CHANGES IN THE PATTERN OF ROMANIA'S FOREIGN TRADE UNDER THE GLOBAL CRISIS IMPACT*

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***Abstract**. The pattern of international trade flows has witnessed significant changes under the global crisis impact. In the case of Romania, paradoxically for an emerging country, in terms of product composition during 2007-2010, the share of capital goods decreased in total imports and increased in total exports, while the share of intermediate goods recorded an opposite development. In terms of competitiveness, no evidence of significant changes has been found, the most important export chapters having comparative advantages related to processing trade operations. The lack of an export strategy and of appropriate policies able to sustain Romanian exporters on foreign markets, mainly extra-EU, has become obvious.*

Keywords: Global Crisis; International Trade; International Competitiveness; Processing Trade; Export Strategy

JEL Classification: F10, F15, F40, G01, G28

1. Introduction

The financial crisis triggered in the autumn of 2008 in the U.S. which has taken an unprecedented scale since the Great Depression of the 1930s, due to its rapid contagion effects in time and space, has escalated in an economic crisis that has spread globally. The state of uncertainty in global financial system developments and the fluctuations in capital markets (shares, derivatives and currencies) fueled sudden and chaotic movements of cross-border capital, in

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many cases speculative, which caused, among others, a high volatility of exchange rates between currencies, with effects on international prices, mainly of energy, raw materials and basic foodstuffs, affecting in this way too the world trade and hence the global economy.

Despite huge efforts, at least apparently, both at national and international levels, including organizations as IMF, World Bank, EU and various groups of states (G 8, G 20) the expected corrections to the global financial system in order to eradicate the causes that generated the crisis were not made. The world remained exposed to the risk of suffering another shock, whose costs, given the high public debt, we think could not be covered any more by governments and/or financial institutions, throwing into chaos the global economy, including the international trade.

The financial crises (including currency crisis) affect the international trade on medium and long term, the effects persistence being determined by the impact on companies' balance sheets and by the specialization degree of the countries concerned, especially in industries which depend on external financing and have high fixed operating costs. The survey of existing data bases led Berman (2009, p. 37) to the conclusion that, by the changes in the pattern of exports and of trading partners, the financial and currency crises can affect the parameters of comparative advantages, with implications for economic policies and post-crisis recovery.

At a conference which focused on the impact of financial crisis on trade and investments, experts of Bruegel (2009, p. 18) stated that a vicious circle has occurred, mainly due to the acceleration of globalization, as follows:

Contraction of Exports → Domestic Demand → Imports → Reduction of Exports

In our opinion, the vicious circle of the financial crisis-external trade interaction has been manifested also as effects of trade deficits accumulation on the current account balance and on international investment position of certain countries, including on its foreign exchange reserves, inducing the risk of degeneration in a currency and even a sovereign debt crisis.

The ways and channels of the global crisis effects transmission on international trade pattern are manifold, in a globalized context. However, while trade imbalance importance in triggering the financial crisis is generally recognized, in terms of their effects transmitted through international trade channels the things are far from being clear.

The trend of higher increase in international trade of intermediate goods aimed to minimize production costs (through their processing in other geographical areas) and to make competitiveness gains have two major effects at statistical level, challenging the entire framework of macroeconomic parameters which, in their current format, reflects an image of an economic phenomena (called also global production fragmentation) increasingly more difficult to explain.

On the one hand, there is a growing distortion in the international trade-economic growth relation, the flows of goods being recorded on a gross value basis while the assessment of GDP is on a value added basis, excluding intermediate goods, which, as shown also in a report of WTO (2009, p. 3), make much less relevant the measurement of the foreign trade elasticity to the GDP growth or the degree of economy openness (exports + imports / GDP). On the other hand, the repeated cross-border transfers of intermediate goods and their double or triple registration by the customs authorities and national statistics, according to the current standards of processing active/passive operations, artificially increases the volume of international trade, which is reflected, through the trade balance distortions, on the configuration of the current account balance of payments.

Pascal Lami himself, the Director General of WTO and ex-EU Trade Commissioner, on the occasion of launching in mid 2011 a joint analysis undertaken by the WTO - IDE - JETRO on recent changes in the international trade flows, with emphasis on the Asian area, recognized that, given the growing impact of intermediate goods that are transferred from one economy to another before transforming into final products subject to international transactions, the foreign trade data are no longer relevant. Consequently, he said, in the context of re-defining the nature of international trade, conceptual and statistical changes are necessary, launching a broad debate at global scale (under the name Made in the World initiative) aiming at measuring the value added in international trade, by developing a world input-output database (see Escaith and Inomata, 2011).

We believe that, without being sure of the concrete results of such an approach, the WTO initiative started on a wrong way, from the viewpoint of an appropriate accounting of international trade flows. In our opinion, the first stage of trying to eliminate/reduce the distortions in recording the foreign trade transactions should have been the submission to the WTO, from the part of all member countries, of the export and import data on custom regimes.

A second phase of the approach should consist in recording and publishing, at national and global level, the two sets of data related to the international trade, i.e. that of final products and that of intermediate goods for processing (goods that do not change ownership). At this stage, a more analytical evaluation of the processing under the final import regime, i.e. related to FDI inflows and to transfer pricing could be undertaken.

A third stage approach may correlate the assessment of the implications for GDP - including the net exports contribution - with the efforts of other organizations or groups of experts (OECD, the Commission for the Measurement of Economic Performance and Social Progress led by Amartya Sen, Joseph Stiglitz and Jean-Paul Fitoussi) involved in correcting the macroeconomic parameters.

A fourth stage may focus on assessing the financial implications at national and planetary level, that is the separation of transactions related to the transfers of intermediate goods under processing regime (non-financial flows, except fees paid for processing operations according to the contract) from those of classic commercial transactions (implying financial flows) and the correction of records in the current account balance of payments, in order to reflect the real flows of financial receipts and payments.

We believe that the key issue of correcting the statistical data on international trade lies not, as appreciate the experts of WTO, in the measurement of the value added along the international supply chains which is likely prove illusory, but in identifying the appropriate ways of separating intermediate goods flows from those of final products flows, and the goods and services flows from those of financial flows.

In the absence of accurate statistical records and interpretation of foreign trade flows, both nationally and globally, which alters also the relevance of key macroeconomic indicators (including GDP and all related indicators) the decision makers are not unable to conduct appropriate management policies or, worse, their decisions based on the current picture of the macroeconomic framework, completely distorted, are likely to lead to wrong actions, which, under crisis conditions, could create huge additional economic and social costs.

Consequently, one can say that not only the global economy faced a crisis, but also the global statistics, the latter preceding it in fact, and inducing confusion by the misinterpretation of various data and information, many arising from accelerating the globalization and the international trade flows, which have generated mitigation actions in obvious contradiction with the crisis effects.

This state of facts has not been perceived by the experts of international financial organizations (especially the IMF, World Bank, WTO) or by the academic world representatives (Nobel Prize winners for economics), who continued to recommend remedies based on misdiagnosis or policies resulted from econometric models outside reality.

2. Romania's foreign trade under the impact of economic and financial crisis

2.1. The evolution of exports, imports and trade balance

Contrary to Romanian authorities' expectations at that time, due to failure to perceive the vulnerabilities of the national economy and the real developments of the global economy, the financial crisis triggered in the autumn of 2008 has spread to the EU countries, including Romania, the primary effects of contagion being felt through foreign trade channels. Thus, in November 2008, Romania's exports decreased by 8.5% (for the first time after many months of continuous growth) compared with the same month of 2007, and in December 2008 even registering a fall by 16.1% compared with the same month of the previous year. Romania's imports also contracted, more drastically, in November 2008 by 17.1% and in December 2008 by 25.2% compared with the same months of the previous year (see Table 1). This trend maintained almost in the whole year 2009, sometimes with decreases of 25% (the case of exports in February), their recovery occurring only at the end of the year, but considering also the low base effect.

Table 1. Exports and imports of Romania in the last months of 2008 compared to the same period of 2007 - euro billion

	November			December		
	2007	**2008**	**%**	**2007**	**2008**	**%**
Exports (FOB)	2786.1	2550.4	91.5	2290.8	1923.4	83.9
Imports (CIF)	5081.9	4252.5	82.9	4509.4	3373.8	74.8

Source: Press releases by the Romanian National Institute of Statistics.

Noting that the monthly sinuous evolution of exports and imports, with a more drastic fall in the latter, impacted the international trade of Romania at yearly levels during the period 2007-2011, the examination of data (see Table 2) showing that, after a fall by nearly 14% in exports in 2009 compared to 2008, in 2010 and 2011 they have recovered (increasing by 28% and 20.5%, respectively compared to previous years), even above the level reached in 2008. At the same time, imports, after a contraction of about 32% in 2009, rose by nearly 20% in 2010 and by 16.7% in 2011 compared to previous years, but remaining below the levels achieved in 2008.

Table 2. Exports, imports and trade balance of Romania in 2007, 2008, 2009, 2010 and 2011

		2007	2008	2009	2010	2011
Exports (FOB)	euro billion	29549.0	33724.6	29084.2	37367.8	45016.8
Exports index*	%	100.0	114.1	86.2	128.1	120.5
Imports (CIF)	euro billion	51322.0	57240.3	38953.2	46901.7	54739.0
Imports index*	%	100.0	111.5	68.1	119.9	116.7
Trade balance	euro billion	-21773.0	-23515.7	-9869.0	-9533.9	-9722.2

* previous year=100

Source: Press releases of Romanian National Institute of Statistics.

The differences between the rates of exports (growing over the considered period) and imports (declining over the considered period) led to a drastic reduction in the trade deficit in 2009, 2010 and 2011, i.e. to less than half of that recorded in 2007 and 2008.

It is worth mentioning that, regardless of external factors, namely the global crisis effects on the international trade contraction, mainly in the EU, the Romanian imports have suffered also a corrective impact of their high growth during 2007 - 2008, fueled by an excessive domestic demand driven by the expansion of consumer credit and housing market. Therefore, the trade deficit contraction in Romania's post-crisis period does not mean an adjustment following a real improvement of production structures or of export competitiveness, but rather a correction imposed by the unsustainable path of economic growth in pre-crisis years.

In our opinion, as long as the vector of exports is under the decisive contribution of foreign companies operating in Romania (many under the processing regime) their possible decision to removing activities looking for new opportunities in the global economic area, is likely to create other vulnerabilities, maintaining the dependency of our economy on imports, perpetuating the trade deficits to the extent of economic growth, with adverse effects on future configuration of the current account balance and of the country indebtedness degree.

In terms of short and medium term prospects, it should be noted that the global economy recovery in 2010 appeared to be unsustainable, in the late 2011 and in 2012 occurring the spectrum of a new recession, which affects more the advanced countries, mainly of Euro Area, while the outlook for sovereign risk in some larger economies has worsened. The costs of the European banking system bailout and of programs to stimulate the economic growth have burdened the public debt, many Euro Area countries encountering difficulties in financing/refinancing of debt (Greece, Ireland and Portugal having to ask rescue financing packages to IMF-EU) and adopting severe austerity budgets and measures to address deep-seated structural weaknesses. In December 2011, more than two thirds of the Eurozone countries' sovereign debt had CDS spreads of over 200 basis points. The European emerging economies, including Romania could be severely affected by spillovers from the Eurozone sovereign debt crisis through several channels, i.e. trade channels, credit channels, local asset markets, business climate and investors appetite, the contagion effects implying also higher costs of government loans and of deficits financing (see IMF, 2012).

Although Romania's exports continued to increase in 2011 (at average monthly rates of 20-25% in the first 8 months), reaching 45 billion euro over the whole year, in the last months of the year there was a slowdown of growth (December witnessed even a decrease in exports compared to the same month of the previous year), which, in the context of the deterioration of the Euro Area prospects led to a contraction of the external demand in 2012. It should be noted that Romania's imports continued a moderate growth in 2011, at lower rates than exports, the trade deficit remaining at the same levels as in 2009 and 2010 (i.e. bellow 10 billion euro).

2.2. Structural changes in the foreign trade of Romania

2.2.1 Geographical orientation

Romania's accession to the EU, mentioning that the amplification of trade exchanges started long before accession in 2007 - through the Interim Agreement in this area since 1993 – led to an increased share of EU in total exports and imports of our country to more than 70%.

This high degree of trade integration and concentration, favored also by the inflow of foreign direct investments from EU states, became obvious, unfortunately as adverse effect, by the sudden transmission of the crisis impact in Romania through foreign trade channels.

From the data presented in Table 3 it results that the decrease in Romanian exports registered in 2009 (of approximately 3.6 billion euro) was mainly located on the Intra-EU trade side (about 2.1 billion euro) but also on Extra-EU countries (about 1.5 billion euro) which led to the increase of the EU share in total exports of Romania to 74.3% in 2009 compared to 70.5% in 2008.

It is worth mentioning that the most significant decreases in Intra-EU exports of Romania in 2009 compared to 2008 registered in relation to Italy (0.8 billion euro), and with some countries of Central and Eastern Europe: Hungary (0.5 billion euro) and Bulgaria (0.3 billion euro). The exports to France and Germany, two of the most important trade partners of Romania, have not witnessed significant declines. Among non-EU countries, the Romanian exports to Turkey recorded the largest decline (0.8 billion euro).

Table 3. Exports, imports and trade balance of Romania intra-EU and extra-EU in 2007, 2008, 2009, 2010 and 2011 - euro billion

	2007	2008	2009	2010	2011
Total exports	29549.0	33724.6	29084.2	37367.8	45016.8
Total (%)	100.0	100.0	100.0	100.0	100.0
Intra-EU exports	21269.1	23764.6	21600.4	26952.9	32006.7
share in total exports (%)	72.0	70.5	74.3	72.1	71.1
Extra-EU exports	8279.9	9960.0	7483.8	10414.9	13010.1
share in total exports (%)	28.0	29.5	25.7	27.9	28.9
Total imports	51322.0	57240.3	38953.2	46901.7	54739.0
Total (%)	100.0	100.0	100.0	100.0	100.0
Intra-EU imports	36586.9	39838.1	28471.7	33992.1	39741.5
share in total imports (%)	71.3	69.6	73.1	72.4	72.6
Extra-EU imports	14735.1	17402.2	10481.5	12909.6	14997.5
share in total imports (%)	28.7	30.4	26.9	27.6	27.4
Trade balance	-21773.0	-23515.7	-9869.0	-9533.9	-9722.2
Total (%)	100.0	100.0	100.0	100.0	100.0
Intra-EU	-15317.8	-16073.5	-6871.3	-7039.2	-7734.8
share in total trade balance (%)	70.4	68.4	69.6	73.8	79.6
Extra-EU	-6455.2	-7442.2	-2997.7	-2494.7	-1987.4
share in total trade balance (%)	29.6	31.6	30.4	26.2	20.4

Source: Press releases of Romanian National Institute of Statistics.

The recovery of exports in 2010 (an increase of about 8.2 billion euro) compared to 2009 was due to both Intra-EU side (about 5.3 billion euro), as well as the Extra-EU side (about 2.9 billion euro), the latter share in total Romanian exports slightly increasing, i.e. to about 28% compared with 25.7% in 2009.

It is worth mentioning that the most significant increase in exports in 2010 was registered in the relation with Germany, the main trading partner of Romania (6.7 billion euro compared to 5.4 billion euro in 2009), but the exports under processing regime having an important share (especially auto spare parts).

Significant increases in Romania's Intra-EU exports have been recorded to France and Italy (by 0.7 billion euro each) and to Hungary (0.5 billion euro). Among non-EU countries, increases in Romania's exports were registered to Turkey (1.1 billion euro) and Russia (over 0.3 billion euro).

As regards imports, it is to note that their sharp drop in 2009 (by about 18.3 billion euro, compared with 2008) was due to the intra-EU countries (about 11.3 billion euro), but also to the Extra-EU countries (about 7 billion euro), which led, as in the case of exports, to the increase of the EU share in total imports of Romania to 73.1% in 2009 vs. 69.6% in 2008. It is worth mentioning that the most significant decreases in Romania's Intra-EU imports in 2009 were recorded from Germany (2.7 billion euro), Italy (2 billion euro), Austria and Hungary (1 billion euro each), France (0.8 billion euro), the Netherlands (0.6 billion euro), the Czech Republic and Poland (0.5 billion euro each).

As regards Romania's Intra-EU imports, major decreases were registered from Russia (1.8 billion euro), Kazakhstan and Turkey (1.2 billion euro each), China (0.5 billion euro). The increase in imports in 2010 (by 7.8 billion euro, of which 5.4 billion euro from the EU member states and 2.4 billion euro from non-EU countries) did not lead to significant changes in weight of the two categories of countries in the total of Romanian imports. The most significant increases in imports in 2010 compared to 2009 were registered from Germany (1.1 billion euro), Italy (0.9 billion euro) and Hungary (0.8 billion euro), respectively from China (0.7 billion euro) and Russia (0.5 billion euro).

2.2.2 Main products

In terms of exports by main products according to the broad classification group of the National Accounts System, as seen from the data presented in Table 4, the share of capital goods in total exports of Romania increased from 9.9% in 2007 to almost 15% in 2010, while the share of consumer goods fell from 24.6% to 21.6% during the same period. A significant decrease was recorded by the share of intermediate goods, i.e. from 59% in 2007 to 52.5% in 2009, followed by a slight recovery in 2010, to 55.8% respectively.

Table 4. Romania's exports and imports breakdown by broad classification group in 2007, 2008, 2009 and 2010, %

	2007	2008	2009	2010
Total exports, of which:	100.0	100.0	100.0	100.0
Capital goods	9.9	11.7	15.2	14.8
Intermediate goods	59.0	60.0	52.5	55.8
Consumer goods	24.6	21.1	23.6	21.6
Other goods n.e.c.	6.5	7.2	8.7	7.8
Total imports, out of which:	100.0	100.0	100.0	100.0
Capital goods	18.8	18.1	15.9	15.0
Intermediate goods	58.6	59.6	61.2	64.3
Consumer goods	16.2	17.1	20,5	18.3
Other goods n.e.c.	6.4	5.2	2.4	2.4

Source: Monthly Statistical Bulletin of International Trade no.12, years 2007, 2008, 2009, 2010, Romanian National Institute of Statistics.

As regards imports, it is worth mentioning that the share of capital goods in total imports decreased from 18.8% in 2007 to 15% in 2010, while the share of consumer goods increased from 16.2% to over 20% in 2009, followed by a decrease in 2010, respectively to 18.3%, considering also that the value of imports was below the 2007 level. In accordance with relevant changes in the breakdown of exports by broad classification group, the share of intermediate goods in total imports increased from 58.6% in 2007 to 64.3% in 2010.

Seeking a more analytical approach, on main groups of products, as it results from the data presented in Table 5, the share in total exports of raw materials and of products with a lower degree of processing (the food, beverages, tobacco Group and the mineral fuels, lubricants Group) decreased from about 20% in 2008 to about 18.5% in 2010. Accordingly, the share of the same products in total imports registered a similar trend, i.e. decreasing from 22.4% in 2008 to 20.6% in 2010. The two trends in the same sense, in the absence of major structural changes in the Romanian economy that could have explained them, seemed to be in contradiction, only the oscillatory evolution of international prices of these products in 2008-2010 having probably the decisive influence, despite the constraints in global demand due to global crisis effects.

Table 5. Romania's exports and imports breakdown on products group in 2008, 2009 and 2010, %

Products group	Exports			Imports		
	2008	**2009**	**2010**	**2008**	**2009**	**2010**
Total, of which:	100.0	100.0	100.0	100.0	100.0	100.0
Food, beverages, tobacco	4.7	6.0	6.3	6.7	8.6	7.0
Raw materials	6.0	5.9	6.9	3.1	2.8	3.5
Mineral fuels, lubricants	9.1	6.0	5.3	12.6	9.4	10.1
Chemical products	6.0	5.1	5.8	10.9	14.0	13.2
Machinery and transport equipment	36.2	42.8	42.4	35,8	33.8	35.3
Other manufactures*	38.0	34.2	33.3	30.9	31.4	30.9

* Manufactured products classified by raw materials (iron, steel, rubber, metals, etc.) and other manufactured products as garment and accessories, footwear, etc.).

Source: Monthly Statistical Bulletin of International Trade no. 12 for the years 2008, 2009, 2010, Romanian National Institute of Statistics.

In the case of exports, as regards the products with a relatively higher degree of processing, i.e. machinery and transport equipment, an increased share from 36.2% in 2008 to over 42% was recorded in both years 2009 and 2010, while the share of other manufactures declined to the same extent, i.e. from 38% to 33.3%.

On the imports side, it is worth mentioning that the share of machinery and transport equipment and that of other manufactures remained relatively constant, around 35% and 31%, respectively, with the same observation regarding the decrease in the value of imports below the level of 2007.

At this stage of the analysis one cannot reveal the real changes in Romania's international trade patterns or the factors that contributed to these developments, the need to examine the structure of exports at more disaggregated levels becoming obvious. Thus, the structure of exports and imports by selected activity group classification (CPA) in 2008-2010 indicate some significant changes (see Table 6).

Table 6. Romania's exports and imports breakdown by selected activity group classification (CPA) in 2008, 2009 and 2010, %

	Exports			Imports		
	2008	2009	2010	2008	2009	2010
Total	92.6	93.0	92.9	91.6	92.5	92.7
Products of agriculture and hunting	4.1	4.5	4.9	2.2	2.7	2.6
Crude oil and natural gas*	…	…	…	9.3	7.0	6.7
Food products*	1.3	1.8	2.3	4.8	6.4	5.4
Textile products	1.8	2.2	2.0	4.2	4.9	4.7
Wearing apparel, furs	8.4	7.7	6.3	1.5	1.8	1.5
Leather and leather products	3.2	3.5	3.2	1.7	2.2	2.2
Wood and wood products (except furniture)	2.8	3.2	3.2	1.0	0.9	0.8
Coke and refined petroleum products	9,0	5.5	4.8	2.5	2.1	3.1
Chemical products*	5.5	3.6	4.0	6.3	8.1	7.8
Pharmaceutical products*	0.5	1.3	1.6	3.2	5.0	4.5
Rubber and plastic products*	3.4	3.9	4.2	4.2	4.8	4.8
Basic metals*	9.2	5.5	6.9	7.8	5.7	6.5
Fabricated metal products*	3.3	2.8	2.9	4.5	4.9	4.7
Computers, electronic and optic products*	5.2	8.2	9,5	8.0	9.6	10.7
Electrical equipments*	7.2	7.2	7.4	6.3	7.6	8.3
Other machinery and equipments*	7.6	7.4	7.1	10.6	10.0	9.5
Motor vehicles and trailers	12.8	16.2	16.3	11.6	7.1	7.4
Other transport equipment	4.0	5.1	3.5	1.0	0.9	0.9
Furniture	3.3	3.4	2.8	0.9	0.8	0.6

* Products with the trade balance in deficit.

Source: The Yearbook of International Trade of Romania 2011, Romanian National Institute of Statistics, pp. 36-37.

The most important chapter of Romania's exports became the road motor vehicles (mainly Dacia), which held 16.2% of total exports in 2010 compared with 12.8% in 2008. In value terms, the exports of these products increased by almost 1.5 billion euro in 2010 compared to 2009, contributing by nearly 20% to the total export growth in this period. We believe that the success story of Dacia (the models Logan and more recently Duster) revealed by the increase in sales from about 250,000 units in 2008 to over 270,000 units in 2009 and over 310,000 units in 2010, most on Western European markets (especially France and Germany!) is due also to the global crisis effects on the purchasing power of European consumers, diverted to lower priced products.

Other products that have recorded significant increases in the share of exports are computers, electronic and optical products, from about 5% of total exports in 2008 to almost 10% in 2010, with the mention that the processing regime held a large part of the sector (especially the assembly of mobile devices by Nokia corporation since 2008; however, at the end of 2011, it re-located the production from Romania to Asia).

It is noteworthy that the top of Romania's exporters was dominated by Automobile Dacia, Nokia Romania, Renault Industrie Roumanie, Samsung Electronics, Honeywell Technologies, OMV Petrom, Petrotel Lukoil, Rompetrol Refining, Arcelor Mittal, Alro.

Significant reductions in export shares in the considered period were recorded by coke and refined petroleum products (over 5 percentage points), the wearing apparel and metal products (by over 2 percentage points).

Regarding the structure of imports, it is worth mentioning that in 2010, although declining, the share of oil and natural gas (7%) is maintained at high levels (6.7% in 2010 as compared to 9.3% in 2008), and also the food products (more than 5%). In 2010, computers, electronic and optical products have had the most significant share (10.7% of total imports compared with 8% in 2008), which can be explained largely by the increase in the components assembled in Romania under a processing regime. Electrical equipment also increased share in total imports, from 6.3% in 2008 to 8.3% respectively in 2010. A severe drop in imports, somehow expected as correction due to excessive growth in the previous period, was registered by the road motor vehicles, from 6.7 billion euro in 2008 to 2.7 billion euro in 2009 respectively, followed by a moderate growth in 2010 to 3.5 billion euro. Accordingly, their share decreased from 11.4% in 2008 to 7.1% in 2009, increasing slightly in 2010 to 7.4%.

In the absence of official data on the actual size of Inward Processing Trade operations, overall and by product, we think that Romania's foreign trade data witnesses a high degree of distortion, due to the overlapping of the two distinct categories: direct Romanian exports to external partners and imported/exported intermediate goods flows on the account and in the name of foreign companies under a processing regime (goods that do not change ownership). Hence one cannot say that Romania's international trade pattern suffered major changes in recent years, including as a result of the global crisis effects, the slight improvements within exports, if not apparent, being rather the result of foreign investments, which determines, in fact, their volume and structure. According to statistical researches (NBR, 2011, p. 6) almost three quarters of Romania's total exports in 2010 were provided by direct investment enterprises (with at least 10% foreign capital) operating in our country.

Further, we try to reveal whether these structural changes indicate also an increase in competitiveness of Romania's export products or at least our country is placed on a positive trend in this regard.

3. Romania's export competitiveness indicators

An indicator that can provide reliable information on a country's competitiveness is the Real Effective Exchange Rate (REER), especially in the context of EU membership. According to Eurostat calculations (see Table 7) the competitiveness of Romania is well below the EU (27) average, the increase of the REER index revealing also an almost continuous deterioration over the last decade, with a slight improvement in 2009 and 2010.

Table 7. The Real Effective Exchange Rate (REER) of Romania compared to EU(27)

1999 = 100

	2006	2007	2008	2009	2010
European Union(27)	115.08	121.69	123.37	118.83	110.32
Romania	159.74	190.75	206.00	172.20	171.43

Source: EUROSTAT.

It is worth mentioning that the most competitive economies in the EU, with a favorable trend in the REER indicator (almost constant below 100 throughout the period 2000-2010) are Germany, Austria, Sweden and the United Kingdom.

Another indicator of export competitiveness is the Revealed Comparative Advantage (RCA), which reflects, theoretically, the sectors or products the country is specialized in and, presumably, more efficient.

The formula used to estimate the RCA is as follows:

$$\mathrm{RCA}_i = \frac{XiR \,/\, \Sigma\, XiR}{XiUE \,/\, \Sigma\, XiUE} \qquad (1)$$

where:

XiR / Σ XiR is the share of exports of section i in total exports of Romania

XiUE / Σ XiUE is the share of exports of section i in total exports of EU

The RCA indicator for Romania calculated in relation to the EU (27) by products sections based on UN Comtrade data (see Table 8) reveals comparative advantages for our country in exports of minerals, vegetables and animal raw materials, as well as those of products with a low degree of processing (semi-manufactured goods such as leather, wood, textiles, metals, etc.) and medium degree (manufactures such as sanitary plumbing, furniture, clothing, footwear, etc.), the latter in a slight decrease in 2009 and 2010.

Table 8. The Real Comparative Advantage (RCA) calculated for Romania compared to EU (27) by product sections (SITC classification)

SITC	Product Section	2008	2009	2010
0 + 1	Food and live animals, Beverages and tobacco	0.88	1.05	1.11
2 + 4	Raw materials, vegetables and animal raw materials	2.45	2.42	2.52
3	Mineral fuels and related products	1.56	1.25	1.00
5	Chemical and related products	0.41	0.29	0.34
6	Semi-manufactured products (leather, wood, textiles, metals, other)	1.42	1.24	1.35
7	Machinery and transport equipments	0.82	1.07	0.99
8	Miscellaneous manufactured products (sanitary plumbing, furniture, clothing, footwear, other)	1.74	1.70	1.50
9	Other goods n.e.c.	0.36	0.27	0.40

Source: Calculated on the basis of UN Comtrade.

Comparative advantages in exports of machinery and transport equipment tend to grow in recent years, the RCA indicator for Romania being above the EU (27) average in 2009 and hovering at the same level with the EU (27) average in 2010. On the other hand a downward trend in export competitiveness of mineral fuels and lubricants was registered.

Deepening the analytical approach of Romania's comparative advantages at the level of main export chapters (HS classification, 4 digits) revealed spectacular developments (see Table 9). Thus, the RCA calculated for export of cars and other road vehicles for passengers, after rising nearly three times in 2009 over 2007, thus reflecting a clear comparative advantages of Romania in this sector, the RCA fell below the EU (27) average in 2010.

The exports of refined oil products other than crude (gasoline, diesel) registered, under the impact of the global crisis, a reduction in comparative advantage. The exports of electrical appliances for communications, under the Nokia effect, have recorded an increase of more than 12 times of the RCA indicator for Romania in relation to the EU (27). The withdrawal of this company from our country in 2011 caused a decrease of these advantages in the short and medium term.

Among the considered products, only exports of spare parts and accessories for road vehicles (mainly car cables assembled in Romania by companies with German capital under a processing regime) witnessed certain constancy in terms of comparative advantages, whose RCA ranged from 2.4 to 2.9 throughout the period.

Table 9. The Real Comparative Advantage (RCA) calculated for Romania compared to EU (27) on selected export chapters (4-digit CN classification)

CN	Export chapters	2007	2008	2009	2010
8703	Cars and other road vehicles for passengers	0.47	0.54	1.38	0.97
8517	Electrical appliances for communications	0.26	0.96	2.51	3.17
2710	Refined oil products (gasoline, diesel)	1.67	1.60	1.29	0.96
8708	Spare parts and accessories for road vehicles	2.39	2.39	2.88	2.49

Source: Calculated on the basis of UN Comtrade.

To complete the analysis of external competitiveness may be useful to calculate the Grubel-Lloyd index, which reveals the share of intra-industry trade compared to other countries in this regard indicating the degree of economic convergence.

The formula to calculate the Grubel-Lloyd index is as follows:

$$GLI = [1 - | Xi - I | / (Xi + Mi)] \times 100 \quad (2)$$

Where: *X* means exports,

M imports and i the product section (SITC)

The Grubel-Lloyd index calculated for Romania by product sections (see Table 10) revealed relatively large and growing shares of intra-industry trade in the cases of machinery and transport equipment (almost 99% in 2009 and 2010) and of food and live animals, beverages and tobacco (about 84% in 2010). For other product sections holding a significant share in Romania's international trade, there was some decrease in the intra-industry trade in the cases of crude materials, vegetables and animal raw materials, i.e. to about 78% and of miscellaneous manufactured products, i.e. to 82% respectively.

Table 10. Grubel-Lloyd coefficient calculated for Romania by product sections (SITC), %

SITC	Product Section	2008	2009	2010
0 + 1	Food and live animals, beverages and tobacco	59.5	68.6	83.8
2 + 4	Crude materials, vegetable and animal raw materials	93.5	76.3	77.7
	Mineral fuels and related products	60.5	64.3	59.3
5	Chemical and related products	50.8	42.9	52.3
	Semi-manufactured products (leather, wood, textiles, metals, other)	69.6	70.4	77.7
7	Machinery and transport equipments	75.1	98.5	98.5
	Miscellaneous manufactured products (sanitary plumbing, furniture, clothing, footwear, other)	88.5	82.3	82.0
9	Other goods n.e.c.	66.1	72.1	71.1

Source: Calculated on the basis of UN Comtrade.

The Grubel-Lloyd index calculated for EU (27) showed major differences in the intra-industry trade for all product sections, with EU average levels significantly below those of Romania, especially in the cases of machinery and transport equipment, food and live animals, beverages and tobacco, semi-manufactured and miscellaneous manufactured products (see Table 11).

Table 11. Grubel-Lloyd Coefficient calculated for EU (27) by product sections (SITC), %

SITC	Product Section	2008	2009	2010
0 + 1	Food and live animals, Beverages and tobacco	7.9	7.4	2.9
2 + 4	Crude materials, vegetable and animal raw materials	41.5	26.9	31.4
3	Mineral fuels and related products	68.9	66.4	66.2
5	Chemical and related products	21.6	27.0	26.2
6	Semi-manufactured products (leather, wood, textiles, metals, other)	0.5	9.8	4.4
7	Machinery and transport equipments	15.4	14.0	12.3
8	Miscellaneous manufactured products (sanitary plumbing, furniture, clothing, footwear, other)	18.1	20.7	19.0
9	Other goods n.e.c.	2.6	1.5	2.0

Source: Calculated on the basis of UN Comtrade.

These discrepancies are reflecting the real situation of the Romanian economy, which, because of the weaknesses of export competitiveness, except for segments managed by foreign investors, still remain dominated by products with relatively low degree of processing and/or incorporating advanced technologies, and proves unable, after five years of EU membership, to be durably anchored in the processes of convergence and structural changes, thus maintaining our country at the EU's periphery.

It became obvious that this situation was also caused by the premature accession to the EU, without the consolidation of a functioning market economy and without having the ability to cope with competition pressures on the European single market, primary economic criteria for admission considered formally fulfilled.

4. Conclusions

Although the government policies and instruments for supporting exports are limited by the international regulations (including the EU) the Romanian authorities could be much more active in order to improve the situation considering the importance of this sector, both for the economy and for the financial stability of the country. The first condition in this respect would be the availability of an accurate picture of the international trade, which, as mentioned above, must be divided into two parts according to the customs regime of goods, i.e. by separating the inward/outward operations from the total exports/imports of goods (see a review of this issue in G. Georgescu, 2007).

Even skipping the rigors of INTRASTAT and EXTRASTAT statistical system adopted by Romania in 2007, the government should request to the National Customs Authority and the National Institute of Statistics to record and publish data concerning export products resulted from active processing, temporary export goods for passive processing, respectively temporary imports of foreign goods placed under customs procedure of active processing (or processing under customs control) and imports of processed products resulted from passive processing outside the country, all of them broken-down by Intra-EU and Extra-EU countries.

Based on these data a pertinent analysis of Romania's foreign trade could be undertaken, in order to identify the exports of national origin and to evaluate accurately their structure and competitiveness, as essential prerequisites for implementing the most appropriate supporting policies and measures. The importance of this analysis arises from the significant size of active/passive processing operations within the foreign trade of Romania, although it is supposed to enter a decreasing trend after the EU accession. It is worth mentioning that in 2006, when these operations were still registered separately, they represented about 45% of total exports and 20% of total imports. In this context we have to highlight the WTO's efforts towards the correction of data concerning the international trade, discussed in paragraph 1.

The current system of supporting and promoting exports with funding from the state budget has been introduced by the Government Ordinance no. 120/2002 and consists of four programs administered by ministries, plus a range of banking tools managed by Eximbank. It is worth mentioning that the system has had some contribution in helping Romanian exporters, but operating at the lowest level, only about 100 million euros being allocated annually, representing less than 0.5% of the total exports.

In our opinion, to the extent to which exports are perceived also as a proof of the governance effectiveness and of Romania's performances on external markets, for the system of supporting and promoting exports one should allocate funds at least 4-5 times bigger, especially in the context of the need to strengthen the economic recovery following the effects of the global crisis. However, regardless of this perception, in terms of budgetary restrictions that will limit the public spending for a long time horizon, the increase in funding to support Romania's exports is supposed to become very difficult, which will be a major obstacle in their recovery.

A priority that can be supported to a greater extent by the State refers to countries with which Romania has registered significant trade deficits (China, Russia, Kazakhstan, etc.), including long-term agreements for the purposes of bilateral trade balancing, issue which, as it results from international practice, is regarded with some openness by the authorities of those countries. In this context, one can approach also the subject of concluding currency swap agreements, with the participation of central banks to support promoting the bilateral trade with these countries, focusing on Romanian exports.

Having in view the high degree of Romania's export concentration (almost 70% on EU markets) a stronger support is expected for the orientation, to a larger extent, to non-EU markets, by: high-level official visits, economic diplomacy and trade representation, promoting national brands, providing logistics for participation in international fairs, covering and insuring trade and investment risks, lobbying for participation in international tenders, etc.)

Starting from the determinants of exports, both quantitatively and in terms of competitiveness, which are directly or indirectly related to FDI, taking into account also the Nokia effect mentioned before, we consider that the incentives aimed to improve the business environment in order to compensate for the gradual loss of comparative advantages of Romania and to attract foreign investors, providing special facilities (concession of land, state aid, etc.) should be accompanied by certain conditions, such as, for example, setting a minimum period of their activity.

The dramatic decrease in FDI inflows (by 52% in 2009, by 25% in 2010 and by another 42% in 2011, falling bellow 2 billion euro in 2011 and covering less than one third of the current account deficit, despite its balance adjustment in the last two years) should have caused alarm to the authorities, especially as the increase in outflows of foreign capital may lead to negative net flows of FDI and, predictably, worsen the financial situation of the country.

As far as Romania fails to manage the real economy adjustments in a manner that would allow the recovery of the external financial framework, damaged by the accumulation of trade and current account deficits, financed by increasingly larger compensatory flows, the country indebtedness, both public and private is deepening, already reaching excessive levels (see Zaman and Georgescu, 2011). The risk for Romania to enter a fatal financial spiral could be increased by the European sovereign debt crisis, also due to the effects of economic stagnation, austerity budget and trade and current account deficits at UE level.

REFERENCES

1. Berman N. (2009), "Financial Crises and International Trade: The Long Way to Recovery", European University Institute, Economics Working Papers No. 23.
2. Bruegel (2009), "Impact of Financial Crisis on Trade and Investment", the EU-Japan Centre for Industrial Cooperation, International Seminar (speakers from Bruegel) Tokyo, February 25.
3. Cerchez, O. (2007), *Eficiența economică a comerțului exterior*, Editura Logos.
4. Escaith H., Inomata S. (Eds) (2011) *Trade Patterns and Global Value Chains in East Asia*, WTO, IDE – JETRO, June.
5. Georgescu G. (2007), "Current Account Deficits and Implications for the Country Risk of Romania", *Romanian Journal of Economic Forecasting*, No 4, pages 88-96 .
6. Giurgiu, A. (2008), "Principalele sectoare economice cu avantaje comparative şi competitive în comerțul exterior al României", *Economie teoretică şi aplicată*, Anul XV, nr. 5 (522).
7. IMF (2012), *Global Financial Stability Report*, GFSR Market Update, IMF, January 24.
8. Lamy P. (2011), *Keynote Address by WTO Director-General*, WTO News Items, June 6.
9. National Bank of Romania (2011) "FDI in Romania in 2010", Press Release, November 7.
10. OECD (2010), "Trade and Economic Effects of Responses to the Economic Crisis", *OECD Trade Policy Studies,* Paris.

11. Pelinescu E., Rădulescu M. (2009), "The Impact of Foreign Direct Investment on the Economic Growth and Country's Export Potential", *Romanian Journal of Economic Forecasting*, No. 4, pages 153-169.
12. Standard & Poors (2011), "Trade Imbalances in The Eurozone Distort Growth for Both Creditors and Debtors", *S&P Report*, London, December.
13. WTO (2011), *Annual Report 2011*, WTO, November.
14. Zaman Gh., Vasile V. (coord.) (2005), *Evoluții structurale ale exportului românesc*, vol. III (Structural developments of Romanian exports, Vol. III), Expert Publishing House, Bucharest.
15. Zaman Gh., Vasile V., Matei M, Croitoru C., Enescu G. (2011), "Aspecte ale impactului ISD din România asupra exporturilor si dezvoltarii durabile", *Romanian Journal of Economics*, Institute of National Economy, vol. 33(2(42)), pages 1-60, December.
16. Zaman G., Georgescu G. (2011), "Sovereign risk and debt sustainability: Warning levels for Romania", in vol. *Non-Linear Modelling in Economics. Beyond Standard Economics*, Expert Publishing House, Bucharest, pp. 234-270.