8	15388.56286	-398.5628621				
9	15396.57736	-737.5773648				
10	15385.16871	-1497.168712				
11	15394.02311	-909.023112				
12	15411.40407	144.5959312				

Appendix A.6

Table A.11. The regression analysis of the real exports of Bulgaria in function of imports of the other EU countries (million of Euro)



SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.934324544
R Square	0.872962353
Adjusted R Square	0.860258588
Standard Error	2038.736668
Observations	12

ANOVA

	df	SS	MS	F	Significance F
Regression	1	285617846.6	285617846.6	68.71682298	8.61242E-06
Residual	10	41564472.02	4156447.202		
Total	11	327182318.7			

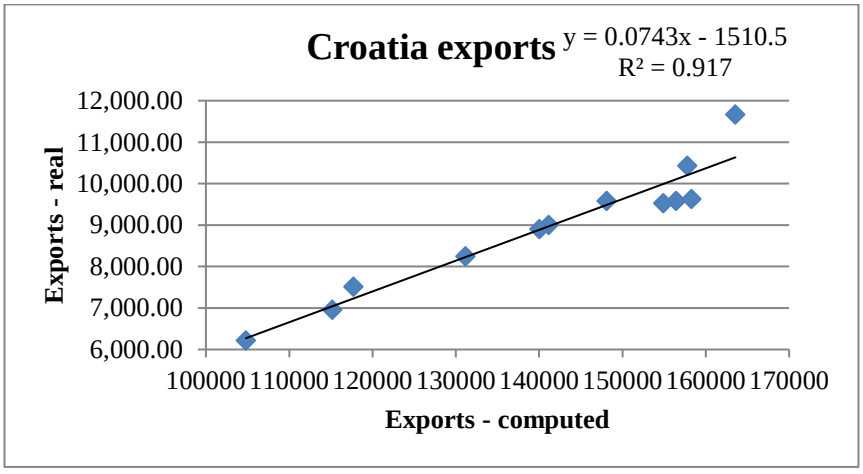
	Coefficients	Standard Error	t Stat	P-value	Lower 95.0%	Upper 95.0%
Intercept	-22905.41873	4741.031555	-4.831315393	0.000690417	-33469.09534	-12341.74213
X Variable 1	0.28806911	0.034750828	8.289561085	8.61242E-06	0.21063944	0.365498779

RESIDUAL OUTPUT		DURBIN-WATSON STATISTIC:	1.063343154
Observation	Predicted Y	Residuals	

1	6498.653724	1209.346276
2	9394.140049	-238.140049
3	13830.2603	-2082.260301
4	16599.32462	-3087.324617
5	18500.83712	-3296.837121
6	9945.680047	1753.319953
7	15854.86186	-293.8618557
8	20150.17393	114.8260726
9	20618.65496	151.3450411
10	19549.62761	2722.372387
11	20349.97866	1694.021338
12	21807.80712	1353.192876

Appendix A.7

Table A.12. The regression analysis of the real exports of Croatia in function of imports of the other EU countries (million of Euro)



SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.957581743
R Square	0.916962794

Adjusted R Square	0.908659073
Standard Error	457.168052
Observations	12

ANOVA

	df	SS	MS	F	Significance F
Regression	1	23079730.39	23079730.39	110.4279436	1.00707E-06
Residual	10	2090026.278	209002.6278		
Total	11	25169756.67			

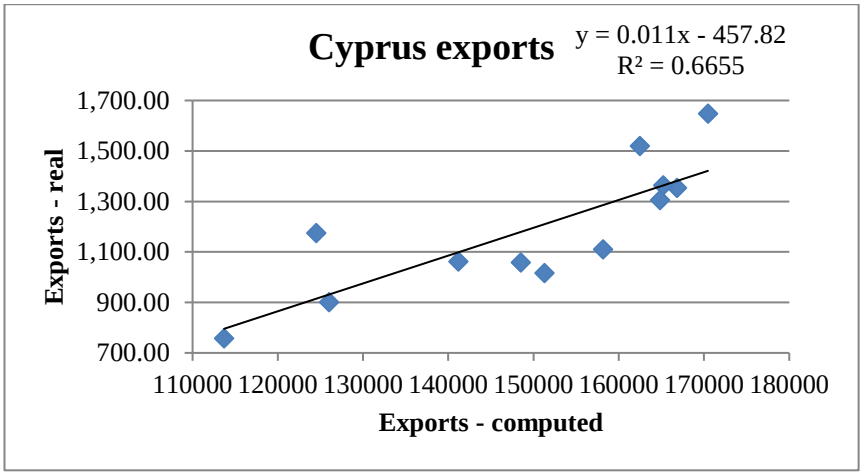
	Coefficients	Standard Error	t Stat	P-value	Lower 83.0%	Upper 83.0%
Intercept	-1510.528066	1003.236114	-1.505655593	0.163071256	-2994.070175	-26.98595746
X Variable 1	0.074253652	0.007066076	10.50847009	1.00707E-06	0.063804644	0.084702659

RESIDUAL OUTPUT DURBIN-WATSON STATISTIC: 0.753454488

Observation	Predicted Y	Residuals
1	6271.894702	-53.8947018
2	7041.598403	-81.59840267
3	8226.946572	25.05342792
4	8968.097516	35.90248375
5	9486.472654	98.5273455
6	7228.540881	287.4591187
7	8887.397162	17.60283752
8	10104.72861	-522.7286073
9	10241.20533	-612.2053341
10	9989.647328	-458.6473277
11	10203.69313	227.3068682
12	10633.77771	1037.222292

Appendix A.8

Table A.13. The regression analysis of the real exports of Cyprus in function of imports of the other EU countries (million of Euro)



SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.815806766
R Square	0.665540679
Adjusted R Square	0.632094747
Standard Error	156.2327471
Observations	12

ANOVA

	df	SS	MS	F	Significance F
Regression	1	485708.2041	485708.2041	19.89900224	0.001214567
Residual	10	244086.7126	24408.67126		
Total	11	729794.9167			

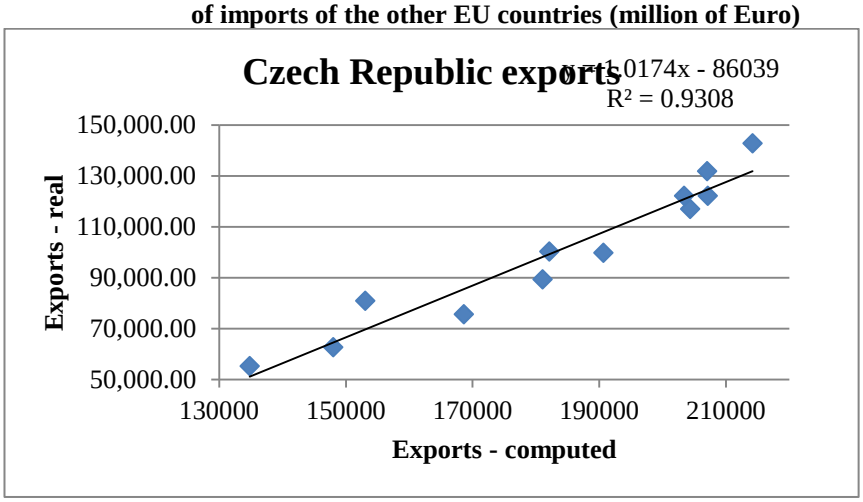
	Coefficients	Standard Error	t Stat	P-value	Lower 75.0%	Upper 75.0%
Intercept	-457.8203583	372.0109404	-1.230663694	0.246610338	-912.1407263	-3.499990333
X Variable 1	0.011023035	0.002471073	4.460829771	0.001214567	0.008005224	0.014040846

RESIDUAL OUTPUT			DURBIN-WATSON STATISTIC:	1.50747398
Observation	Predicted Y	Residuals		

1	795.5241686	-37.52416862
2	914.4836585	260.5163415
3	1098.645612	-36.64561219
4	1209.664549	-192.6645487
5	1285.681602	-175.6816017
6	931.3619091	-30.36190905
7	1179.16789	-121.1678898
8	1359.332119	-53.33211938
9	1381.223977	-27.22397684
10	1333.349063	186.6509375
11	1363.403367	0.596632929
12	1421.162086	226.8379144

Appendix A.9

Table A.14. The regression analysis of the real exports of Czech Republic in function of imports of the other EU countries (million of Euro)



SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.964782205

R Square	0.930804703
Adjusted R Square	0.923885173
Standard Error	7705.506309
Observations	12

ANOVA

	df	SS	MS	F	Significance F
Regression	1	7987012248	7987012248	134.5184919	4.02159E-07
Residual	10	593748274.7	59374827.47		
Total	11	8580760523			

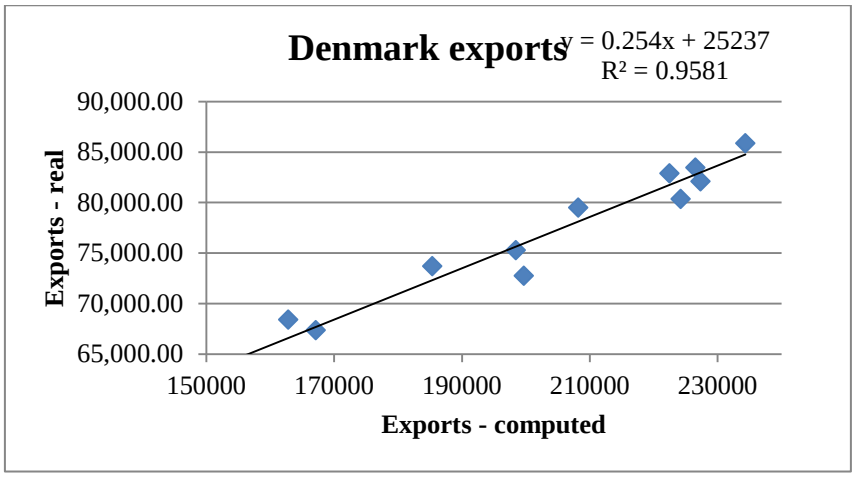
	Coefficients	Standard Error	t Stat	P-value	Lower 95.0%	Upper 95.0%
Intercept	-86039.09442	16195.15678	-5.312643502	0.000341316	-122124.1525	-49954.03639
X Variable 1	1.017423963	0.087722493	11.59821072	4.02159E-07	0.821966067	1.212881858

RESIDUAL OUTPUT DURBIN-WATSON STATISTIC: 1.160581481

Observation	Predicted Y	Residuals
1	51129.85161	4156.148393
2	64558.29126	-1836.291255
3	85520.93848	-9916.938483
4	98173.96881	-8791.968806
5	107951.7895	-8142.789534
6	69670.47022	11312.52978
7	99255.71431	1055.285688
8	121846.1381	-4792.138137
9	124709.0267	-2479.026729
10	120873.2061	1311.793875
11	124609.0241	7189.975872
12	131888.5807	10933.41934

Appendix A.10

Table A.15. The regression analysis of the real exports of Denmark in function of imports of the other EU countries (million of Euro)



SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.978848543
R Square	0.95814447
Adjusted R Square	0.953958917
Standard Error	1605.052516
Observations	12

ANOVA

	df	SS	MS	F	Significance F
Regression	1	589734647.9	589734647.9	228.9170553	3.21796E-08
Residual	10	25761935.78	2576193.578		
Total	11	615496583.7			

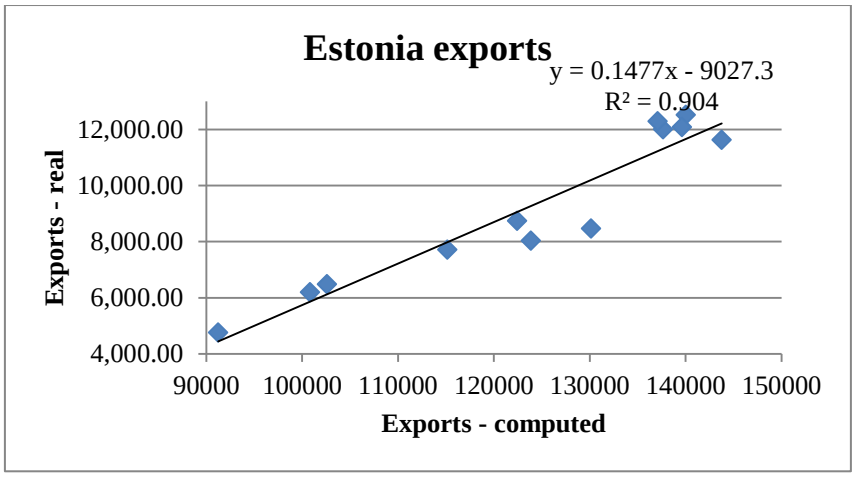
	Coefficients	Standard Error	t Stat	P-value	Lower 95.0%	Upper 95.0%
Intercept	25237.4467	3395.827651	7.431898582	2.23119E-05	17671.07118	32803.82222
X Variable 1	0.253974849	0.016786171	15.13000513	3.21796E-08	0.21657293	0.291376768

RESIDUAL OUTPUT			DURBIN-WATSON STATISTIC:	1.268507634
Observation	Predicted Y	Residuals		

1	62897.55096	-980.5509556
2	66594.49267	1808.507333
3	72314.00118	1401.998817
4	75635.30139	-355.3013944
5	78120.53672	1375.463279
6	67681.0885	-299.0885012
7	75957.89263	-3210.892628
8	82184.10891	-1822.108905
9	82969.41692	-879.4169159
10	81743.71906	1161.280943
11	82773.50326	694.4967427
12	84758.38781	1105.612186

Appendix A.11

Table A.16. **The regression analysis of the real exports of Estonia in function of imports of the other EU countries (million of Euro)**



SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.950793005

R Square	0.904007338
Adjusted R Square	0.894408072
Standard Error	892.0949659
Observations	12

ANOVA

	df	SS	MS	F	Significance F
Regression	1	74947318.39	74947318.39	94.17462969	2.09137E-06
Residual	10	7958334.281	795833.4281		
Total	11	82905652.67			

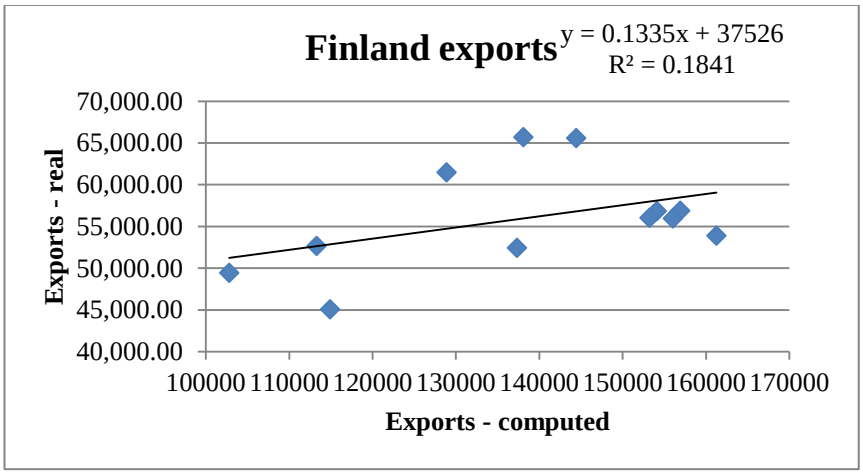
	Coefficients	Standard Error	t Stat	P-value	Lower 95.0%	Upper 95.0%
Intercept	-9027.256286	1900.454667	-4.75005084	0.000780175	-13261.73317	-4792.779407
X Variable 1	0.14771808	0.015221824	9.704361375	2.09137E-06	0.113801743	0.181634417

RESIDUAL OUTPUT DURBIN-WATSON STATISTIC: 1.120941197

Observation	Predicted Y	Residuals
1	4449.987397	317.0126032
2	5868.360153	332.6398473
3	7983.353648	-264.353648
4	9271.648817	-1237.648817
5	10194.74944	-1724.74944
6	6125.628915	361.3710847
7	9058.366067	-315.366067
8	11305.47566	697.5243413
9	11658.02849	862.9715083
10	11223.97516	1065.024838
11	11596.01792	486.9820811
12	12208.40833	-581.4083319

Appendix A.12

Table A.17. The regression analysis of the real exports of Finland in function of imports of the other EU countries (million of Euro)



SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.429016554
R Square	0.184055204
Adjusted R Square	0.102460724
Standard Error	5771.774637
Observations	12

ANOVA

	df	SS	MS	F	Significance F
Regression	1	75146032.35	75146032.35	2.255731085	0.16402133
Residual	10	333133824.6	33313382.46		
Total	11	408279856.9			

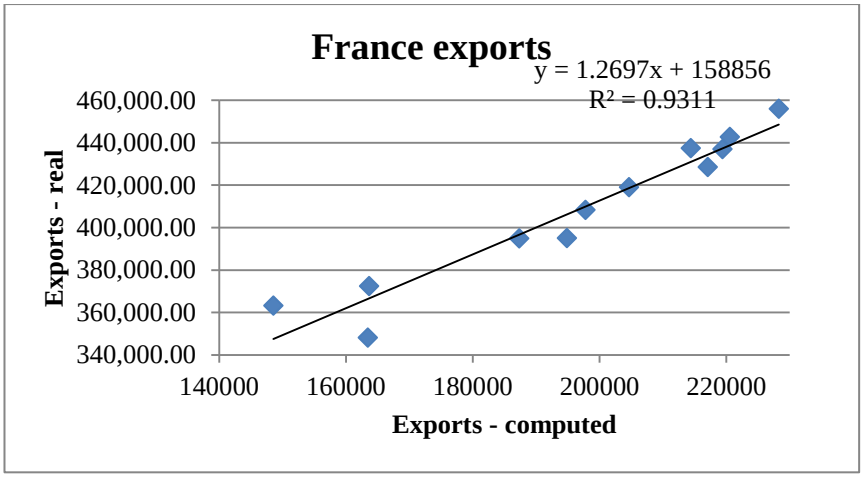
	Coefficients	Standard Error	t Stat	P-value	Lower 83.0%	Upper 83.0%
Intercept	37525.62094	12412.65385	3.023174689	0.012825741	19170.3261	55880.91577
X Variable 1	0.133454299	0.088856439	1.501909147	0.16402133	0.002057245	0.264851353

RESIDUAL OUTPUT DURBIN-WATSON STATISTIC: 1.097430679

Observation	Predicted Y	Residuals
1	51245.22333	-1804.223329
2	52645.47388	-4.473877948
3	54723.03702	6765.962976
4	55955.06976	9732.930237
5	56797.42129	8782.578712
6	52856.43576	-7793.435765
7	55852.83977	-3413.839766
8	58088.18993	-1233.189933
9	58466.50084	-1588.500842
10	57974.09718	-1926.097184
11	58347.50899	-2374.508985
12	59043.20224	-5143.202243

Appendix A.13

Table A.18. The regression analysis of the real exports of France in function of imports of the other EU countries (million of Euro)



SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.964936764
R Square	0.931102958
Adjusted R Square	0.924213254
Standard Error	9446.546343
Observations	12

ANOVA

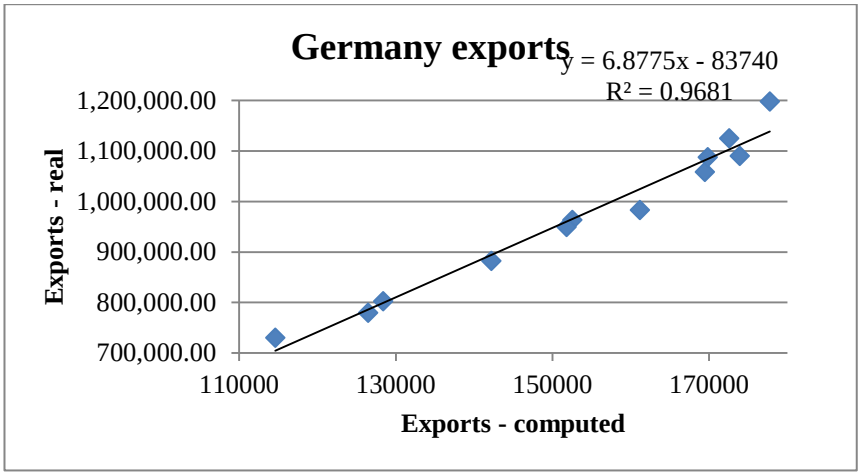
	df	SS	MS	F	Significance F
Regression	1	12059887379	12059887379	135.1441133	3.93514E-07
Residual	10	892372378.2	89237237.82		
Total	11	12952259758			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	158856.3841	21650.23854	7.337396481	2.49002E-05	110616.6464	207096.1217
X Variable 1	1.269691052	0.109219326	11.62515003	3.93514E-07	1.026335228	1.513046875

RESIDUAL OUTPUT			DURBIN-WATSON STATISTIC:	0.893684525
Observation	Predicted Y	Residuals		
1	347424.6522	15783.3478		
2	366645.1084	5749.891629		
3	396701.6286	-1776.628551		
4	409989.5295	-1662.529465		
5	418658.8276	324.1723973		
6	366372.3914	-18337.39143		
7	406224.1718	-11137.17177		
8	434425.1147	-5924.114662		
9	438872.8297	3770.170281		
10	431075.0094	6363.990572		
11	437427.2865	-490.2864568		
12	448653.4503	7336.549656		

Appendix A.14

Table A.19. The regression analysis of the real exports of Germany in function of imports of the other EU countries (million of Euro)



SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.983927434
R Square	0.968113195
Adjusted R Square	0.964924515
Standard Error	27788.39183
Observations	12

ANOVA

	df	SS	MS	F	Significance F
Regression	1	2.34446E+11	2.34446E+11	303.6093474	8.22256E-09
Residual	10	7721947207	772194720.7		
Total	11	2.42167E+11			

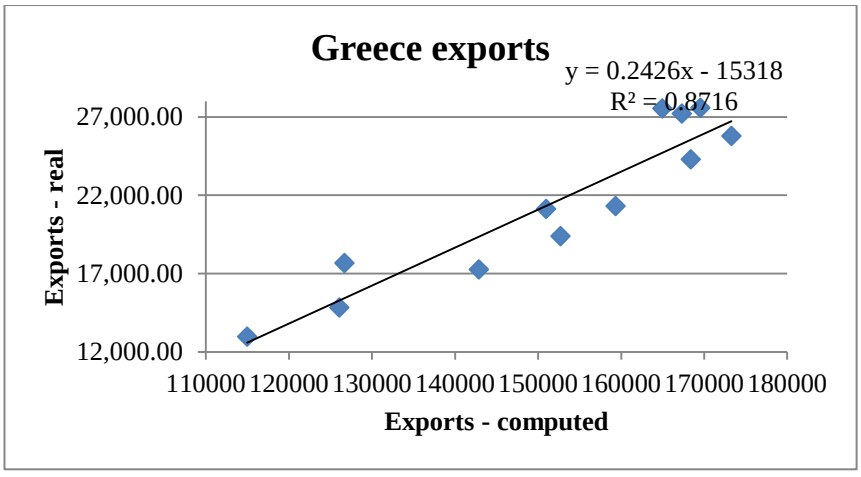
	Coefficients	Standard Error	t Stat	P-value	Lower 79.0%	Upper 79.0%
Intercept	-83740.24497	61069.85943	-1.371220529	0.200290384	-165553.9051	-1926.584824
X Variable 1	6.877499574	0.394705341	17.42438944	8.22256E-09	6.348723367	7.40627578

RESIDUAL OUTPUT			DURBIN-WATSON STATISTIC:	0.978650566
Observation	Predicted Y	Residuals		

1	704309.1029	26134.89705
2	785984.3622	-5995.362187
3	894079.3297	-11547.32971
4	965266.6772	-1228.677202
5	1024528.234	-41273.2341
6	799149.9596	3862.040379
7	960348.0958	-10719.09583
8	1081656.735	-22759.73451
9	1112307.962	-21777.96196
10	1084353.746	3717.254028
11	1102955.182	22078.81848
12	1138797.614	59508.38558

Appendix A.15

Table A.20. The regression analysis of the real exports of Greece in function of imports of the other EU countries (million of Euro)



SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.933612973

R Square	0.871633184
Adjusted R Square	0.858796502
Standard Error	1919.574472
Observations	12

ANOVA

	df	SS	MS	F	Significance F
Regression	1	250202081.4	250202081.4	67.90175301	9.07815E-06
Residual	10	36847661.55	3684766.155		
Total	11	287049742.9			

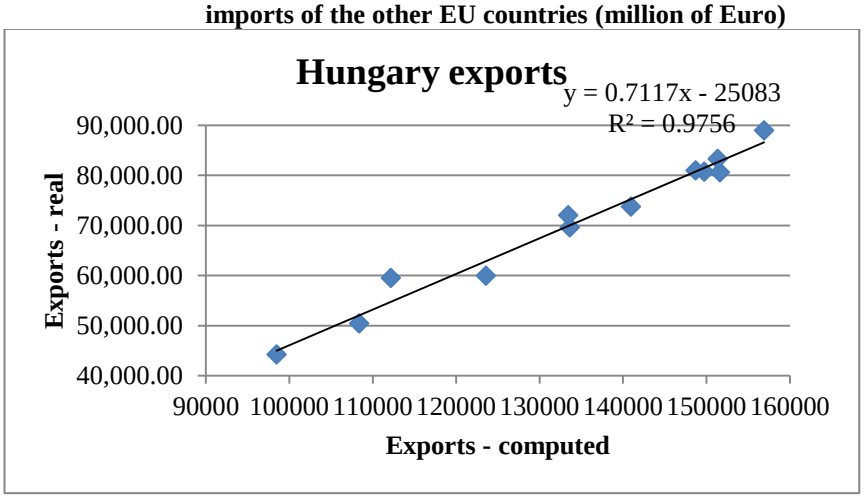
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	-15317.93886	4492.726576	-3.40949724	0.006663906	-25328.3575	-5307.520225
X Variable 1	0.242635663	0.029445175	8.240251999	9.07815E-06	0.177027724	0.308243602

RESIDUAL OUTPUT DURBIN-WATSON STATISTIC: 1.310137051

Observation	Predicted Y	Residuals
1	12577.16267	392.8373263
2	15272.0175	-446.0175008
3	19346.78016	-2073.780164
4	21733.65997	-2341.659971
5	23336.03074	-2017.030741
6	15414.54654	2259.453458
7	21310.47426	-170.4742585
8	25539.94385	-1244.943847
9	25815.50032	1769.499683
10	24703.11528	2855.884717
11	25271.63248	1949.367522
12	26726.13622	-933.1362231

Appendix A.16

Table A.21. The regression analysis of the real exports of Hungary in function of imports of the other EU countries (million of Euro)



SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.98771277
R Square	0.975576515
Adjusted R Square	0.973134167
Standard Error	2294.701727
Observations	12

ANOVA

	df	SS	MS	F	Significance F
Regression	1	2103324067	2103324067	399.4419804	2.16076E-09
Residual	10	52656560.15	5265656.015		
Total	11	2155980627			

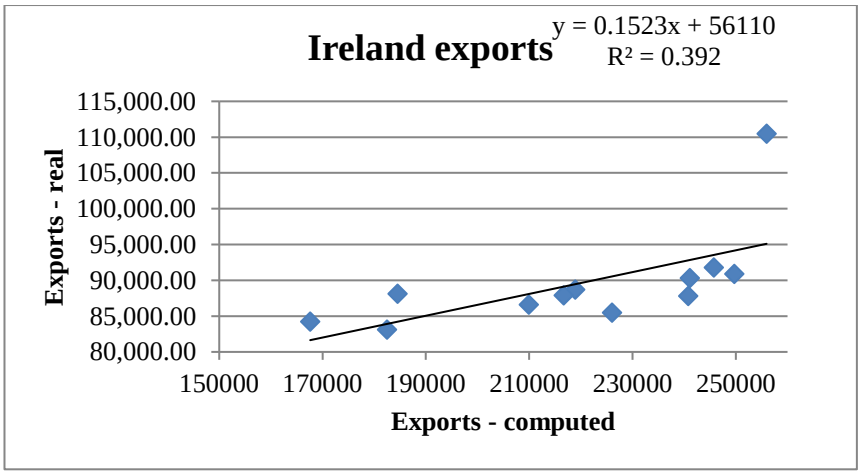
	Coefficients	Standard Error	t Stat	P-value	Lower 95.0%	Upper 95.0%
Intercept	-25082.86424	4819.717363	-5.20421891	0.000398858	-35821.86375	-14343.86473
X Variable 1	0.711653864	0.035607539	19.98604464	2.16076E-09	0.632315323	0.790992405

RESIDUAL OUTPUT DURBIN-WATSON STATISTIC: 1.423748616

Observation	Predicted Y	Residuals
1	44997.07921	-737.0792079
2	52031.29373	-1626.293728
3	62850.31834	-2914.318342
4	69993.78596	-383.7859626
5	75225.08235	-1453.082351
6	54748.92904	4764.070963
7	69879.76478	2144.23522
8	81464.8919	-780.8918952
9	82814.03106	-2202.031057
10	80744.51315	200.486845
11	82625.25775	640.7422466
12	86586.05273	2347.947269

Appendix A.17

Table A.22. The regression analysis of the real exports of Ireland in function of imports of the other EU countries (million of Euro)



SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.626075259
R Square	0.39197023
Adjusted R Square	0.331167253

Standard Error	5777.701719
Observations	12

ANOVA

	df	SS	MS	F	Significance F
Regression	1	215198121.1	215198121.1	6.446563146	0.029413122
Residual	10	333818371.5	33381837.15		
Total	11	549016492.7			

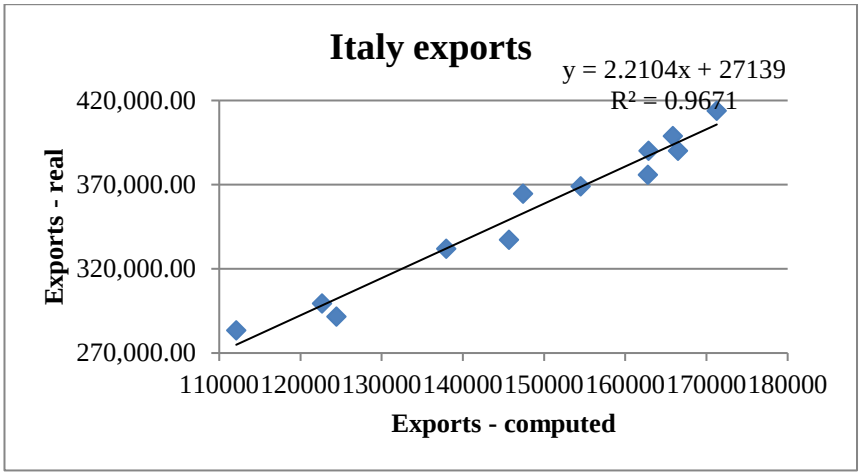
	Coefficients	Standard Error	t Stat	P-value	Lower 95.0%	Upper 95.0%
Intercept	56109.67246	13302.51305	4.217975373	0.001777314	26469.82629	85749.51862
X Variable 1	0.152348008	0.060002958	2.5390083	0.029413122	0.018653086	0.28604293

RESIDUAL OUTPUT DURBIN-WATSON STATISTIC: 1.129948206

Observation	Predicted Y	Residuals
1	81644.82721	2582.172794
2	84222.7886	3914.211405
3	88087.40966	-1494.409656
4	89463.64234	-777.6423399
5	90546.82144	-5069.821442
6	83912.42828	-798.42828
7	89116.31326	-1241.313257
8	92834.84629	-2504.84629
9	94154.03379	-3266.033785
10	92789.44811	-4967.448107
11	93544.47265	-1752.472647
12	95102.96839	15376.03161

Appendix A.18

Table A.23. The regression analysis of the real exports of Italy in function of imports of the other EU countries (million of Euro)



SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.983435565
R Square	0.96714551
Adjusted R Square	0.963860061
Standard Error	8426.232211
Observations	12

ANOVA

	df	SS	MS	F	Significance F
Regression	1	20900849158	20900849158	294.3723971	9.55226E-09
Residual	10	710013892.7	71001389.27		
Total	11	21610863051			

	Coefficients	Standard Error	t Stat	P-value	Lower 81.0%	Upper 81.0%
Intercept	27138.52056	19200.97586	1.413392775	0.187904329	140.128922	54136.9122
X Variable 1	2.210412128	0.128832286	17.15728408	9.55226E-09	2.029261725	2.391562531

RESIDUAL OUTPUT		DURBIN-WATSON STATISTIC:	0.787575325
Observation	Predicted Y	Residuals	

1	274911.0872	8582.912815
2	298296.4296	1277.570353
3	332067.1946	-54.19455608
4	352995.1334	11748.86656
5	368693.8561	322.1438575
6	302182.29	-10449.28996
7	349141.943	-11734.94302
8	387000.2241	-11096.22414
9	395133.3914	-4951.391354
10	387118.8127	3114.187252
11	393779.8455	5090.154512
12	405730.7923	8150.207676

Table A.24. The regression analysis of the real exports of Italy, after eliminating the autoregression, in function of imports of the other EU countries (million of Euro)

SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.98010413
R Square	0.960604105
Adjusted R Square	0.956226783
Standard Error	6233.650561
Observations	11

ANOVA

	df	SS	MS	F	Significance F
Regression	1	8527483336	8527483336	219.4501957	1.25727E-07
Residual	9	349725593.8	38858399.32		
Total	10	8877208930			

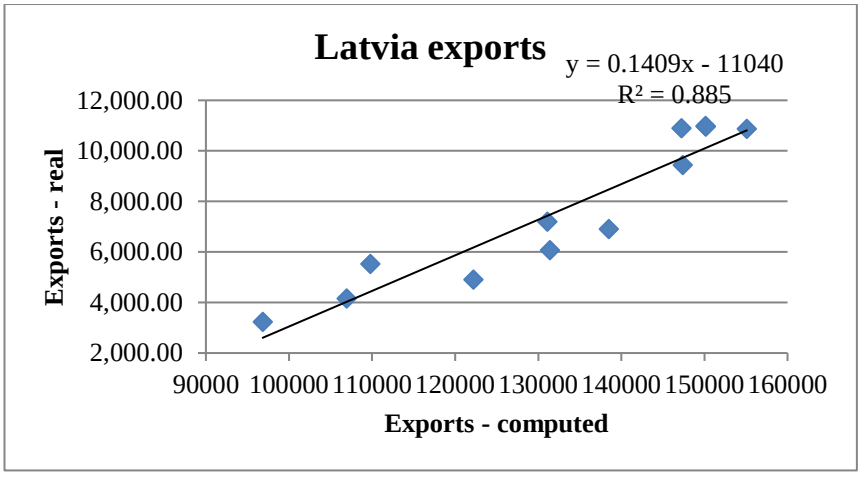
	Coefficients	Standard Error	t Stat	P-value	Lower 33.0%	Upper 33.0%
Intercept	-5288.769383	11689.02623	-0.452455943	0.6616493	-10437.2029	-140.335868
X Variable 1	2.452933644	0.165583788	14.81385148	1.25727E-07	2.380002237	2.52586505

RESIDUAL OUTPUT DURBIN-WATSON STATISTIC: 1.80563333

Observation	Predicted Y	Residuals
1	141988.8689	-815.6394282
2	164964.8306	-337.2159613
3	167249.4098	11984.08543
4	171694.2154	-6476.993012
5	88151.17151	-2603.90645
6	181503.5591	-7100.827208
7	194398.2841	-7018.657784
8	179949.8177	197.8138908
9	166012.9356	6207.939071
10	178374.233	2455.145715
11	187506.245	3508.255741

Appendix A.19

Table A.25. The regression analysis of the real exports of Latvia in function of imports of the other EU countries (million of Euro)

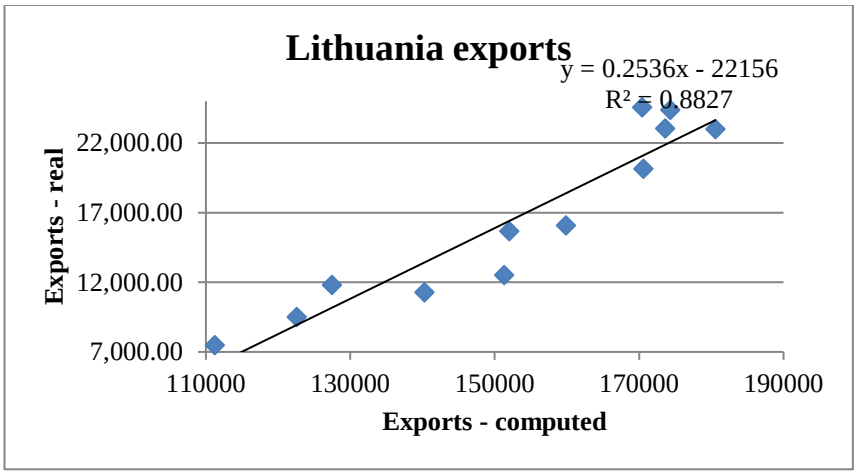


SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.940726109
R Square	0.884965612
Adjusted R Square	0.873462174
Standard	1035.851684

Error						
Observations	12					
ANOVA						
	df	SS	MS	F	Significance F	
Regression	1	82545587.55	82545587.55	76.93052745	5.21402E-06	
Residual	10	10729887.12	1072988.712			
Total	11	93275474.67				
	Coefficients	Standard Error	t Stat	P-value	Lower 95.0%	Upper 95.0%
Intercept	-11040.27378	2144.982426	-5.147022954	0.000433316	-15819.59246	-6260.955102
X Variable 1	0.140894299	0.016063644	8.771004928	5.21402E-06	0.10510227	0.176686328
RESIDUAL OUTPUT			DURBIN-WATSON STATISTIC:			1.24547556
Observation	Predicted Y	Residuals				
1	2603.935791	619.0642091				
2	4025.128133	122.8718666				
3	6176.02755	-1274.02755				
4	7474.267073	-1412.267073				
5	8473.57398	-1576.57398				
6	4426.492315	1095.507685				
7	7428.249586	-237.2495864				
8	9725.059139	-292.0591393				
9	10110.70938	872.2906207				
10	9702.293438	1190.706562				
11	10117.22433	839.7756683				
12	10813.03928	51.9607179				

Appendix A.20

Table A.26. The regression analysis of the real exports of Lithuania in function of imports of the other EU countries (million of Euro)



SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.93952497
R Square	0.882707169
Adjusted R Square	0.870977886
Standard Error	2223.788491
Observations	12

ANOVA

	df	SS	MS	F	Significance F
Regression	1	372162097.7	372162097.7	75.25670242	5.75237E-06
Residual	10	49452352.52	4945235.252		
Total	11	421614450.3			

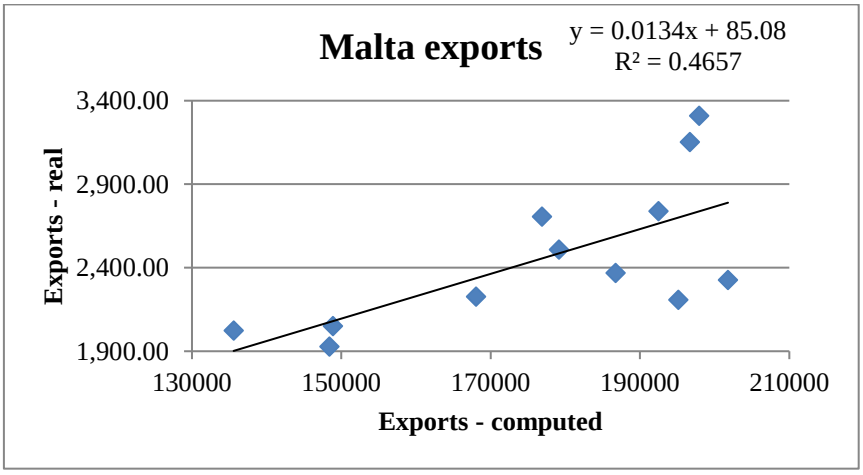
	Coefficients	Standard Error	t Stat	P-value	Lower 95.0%	Upper 95.0%
Intercept	-22155.78215	4514.777815	-4.907391474	0.000616301	-32215.33401	-12096.2303
X Variable 1	0.253636416	0.029237418	8.675062099	5.75237E-06	0.188491389	0.318781443

RESIDUAL OUTPUT DURBIN-WATSON STATISTIC: 1.087026461128

Observation	Predicted Y	Residuals
1	6061.091562	1411.908438
2	8934.137772	554.862228
3	13421.83848	-2158.838477
4	16216.80018	-3707.80018
5	18391.8618	-2314.8618
6	10168.0485	1628.951501
7	16404.00161	-753.0016094
8	21113.20807	-962.2080696
9	21877.76461	1169.235391
10	21063.15546	3481.844541
11	22055.12495	2305.875055
12	23639.96702	-655.9670169

Appendix A.21

Table A.27. The regression analysis of the real exports of Malta in function of imports of the other EU countries (million of Euro)



SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.682393372

R Square	0.465660715
Adjusted R Square	0.412226786
Standard Error	336.9866634
Observations	12

ANOVA

	df	SS	MS	F	Significance F
Regression	1	989641.5534	989641.5534	8.71470108	0.014483342
Residual	10	1135600.113	113560.0113		
Total	11	2125241.667			

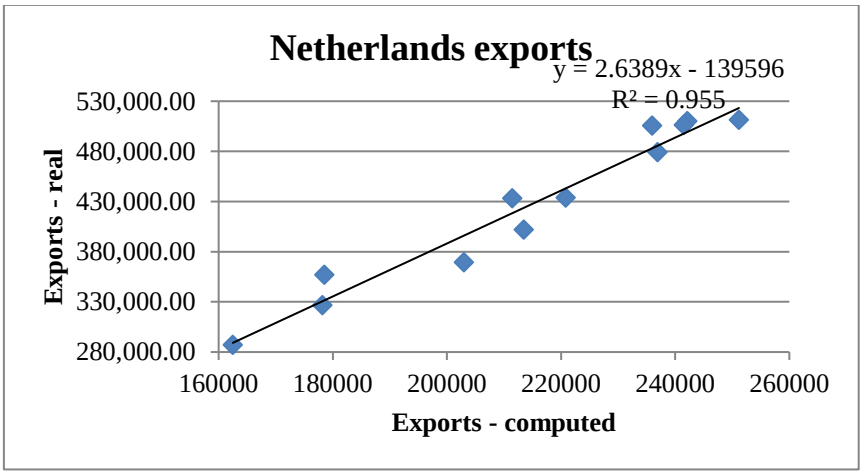
	Coefficients	Standard Error	t Stat	P-value	Lower 8.0%	Upper 8.0%
Intercept	85.07987218	810.7464575	0.104940171	0.918498325	1.57376909	168.5859753
X Variable 1	0.01340127	0.004539622	2.952067255	0.014483342	0.012933693	0.013868847

RESIDUAL OUTPUT DURBIN-WATSON STATISTIC: 0.779671474

Observation	Predicted Y	Residuals
1	1901.964441	121.0355587
2	2074.085664	-146.0856644
3	2336.763826	-110.7638263
4	2486.06148	21.93851971
5	2587.255007	-220.2550071
6	2080.171717	-31.17171723
7	2455.466917	249.5330834
8	2720.995127	430.0048734
9	2737.699944	570.3000561
10	2664.316331	73.68366923
11	2699.957009	-493.9570087
12	2789.262537	-464.2625368

Appendix A.22

Table A.28. The regression analysis of the real exports of Netherlands in function of imports of the other EU countries (million of Euro)



SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.977219202
R Square	0.954957368
Adjusted R Square	0.950453105
Standard Error	17480.34108
Observations	12

ANOVA

	df	SS	MS	F	Significance F
Regression	1	64782846493	64782846493	212.0118921	4.65087E-08
Residual	10	3055623242	305562324.2		
Total	11	67838469735			

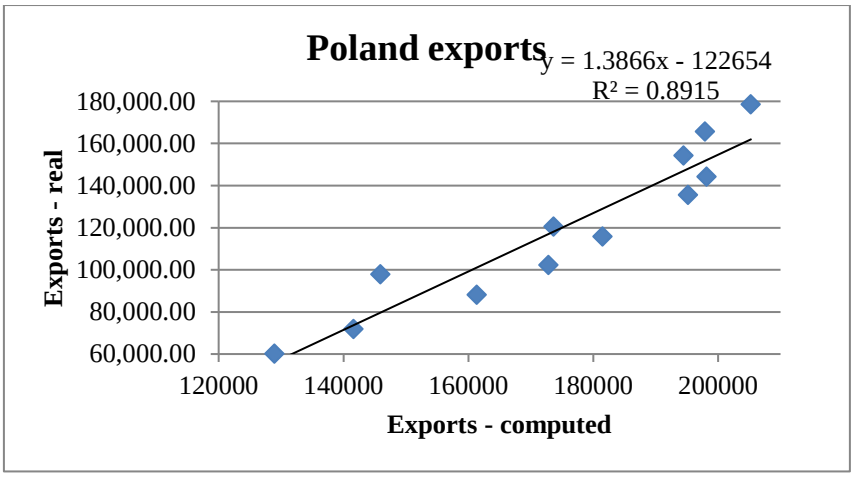
	Coefficients	Standard Error	t Stat	P-value	Lower 95.0%	Upper 95.0%
Intercept	-139596.1248	39223.56978	-3.558985721	0.005190005	-226991.6845	-52200.56505
X Variable 1	2.638938977	0.18123799	14.56062815	4.65087E-08	2.23511557	3.042762383

RESIDUAL OUTPUT DURBIN-WATSON STATISTIC: 1.154539328

Observation	Predicted Y	Residuals
1	289181.9788	-2071.978795
2	330635.1975	-4080.197531
3	396010.0286	-26761.02864
4	423729.2589	-21828.25892
5	443094.0306	-9372.030638
6	331423.0792	25538.92085
7	418366.0113	14806.98871
8	485573.5855	-6334.585521
9	499342.2232	10755.77676
10	483035.1637	22615.83627
11	497724.237	8614.763024
12	523217.2056	-11884.20556

Appendix A.23

Table A.29. The regression analysis of the real exports of Poland in function of imports of the other EU countries (million of Euro)



SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.944219192
R Square	0.891549882
Adjusted R Square	0.88070487

Standard Error	12865.13173
Observations	12

ANOVA

	df	SS	MS	F	Significance F
Regression	1	13606426848	13606426848	82.20829031	3.87137E-06
Residual	10	1655116144	165511614.4		
Total	11	15261542992			

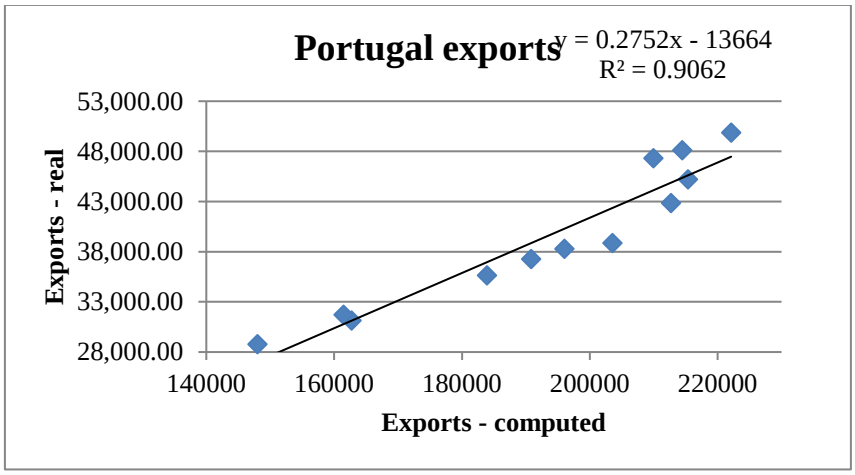
	Coefficients	Standard Error	t Stat	P-value	Lower 95.0%	Upper 95.0%
Intercept	-122654.2762	26977.34642	-4.546565639	0.0010639	-182763.5499	-62545.00257
X Variable 1	1.386567639	0.152926677	9.066878752	3.87137E-06	1.045825769	1.72730951

RESIDUAL OUTPUT DURBIN-WATSON STATISTIC: 1.156972511

Observation	Predicted Y	Residuals
1	56131.97369	4084.026308
2	73710.57318	-1821.57318
3	101099.0555	-12870.05552
4	116976.9189	-14717.91887
5	128984.0677	-13089.06774
6	79656.93783	18208.06217
7	118103.1307	2379.869291
8	147964.806	-12406.80602
9	152112.7647	-7830.764709
10	146964.8689	7379.1311
11	151760.5072	13954.4928
12	161940.3956	16730.60437

Appendix A.24

Table A.30. The regression analysis of the real exports of Portugal in function of imports of the other EU countries (million of Euro)



SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.95192827
R Square	0.906167431
Adjusted R Square	0.896784175
Standard Error	2279.207787
Observations	12

ANOVA

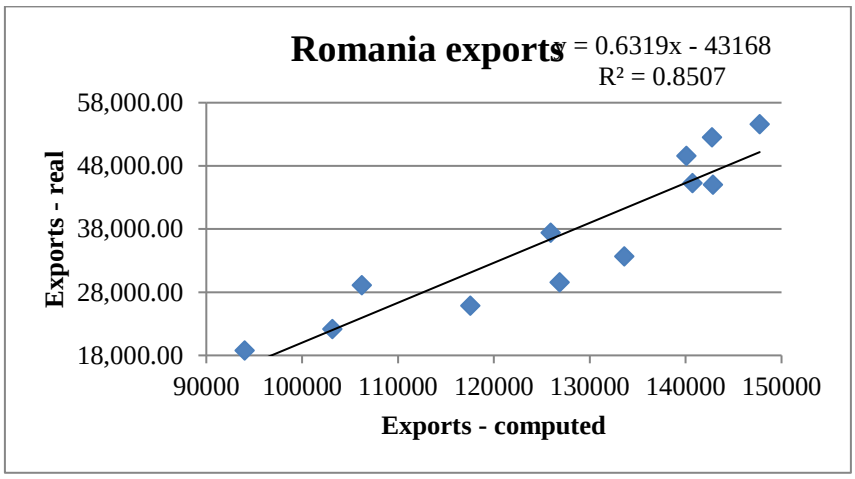
	df	SS	MS	F	Significance F
Regression	1	501675260.3	501675260.3	96.5728047	1.86458E-06
Residual	10	51947881.38	5194788.138		
Total	11	553623141.7			

	Coefficients	Standard Error	t Stat	P-value	Lower 95.0%	Upper 95.0%
Intercept	-13663.53419	5457.792629	-2.503490901	0.031259318	-25824.25399	-1502.814385
X Variable 1	0.275240345	0.028008166	9.827146315	1.86458E-06	0.212834262	0.337646427

RESIDUAL OUTPUT		DURBIN-WATSON STATISTIC:	0.948436047
Observation	Predicted Y	Residuals	
1	27082.54824	1685.45176	
2	31130.30706	6.692937875	
3	36961.9426	-1321.942596	
4	40296.91425	-2002.914251	
5	42359.62319	-3512.623193	
6	30785.9924	911.0075993	
7	38863.31666	-1595.316659	
8	44885.31392	-2057.31392	
9	45618.68631	-405.6863133	
10	44126.33316	3176.666835	
11	45374.60042	2730.399577	
12	47472.42178	2385.578223	

Appendix A.25

Table A.31. The regression analysis of the real exports of Romania in function of imports of the other EU countries (million of Euro)



SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.922339983
R Square	0.850711045
Adjusted R Square	0.835782149
Standard Error	4959.567538
Observations	12

ANOVA

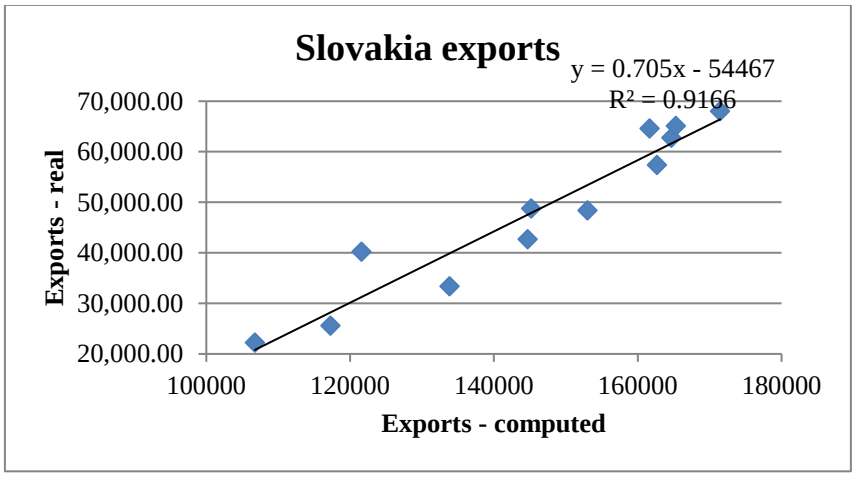
	df	SS	MS	F	Significance F
Regression	1	1401657837	1401657837	56.98419168	1.95065E-05
Residual	10	245973101.6	24597310.16		
Total	11	1647630939			

	Coefficients	Standard Error	t Stat	P-value	Lower 95.0%	Upper 95.0%
Intercept	-43168.1268	10710.11997	-4.030592275	0.002397225	-67031.76121	-19304.4924
X Variable 1	0.631915739	0.083710893	7.548787431	1.95065E-05	0.445396245	0.818435232

RESIDUAL OUTPUT			DURBIN-WATSON STATISTIC:	1.07763901
Observation	Predicted Y	Residuals		
1	16240.62884	2512.371163		
2	22017.80473	154.1952663		
3	31104.08323	-5254.083225		
4	37004.67858	-7461.678585		
5	41259.67689	-7580.676892		
6	23968.061	5116.938999		
7	36418.95589	979.0441136		
8	45765.43832	-481.4383219		
9	47105.51043	-2086.510433		
10	45354.04854	4216.951462		
11	47038.91915	5454.080847		
12	50178.19439	4430.805607		

Appendix A.26

Table A.32. The regression analysis of the real exports of Slovakia in function of imports of the other EU countries (million of Euro)



SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.95739738
R Square	0.916609743
Adjusted R Square	0.908270718
Standard Error	4781.955359
Observations	12

ANOVA

	df	SS	MS	F	Significance F
Regression	1	2513507550	2513507550	109.9180864	1.02883E-06
Residual	10	228670970.6	22867097.06		
Total	11	2742178521			

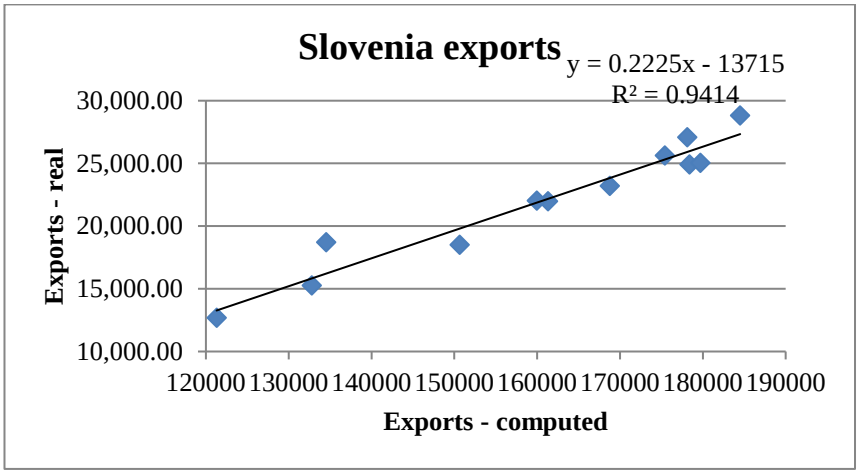
	Coefficients	Standard Error	t Stat	P-value	Lower 95.0%	Upper 95.0%
Intercept	-54467.40819	9893.527489	-5.505357745	0.000259829	-76511.56117	-32423.25521
X Variable 1	0.705009601	0.06724507	10.48418268	1.02883E-06	0.555178247	0.854840954

RESIDUAL OUTPUT	DURBIN-WATSON STATISTIC:	1.524590464137

Observation	Predicted Y	Residuals
1	20794.72847	1417.271531
2	28206.03615	-2623.036145
3	39883.83632	-6543.836322
4	47556.73781	-4860.73781
5	53434.1138	-5064.113797
6	31249.04088	8958.959115
7	47898.43481	878.5651865
8	60243.95663	-2894.956633
9	61649.04782	1092.952183
10	59507.25685	5058.743149
11	62084.47585	2996.524153
12	66414.33461	1583.66539

Appendix A.27

Table A.33. The regression analysis of the real exports of Slovenia in function of imports of the other EU countries (million of Euro)



SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.970259019

R Square	0.941402564
Adjusted R Square	0.935542821
Standard Error	1234.242141
Observations	12

ANOVA

	df	SS	MS	F	Significance F
Regression	1	244735803	244735803	160.6559323	1.74332E-07
Residual	10	15233536.63	1523353.663		
Total	11	259969339.7			

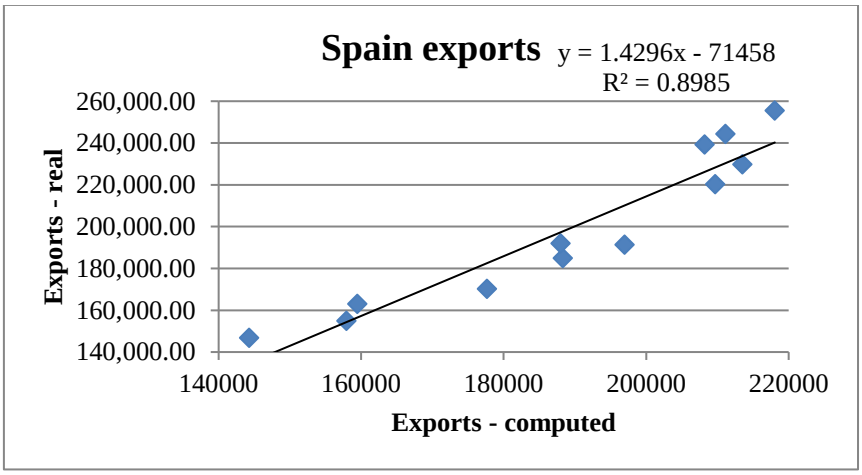
	Coefficients	Standard Error	t Stat	P-value	Lower 95.0%	Upper 95.0%
Intercept	-13714.99681	2838.919974	-4.831061436	0.00069068	-20040.5047	-7389.488916
X Variable 1	0.222485889	0.017553111	12.67501212	1.74332E-07	0.183375121	0.261596656

RESIDUAL OUTPUT DURBIN-WATSON STATISTIC: 1.425212074

Observation	Predicted Y	Residuals
1	13269.79602	-598.7960175
2	15830.55742	-560.5574248
3	19800.5133	-1299.513303
4	22175.69033	-195.6903314
5	23837.05253	-633.0525336
6	16218.41262	2476.587375
7	21869.26052	157.7394832
8	25970.30063	-1055.300631
9	26268.51404	-1235.514042
10	25312.65904	302.3409575
11	25917.82956	1157.170441
12	27335.41397	1484.586027

Appendix A.28

Table A.34. The regression analysis of the real exports of Spain in function of imports of the other EU countries (million of Euro)



SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.947880996
R Square	0.898478382
Adjusted R Square	0.888326221
Standard Error	12495.218
Observations	12

ANOVA

	df	SS	MS	F	Significance F
Regression	1	13817732424	13817732424	88.50118862	2.77413E-06
Residual	10	1561304728	156130472.8		
Total	11	15379037153			

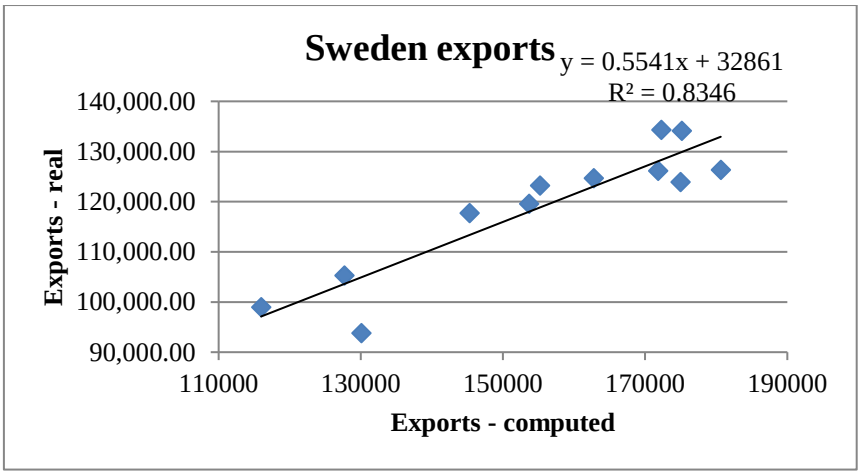
	Coefficients	Standard Error	t Stat	P-value	Lower 95.0%	Upper 95.0%
Intercept	-71457.96937	29009.12347	-2.463292951	0.033487171	-136094.3244	-6821.614304
X Variable 1	1.429564886	0.151960012	9.407507035	2.77413E-06	1.090976878	1.768152893

RESIDUAL OUTPUT	DURBIN-WATSON STATISTIC:	0.914929148140

Observation	Predicted Y	Residuals
1	134763.1127	11964.88733
2	154316.8727	498.1272737
3	182478.1144	-12267.11444
4	197712.7158	-12891.71581
5	210142.7968	-18754.79678
6	156469.9547	6520.045304
7	197287.0343	-5375.034271
8	228258.0286	-8035.028581
9	233743.3405	-3941.340526
10	226138.3841	13175.61587
11	230363.3488	13923.65121
12	240258.2966	15182.70342

Appendix A.29

Table A.35. The regression analysis of the real exports of Sweden in function of imports of the other EU countries (million of Euro)



SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.913538903
R Square	0.834553328
Adjusted R Square	0.81800866

Standard Error	5565.085133
Observations	12

ANOVA

	df	SS	MS	F	Significance F
Regression	1	1562210963	1562210963	50.44243655	3.2864E-05
Residual	10	309701725.4	30970172.54		
Total	11	1871912689			

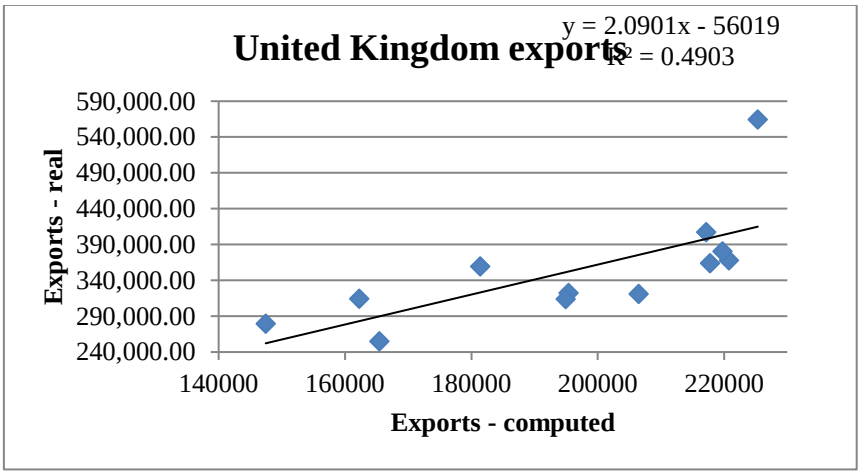
	Coefficients	Standard Error	t Stat	P-value	Lower 95.0%	Upper 95.0%
Intercept	32860.69799	12234.0614	2.68600074	0.02285607	5601.510457	60119.88552
X Variable 1	0.554061705	0.078011765	7.102283897	3.2864E-05	0.38024066	0.72788275

RESIDUAL OUTPUT DURBIN-WATSON STATISTIC: 1.347442

Observation	Predicted Y	Residuals
1	97116.83515	1833.164845
2	103603.5735	1662.426487
3	113356.8048	4350.195185
4	118848.127	4330.873005
5	123058.3366	1586.663381
6	104939.1448	-11176.14479
7	118010.2638	1586.736197
8	128309.6947	6003.305326
9	129910.1185	4230.881469
10	128065.1872	-1908.187244
11	129817.1691	-5896.16914
12	132941.7447	-6603.744719

Appendix A.30

Table A.36. The regression analysis of the real exports of United Kingdom in function of imports of the other EU countries (million of Euro)



SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.700181537
R Square	0.490254185
Adjusted R Square	0.439279603
Standard Error	59196.87448
Observations	12

ANOVA

	df	SS	MS	F	Significance F
Regression	1	33702738823	33702738823	9.617620595	0.011227133
Residual	10	35042699480	3504269948		
Total	11	68745438303			

	Coefficients	Standard Error	t Stat	P-value	Lower 31.0%	Upper 31.0%
Intercept	-56019.03444	133307.3296	-0.420224714	0.683208016	-110759.7973	-1278.271604
X Variable 1	2.090141757	0.673972104	3.101228885	0.011227133	1.813384678	2.366898836

RESIDUAL OUTPUT	DURBIN-WATSON STATISTIC:	1.092209265143

Observation	Predicted Y	Residuals
1	252154.4342	27111.56576
2	283068.3206	31067.67943
3	323053.3385	36063.66147
4	352378.4036	-29991.40361
5	375518.4257	-54490.42571
6	289742.4776	-35038.47763
7	351364.2877	-37598.28773
8	399117.7983	-35202.79826
9	405411.3405	-37422.3405
10	397853.2416	9206.758407
11	403252.1196	-22970.11955
12	414925.8121	149264.1879