TRADE ORIENTATION IN THE EU IN THE AFTERMATH OF THE FINANCIAL CRISIS

Cristian SPIRIDON[*]

Abstract: *The present paper aims to analyze the impact the economic crisis bursted out in the United States at the end of 2007 and quasi spreaded all over the world had on the (re) orientation of trade flows (exports) among European Union member states in general, and Romania in particular. As observation and analysis data tool we chose groupings, tabular and graphical representation. The analysis will be conducted at individual and group of countries levels. The main findings will show that although the geographic network of member states trade has been seriously shaken by the crisis, export flows orientatio remained quite similar to the period previous to economic decline. As for Romania, its exports prove to be influenced by the economic situation of the main European partners.*

Introduction

There is a question trade literature is trying to answer to: whether the rise of international trade is the result of economic growth in recent decades or a consequence of trade tension reduction. The answers to this question are widely divided. On one hand, empirical studies show a strong positive relationship between economic growth (proxied predominantly byt he gross domestic product or GDP per capita indices) and the rise of international trade practiced by a particular state or region. On the other hand, the reduction or in some cases the tariff barriers elimination along with the decrease in transport costs have resulted in significant international trade growth rates that exceed by far the GDP growth rate of trading partners participating in transactions (Novy, 2013). To highlight these dynamics, many authors resort to empirical research instruments like gravity equation, starting with the supposition that bilateral trade is closely related to the country economic dimension and bilateral trade costs. This approach, however, has some drawbacks consisting in that the equation of gravity puts first the analysis of countries characteristics involved in international trade and the dyadic relations between them leaving out in the background the analysis of the international trade network (Benedictis and Tajoli, 2011). Thus, part of the literature dealing with the subject of international trade analysis highlights the relevance of the commercial network (network analysis) in order to focus

---

[*] Ph.D. Student, Doctoral School of Economics, Faculty of Economics and Business Administration, Alexandru Ioan Cuza University of Iasi, Romania, e-mail:kristian_spiridon@yahoo.com

on systemic effects (e.g. trade creation effects, trade diversion, the influence of institutions and so on) (Kali and Reyes, 2010).

Instrumentation needed to perform a bipartite analysis (equation of gravity - network analysis) is wide and requires the setup of a starting point and a very solid theoretical framework. In this paper we opted for a trade off in order to outline a picture of the starting point in any future analysis and the context in which international trade is conducted both before and after the outbreak of the economic crisis. The analysis tool used is the observation and as data analysis approach we opted for groupings, tabular and, graphical representation. The analysis will be conducted at individual and group of countries levels. The selected sample consists of 26 EU countries (EU-27 excepting Cyprus) and the period of analysis between 2005 and 2010.

International trade within EU before and after the economic crisis burst

In order to capture the orientation of trade flows among EU member states we collected data on export volumes of major trading partners of the 26 countries analyzed. For database dimension purposes, we stopped on the top ten export markets for goods produced in the EU countries. Thus, a relevant index for highlighting the exports profile is the concentration degree among their trading partners.

**Figure 1 - Top 10 trade partners of UE member states 2005,2009 (sum %)**

Source: Own calculation based on data from https://stats.oecd.org/
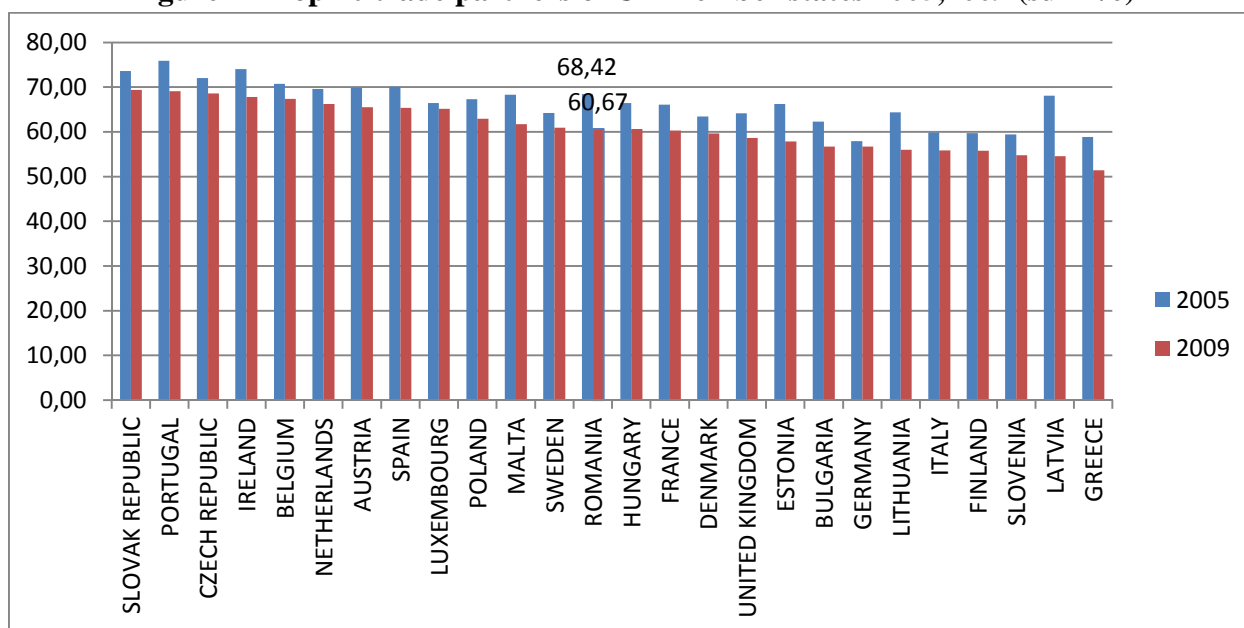
One can easily observe that in comparison to 2005, the concentration of exports in a smaller number of countries registered a noticeable decrease. The Slovak Republic was in 2009 among EU member states with a high concentration of exports in the first 10 commercial partners of 69.35% (73.59% compared to 2005). It was followed by Portugal and the Czech Republic. In contrast, the member states with a lower degree of export concentration in 2009 were represented by Slovenia (54.78%), Latvia (54.53%) and Greece (51.39%). What is also important to grasp is that, for example, taking the case of Slovakia, in 2005 and 2008, the top 10 trading partners were represented by the same countries. In 2009, only one major export market has been replaced (United States of America by Spain). The same note is valid for Germany, United Kingdom and France. Although they have been hit by the crisis the export of the EU member countries has not changed.

This status quo is explained in part by the export share of intermediate goods in total exports. A high percentage shows a more pronounced vertical integration and the existence of cross-border production chains, on the one hand, and a more pronounced interdependence among export partners, on the other hand.

Figure 2 – Exports of intermediate goods within EU (2010)

Source: Own calculation based on data from https://stats.oecd.org/
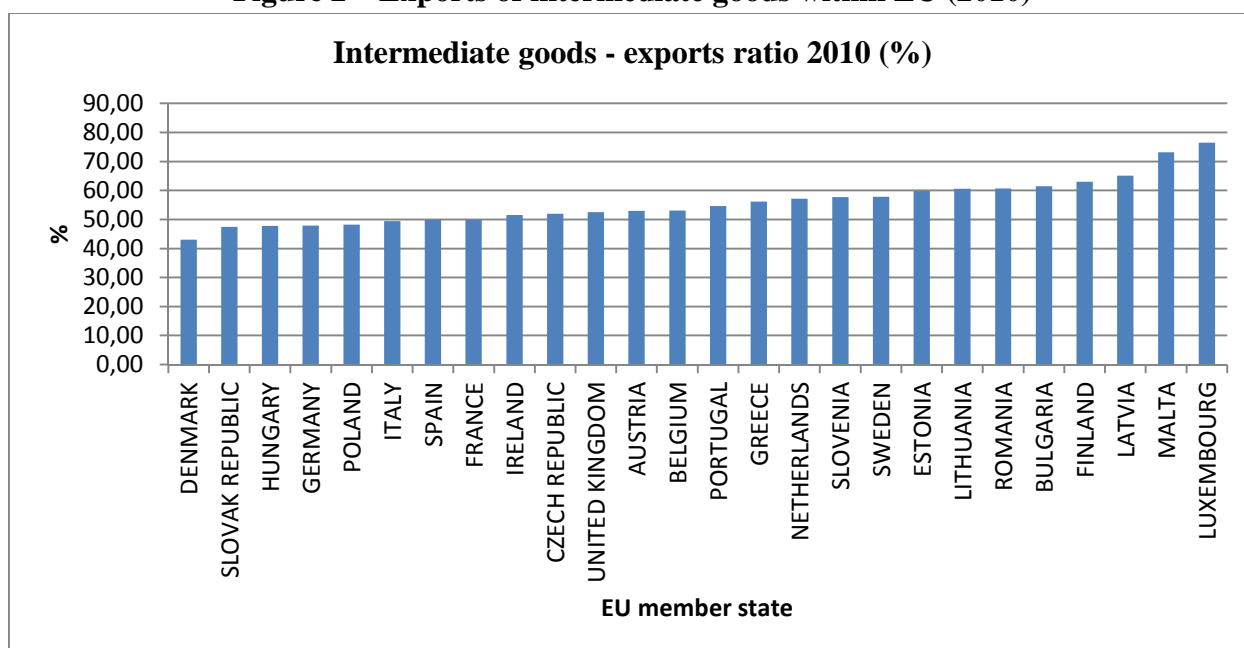
But the abovementioned interdependence does not explain the export performance of those countries. Although Luxembourg exports in 2010 accounted for 76.42% in intermediate goods, and Malta 73.21%, these two countries have different trade developments between 2009 and 2010. These different dynamics are caused by different economic situation among trading partners as well. Malta

exports much of its output in the Asian and Southeast Asian countries (Singapore, China, Japan) and North America (Canada, Mexico) while Luxembourg exports are of much regional (Belgium, Ireland, the Netherlands, Switzerland).

Table 1 - Exports in the period 2005-2010 in the UE member states (changes %)

Country	2005	2006	2007	2008	2009	2010
Sweden	4.23	10.18	11.90	4.68	-29.55	22.01
Estonia	22.90	7.80	2.07	-0.47	-25.53	33.60
Finland	6.11	14.37	6.45	1.78	-25.07	11.06
Luxembourg	-2.08	9.90	-0.99	3.30	-21.60	7.37
Italy	3.59	8.48	7.12	-1.54	-18.44	12.36
Austria	6.41	7.21	9.93	0.29	-18.28	12.15
Slovenia	10.26	13.41	13.86	1.79	-16.58	11.96
Germany	7.56	12.80	8.47	2.31	-15.64	16.91
Greece	6.30	7.75	4.53	-3.02	-15.58	7.61
Denmark	5.63	5.17	8.60	7.75	-15.47	-0.83
Slovak Republic	9.55	22.07	15.10	3.61	-15.22	17.68
Portugal	-4.82	7.82	9.52	0.99	-14.83	3.01
Hungary	11.30	11.66	8.71	-0.89	-13.86	9.87
Latvia	20.26	6.38	11.60	2.36	-13.14	12.51
Bulgaria	10.50	11.30	11.84	9.48	-12.73	5.50
Lithuania	17.028	12.25	3.12	11.44	-12.63	17.394
France	3.07	6.75	1.48	-1.22	-12.40	10.62
Czech Republic	10.69	13.96	11.39	2.98	-11.79	16.36
Belgium	3.82	4.74	4.94	-2.18	-10.93	8.53
United Kingdom	8.20	13.67	-8.94	1.44	-10.55	9.66
Spain	1.06	6.63	7.49	-2.27	-10.41	15.28
Netherlands	6.19	8.70	6.62	1.42	-9.32	13.02
Malta	0.68	14.77	3.73	2.08	-8.41	17.36
Poland	7.96	14.64	9.12	7.05	**-6.81**	12.09
Ireland	0.98	-0.29	4.63	-0.29	**-5.37**	5.24
Romania	**5.29**	**7.15**	**7.26**	**3.84**	**-3.62**	**19.06**

Source: World Economic Outlook. For Malta and Lithuania we took into consideration the volum change in goods and services.

The importance of the economic situation (proxied by GDP) is shown below. Thus, an increasing trend in exports and the concentration of exports in a few export markets tends to be associated with a similar GDP dynamics. Why a higher concentration causes an increase in exports to GDP? Because the main trading partners consist predominantly of countries that face a very good economic stat quo, which may create a demand for a significant and sustainable volume of merchandise. The high export concentration is usually accompanied by a comparable volume intermediate goods exchange, which shows trade relations are conducted between partners in a context of increased vertical integration.

Table 2 – Regression of exports change and commercial partners (%) variables on GDP change (%)

R-sq: within = **0.5487**	Obs per group: min = 6					
between = 0.3097	avg = 6.0					
overall = 0.4898	max = 6					
	F(2,123) = 74.79					
corr(u_i, Xb) = -0.3398	Prob > F = 0.0000					
PIB |	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
EXP |	.2831138	.0317404	8.92	0.000	.2202857	.345942
MPART |	.300103	.0833118	3.60	0.000	.1351925	.4650135
_cons |	-18.75282	5.343398	-3.51	0.001	-29.32975	-8.175887
F test that all u_i=0:	F(24, 123) = 0.56		Prob > F = 0.9488			

Source: Own calculation using STATA.

In what concerns Romania in 2005 68.42% of our country exports were concentrated in the top 10 trading partners. In 2008, this percentage was 61.66% and approximately 60.67% in 2009.

Figure 3 – Romania's main 10 export partners (2005)

Source: Own representation using SMARTDRAW

It can be notice that the decrease of export concentration among major trading partners and the annual evolution of exports went on a downward trend. Thus, the decrease in demand from the major export markets translated into a slowdown in export growth. This shows that, in the case of Romania, there was not a shift of trade flows to other outlets. Simply, trade partners with unfavorable economic growth caused a reduction of demand for exports thus implicitly causing an increase in the share of exports to less important markets

Figure 4 – Romania's main 10 export partners (2009)

Source: Own representation using SMARTDRAW

Moreover, in 2009 compared to 2005, a single export trading partner left the top 10 (Austria) and was replaced by the Russian Federation. The percentage share of 60.69% of exports of intermediate goods to major trading partners may explain why when the demand for our country goods decrease Romania could turn to other markets in order to maintain a trade positive growth rate. A high share of intermediate goods in total exports suggests a pronounced vertical integration of production between Romania and its trading partners which translates into a low degree of flexibility

and potential portfolio diversification. Romania's dependence on its main trading partners is obvious. A decrease in the importers demand (proxied by a decreasing GDP) immediately reflects in the volume of output flows.

Conclusions

Economic integration in Europe seems to find confirmation even during harsh times. Economic relations between states are solid and long-termed. The Common Market induced visible trade creation effects (a large share of trade in the European Community is intra-regional). Removal of trade barriers within the union allowed the formation of cross-border production chains engaging both developed countries and emerging economies. The integration of production involves also a high degree of interdependence, making shocks to be transmitted rapidly from one partner to another. The global economic crisis bursted out in the United State in the late 2007 spreaded all over the world come to certify the above statement. It shook the whole network of trade. However, the orientation of trade flows recorded no significant changes. Although exports fell down among almost all countries under observation in 2009, there were not reported major trade flows reorientation patterns to other markets. In what concerns Romania, its exports dynamics turns out to be highly influenced by its main trading partners economic situation of (especially european trade partners).

Aknowledgements

References

Benedictis, L., Tajoli, L. (2011), "The World Trade Network"*, The World Economy*, pp.1417-1457.

International Monetary Fund – World Economic Outlook (WEO), available at: http://www.imf.org/external/pubs/ft/weo/

Jaba, E. and Grama, A. (2004), *SPSS Statistics Analisis on Windows*, Polirom Press, Bucharest.

Kali, Raja, Reyes, Javier (2010), "Financial Contagion on the International Trade Network"*, Economic Inquiry*, Vol. 48, No. 4, pp. 1072-1101.

Novy, D. (2013), "Gravity Redux: Measuring International Trade Costs With Panel Data"*, Economic Inquiry*, Vol. 51, No. 1, pp. 101-121.

Organisation for Economic Co-operation and Development StatExtracts and STAN Bilateral Trade Database, available at:https://stats.oecd.org/