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NOMINAL AND REAL CONVERGENCE IN THE EURO AREA

Theoretical article

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Abstract

The problem of the economic convergence and divergence in the European economic integration process falls within the current concerns of specialists within the economic field. In this sense, the present study addresses the issues of the economic convergence and divergence analysis, both at the level of the Member States and of the candidate countries to the Economic and Monetary Union. This paper aims at the process of European economic integration on the two axes: the nominal and the real one. The analysis results show the need for prior harmonization of the real and nominal convergence process towards joining the euro area, in order to prevent slipping after the adoption of the single currency. The nominal convergence process from the candidate countries needs also a coherent setting of speed and sequence so as not to cause delays and distortions in the development of the real convergence.

Introduction

As a model of economic development of the European states for over fifteen years, the Economic and Monetary Union (EMU), has been subjected since its creation, to the permanent challenges generated by the heterogeneity and the imperfections of its construction. The purpose of this paper is to assess the performances of the Member States and the candidate countries to the EMU regarding economic convergence and identifying the differences of the development, in their way to the EMU.

The research is divided into two parts. The first part contains an analysis of the necessary nominal conditions, but not enough for the economic convergence, assessed in terms of the implied requirements as well as the experiences of the Member States and those that are candidates to the EMU. The second part analyzes the real convergence, essential to the process of economic integration. In estimating the real convergence we used a series of indicators to highlight the results, such as the degree of economic development, the degree of production diversification, the openness of the economy, the foreign trade and the degree of trade integration within the European Union.

The paper ends with a set of conclusions that complete the scientific content by pointing out the most representative aspects that the analysis of convergence and divergence in European economic integration captures.

The classical perspective of euro adoption: the nominal convergence criteria

The Maastricht convergence criteria had as main purpose ensuring that a country's economy is prepared enough to be integrated in the EMU. These criteria reflect the convergence of economic policies and the ability to attenuate the economic shocks by providing a common reference base for the stability and sustainability of public finances in the euro area countries.

According to the Maastricht Treaty, the candidate countries that join the European Union become Member States with a temporary derogation in terms of adopting the single currency. Under these conditions, at a later time, after joining the EU, the new Member States will enter the Exchange Rate Mechanism (ERM II) and later, after meeting the nominal convergence criteria, will adopt the European single currency.

The architects who designed the Maastricht Treaty, considered as necessary and sufficient conditions for a country to adopt the euro, only the nominal convergence criteria, namely (Is rescu, 2004):

- a budget deficit not exceeding 3% of the gross domestic product (GDP);
- a total public debt of maximum 60% of GDP in the year the euro was adopted;

- an inflation rate with a maximum value of 1.5% above the average inflation rate of the three best performing EU countries;
- an interest rate on ten-year titles that exceed with 2% at most, the average interest rate of the three best performing states in the Union;
- a stable exchange rate, without unilateral devaluations against the euro for at least two years.

We can observe that, if in the case of the budget deficit and the total public debt, the limits are fixed in GDP and the exchange rate defines, in turn, a fixed central parity towards the euro, in the case of the inflation and the interest rate on long-term, we are dealing with moving targets, the criteria levels varying every year depending on the EU member states performance (Is rescu, 2004).

With the exception of the United Kingdom and Denmark, the countries admitted to the EU cannot choose the opt-out clause because one of the conditions to enter the EU is joining the euro area (De Grauwe, Mongelli, 2005). The table no. 1 from Appendix A illustrates a summary of the current situation of EU countries in terms of participation in ERM II and in the Economic and Monetary Union.

Since the introduction of the euro in 11 EU Member States on January 1st 1999 (Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, Netherlands, Portugal and Spain), eight more countries joined the euro area (Greece, Slovenia, Cyprus, Malta, Slovakia, Estonia, Latvia and Lithuania - the latest member of January 1st 2015). Although 42 years have passed since both UK and Denmark joined the European Union, both countries still choose not to participate in the EMU, clause comprised in the Treaty of Maastricht. The public opinion in these countries is divided, and the political parties in power are hostile to the euro. Accordingly, except for the two countries with derogation from adopting the euro, there are seven countries that will join the euro area. The table no. 2 from Appendix B illustrates the national targets of the countries that are in the process of adhering to the EMU.

In all the seven countries acceding to the Economic and Monetary Union, the nominal convergence criteria are reached or tangible. However, the authorities of these countries do not consider a rapid entry into the euro area. Except Romania, which remains the only state with a future target date for the euro adoption, the other countries acceding to the EU prefer to opt for a waiting position (Is rescu, 2014).

At first glance, this is a paradoxical situation since shortly after these countries acceded to the European Union, the target dates set for the euro adoption were very ambitious, despite of the less advanced stage to reach the Maastricht criteria, at that time. In fact, the cautious attitude currently

adopted, does not indicate an inability or difficulty to meet the limits laid down in the Maastricht Treaty, but a substantial revision of the process to adopt the euro as a whole (D ianu, 2014). This change occurred in order to remedy the single currency, while increasing the visibility of the assumed costs, in the context of the recent European economic decline.

Under these circumstances, in the process of the euro adoption, the emphasis gradually shifted from simply complying with the Maastricht criteria to choosing the perfect timing to join the euro area. During the period before the global economic crisis outbreak, the idea that reaching the Maastricht criteria was dominant, would be enough - or close enough - to join the EMU. Some economists even began to criticize the excessive rigidity of some of the criteria laid down in the Treaty and in order to highlight the existence of some possible tensions between their fulfilment and the real convergence (Žd'árek, 2008).

Only after the manifestation of the global crisis effects, the fact that reaching the nominal convergence criteria does not ensure the country's economic success in the euro area became undeniable. Given the fact that only under conditions of external competitiveness, financial stability and fiscal balance the Maastricht criteria can be met in a sustainable way, it was necessary to broaden the panoramic view, based on an extensive set of monitoring indicators. The idea that the economy should be seen as a whole - such as the dashboard that is specific to the macroeconomic imbalances procedure - and the importance given to convergence criteria has increased considerably.

Currently, a way to avoid the euro adoption is to avoid introducing the national currency into the ERM II. Without participating at least two years in the ERM, joining the euro area is not possible, even if the rest of the criteria are met with a considerable margin. This is the case of Sweden, where the satisfaction with the performance of the Swedish krona, on the one hand, and the need to be convinced that the monetary union is able to perform a smooth operation and that the Member States implement responsibly the economic policies, on the other hand, are invoked by the political parties in power as the main reasons to adopt the euro.

According to the data shown in the table no. 3 from Appendix C, the degree to fulfill the nominal convergence in the EMU candidate countries during 2012-2014 can be summarized as it follows:

• in terms of convergence on HICP inflation rate, it may be noted that the acceding Member States with the best performances are Bulgaria and Sweden, in the opposite part being Romania;

- concerning the long-term interest rate convergence we can observe that Sweden manifested the strongest convergence process.
 Also in 2014, all seven countries acceding to the euro area, fulfilled the long-term interest rate criterion;
- Bulgaria ranks first in terms of the degree of convergence of the public deficit with an average of -1.9% in 2014. The lowest performances registered based on this criterion we can observe in Poland and Croatia, countries for which the -5.7 and -3.8 values indicate a quite emphasized divergent character;
- the convergence rates on the gross public debt reaches optimum value in Bulgaria, Poland, the Czech Republic, Romania and Sweden, countries that also register a convergent degree. On the other hand, values of 69.0 and 80.3% from the GDP, recorded by Croatia and Hungary in 2014, reflect a strong divergence at the level of this criterion;
- the best values are achieved by the states evaluated in regards to the exchange rates against the euro. On the one hand, we see that there is a group of countries that excels in achieving and maintaining the convergence, formed of Bulgaria, Croatia and Poland, followed by Romania, Sweden, Czech Republic and Hungary with quite high degrees of convergence of the exchange rate

The brief assessment of the nominal convergence indicators, as the analysis objective was aimed at identifying the degree of convergence reached by the acceding states and the discrepancies between them on their way to the euro area. However, for an accurate analysis, the obtained results should be evaluated in a comprehensive context of convergence, referring here at the real convergence that reflects the actual state of the whole process (Lein-Rupprecht, León-Ledesma, 2007).

Going beyond the Maastricht criteria: the real convergence in the euro area

The Maastricht Treaty does not refer to real convergence criteria, which could ensure a high degree of similarity and cohesion of the economic structures to the candidate states. Perhaps the initial omission is because, until the early '90s, the European Union has been a club of developed countries and their economic structures were, by definition, similar. When the Western Europe states have realized the importance that real convergence has for a successful insertion of the economies in Central and Eastern Europe, the association treaties had already been signed and the reopening of the issue seemed inappropriate. Instead, both the European Commission and the European Central Bank warned in the recent years, at first subtly,

then increasingly transparent, about the risks of hastily adopting the single currency by a country whose real convergence with the Western European structures is insufficient (Arestis, Sawyer, 2013).

In the absence of criteria clearly stipulated in the Treaty, we believe that the most important real convergence criteria concern:

- the most relevant criteria, GDP per capita (expressed by nominal exchange rate or by purchasing power parity);
- the openness of the economy (expressed as a percentage that the amount of the exports and imports of a country has in the GDP);
- the share of the bilateral trade relations with EU Member States in total foreign trade;
- the composition of the economy (expressed by the percentage that the main sectors have in creating GDP: agriculture, industry and services).

Therefore the real convergence implies, firstly, convergence of the income between countries and increase of revenues from the developing countries to the existing levels of the industrialized ones.

Considering the information available on Eurostat on GDP per capita calculated the standard purchasing power, we aim to highlight the evolution of the economic development, using local series - EU Member States in different groups: EU-28 (EU Member States European) Euro area-19 (euro area Member States) and Euro area-7 (represented by the seven countries that are acceding to the euro area). Note that the third group excludes the UK and Denmark, countries that chose the opt-out clause, thus remaining outside the EMU. The indicators will be analyzed for 1999-2013, which mark important moments in the history of the EU and EMU, namely: appearance in 1999 and circulation in 2001 of the euro, 2004 - the year of the biggest enlargement of the European assembly and 2008-2009, the period of the outbreak and deepening of the financial crisis.

The evolution of GDP per capita over the analyzed period, illustrated in figure no. 1 from Appendix D, indicates a rising tendency of the indicator for the EU and the euro area and also for the candidate countries to the EMU. It is noted that the average GDP per capita in the euro area overlaps with that of the European Union, a situation that suggests an average level of a much higher living standard in member countries of the EMU compared to that existing in the countries acceding to the euro area.

The recent economic and financial crisis that broke out in the fall of 2008 had serious repercussions on economic performance of many economies, including EU Member States. Therefore, there is a decreasing tendency of the indicator in 2009. Also, in 2010, GDP per capita, in EU-28, Eura area-19 and Euro area-7, it is found

below the levels of 2008, the year preceding the penultimate EU enlargement.

The income convergence is accompanied by changes in the structure of the economy. Thus, analyzing the degree of diversification of production shown in the table no. 4 from Appendix E, expressed by the percentage of the main economic sectors to create the added value: the main sector (agriculture, fishing, hunting), secondary sector (industry, including energy service and construction) and tertiary sector (trade, transport and communication services, activities and financial services and other services), we observe the existence in the recent years of some considerable changes in the structure of the value added to the GDP of the sectors of economic activity in the European Union.

The main changes are to reduce the percentages of agriculture and industry, while services have experienced a notable increase. Changes can be explained, at least partially, by the manifestation of phenomena such as: technological changes, the evolution in relative prices, globalization, the latter often resulting in transferring production centers in regions with cheap labour, both inside and outside the EU.

Therefore, the structural convergence, analyzed through the weighted average of the three economic sectors in the EU-28 during 1999-2013, is characterized by a significant and growing contribution of services, from 66.5% in 1999 to 71.2% in 2013. Also, the percentage in industry, representing a quarter of the total gross added value, evolves downward from 29.2% in 1999 to 26% in 2013.

The tertiary sector contribution is significant throughout the analysis in Luxembourg (over 80%), but also in countries like Belgium, France, Netherlands, Denmark, United Kingdom, Greece, Cyprus and Malta (over 70%). The remaining member states are positioned generally below the European average level. Also, compared with other Member States, we observe the higher role of the main sector (agriculture) for the last three countries that joined the EU: Romania 6.4%, Bulgaria 6.7% and Croatia 5% of GDP in 2013.

In studying the process of real convergence, the degree of economic openness is important, as well as the percentage of bilateral trade with EU Member States in the total foreign trade.

The results of the degree of economic openness for the EU-28 Member States, during 1999-2013, by determining the percentages of exports and imports in GDP, according to the information in Appendix F, generally reflect an increasing tendency. Although it varies throughout the considered period, the obtained values suggest that approximately three quarters of the Member States recorded a degree of the openness of the

economy above the EU average level. The position of being a member state of the union determines the increase of the openness degree, which in turn positively affects the GDP growth.

Luxembourg is characterized by the highest degree of openness of the economy, almost four times higher than the one recorded for EU-28, reaching a peak of 371.4% in 2013. The lowest openness degree is recorded in 2013 by Italy, with a total level of exports and imports of 54.8% from GDP.

The bilateral trade intensity also influences the real convergence, especially in the case of the new member countries. The table no. 6 from Appendix G illustrates the evolution of the EU-28 bilateral trade in 1999, 2004, 2008 and 2013 (%).

In regards to the percentage of exports and imports to / from the EU, among the Member States, generally, there is no considerable difference at the level of the analyzed years. However, we observe the situation between the percentage of exports to the EU and a percentage that is almost five times higher of the EU Imports registered in Cyprus.

In Romania, although the foreign trade with the EU tends to go upward, the fact that the percentage of imports surpasses that of the exports can create major macroeconomic imbalances on medium and long term. This situation appears due to the fact that Romanian exports are mainly based on low-processing products (metal products, garments, furniture, agricultural products, etc.), which makes their value level to be a decreased one compared to EU member countries.

Conclusions

The catch-up process of the euro area candidate countries is a topic of great interest for the EMU economic strategy, and various studies and research in this field indicate both the relevance of the subject addressed in the present research and the difficulties of analyzing the economic divergence and convergence processes.

From the analysis performed in order to identify the manifestation of convergence at the level of the Member States and the countries candidates to the euro area, we can conclude that the decision to adopt the single currency must not be taken only in terms of the capacity to fulfill the Maastricht criteria, but also based on the progress in the process of real economic convergence, otherwise, that economy will become a peripheral economy, with little flexibility and unable to eliminate the shocks affecting it.

Although it is still in the spotlight of the applicative research in the field of European economic integration and, inevitably, to the attention of the EMU decisional authorities involved in the management and monitoring of the integration process, the problem of the real

convergence remains unresolved and controversial. The issue remains controversial, as the economic measures needed to eliminate the economic gaps are sometimes opposed to those needed to achieve nominal convergence to gain access to the euro zone. The positive implications of the nominal convergence on the real convergence may be accompanied by short-term tensions between the two processes. An excessive rate of the nominal convergence alert may jeopardize the real convergence sustainability. In the context of the realities mentioned above, it is considered appropriate to apply new models of suitable convergence to capture as faithfully as it can the influence of all these aspects in performing the real economic convergence of the EU states.

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Reference list

- [1] Arestis, P., Sawyer, M. (2013), Can the eurozone survive and be prosperous?, *Intereconomics, Volume 48, Issue 6*, pp. 326-327.
- [2]D ianu, Daniel (2014), External Imbalances and the Governance of the Eurozone, *World Commerce Review*, December 2014.
- [3]De Grauwe, P., Mongelli, F. (2005), Endogeneities and Optimum Currency Areas: What brings countries sharing a single currency closer together?, *European Central Bank Working Paper Series No. 468*.
- [4]European Central Bank (2014), *Convergence Report June 2014*, available at http://www.ecb.europa.eu/pub/pdf/conrep/cr201406en.pdf.
- [5]European Commission, AMECO Database, available at http://ec.europa.eu/economy_finance /ameco/user/serie/SelectSerie.cfm.
- [6]Eurostat Database, Euro indicators / PEEIS (Principal European Economic Indicators), available at http://ec.europa.eu/eurostat/data/database.
- [7]Lein-Rupprecht, S., León-Ledesma, M., Nerlich, C. (2007), How is real convergence driving nominal convergence in the new EU Member States?, European Central Bank Working Paper Series No. 827.
- [8]Is rescu, Mugur (2004), Romania: the path to the euro adoption, Conference organised by the Academic College of "Babe Bolyai" University, Cluj-Napoca, 29 March 2004.

- [9]Is rescu, Mugur (2014), Romania, the euro adoption and the Banking Union, *Scientific Conference ERMAS 2014*, "Babe Bolyai" University, Cluj-Napoca.
- [10]Žd'árek, V. (2008), Some Thoughts on Nominal Convergence, its Drivers and Determinants for the New EU Member States Preparing the Euro Adoption, *Prague Economic Papers, No. 4*, pp. 291-318.

Appendices

$Appendix\,A$

Table No. 1
Reflection of the membership of the EU, EMU and ERM II (January 2015)

No.	Country	EU	ERM II	EMU					
1.	Austria	1995	-	1999					
2.	Belgium	1952	-	1999					
3.	Finland	1995	-	1999					
4.	France	1952	-	1999					
5.	Germany	1952	-	1999					
6.	Ireland	1973	-	1999					
7.	Italy	1952	-	1999					
8.	Luxembourg	1952	-	1999					
9.	Netherlands	1952	-	1999					
10.	Portugal	1986	-	1999					
11.	Spain	1986	-	1999					
12.	Greece	1981	January 1 st 1999	2001					
13.	United	1973	country with special status, outside the ERN	ИII;					
	Kingdom		has rejected the introduction of the single cu 1997.						
14.	Denmark	1973	 country with special status, situated in the ERM II since January 1st 1999 (with broadband of ±2,25%); has rejected twice the introduction of the single currency by the referendum in 1993 and 2002. 						
15.	Sweden		-	_					
16.	Estonia	2004	June 28 th 2004	2011					
17.	Lithuania	2004	June 28 th 2004	2015					
18.	Slovenia	2004	June 28 th 2004	2007					
19.	Cyprus	2004	May 2 nd 2005	2008					
20.	Malta	2004	May 2 nd 2005	2008					
21.	Latvia	2004	May 2 nd 2005	2014					
22.	Poland	2004	-	-					
23.	Czech Republic	2004	-	-					
24.	Slovakia	2004	November 28 th 2005	2009					
25.	Hungary	2004	-	-					
26.	Romania	2007	-	-					
27.	Bulgaria	2007	-	-					
28.	Croatia	2013	-	-					

Source: European Commission

Appendix B

Table No. 2 The national targets of the Member States acceding to the euro area

The national targets of t	ne member sinies acc	early to the earl area
Country	Initial target	Present position
1. Bulgaria	2010	No target date
2. Croatia	No target date	No target date
3. Czech Republic	2009/2010	No target date
4. Poland	2008/2008	No target date
5. Romania	2014	2019
6. Sweden	2006	No target date
7. Hungary	2008	No target date

Source: European Commission

Appendix C

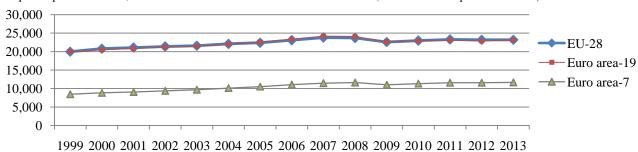
Table No. 3 The degree of achieving the nominal test of convergence in the candidate countries to the EMU, 2012-2014

Country	Year	Price stability HIPC	Long-term interest rate	General government	General government	Exchange rate vis-à-vis euro
		inflation (%)	(%)	surplus(+)/	gross debt	(%)
				deficit(-) (%)	(%)	
	2012	2,4	4,4	-0,5	18,0	0,0
1. Bulgaria	2013	0,4	3,4	-1,2	18,3	0,0
	2014	-1,6	3,3	-1,9	23,1	0,0
	2012	3,4	6,1	-5,6	64,4	-1,1
2. Croația	2013	2,3	4,6	-5,2	75,7	-0,8
	2014	0,2	4,0	-3,8	69,0	-0,8
	2012	3,5	2,7	-4,0	45,5	-2,3
3.Czech	2013	1,4	2,1	-1,3	45,7	-3,3
Republic	2014	0,4	1,5	-1,9	44,4	-6,0
	2012	3,7	5,0	-3,7	54,4	-1,6
4.Poland	2013	0,8	4,0	-4,0	55,7	-0,3
	2014	0,1	3,5	-5,7	49,2	0,3
	2012	3,4	6,6	-3,0	37,3	-5,1
5.Romania	2013	3,2	5,4	-2,2	37,9	0,9
	2014	1,4	4,4	-2,2	39,9	-0,5
	2012	0,9	1,5	-0,9	36,4	3,6
6.Sweden	2013	0,4	2,1	-1,3	38,6	0,6
	2014	0,2	1,7	-1,8	41,6	-5,2
	2012	5,7	7,8	-2,3	78,5	-3,5
7.Hungary	2013	1,7	5,9	-2,4	77,3	-2,6
	2014	0,0	4,8	-2,9	80,3	-4,0
Reference	2012	3,1	5,8	<3,0	<60	±15%
value	2013	2,7	5,5	<3,0	<60	±15%
	2014	1,7	6,2	<3,0	<60	±15%

Source: Eurostat, European Central Bank – Convergence Report 2014

Appendix D

Figure No. 1 GDP per capita in EU-28, Euro area-19 and Euro area-7 in 1999-2013 (thousand euro per inhabitant)



Source: Eurostat

 $Appendix\ E$

Table No. 4 The composition of the economy shown by the share of main sectors in 1999, 2004, 2008 and 2013 (% of GDP)

The composition of	1999			ine snar	2004	n secioi	S III 192	2008	, 2000 a	na 2013	2013))
		1999			2004			2000		İ	2013	
	agriculture	industry	services									
Austria	2.1	30.7	66.6	1.9	29.2	68.1	1.7	29.9	67.5	1.6	28.6	69.8
Belgium	1.3	27.0	71.5	1.1	24.5	74.1	0.9	23.7	75.3	0.8	22.6	76.6
Bulgaria	15.9	25.1	59.0	10.7	27.3	62.0	6.0	32.2	61.8	6.7	30.3	63.0
Croatia	:	:	:	:	:	:	7.2	32.0	60.7	5.0	25.8	69.2
Cyprus	4.0	19.8	76.9	3.0	20.0	78.2	2.2	19.0	79.3	2.4	15.9	81.7
Czech Republic	3.7	37.4	55.3	3.2	36.9	55.6	2.4	37.0	56.8	2.4	37.3	60.3
Denmark	2.4	26.0	71.6	1.9	24.7	73.4	1.2	25.7	73.2	1.5	21.7	76.8
Estonia	4.4	26.9	68.6	3.9	27.9	68.2	3.1	29.6	65.5	3.9	30.0	66.2
Finland	3.5	34.0	62.5	2.9	32.5	64.6	3.0	33.7	63.2	2.9	25.1	71.9
France	3.0	23.1	73.9	2.5	21.0	76.8	2.2	20.6	77.6	1.9	18.7	79.4
Germany	1.2	30.4	69.0	1.1	29.5	70.2	1.0	30.5	68.7	0.8	30.1	69.1
Greece	:	:	:	4.9	18.8	76.4	3.5	19.3	79.7	3.5	16.0	80.5
Hungary	5.9	31.8	64.2	4.9	30.5	65.4	4.0	30.2	67.2	3.3	28.0	68.7
Ireland	3.6	42.4	54.0	2.2	36.0	61.1	1.4	33.3	64.2	1.6	28.0	70.4
Italy	3.0	28.7	68.3	2.5	26.9	70.1	2.0	27.4	69.9	2.1	24.4	73.5
Latvia	3.9	24.7	71.3	4.4	22.3	73.4	3.6	23.3	73.4	4.9	25.7	69.4
Lithuania	7.3	30.1	62.7	4.6	32.9	61.9	3.9	32.4	63.1	3.7	28.3	68.0
Luxembourg	0.8	19.0	80.2	0.6	17.7	81.7	0.4	16.2	83.4	0.3	13.3	86.4
Malta	2.7	26.2	71.1	2.7	22.0	75.1	2.4	21.8	76.1	1.4	25.3	73.3
Netherlands	2.7	24.5	72.9	2.2	23.9	74.1	2.1	24.7	73.3	2.6	25.4	72.0
Poland	5.2	32.8	62.0	5.1	30.7	64.1	4.3	31.6	64.0	4.0	33.3	62.7
Portugal	3.9	28.8	67.4	3.1	25.7	71.1	2.5	24.8	72.9	2.6	22.2	75.2
Romania	14.4	33.3	52.3	14.1	34.5	51.5	6.5	37.8	55.7	6.4	34.2	59.4
Slovakia	4.7	35.3	60.0	4.1	36.5	59.4	4.1	38.5	57.7	3.1	30.8	66.1
Slovenia	3.3	35.9	60.1	2.7	34.4	62.5	2.5	34.6	62.9	2.8	28.9	68.3
Spain	4.5	29.2	66.4	3.6	29.1	67.2	2.9	29.1	67.8	3.1	26.1	70.8
Sweden	2.3	28.8	68.9	1.9	28.0	70.1	1.7	28.2	70.0	2.0	31.2	66.8
United Kingdom	1.1	27.4	71.4	1.0	23.4	75.5	0.7	23.0	76.2	0.7	20.5	78.8
EU-28	4.3	29.2	66.5	3.6	27.7	68.6	2.8	28.2	68.8	2.8	26.0	71.2
Euro area-19	3.3	28.7	68.0	2.8	26.9	70.2	2.4	27.0	70.6	2.4	24.5	73.1
Euro area-7	7.9	31.5	60.3	6.7	31.3	61.5	4.6	32.7	62.3	4.3	31.4	64.3

Note: :-not available Source: Eurostat

 $Appendix\ F$

Table No. 5
The openness of the economy* shown by EU countries' exports and imports as a share to GDP in 1999-2013
(%)

Austria Belgium Bulgaria Croatia Cyprus	1999 78.4 124.2 89.9 67.0 131.9 86.5	2001 87.6 138.9 78.4 80.8 132.7	2003 86.5 132.2 79.2 85.2	2005 94.2 143.7 101.6	2007 100.8 151.2	2009 86.8 136.1	2011 104.8 162.2	2013 103.4 164.2
Belgium Bulgaria Croatia	124.2 89.9 67.0 131.9	138.9 78.4 80.8	132.2 79.2	143.7	151.2			
Bulgaria Croatia	89.9 67.0 131.9	78.4 80.8	79.2			136.1	162.2	164.2
Croatia	67.0 131.9	80.8		101.6				107.4
	131.9		85.2		125.8	96.1	126.3	137.4
Cyprus		132.7		84.7	85.3	72.8	81.3	85.4
	86.5		114.8	112.9	112.5	99.2	102.5	99.2
Czech Republic		99.5	95.3	122.3	130.7	113.7	139.3	148.6
Denmark	72.8	84.1	81.0	89.2	99.8	89.1	100.3	102.8
Estonia	125.8	126.9	123.4	136.9	135.3	116.7	170.0	170.7
Finland	66.2	70.3	68.0	76.6	83.2	70.5	79.2	77.7
France	49.2	54.3	50.1	53.2	55.5	49.6	58.2	58.0
Germany	53.4	62.1	61.6	70.5	79.5	70.8	84.8	85.3
Greece	47.5	56.3	47.9	50.9	57.5	48.4	57.8	63.4
Hungary	114.1	131.3	117.2	128.6	156.5	146.1	168.9	169.9
Ireland	160.4	178.3	146.5	145.4	146.1	159.4	175.1	189.8
Italy	44.7	50.2	46.2	49.4	55.2	45.6	55.5	54.8
Latvia	80.7	86.8	84.8	100.8	96.2	86.5	120.6	121.7
Lithuania	87.4	104.7	107.7	115.0	113.9	105.6	152.7	166.9
Luxembourg	249.4	274.4	256.6	297.6	341.8	303.5	337.2	371.4
Malta	227.0	218.7	214.6	211.2	258.5	297.0	315.7	307.9
Netherlands	118.0	122.6	113.5	124.7	133.4	120.3	146.2	155.6
Poland	54.3	57.8	69.4	70.8	81.0	75.9	88.0	90.3
Portugal	63.3	65.1	60.4	62.6	69.7	61.1	72.9	77.5
Romania	59.9	73.5	76.5	75.9	72.6	61.2	79.3	80.1
Slovakia	99.4	123.6	126.1	148.7	168.2	136.7	171.5	181.4
Slovenia	92.6	104.5	102.1	119.8	136.5	112.6	138.8	143.4
Spain	54.7	58.1	53.1	54.3	57.4	46.5	57.8	59.7
Sweden	76.0	81.3	76.1	84.6	89.5	83.1	88.7	82.9
United Kingdom	51.9	54.6	51.6	54.1	54.0	55.9	63.2	62.2
EU-28	87.9	103.7	97.0	106.4	116.0	105.2	125.0	129.0
Euro area-19	93.2	111.7	104.9	114.1	123.8	113.3	134.9	139.6
Euro area-7	82.2	90.8	85.6	95.5	105.9	92.7	110.2	113.5

Note: *)=[(exports+imports)/GDP]*100 Source: own calculations based on the Eurostat Data

Appendix G

Table No. 6 $The \ share \ of \ bil lateral \ trade \ relations \ with \ EU\ Member\ States \ in \ total \ for eign \ trade \ in \ 1999, \ 2004, \ 2008 \ and$ 2013 (%)

	1/	999		13 (<i>70)</i> 004	20	008	2013		
	Exports to EU*	Imports	Exports	Imports	Exports	Imports	Exports	Imports	
	to EU*	from EU**	to EU	from EU	to EU	from EU	to EU	from EU	
Amatuia	59.7	69.8	62.9	EU 75.7	58.4	68.9	53.4	65.2	
Austria									
Belgium	84.9	76.2	90.2	85.2	87.4	79.0	75.7	69.9	
Bulgaria	39.1	46.6	57.9	60.5	47.3	53.1	47.6	54.4	
Croatia	:	:	32.2	62.3	31.5	59.6	28.2	55.5	
Cyprus	3.5	26.1	6.5	38.7	8.2	43.0	9.6	38.2	
Czech									
Republic	84.0	77.7	88.3	83.3	83.6	75.5	81.2	73.6	
Denmark	50.9	56.6	49.5	50.1	42.8	43.7	38.3	41.6	
Estonia	54.0	55.5	64.2	73.4	53.8	74.4	54.0	70.4	
Finland	54.4	57.4	47.0	54.3	42.1	48.2	39.9	48.6	
France	55.2	61.4	54.2	61.0	49.0	57.2	43.3	55.2	
Germany	60.0	54.1	58.9	54.8	56.2	53.5	48.7	51.8	
Greece	25.7	50.4	22.0	49.4	22.9	41.1	23.3	36.5	
Hungary	78.2	70.4	75.5	62.9	68.7	59.5	71.0	66.2	
Ireland	56.1	40.5	42.4	31.9	35.8	29.8	26.6	23.5	
Italy	52.3	54.3	51.1	52.6	50.1	46.4	45.3	46.8	
Latvia	50.9	66.5	54.7	67.7	49.1	64.9	52.2	73.8	
Lithuania	51.8	49.2	58.2	63.8	51.9	54.2	48.0	54.3	
Luxembourg	29.1	38.5	27.8	34.7	21.5	27.4	12.2	20.8	
Malta	21.1	40.1	19.9	42.0	10.5	30.2	9.4	27.0	
Netherlands	66.3	47.5	69.7	46.9	75.0	47.0	71.8	44.1	
Poland	56.8	68.2	68.6	71.4	65.0	65.0	62.3	60.5	
Portugal	61.3	67.2	55.5	63.0	52.0	65.7	49.5	62.4	
Romania	62.1	61.7	65.3	63.4	62.2	69.7	60.2	71.8	
Slovakia	93.2	78.4	81.6	76.4	78.6	67.2	78.6	70.5	
Slovenia	70.0	75.4	66.2	78.2	70.6	73.5	71.3	71.2	
Spain	46.0	52.7	50.4	56.4	47.2	49.9	45.3	47.6	
Sweden	47.9	51.6	43.9	53.0	42.7	51.7	38.0	48.8	
United									
Kingdom	42.2	42.7	36.5	42.2	33.8	39.3	29.3	39.7	

Note: :-not available

*)=(Intra-EU Exports/Total Exports)*100 **)=(Intra-EU Imports/Total Imports)*100

Source: own calculations based on the Eurostat Data