EXTERNAL COMPETITIVENESS OF THE ROMANIAN REGIONS AND COUNTIES

Mihaela Nona CHILIAN

Abstract

The paper approaches some of the issues regarding the external competitiveness of the Romania regions and counties, by the means of the competitive advantage concept and by providing answers to the questions: (i) Which are the regions and counties that contribute most to the country’s exports? (ii), Which are the economic sectors/groups of products in which these regions/counties are (eventually) specialized? and (iii) Which are the competitive advantages of those regions/counties (if they exists)? The results point out to a significant presence of the analyzed regions and counties in three groups of manufacturing industries: low skilled, labor-intensive; natural resource-intensive and medium-to-high skilled, more sophisticated ones, and also to increased export concentration/specialization in/of certain regions and counties.

Keywords: regional competitiveness, comparative advantage, export specialization, territorial imbalances

JEL Classification: F14, O18, R12

Introduction

Competitiveness, in general, (and national competitiveness in particular) is a very complex topic, with countless definitions and quantification methods. Generally, it may be defined as the capability of a country, measured by comparison to other countries, to build up and secure an economic, political and social environment able to support and accelerate value-added creation for all time horizons. As the specialized literature dedicated to competitiveness revealed, one of the major issues refers to the capability of selling national products on international markets (capability to export – see Reiljan 2012.

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1 The paper is part of Chapter 3 of the Ph.D. dissertation “Competitiveness of the Romanian Economy in the Context of Integration”, coordinator Acad. Aurel Iancu, National Institute of Economic Research. Due to the very large amount of data, only a summary of the findings was presented.

2 Despite its “appeal”, contested by some distinguished economists – see Krugman (1996).
In a broad sense, what may be called the external competitiveness of an economy refers to its capability to ensure a long-term economic growth with a structure able to adapt easily to the changes in demand on international markets. In a limited sense that emphasizes the importance of exports, competitiveness is defined as the capability of a country to gain and maintain market shares on the international markets or as depending on the GDP growth able only under the circumstances of increasing exports, while other economists have mostly identified competitiveness with successful foreign trade. OECD also emphasized the relationship between exports and standard of living when we consider competitiveness as the capability of a country to produce goods and services that pass the test of international competition, at the same time maintaining and increasing the real standard of living of its citizens (OECD, 1992). For the purpose of this study, we followed this limited approach to competitiveness, nevertheless aware that competitiveness has more faces, facets and details than those revealed solely by the foreign trade analysis.

The analysis of the foreign trade of the CEE countries and, particularly, of Romania, especially concerning the trade with the European Union, revealed a long-time “specialization” of the latter mainly as a supplier of labor and energy-intensive, low value-added products and services, although the technology-intensive products gained higher shares in the last years (see, for instance, Freudenberg and Lemoine, 1999; Havlik et al., 2001; Kaitila, 2001; Edwards, 2004, Dulleck et al., 2004, Yilmaz, 2003; Chilian, 2003; Iordan et al., 2002, Zaman and Vasile, 2001, Scutaru and Florescu, 2004; Unguru, 1999, Grigorovici, 2009). In what regards the capital-intensive products, most of the goods for which Romania gained market shares and comparative advantages in the trade relationships with the EU had some significant shares in the overall exports. Nevertheless, in the case of certain capital-intensive groups of products, with high shares in the overall Romanian exports, no or very weak comparative advantages were recorded (e.g., electric machinery and equipment, transport means, etc.).

However, if that is the case of the overall foreign trade, in our opinion is also important not only to point towards the sectors with comparative advantages and/or large export shares, but also to reveal the extent to which the external competitiveness is “spread” within the national territory. That means, among others, the attempt to answer questions such as (Chilian, 2006): i) Which are the regions/counties with the largest contributions to exports? ii) Which are the sectors in which those regions/countries are eventually specialized (if they are)? and iii) Which are the competitive advantages of those regions/counties (if they exists)? In the following, we shall attempt to provide for certain aspects able to answer adequately the above-mentioned questions, along the lines of external competitiveness, with emphasis upon exports.

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3 See Reiljan et al. (2000).
4 Though employed as one of the main economic theories in explaining competitiveness, the comparative advantage is just a facet and is considered as distinct from competitiveness. While competitiveness is related to the relative strength or weakness of a country in producing a given product, the comparative advantage deals with the relative strength or weakness of products for a given country and is structural (if compared to competitiveness, which is often subject to macroeconomic fluctuations - see Lafay (1992).
Export positioning and specialization analysis of the Romanian regions and counties

According to the available statistical data, the ranking of the regions and counties of Romania in what regards their participation to the country’s foreign trade after 2000 (with a higher emphasis on exports) revealed the following aspects (see Tables 1 and 2).

Table 1

<table>
<thead>
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<th>REGIONS</th>
<th>2001</th>
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</table>

Source: Author’s computations on the basis of data provided by the National Institute of Statistics, Bucharest, Romania.

Table 2

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Source: Data provided by the National Institute of Statistics, Bucharest, Romania.

- Nearly one fifth of the Romanian exports and around 40% of the imports are made via companies located in the București-Ilfov region. At the same time, this region is

5 The data are compiled from the customs declarations of companies, which induces distortions since a company may have its headquarter in a region, and its processing units located in another one (the case of the oil companies, for instance), but the result is accounted for by the region/county where the company’s headquarter is located or the company is an intermediate trader, buying products from other regions/counties to export them, usually after minor processing. In such a case, the export/import position is rather a measure of the visibility of a

the largest contributor to the overall foreign trade balance deficit. Nevertheless, this is explainable considering the fact that this is the region where a large part of the country's economic activity is located, as well as the one where the main foreign and domestic companies have located their headquarters. One may though notice that over the analyzed period the share of exports coming from this region in the overall exports of Romania has decreased significantly, concomitantly with the advance of the exports provided by the companies located in the other regions of Romania, especially Sud Muntenia and Centru.

- The regions Vest, Nord-Vest and Centru recorded constantly high shares in the overall exports and imports, but a single one was “net exporter” in some years of the analyzed interval, namely the Vest region. This is also explainable, given the higher economic development of these regions.

- Among the regions located outside the Carpathians, only the Sud-Est region registered a constantly higher share in the overall exports over the mentioned period, but more recently one may notice the advance of the Sud Muntenia region as a main exporter (both the above-mentioned regions recorded significant increases in their shares in overall exports after 2000). Except for Sud Muntenia region, all the other regions were at certain moments “net exporters”, a peculiar situation being that of Sud-Vest Oltenia region, where such a position was recorded all over the analyzed interval, but also registering some of the lowest shares in overall exports. One may also notice the decline in the exporter position of the Nord-Est region, both as regards its share in the overall exports and by switching from “net exporter” to “net importer” position.

- Except for the Sud-Vest Oltenia region, which improved its “net exporter” position, all the other regions experienced significant deteriorations of their trade balances, the import dependency increasing in the București-Ilfov, Centru, Nord-Vest, Sud Muntenia and Vest regions.

Because the export capability of a country/region is also relevant for the external competitiveness, it would be interesting to analyze the exporter position (defined as the share in overall exports) of the regions and counties of Romania. For the eight regions and their counties, respectively, the situation is as follows:

• Over the interval 2005-2007, a decline in the Nord-Est region’s share and in all its counties’ shares in overall exports was recorded; in the case of the latter the shares in overall exports being very low, even below 1% in the case of the Botoșani, Suceava and Vaslui Counties.

• The share of the Sud-Est region in overall exports diminished over the analyzed interval, but one may notice quite a strong exporter position in the case of Constanța County (nearly 5% of the overall exports in 2007) and Galați County (over 5% of the national exports in the same year). At the same time, a deterioration of the exporter positions of the less developed counties was
noticeable, namely the counties with less than 1% of overall exports (especially Vrancea and Tulcea).

• As regards the **Sud Muntenia** region, its exporter position improved over the analyzed interval, but things were different for its counties: two counties revealed as very strong exporters, namely Argeș (with an increasing share in overall exports, reaching near 8% in 2007) and Prahova (with a share around 4% of overall exports, but declining in 2007), while the rest of the counties recorded shares below 1% of overall exports (Giurgiu County even below 0.1% in 2005 and 2006), although most of them slightly increased.

• The **Sud-Vest Oltenia** region improved significantly its exporter position over the interval 2005-2007, but high gaps among its counties were also recorded. Thus, Olt County registered the highest advance (reaching slightly over 4% of overall exports in 2007), followed by Vâlcea and Dolj counties (both with over 1% of the national exports in 2007, and both with increasing shares), while the other two counties recorded shares lower than 1% of the overall exports (especially Gorj County, with a relatively stagnant share slightly higher than 0.1% of the national exports).

• The **Vest** region maintained nearly constant its exporter position, but the gaps among its counties were high: two counties recorded shares higher than 5% of the national exports, namely Arad and Timiș, the latter with a strong ascending trend of its exports, reaching over 8% of overall exports in 2007, one county has recorded a significant deterioration of its exporter position (Hunedoara, which diminished its share in the national exports to less than 2% in 2007), and the last one had only a marginal exporter position ( Caraș-Severin).

• The **Nord-Vest** region recorded a decline in its share of the national exports in 2007, especially due to the deterioration of the exporter positions of its highest developed counties (Bihor, which declined to less than 3% of the overall exports in 2007, and Cluj, with a share slightly less than 2% in the same year). However, one may notice that a single county (Sălaj) has recorded shares below 1% of the national exports, while others improved or maintained their exporter positions (Satu Mare, Bistrița-Năsăud and Maramureș).

• The **Centru** region recorded an improvement in its exporter position over the interval 2005-2007, the “engines” of such an evolution being the increases in the exports of its most developed counties (Brașov and Sibiu, which reached shares of nearly 4% of the national exports, but also Mureș, which reached shares around 2%). The other counties, however, have recorded slow declines in their shares in the overall exports, and two of them (Covasna and Harghita) have had shares below 1% of the national exports.

• Despite the fact that it recorded a significant decrease in its share in the national exports, the **București-Ilfov** region still held the top exporter position (nearly 18% of the national exports in 2007), the companies located in Bucharest exporting nearly 16.5% of overall exports in 2007, although their export share has declined significantly over the interval 2005-2007. One may also notice the increase in the share of Ilfov County in the overall exports, to over 1.5% in 2007, the closeness to Bucharest allowing for localization of many exporting companies also in this area.
In order to identify a possible specialization of regions in sectors with high export shares (in agreement or not with their economic potential), we have started from the analysis of the shares of the main group of products in the overall exports\(^6\) over the interval 2001-2007, the main findings being as follows:

- **As regards the clothing and footwear groups of products**, with high export volumes and comparative advantages\(^7\), nevertheless based on low labor costs (and OPT), namely 61 - Knitwear, 62 - Apparels and clothes and 64 - Footwear, the regions whose companies exported more were Bucuresti-Ilfov (for all the three above-mentioned groups, but with a sharp decline in the shares in the overall exports for the groups 61 and 62 over the interval 2005-2007), Nord-Est, Sud-Est and Centru (for group 62 with a significant increase in the share of Centru region over the interval 2005-2007) and Vest and Nord-Vest (for groups 61 and 64). Nevertheless, one should note that in the case of these groups the territorial spread of the exporting companies did not reveal high discrepancies, such companies being usually SMEs that used the relatively cheap available female (mostly) labor. The exports of the groups with a somehow higher technological level, namely 61 and 64, were nevertheless “concentrated” in the higher developed areas (Bucharest and the west of the country).

- **In the case of the equipment, machinery and apparatus groups of products**, namely 84 – Machinery and equipment, 85 - Electrical machinery and apparatus, 87 – Road transport means and 89 - Ships and similar transport means, with relatively high or medium, and also increasing export shares over the analyzed interval, but with major comparative disadvantages (although diminishing), the economic development, industrial background and the resources of a region were influencing more significantly its exports of such products. Thus, the companies that exported most products belonging to group 85 were those located in the Vest region, while in the case of group 84 such companies were located mainly in the Bucuresti-Ilfov and Sud Muntenia regions (with significant export shares also in the case of group 85). As regards the group 87, the main exporting regions were Centru, Vest (increasing) and Sud Muntenia (also increasing), while the Sud-Vest Oltenia region recorded a sharp decline in exports over only four years. The group 89 was clearly dominated in exports by the Sud-Est region, followed by the Sud-Vest Oltenia region (areas where the main shipbuilding sites were located). As regards the groups of products with higher technological sophistication, one may also notice the advance of group 90 – Optical, photographic and cinematography instruments and apparatuses, as well as the specialization of the Vest region in exports of such products.

- **As regards the metallurgy groups of products**, with relatively high export shares, but being high energy-intensive, the production factor endowment (especially physical capital) is extremely significant for the exports of the regions. Thus, the main exports were made by the Sud-Est region for group 72 – Pig iron, iron and steel, Sud-Vest Oltenia region for group 76 – Aluminum and articles thereof and Nord-Vest and Nord-Est for group 73 – Pig iron products (for which

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\(^6\) According to the Combined Nomenclature Classification.  
\(^7\) Computed at national level.
București-Ilfov region recorded the sharpest decline in exports). One may also notice the advance of the Vest and Centru regions in exports of metallurgy products other than those belonging to the above-mentioned groups of products.

- The **chemicals and connected groups of products** recorded relatively modest export volumes, both overall and by regions, and also high comparative disadvantages – except for fertilizers. Also in this case, the factor endowment of a region proved as driving factor, but paradoxical situations were also recorded, due to the localization of the headquarters of the exporting companies in regions other than those where the processing units were located. Thus, in the case of group 27 – Fuels and mineral oils – with a (constant) high share in overall exports, the highest exports were made by the București-Ilfov region – where the headquarters of certain main oil companies and/or of trading companies are located – followed by the Sud-Est, Nord-Est and Sud Muntenia regions, where the main petroleum processing units are located. A somehow similar situation one may notice in the case of group 31 – Fertilizers, the București-Ilfov region accounting for a significant share in overall exports of the group, the main exporting regions being, nevertheless, those with the best factor endowment, namely Centru and Sud Muntenia (except for 2007). The presence of processing units within the region and their competitiveness is highly significant in the case of group 40 – Rubber and rubber products, whose exports were dominated by companies located in the Vest and București-Ilfov regions, group 39 – Plastics and articles thereof, with the main exporting companies located in the Sud-Vest Oltenia, București-Ilfov and Centru regions and group 28 – Inorganic chemicals – with main exports made by the Sud-Est, București-Ilfov and Sud-Vest Oltenia region.

- The **wooden products groups** recorded quite significant export volumes and comparative advantages, but also in this case the territorial spread of exports did not always reflect the resource and factor endowment of the regions. Thus, in the case of group 44 – Wood and wooden products, excluding furniture – among the main exporting regions, beside the Nord-Est and Centru regions (with abundant natural resources) one may find the București-Ilfov and Vest regions, where the natural resources are modest or are missing almost entirely. A more balanced situation one may find in what regards the group 94 – Furniture, the main exporting regions being also those where most of the manufacturing units are located, namely the Nord-Vest, București-Ilfov, Centru, Vest and Nord-Est regions.

Finally, we provide a very synthetic picture of the **external competitiveness position** of the Romanian regions in 2007, combining indicators such as region’s

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share in total exports of product groups, product group share in total exports of the region and the specialization index\(^9\) (as a measure of comparative advantage), computed according to the formula (Neven, 1995):

\[
RCA = \frac{(x_i/X - m_i/M)}{100}
\]

where:  
- \(m_i\) = import of product \(i\)  
- \(x_i\) = export of product \(i\)  
- \(M\) = total import  
- \(X\) = total export

The index theoretically falls between 100\% and -100\%, but it rarely exceeds +/-10\%. The lower and upper limits of the index can be attained only in the (theoretical) case when there is complete trade specialization and there are only two goods. The higher the value of the index is, the stronger the trade specialization is. It can be also interpreted as a “normalized” trade balance (i.e. given that the sum of the RCA indicators across sectors is equal to zero, the comparative advantages are therefore measured under the theoretical condition of a balanced trade). The value of this indicator is also related to the intensity of intra-industry trade (the stronger the two-way trade is, the lower specialization is and the closer to zero the index – see Ahrend, 2004). Unfortunately, the high group aggregation of regions'/counties' export and import data did not allow for the computation of the Grubel-Lloyd index, which measures the intra-industry trade intensity. The results are shown in the graphs below.

\(^9\) Similar to the Michaely index, it represents a measure of the relative net export of a certain industry; an advantage being also the elimination of re-export as a bias source when computing the comparative advantage.
External Competitiveness of the Romanian Regions and Counties

External Competitiveness - Sud Muntenia Region in 2007

External Competitiveness - Sud-Vest Oltenia Region in 2007

External Competitiveness - Vest Region in 2007

External Competitiveness - Nord-Vest Region in 2007
Conclusions

Synthesizing the above-mentioned ones, a picture in brief of the export specialization of the regions and counties of Romania and, implicitly, of their external competitiveness would look as follows:

- **Bucureşti-Ilfov Region** – rank 1. It is a highly atypical region, mostly due to the above-mentioned exporter’s location bias. Despite the fact that it is recording high comparative disadvantages, it is also recording high export shares in many product sections and groups, high specialization index, and concomitant high export shares occur paradoxically in some of the above-mentioned sectors facing problems, namely mineral fuels and wood products. By groups of products and counties, the highest export specialization is recorded in the case of product groups1162 (Bucharest Municipality), 64 (Bucharest Municipality), 85 (Bucharest Municipality), 27 (Bucharest Municipality and Ilfov County), 72 (Bucharest Municipality and Ilfov County), 84 (Bucharest Municipality), 61 (Bucharest Municipality), 94 (Bucharest Municipality), 44 (Bucharest Municipality), 73 (Bucharest Municipality), 76 (Bucharest Municipality), 31 (Bucharest Municipality), 39 (Bucharest Municipality and Ilfov County), 40 (Bucharest Municipality), 28 (Bucharest Municipality), 88 (Bucharest Municipality), 29 (Bucharest Municipality).

- **Vest Region** – rank 2. The specialization index is better correlated with the export shares, and high specialization indices and export shares may be found in the case of higher value-added and technology intensive products (transport means, optical, photographic, control and measurement instruments and apparatus), but also in that of lower value-added and resource-based products.

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10 According to the share in overall exports.
11 Ranks 1-3 as shares in the group’s exports over the analyzed interval.
External Competitiveness of the Romanian Regions and Counties

By groups of products and counties, the highest export specialization is recorded in the case of product groups 85 (Timiș, Arad and Hunedoara Counties), 64 (Timiș, Arad and Hunedoara Counties), 84 (Timiș County), 61 (Timiș, Arad and Hunedoara Counties), 94 (Timiș, Arad and Hunedoara Counties), 90 (Timiș and Arad Counties), 33 (Timiș County), 34 (Timiș County), 62 (Timiș and Arad Counties), 84 (Timiș County), 69 (Timiș County), 44 (Arad, Hunedoara, Caraș-Severin and Timiș Counties), 81 (Arad and Timiș Counties), 82 (Timiș and Arad Counties), 83 (Arad County), 86 (Arad County), 95 (Timiș County).

- **Sud-Est Region** – rank 3. Despite the export volumes, the export specialization is quite narrow as compared to other regions, marked high specialization indices and high export shares being recorded in the case of metallurgical products and transport means. Live animals, mineral fuels and textiles also account for high export shares, but with less impressive specialization indices. By groups of products and counties, the highest export specialization is recorded in the case of product groups 62 (Vrancea and Brăila Counties), 72 (Galaj and Constanța Counties), 27 (Constanța County), 39 (Constanța County), 89 (Brăila, Constanța, Galați and Tulcea Counties), 68 (Buzău and Constanța Counties), 73 (Buzău and Galați Counties), 81 (Tulcea County), 83 (Buzău and Galați Counties).

- **Nord-Vest Region** – rank 4. High specialization indices and export shares may be found in the case of higher value-added and technological intensity products (machinery and equipment), but also in that of medium and lower value-added or resource-based products (other products, footwear, pulp and paper, and animal and vegetal oils). By groups of products and counties, the highest export specialization is recorded in the case of product groups 64 (Bihor and Cluj Counties), 61 (Bihor, Cluj and Satu Mare Counties), 94 (Maramureș, Cluj, Satu Mare and Bihor Counties), 73 (Sălaj, Satu Mare and Cluj Counties), 84 (Bihor, Cluj and Bistrița-Năsăud Counties), 85 (Bihor, Bistrița-Năsăud, Cluj, Maramureș and Satu Mare Counties), 26 (Maramureș County), 30 (Cluj County), 32 (Bihor County), 47 (Cluj County), 48 (Cluj County), 49 (Bihor and Cluj Counties), 68 (Cluj County), 69 (Cluj and Maramureș Counties), 90 (Bihor, Cluj and Sălaj Counties), 95 (Bihor County).

- **Centru Region** – rank 5. It records a marked specialization in medium value-added and resource-based products (wood and wood products, building materials, pottery, glass, chemical products and other products), but also high specialization indices and higher export shares in higher value-added and technology intensive products (machinery and equipment, transport means, optical, photographic, control and measurement instruments and apparatus). By groups of products and counties, the highest export specialization is recorded in the case of product groups 87 (Brașov, Mureș and Sibiu Counties), 44 (Alba, Brașov, Harghita, Mureș and Sibiu Counties), 31 (Mureș County), 84 (Alba, Brașov and Sibiu Counties), 83 (Brașov, Mureș and Sibiu Counties) 94 (Alba, Brașov, Harghita, Mureș and Sibiu Counties), 39 (Alba, Brașov and Sibiu Counties).
Counties) 29 (Mureş County), 49 (Harghita County), 69 (Alba and Mureş Counties), 92 (Mureş and Harghita Counties).

- **Sud Muntenia Region** – rank 6. It is another region with “spiked” specialization, marked high specialization indices and high export shares being recorded both in the case of high value-added and technology-intensive products (transport means) and in that of lower value-added and resource-based products (animal and vegetal fats). High export shares, but lower specialization indices may be found in the case of mineral products, textiles and textile products and building materials, pottery and glass. By groups of products and counties, the highest export specialization is recorded in the case of product groups 85 (Argeş and Prahova Counties), 84 (Argeş, Prahova and Dâmboviţa Counties), 72 (Dâmboviţa County), 27 (Prahova County), 87 (Argeş County), 89 (Giurgiu County), 31 (Teleorman County), 40 (Argeş County), 28 (Dâmboviţa County), 32 (Argeş and Dâmboviţa Counties), 34 (Prahova County), 62 (Prahova County), 70 (Călăraşi and Prahova Counties), 81 (Giurgiu County).

- **Nord-Est Region** – rank 7. It is the region which is mostly specialized in lower and medium value-added and resource-based products (textiles and textile products, wood and wood products, hides and skins, animal and vegetal oils and food, beverages and tobacco), with low or marginal exports of higher value-added and technology intensive products. By groups of products and counties, the highest export specialization is recorded in the case of product groups 62 (Bacău, Botoşani, Iaşi and Vaslui Counties), 27 (Bacău County), 44 (Bacău, Neamţ and Suceava Counties), 73 (Iaşi and Neamţ Counties), 28 (Bacău County), 29 (Bacău County), 30 (Iaşi County), 48 (Bacău and Neamţ Counties).

- **Sud-Vest Oltenia Region** – rank 8. The smallest of the regions in terms of exports, it also has a “spiked” specialization, in medium and higher value-added and technology-intensive products (metallurgical products, transport means, rubber and plastic and chemical products). By groups of products and counties, the highest export specialization is recorded in the case of product groups 76 (Olt County), 87 (Dolj County), 89 (Mehedinţi County), 39 (Vâlcea County), 28 (Vâlcea and Olt County), 40 (Olt County), 86 (Olt, Mehedinti and Dolj Counties), 61 (Dolj and Olt Counties), 86 (Mehedinţi and Olt Counties).

**References**


