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A Comparative Analysis of Romanian and Greek Exports in the Process of EU-Integration

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Abstract
This paper provides a comparative analysis of Romanian and Greek exports in the context of EU-integration. The Romanian revealed comparative advantage in exports is investigated by calculating the specialization index. The same indicator is examined in the case of Greece. The evolution of bilateral trade flows between Romania and Greece is addressed further. The current economic crisis poses serious challenges for both countries' exporters. The impact of the crisis on the structure of Greek exports is compared to Romania's situation. Subsequently, some conclusions and policy recommendations are issued to improve Romania's and Greece's export competitiveness in the following period.
Keywords: *exports, Romania, Greece, economic crisis.*
JEL classification*: F14, F15*

1. The analysis of Romanian exports

Romania embarked on its journey towards EU-membership in 1993 with the signing of the Europe-Agreement, whose purpose was to prepare the country for accession, over a period of ten years (1995-2005). The Agreement was asymmetric in nature, with the EU willing to eliminate its trade barriers for Romanian exports over the first half of the period and Romania doing the same for EU-exports over the second half. This concession given by the EU, joined by the preferential fiscal regime for Romanian exporters, who paid a reduced corporate tax of 6% until 2003 compared to 25% for all firms, brought results in terms of a solid increase in Romanian exports. Subsequently, the exposure to increased competition from EU-companies after the elimination of tariffs proved difficult to handle for some of the Romanian companies and imports soared. Romania eventually became a Member State of the European Union on the 1st of January, 2007.
During the last ten to fifteen years Romania's foreign trade has increased constantly, confirming thus that the country was approaching EU membership and becoming a more viable trade partner. Witness to this is the more accelerated growth rate of foreign trade registered in the last few years, once the customs union was completed. The increase came at the expense of the disproportionate growth of imports though (see figure 1). In fact, Romania eliminated its last industrial tariffs on goods

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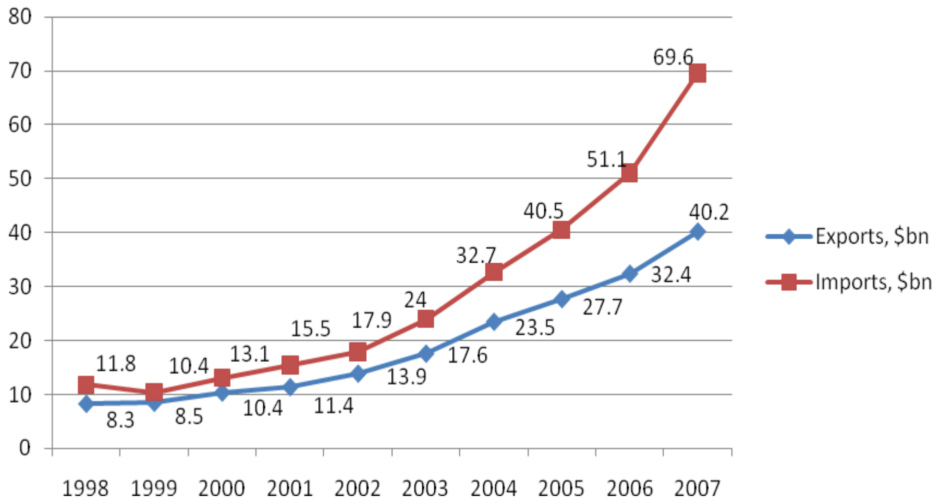
imported from the EU starting with 2002. This led to an ever increasing trade deficit (no year with a trade surplus has been recorded in this decade) amounting to almost $30bn in 2007, or 17.7% of GDP.

Figure 1. The evolution of Romanian foreign trade



Source: Data compiled from the National Institute of Statistics

The European Union stands out as the main trade partner, with 72% of Romanian exports and 71% of imports (NIS, 2010). The share of the EU in Romania's trade relations increased significantly over the years, especially with the accession process arriving in its final stages. Three large EU Member States top the export destination ranks (see table 1).

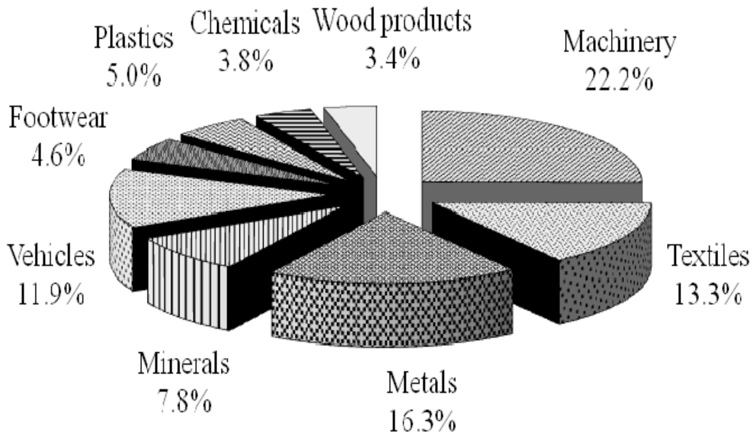
Table 1. Top 10 export destinations for Romania (2007)

Rank	Main export partners
1.	Italy (17.1%)
2.	Germany (16.9%)
3.	France (7.7%)
4.	Turkey (7.1%)
5.	Hungary (5.6%)
6.	United Kingdom (4.1%)
7.	Bulgaria (3.2%)
8.	Austria (2.6%)
9.	Spain (2.3%)
10.	Poland (2.2%)

Source: Compiled from Ministry of Economy and Trade data

The composition of Romanian exports has changed over time. Typically, textiles and clothing have represented the major export products in the transition period (about one-fourth of all exports). Romania became the third major exporter of textiles to the EU, after China and Turkey. Textiles have lost their top spot in Romania's exports in the past three years due to the extraordinary development of machinery, triggered mainly by automotive parts and other industrial components (see figure 2). Steel and various metals have also been an important product category in Romania's exports throughout the last decade and they even managed to increase their share, surpassing textiles recently. Another major product category that has increased rapidly in the last years and climbed its way up the export chart is that of vehicles, especially after Renault acquired the Romanian car maker Dacia. The fifth spot in Romanian exports is claimed by minerals, which improved their position once the oil industry witnessed a steady development.

Figure 2. Distribution of Romanian exports by product categories, 2007



Source: Adapted from the Ministry of Economy and Trade data

The sectors in which Romania has revealed a comparative advantage over the last years are pointed out by calculating the specialization index. The index measures the country's revealed comparative advantage (RCA) in exports according to the Balassa formula (1965):

$$\mathrm{RCA} = \frac{\dfrac{x_j^i}{\sum_{j=1}^{n} x_j^i}}{\dfrac{x_j^w}{\sum_{j=1}^{n} x_j^w}} \quad (1)$$

where: x_j^i = exports of product j of country i, x_j^w = world exports of product j.

The index compares the share of a given sector in national exports with the share of this sector in world exports. Values above 1 indicate that the country is specialized in the sector under review. Data in table 1 suggests that Romania is specialized predominantly in metals, textiles & clothing and in a less obvious manner in machinery and automotive products. Traditionally, the strongest comparative advantage in the case of Romania has been registered in wood products, followed by footwear, but both have been rapidly decreasing over time. Other areas in which Romania held a significant comparative advantage even before entering the EU are textiles & clothing and metals, as highlighted by the specialization indexes in table 1. This advantage has been preserved over time, but has slightly decreased from one year to another. Like in the case of other CEECs, the sector of textiles and clothing lost competitiveness and moved to the East, outside the EU, because this sector feeds from the advantage of cheap labour cost.
In turn, machinery and transport equipment has gained competitiveness, especially after Romania's integration in the EU, and thus has allowed Romania to become specialised in this sector since 2008. This positive dynamic is mainly due to the success of car manufacturer Dacia and its continuous sales expansion in the EU. Romania is close to become specialised in agricultural products and this advantage has also prevailed after the integration in the EU. Chemicals and minerals have always been a source of comparative disadvantage, before and after EU-accession.

Even if traditional areas of specialization for Romania like footwear or furniture lost ground to higher value-added exports, the focus of Romanian exports still lies in sectors with low productivity and weak technological intensity (textiles and clothing), or high energy consumption like steel (see table 2).

Table 2. Specialisation index of Romanian selected sectors

Sectors	2000	2007	2008
Agricultural products	0.93	0.73	0.96
Fuels and mining products	0.58	0.68	0.63
Iron and steel	3.54	2.40	1.98
Chemicals	0.64	0.55	0.57
Machinery and transport equipment	0.46	0.97	1.08
Textiles and clothing	4.41	3.17	2.71

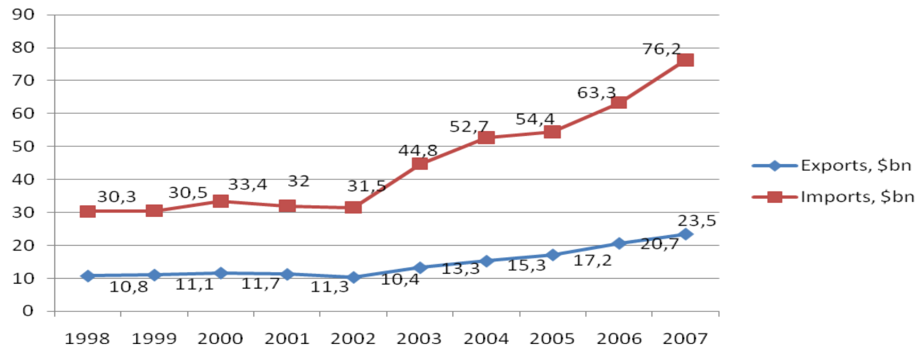
Source: Own calculations based on data from the WTO

This has represented a worrying matter throughout the years for policy-makers. Data from the Ministry of Economy and Trade for 2006 shows that before entering the EU, Romania's high-tech exports in the OECD classification (aeronautics, electronics, IT&C and pharmaceuticals) amounted to only 1.3% of all exports, whereas low-tech exports (foodstuffs, textiles, paper, wood products) reached up to 32.8% (MEC, 2007). Once Romania joined the EU, it became apparent that the composition of exports was improving with higher-technology sectors broadening the portfolio.

2. The analysis of Greek exports

Greek exports have been increasing continuously over the period 2002-2007, but despite this growth, they continue to lag behind imports. As indicated in figure 3, Greece's trade deficit generally widened after Greece joined the Euro area, reaching a historical peak of $52.7bn in 2007. As a consequence, Greek imports are currently more than three times larger than its exports and perspectives are gloomy in the face of the current crisis.

Figure 3. The evolution of Greek foreign trade



Source: National Statistical Service of Greece

This situation stems partly from developments in world oil prices and the evolution of the international freight transport, Greece accounting for an estimated 15% of world deadweight tonnage (Bank of Greece, 2009). Due to its large shipping market and receipts from international tourism, Greece's service exports account for more than 60% of the country's total exports, a share that is by far the highest one in the OECD (KEEM, 2003). The downside of this is that these services are highly volatile and prone to major influences from the international economic environment.

The European Union is Greece's major trading partner, absorbing almost two-thirds of Greek exports (see table 3).

Table 3. Geographical distribution of Greek exports (%)

Export destination	2004	2008
EU-27	64.3	64.1
EU-15	47.4	41.3
12 New Member States	16.9	22.7
Balkans and Turkey	12.1	11.0
Central and Eastern Europe, CIS	3.0	3.4
North America	6.0	5.7
Northern Africa and Middle East	6.6	6.4
East and South-East Asia	2.8	2.0
Rest of the world	5.2	7.5
Total	100	100

Sources: National Statistical Service of Greece, Export Research Centre (KEEM)

The old Member States remained Greece's largest trading partners in the last decade, but their proportion in total exports is decreasing, while the share of the new Member States (particularly Bulgaria and Romania) is increasing at a fast pace. In 2008, Greek exports to accession countries represented a total of €3,940 million, of which 28.0% is directed toward Cyprus, 31.4% toward Bulgaria and 19.6% toward Romania (ACCI, 2010). Italy, Germany, Bulgaria and Cyprus are currently Greece's largest export partners, representing the destination of more than one third of the country's exports.

The IMF found that Greece's export growth in recent years has been primarily demand-driven, with the country's geographical position and its access to rapidly expanding Balkan markets explaining almost half of that growth. Thus, despite its proximity to the dynamic economies of the new Member States, Greece has not increased its overall share in international markets (IMF, 2007).

The largest share of Greek exports is represented by manufactured products (see figure 4).

Table 4. Specialisation index of Greek selected sectors

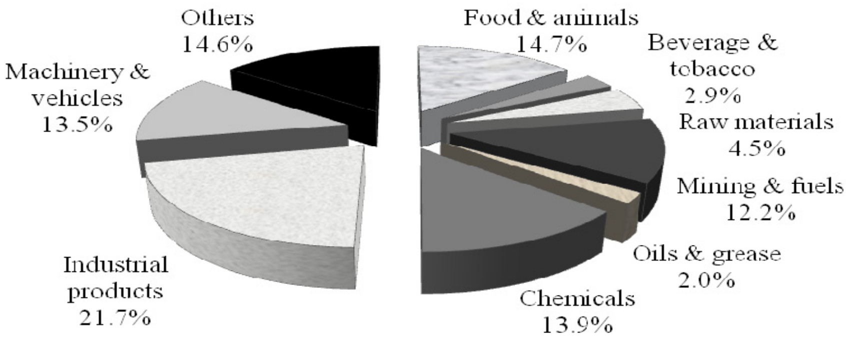
Sectors	2000	2007	2008
Agricultural products	2.68	2.53	2.65
Fuels and mining products	1.48	1.13	0.88
Iron and steel	1.32	1.11	1.49
Chemicals	0.80	1.22	1.20
Machinery and transport equipment	0.27	0.35	0.40
Textiles and clothing	2.78	2.22	2.24

Source: Own calculations based on data from the WTO

Still, a considerable proportion of Greek exports consist in agricultural products, especially beverages and tobacco. In recent years, the most dynamic exports of manufactures were machinery and transport equipment and also industrial products classified as raw materials, while fuel and chemicals decreased in the overall composition of exports. Exports of agricultural products have increased to a larger extent than exports of manufactured products. This kind of exports has a traditional dimension in the Greek economy and is larger than that of the most developed EU economies.

Even if the share of technology-intensive products in Greek exports (e.g. chemicals, pharmaceuticals, electronics etc.) remains low compared to the EU-average, it has displayed an impressive growth over the last years, rising from 5.8% of total exports in 1998 to 22.3% in 2005 (KEEM, 2003).

Figure 4. Distribution of Greek exports by product categories, 2007



Sources: National Statistical Service of Greece

Greece has a different specialisation map in comparison to Romania. As shown in table 4 it has a tradition of being specialised in exports of agricultural products, as well as textiles and clothing. Calculations reveal that the Greek comparative advantage in exporting metals and chemicals has registered an increasing trend, while the sector of fuels and mining becomes less competitive from one year to another.

3. Bilateral trade flows between Romania and Greece

This section is aimed at analyzing the dynamics of trading relations between Romania and Greece from 2002 to 2008 and to point out the important changes occurring in time in the volume and structure of these bilateral relations. During the above mentioned years, the value of trading relations between the two countries has continuously increased. At present, Romania is one of the most important trading partners for Greece.

As indicated in table 5, from 2002 to 2006, before Romania's accession to the EU, the value of Greek imports to Romania exceeded the volume of exports, and therefore Greece's balance of trade in relation with Romania was in deficit, over the entire period.

Table 5. Trade flows between Romania and Greece (mil. euro)

Year	Exports	Imports	Balance
2002	341	298	+43
2003	393	306	+87
2004	504	383	+121
2005	434	409	+25
2006	508	481	+27
2007	501.5	779.6	-278.1
2008	608.9	806.6	-197.7

Source: Adapted from Romanian National Institute of Statistics and National Statistical Service of Greece

Before 2007, the main product groups of Greek exports to Romania were: automobiles (7.3%), aluminium (7.1%) and telecommunication equipment (7%). In the same period, major imports from Romania consisted in: petroleum and asphalt minerals (18%), iron and steel scraps (8.7%), aluminium (7.7%) and electric energy (7%) according to data from the statistical services of both countries (NIS, NSSG, 2007).

Romania's integration in the EU in 2007 has brought a sharp increase in the volume and value of imports from Greece, while the level of Romanian exports to Greece has remained rather constant. As a consequence, Romania's trading balance in relation with Greece changed very fast from surplus to deficit. One possible explanation for this massive change in the structure of bilateral trade is the procedure of parallel exports from Greece, once Romania entered the EU as a full member. Another one is the fact that Greece is a major investor in Romania, with mainly market-oriented investments, such as telecoms, trade and construction, which draw imports from Greece in the form of equipment and products. Greece ranks 6th at end of 2008 among foreign investors in Romania, with 6.5% of FDI stock (NBR, 2008).

At the end of 2008, trade between Greece and Romania stood at 1.4 billion euro. Romanian exports to Greece amounted to almost €609 million and their structure upon product category changed in comparison with the period 2002-2006. In 2008 they were mainly electrical equipment and technological machinery. Greek exports to Romania amounted to almost €807 million, mainly made up of electrical equipment, plastics and chemicals.

4. The influence of the economic crisis on Romanian and Greek exports

The global economic crisis has determined the drop of export growth rates all over the world. In 2008 due to the global recession, world trade experienced the sharpest contraction ever recorded since 1970, by -6.7%, and the decline continued in 2009 (WTO, 2009).

As a consequence, the value of bilateral trade between Romania and Greece has decreased sharply due to the economic crisis that engulfed Europe. According to national statistics trade between Romania and Greece in the first ten months of 2009 stood at 850 million euro, which represents a reduction of 22.3% from the similar period of the year before (NIS, 2010). Romania's deficit in relation to Greece, registered after Romania's accession to the EU, maintained its existence in 2009, although with a slightly decreasing trend.

The economic crisis has impacted significantly on both countries' exports. Romania experienced in 2009 a decline of 13.9% in exports compared to 2008. Imports dropped much steeper, by 32.3% (NIS, 2010). Thus, the ever-increasing Romanian trade deficit was put to a halt, decreasing for the first time in the last decade. In a similar manner, Greek exports decreased by 17.5% in 2009 compared to

2008, while imports fell by 26.2%, bringing the Greek trade deficit to lower levels compared to previous years (NSSG, 2010).

Referring to the structure of exports, the economic crisis has brought important changes in the case of Romania. According to national statistics, exports of machinery and vehicles rose from 36% to 43% out of the total, whereas raw materials and fuels dropped from 15% to 12% from 2008 to 2009. It seems that Romania has started to move away from exports of low value-added products (steel, leather parts, fuel, wood, etc.) to higher-technology products (car parts, automobiles, phones, etc.), which is a positive sign.

The composition of Greek exports did not change significantly as a consequence of the economic crisis. Among the major product groups we still find various industrial products, chemicals and machinery, as well as agricultural products. Greece became even more specialized in agricultural products, the share of food and animal products out of total exports increasing from 15.6% in 2008 to 18.9% in 2009, as shown in national statistics.

A possible explanation for the two different paths of development in the structure of the two countries' exports is based on the inflows of foreign direct investment (FDI) received by Romania and Greece in recent years. Romania has outrun Greece in inward FDI in each of the last three years before the crisis: $11.4bn vs. $5.4bn in 2006, $9.9bn vs. $1.9bn in 2007 and $13.3bn vs. $5.1bn in 2008 (UNCTAD, 2009). The much larger investments undertaken by foreign affiliates in the Romanian industry compared to the Greek industrial sector became a vital point for triggering exports.

One major example where FDI has played a chief role for Romania's export orientation is the automotive sector and especially car maker Dacia. The national company, bought 1999 by Renault, exported close to zero in the last years before privatization and since the launch of the Logan model by Renault at the end of 2004, exports have been increasing at a fast pace, from 16,306 exported cars in 2004 to 88,931 units in 2006 and as much as 173,664 exported units in 2008 (Dacia, 2010). Thus, Dacia became Romania's major exporter, replacing oil and steel companies from the top of the ranking.

The low level of FDI inflows registered by Greece explains partly why the country's export competitiveness did not change much in the last few years. Moreover, Greece has been struggling with its own economic problems recently and the perennial trade deficit is not helping in this respect.

5. Conclusions and policy recommendations

A series of conclusions can be drawn from the evolution of Romanian and Greek foreign trade in the context of European integration. The ever-increasing trade deficit in the last decade in both countries shows that much of their economic growth before the crisis was based on rising consumption and imports. Also, it gives a hint that local companies did not quite stand up to the challenge posed by the Single Market of the EU.

Lately, once export-oriented FDI consolidated its operations on the Romanian market, it brought a deeper integration into European trade and logistics networks. This situation, combined with the large drop in imports once the crisis moved in led to a decrease of the trade deficit. In similar fashion, Greece's trade deficit decreased during the crisis, but it still remains a matter of worry. In Romania's case, it is hoped that the technology transfer brought about by inward FDI will eventually translate into a higher technological content of exports. There are already some positive signs in this respect with the automotive and car parts industry driving exports ahead. In the case of Greece, the low level of FDI inflows makes it impossible to find a significant relationship between the recent investment activities of foreign affiliates and Greek exports.

Considering the difficult economic prospects both countries are facing, the improvement of their export competitiveness is a must. This can be managed with a strategic approach for stimulating exports. Legal and macroeconomic stability and an investor-friendly business environment represent the prerequisites for a better export performance by domestic firms. Easing access to finance and export credits for Romanian SMEs and getting rid of all the bureaucratic hurdles and constraints for Greek SMEs are definitely a priority. Solid support measures of promotional type could also facilitate the entry of domestic firms and their export products on other EU-markets.

Clusters should be encouraged in selected dynamic areas as bio / organic foodstuffs, IT or vehicles where both countries show solid potential for growth. Enhancing the export competitiveness of such sectors involves the implementation of a well-designed branding and continuous promotional process. This process should be coordinated by regional authorities together with producer and trade associations.

In order to guide the move towards higher-technology intensive sectors and to increase the value-added content of exports, there is a need for a step-by-step changeover to those dynamic products in world trade for which Romania and Greece owns adequate resources, human capital and specific skills. To accomplish such a task, policy-makers should eliminate market failures that impede the formation of linkages between domestic firms and foreign affiliates or regional networks. Training courses offered to employees of domestic firms, for instance in supply chain management, quality, safety and environmental norms as well as in project management are badly needed to improve the export performance of Romanian and Greek merchandise.

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