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CURRENT TRENDS IN THE FOREIGN TRADE

Theoretical article

Keywords
International trade
Absolute advantage
Relative advantage
Revealed comparative advantage index

JEL Classification
F13, F43, F63

Abstract

In this article, we aim at highlighting the benefits of international trade on economic growth and development. In the first part of the paper, we will outline the seminal theories in the doctrine of international trade. In the second part, we will focus on current developments in the exports and imports of goods and services.
We will also consider several indicators meant to emphasize the various aspects of research. Our approach is a transversal-comparative one and static models pertain to uni- and multivariate analysis.

1. Introduction

The benefits of international trade on economic growth and development were first tackled by the *Classic School* through Adam Smith, David Ricardo and John Stuart Mill. For Smith, international exchanges contribute to the overcoming of the small size of the market and this is a mutual advantage for the nations involved. Every nation provides the surplus of their work to purchase those goods that would require a higher amount of work if they were produced internally, rather than acquired externally. Hence the expression of *absolute advantage*: from that difference between the costs incurred by the manufacturing of a product internally and its purchase from another country. As a result, commercial trade, as Smith points out, was extremely profitable, a dynamic force meant to intensify both the workers' skills and abilities, encouraging technological innovations and capitalization.

Ricardo places Smith's analysis on a different level. The author we mentioned seizes that Smith's theory cannot be proved unless a country has an absolute advantage over another in production costs. The solution given by the representative of the *Classic School* refers to a country's specialization where its profit is the highest and the loss, the lowest; therefore, we speak about the area in which exchanges between countries may be mutually profitable. This quintessential reflection by D. Ricardo is called the *theory of relative advantage.* With respect to methodology, there are several flaws to this theory: *first*, even if we acknowledge the incontestable merits of the aforementioned author, his analysis does not specify what happens when the demand of the two countries involved faces their offer; *second*, in the study on the subject, nothing is mentioned on the set of exchange terms; *third*, the way in which the maximum level of the advantage is reached for every country is not mentioned. By continuing the line of thought of the two predecessors, J.S. Mill is the one who attempts to fill these gaps. Mill's work innovated the principle of demand and offer by extending it to international trade (so as to reach a state of equilibrium, the demand of a country needs to be equal to the offer of the other one) and set the terms of trade (since they are established after the demand and offer are compared).

Neoclassics, by means of reputed representatives such as Bertil Gothard Ohlin and Eli Filip Heckscker present us a new theory of international trade resulting from the perfect mobility between production factors worldwide. By using the less essential features of the subjective theory of value, the two authors coined the H-O-S model starting from two countries which were different with respect to their two production factors, namely work and capital and two products. In their vision, each region has its potential for a better production of the goods that require a higher percentage of relatively abundant factors; but on the other hand, it is less likely to manufacture goods that require a higher percentage of existent factors in lower percentages in its contents or unavailable factors. According to Borkakoti (1998), the country in which the capital is more abundant, will export relatively intensive goods in capital and import the ones intensive in work. For the partner country, it goes the other way round (Borkakoti J., 1998, p.122).

The reasons for the development of this theory may be rendered as follows: "when discussing equipment-related production problems of international trade and their consideration; optimizing the allocation of production factors and optimal placement of various economic activities; dealing with the model of international trade starting from the bases of neoclassic theories of utility-driven subjective values" (Popescu, 2001, pp.130-131). The innovations in the H-O-S model are the following: "the combination of the analysis of international specialization in production and trade with placement of existing resources in every country; the possibility to apply this model to a higher number of countries, to more factors of production and goods; relative advantage is explained based on the ratios in which production factors are combined and not only on internal possibilities of each country as in classic theory; the use of various instruments for analysing the mechanism of international trade through concepts such as: opportunity cost, marginal substitution rate, consumer optimum, etc" (Popescu, 2001, pp.132-133).

Further directions of research on measuring the comparative advantage of a country imply the identification of a country's strong and weak sectors in matters of foreign trade. Out of the many studies that tackle the issue, we will only review the ones we consider the most important for our approach.

II. Revealed comparative advantage index and foreign trade concentration index

Continuing from this point and benefiting from a generous heritage passed on by classic and neoclassic writings, reputed authors of the field such as Bela Balassa (1964, 1965), Alex R. Hoen, Jan Oosterhaven (2006), Albu L., Iordan M., Lupu R., (2012) Francois et al., (2013) analyse international trade from a new perspective, namely *as main variable of economic growth and development.*

The first lines written on the theme of comparative advantage in commercial relations go as back as 1958 and draw on Liesner. The indicator proposed in the study conducted by him is nothing else than the relation between exports for a certain

product and the export for the same product carried out within reference countries; certainly, the study was improved by subsequent ones.

Out of the many empirical analyses carried out along time, in our analysis we will refer to Bela Balassa (1965)'s ones – *revealed comparative advantage index* (RCA), Ng and Yeats (1999) – *revealed comparative advantage index calculated for imports, as well* and Herfindahl – Hirschmann – *export concentration index*.

By using the export of a country's goods/ product as indicators, their export in relation to the level of reference countries, the exports of the countries analysed, Bela Belassa proposes the following calculus model of the *revealed comparative advantage index* (RCA):

$$ACR_j^i = (Xi/Xj)/(Xi/X)$$

Where, X_i is the export of countries *i* in the analysis; X_j – is the export of the product/ goods *j*; X_j^i is the export of the product j of a country *i*.

Based on the values of the substitution indices and implicitly, of the revealed comparative advantage, we may decide whether the country analysed has a comparative advantage/ disadvantage, a neutral advantage or whether it is specialised or not in a given sector of production according to the following criteria: if ACR_j^i values are higher than 1, the country has a competitive advantage for the products/ goods analysed and, conversely, if ACR_j^i <1; in case the index value is zero, the country analysed has a neutral comparative advantage, and if its values are comprised between zero and one, the country *i* is not specialized in a particular sector.

Benefiting from the context of ideas created by their predecessors, Ng and Yeats (1999) propose us a new way to measure revealed comparative advantages. This time, the new RCA index is calculated based on the values obtained for the imports of a country *i*, to manufacture a product *j*. The indicator comes as follows:

$$ACR_{ij}^I = (m_{ij}/M_i)/M_j^{Ref}/M^{Ref})$$

This indicator measures the normalized weight of imports with the normalization in relation to the imports in the group of reference countries. In case RCA index values for import are higher than 1 when the country *i* imports more from a product *j* than the group of reference countries.

Another indicator that measures the comparative advantage/ disadvantage of a country is Herfindahl - Hirschmann concentration index which is calculated as follows:

$$H_i = \frac{\sqrt{\sum_{i=1}^{n}\left(\frac{x_i}{X}\right)^2} - \sqrt{\frac{1}{n}}}{1-\sqrt{\frac{1}{n}}}$$

where, *Hj* – is the Herfindahl – Hirschmann index; *Xi* is the value of exports for *i* products; *X* – total value of exports; *n* – number of products.

According to the values recorded, the following situations might occur: a) a value of the Herfindahl - Hirschmann index comprised between 0 and 0.15 points out a diversification of exports; b) a value of the index between 0.15 and 0.25 indicates moderate diversification; c) a higher value than 0.25 shows high diversification.

III. Current tendencies in international trade

When we refer to the degree of development of foreign trade, we have in view both the export per capita and the level of import. The figure below shows values recorded by world exports of goods between 2005-2012 for several regions such as Europe, Asia, North America, the Commonwealth of Independent States (CIS), Africa, Middle East and Centran and South America.

At the level of 2005, the highest percentage of exports per destinations could be encountered in Europe, i.e. 73.5%, followed by 8.9% in North America and 7.5% in Asia.

Of all the regions analysed, at the level of 2012, Europe is still at the top as far as export per destination is concerned, with a percentage of 4.2 points lower than in 2005. Asia and North America recorded an increase between 2.2 and 2.5 percentage points as compared to the previous period.

The remaining regions, i.e. the Commonwealth of Independent States (CIS), Africa, Middle East and Central and South America make together 11.8% of the world exports of goods – Figure 1, figure 2

At EU level, 68.6% of exports are directed to countries in the region, 10% to Asia, 7.7% to North America, 3.5% to CSI, 3.3% to Africa and Middle East and 1.9% to Central and South America.

According to the report published by World Trade Organization, the region with the higher volume of imported goods for 2005 was Europe with 35.9%, closely followed by Asia with 31.8%, North America with 17.6 %, Central and South America with 4.1%, Middle East with 4.1%, Africa with 3.4% and CSI with 3.1%.

Unlike the previous period, 2012 was marked by massive imports of goods. The most significant decrease was recorded in Central and South America, where the value of imports diminished by 13% as compared to the previous year. Worldwide, the total amount of imports dropped by approximately 40% as compared to 2011.

III.1 Values of the comparative advantage index at EU level

The table below shows the values of the comparative advantage index for a number of ten European countries such as Romania, Bulgaria, The

Czech Republic, France, Germany, Hungary, Italy, Poland, Sweden and Great Britain, as well as the average value at EU-27 level.

As can be noticed from the table above, countries such as Romania and Sweden are the least competitive with respect to food production, recording a value of the comparative advantage index of 0.49. Poland is ranked the first with respect to food production and its penetration on the market, its index value being 1.46. As a result, it has a stronger comparative advantage for this product as compared to the rest of reference countries. As far as the textile, clothing, leather and shoes industry is concerned, our country records high values of comparative advantage index.

However, this does not hold true for the pharmaceutical industry, non-metallic ores and metal products, machinery and devices, not to mention other transportation means where we record much more reduced values. In rubber, plastic and cars we rank first.

For instance, in rubber, plastic and cars we are the third after Poland (1.85) and The Czech Republic (1.67) in the first case and after The Czech Republic (2.00) and Germany (1.91), in the second. We have the highest values of comparative advantage index for tobacco, wood and wood products, higher than Poland, Germany or Sweden.

The table 1,2,3 shows the values of the comparative advantage index for services recorded by the same EU countries, as well as the average of the 27 member states. When we refer to services, we consider the following: telecommunications and information technology, constructions, finance, insurance and pension, business services, personal and cultural services, transport and travels.

Of the values recorded by the comparative advantage index for the countries analysed, Romania is among the first ranked for telecommunication services, information technology and transport. As far as insurance and pension are concerned, we are way below the European average, the latter service ranking last.

Even if the values recorded by the service are not very high, Romania's development potential is a significant one, its strong points being posited strategically on areas with a major impact on GDP evolution.

Conclusions

Nowadays, against the background of globalization and a prolonged crisis of world economy, the role of foreign trade, as determining factor of economic growth and development tends to be increasingly important. Within foreign trade, (see Chilian M.N, 2011), the identification of comparative and competitive advantages or disadvantages involved is important because: (a) this is how external competitiveness is appreciated in the peculiar context of a unique European market and the specific one of EU member states; (b) brings to the fore information on the specialization of sectors/ national industries and ensures the adjustment of their production to what is demanded on the unique European market characterised by competition and a higher and higher degree of sophistication of consumers' demands; (c) signals adaptation/ adaptability problems of problems pertaining to economic sectors in changing the conditions of the general economic environment; (d) gives an image on the integration of companies to production structures and European value chains.

As can be noticed from the analysis we conducted, Romania is a less competitive country when it comes to food production, the pharmaceutical industry, non-metal ores, and metal products, machinery and devices and other transportation means. In rubber and plastic, tobacco, cars, equipment, wood and wood products, we rank among the first. For instance, in rubber, plastic and cars, we come third after Poland (1.85) and The Czech Republic (1.67) in the former case and after The Czech Republic (2.00) and Germany (1.91) in the latter. The highest values of the comparative advantage index are for tobacco, wood and wood products thanks to which we rank before countries such as Poland, Germany and Sweden.

As far as services are concerned, we are on top due to telecommunication services, information technology and transport. With respect to insurance and pensions, we are much below the European average, the latter service being ranked the last of all EU countries. Even if the values recorded in the service are not very high, Romania's development potential is a significant one, the strong points being posited strategically, on areas with a major impact on the evolution of GDP.

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APPENDIX

Table 1. Values of the comparative advantage index per product groups

Product	RO	BG	CZ	FR	GE	HU	IT	PL	SE	UK	EU27
Foods	**0,49**	1,31	0,44	1,18	0,74	0,85	0,87	1,46	0,49	0,67	1,06
Drinks	**0,28**	0,81	0,57	4,63	0,65	0,40	2,30	0,45	0,84	3,99	1,72
Tobacco	**5,73**	4,94	1,57	0,59	2,05	0,62	0,03	4,79	0,28	0,60	1,72
Textiles	**1,04**	1,14	0,88	0,54	0,53	0,35	1,35	0,60	0,29	0,50	0,66
Clothes	**2,18**	2,87	0,31	0,70	0,50	0,27	1,58	0,71	0,36	0,63	0,75
Leather products and shoes	**2,40**	1,18	0,46	1,18	0,39	0,50	3,09	0,41	0,21	0,48	0,91
Wood and wood products	**4,18**	1,63	1,42	0,63	0,81	0,74	0,53	2,33	3,54	0,18	1,15
Paper	**0,31**	0,76	0,94	1,03	1,20	0,88	1,03	1,66	5,49	0,66	1,34
Printed products	**1,90**	0,22	1,74	1,80	2,49	0,08	0,98	0,54	0,22	1,88	1,87
Oil refinement	**0,85**	1,55	0,20	0,51	0,21	0,42	0,70	0,59	1,06	1,27	0,78
Chemical products	**0,53**	0,55	0,53	1,30	1,00	0,58	0,70	0,76	0,67	1,17	1,13
Pharmaceuticals	**0,47**	0,90	0,32	1,70	1,34	1,11	1,10	0,32	1,37	2,51	1,62
Rubber and plastic	**1,61**	0,92	1,67	1,10	1,29	1,44	1,35	1,85	0,85	0,92	1,19
Non-metallic ores	**0,54**	2,20	1,63	0,99	1,02	1,18	1,90	1,61	0,60	0,72	1,13
Raw metal	**0,98**	2,83	0,64	0,75	0,76	0,33	1,09	0,92	1,11	0,80	0,86
Metal products	**1,12**	0,86	0,90	0,90	1,31	0,80	1,68	1,79	1,11	0,73	1,20
Computers, electronics	**0,61**	0,27	1,11	0,48	0,58	1,68	0,23	0,60	0,82	0,65	0,58
Electric equipment	**1,48**	1,11	1,66	0,88	1,22	1,89	1,05	1,35	1,01	0,72	0,99
Machinery and devices	**0,77**	0,93	1,16	0,87	1,60	0,86	1,82	0,57	1,25	1,11	1,18
Cars	**1,82**	0,36	2,00	1,15	1,91	1,78	0,73	1,64	1,34	1,30	1,32
Other transportation means	**0,91**	0,24	0,39	3,97	1,30	0,17	0,75	1,29	0,31	1,61	1,15
Equipment	**3,61**	1,31	1,52	0,52	0,85	1,00	2,38	5,03	1,55	0.42	1,15
Other products	**0,23**	0,35	0,73	0,76	0,57	0,27	0,95	0,27	0,43	1,01	0,72

Source: World Trade Organization, Statistiques du commerce international, 2013, available on http://www.wto.org/french/res_f/statis_f/its2013_f/its2013_f.pdf

Table 2. Values of comparative advantage index for the service sector

SERVICES	RO	BG	CZ	FR	GE	HU	IT	PL	SE	UK	UE27
Telecommunications and information technology	**1.35**	0,89	0,90	0,47	0,78	0,66	0,79	0,68	1,51	0,76	1,11
Constructions	**1,53**	0,42	1,44	1,81	1,85	0,76	0,05	1,70	0,54	0,35	0,75
Finance	**0.30**	0.20	0.07	0.59	1,04	0,16	0.47	0,24	0.44	4.16	1.28
Insurance and pension	**0.56**	0.98	0.64	1.32	1,17	0.08	1,16	0.57	0.72	3,16	1,19
Business services	**1,00**	0,52	1,23	1,23	1,19	1,08	1,29	1,28	1,39	1,52	1,13
Personal and cultural services	**0.86**	0.74	0.89	1.67	0.33	5.64	0.25	1.18	0.75	1,14	1.10
Transport	**1,20**	0,97	1,08	1,00	1,08	0,96	0,67	1,35	0,81	0,58	1,06
Travels	**0.44**	2.00	1.21	0.97	0.53	0.92	1.52	1.06	0.78	0.45	0.88

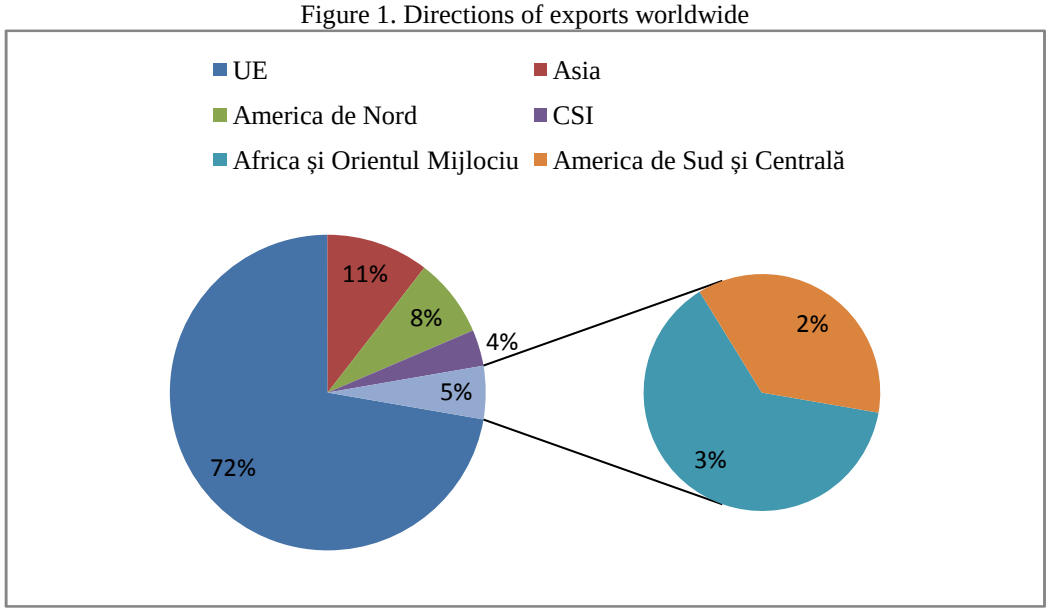
Source: World Trade Organization, Statistiques du commerce international, 2013, available on http://www.wto.org/french/res_f/statis_f/its2013_f/its2013_f.pdf

Table 3. Values of the revealed comparative advantage index per groups of products for other European countries: Spain, Italy and The Netherlands

Industry	Spain	Italy	The Netherlands
Foods	1.08	0.95	1.19
Textile	1.14	1.16	0.88
Wood	1.1	1.15	1.02
Paper	0.97	0.98	1.01
Chemical	1.01	0.95	1.19
Plastic products	1.01	0.92	1.08
Mineral products	1.09	1.03	1.06
Metal products	1.02	1.1	0.97
Machinery and equipment	0.94	1.09	1
Machinery and electric equipment	0.9	0.95	0.99
Transport equipment	0.97	1.01	0.96
Other	0.94	0.9	0.89

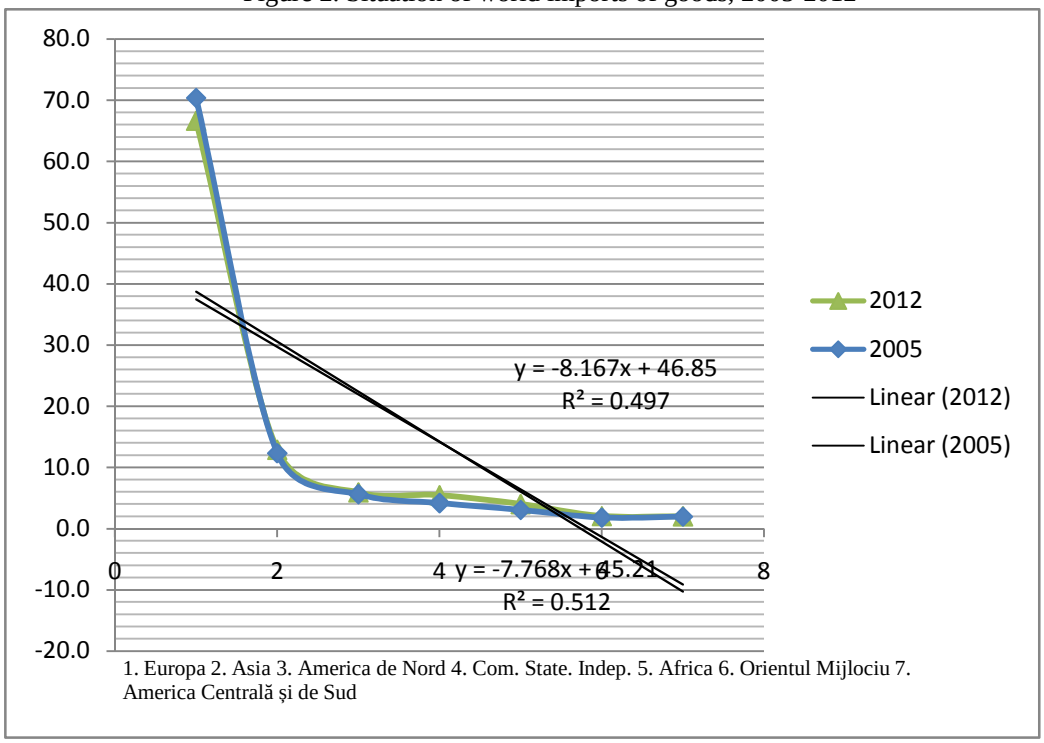
Source: CEPII

Figure 1. Directions of exports worldwide



Source: CEPII

Figure 2. Situation of world imports of goods, 2005-2012



Source: WTO, Statistiques du commerce international, 2013