TRENDS IN ROMANIA'S EXTERNAL TRADE, DURING THE LAST TWO DECADES

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Abstract

The paper describes, statistically and instrumentally, in a succinct yet coherent manner, the combined or disparate flows, which were partially offset, but mostly completed with a very important deficit in the last two decades' foreign trade in the Romanian economy. After a short repertoire of a number of reference papers dedicated to the statistical analyses conducted in Romania on this issue and their authors, a major section describes some trends of the external marketing in the national economy after 1995. The signals for the past five years in the national economy are encouraging; however, progress having a destination defined by a natural surplus of Romania's foreign trade balance, as a major pilot indicator, is a lengthy evolution, and especially one to be expected for the next decade in the most optimistic variant.

Key words: *foreign trade, export, import, coverage, unit value indices (UVI), indices of the exchange rate.*

Introduction

Adam Smith, the author of *The Wealth of Nations*, noted the positive effects of international trade on the growth and development of world economies, while, in Romania's economic history, with a significant yet understandable century-long time lag, A.D. Xenopol emphasized the capacity and visibility of "a country's foreign trade [...] as the safest mirror of its economic state and position, which by its export shows the people's production power, and, judging by the objects imported one can clearly see to what extent that nations is economically dependent on other nations". The contrasting, and partly compensated character of the flows of export – and especially of import flows – was noted by none other than Gustave Flaubert, who believed, and expressed it in his own personal literary style full of great plasticity, that import was "the worm that eats trade", thus highlighting and anticipating the devastating impact of an uncompensated balance and a chronic deficit of a type of damaging or ruinous external trade. Any statistical analysis of Romania's foreign trade will be made under the impact of the certainty of the clear prevalence, in recent decades, of the European Union (EU), as far as both market flows are concerned, and also of the precariousness of the trends of partial, totally unfavorable compensation in Romania's foreign trade balance, escaping the abstract determinism of theoretical aspects, in instrumental quantifying, in keeping with the work of a number of authors who conducted investigations in this economic theme area with a proven national specificity (Enescu, 1993; Anghelache, 1999; Korka,Tuşa 2004; Anghelache, Mitruţ, Isaic-Maniu, Voineagu, 2009; Săvoiu, Dinu, Tăchiciu, 2012).

"The ensemble of the imports (M) and exports (X) of economic goods by a country completes its overall picture and activity of foreign trading, in a relatively brief manner. Foreign trade changes the material structure of the Gross Domestic Product (GDP), its rate of growth and, especially, its value volume, as seen from the influence of net exports (X-M) in calculating GDP using the method of consumption" (Săvoiu, 2013).

A Brief Overview of The Main Developments, Trends, Flow Compensations and Terms of Exchange

The methodology we used in drafting this paper starts from the investigation of structural changes and adds a hypothesis according to which crisis and economic recession changed the evolution of Romania's foreign trade in a positive way, as coverage of import flows through exports, while the original endeavour of Romanian foreign trade, and Romania's effective joining the European Union have changed the structure of its flows. According to a database whose source was Eurostat[1], focusing on a small number (11) of significant macroeconomic indicators, the analysis of Romania's foreign trade flows for the period 1995 to 2014, is relevant in relation to a long process of adaptation, integration and even convergence to the typically European economy, as defined within the framework of EU.

Starting from the statistics of Eurostat (Annex 1), and also from the specific tools of quantification to be found in the literature of economics and statistics[2], where there are systems of various indicators, having diverse valencies in analyzing foreign trade, a trend of general adaptation can be identified, favourable to the overall modern development of the national economy, which is equally favouring a real and sustainable dynamics of opening Romania's foreign trade. Based on the information extracted from the last 20 years, in the first step of the analysis a characterization of the main

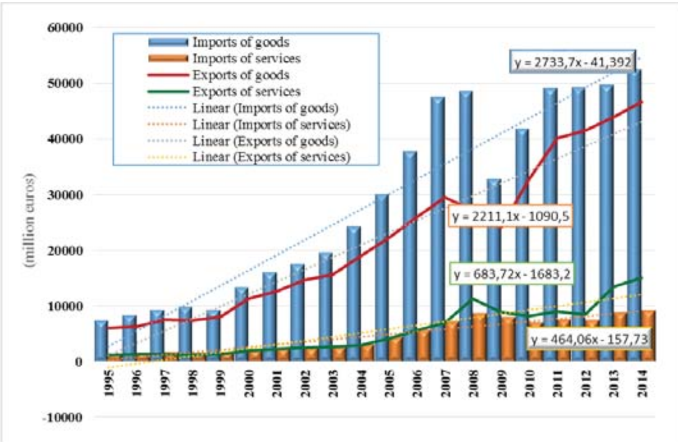
1. Eurostat http://appsso.eurostat.ec.europa.eu/nui/setupDownloads.do accessed in the 10th of January, 2016.

2. Begu, Stelian, (1999), Statistică internaţională (International Statistics), ALL Beck Publishers, Bucharest, p. 19.

trends of trade in goods and services was performed for the period 1995-2014 (including the crisis and post-crisis years of) nation-wide, the evolution of the imports and exports of goods and services. It is important to note that 1995[1] was the yaer when Romania officially applied for membership in the European Union, which prevalently resulted in a development of foreign trade, where a significant share was represented by our EU foreign trade partners. According to the *Association Agreement to the EU*, Romania has gradually and asymmetrically reduced customs duties on imports of industrial products from the EU, suppressing them completely on January 2002 (while the EU eliminated these duties in its trade with Romania as early as January 1997), as well as the quantitative restrictions for goods traffic aimed at processing (a highly illustrative example in this respect is lohn in the field of the export of textile and clothing products, which virtually resulted in an increased share of that group in Romania's total exports to the EU).

Comparative evolution of imports and exports of goods and services

Figure 1



Romania's meandering evolution, through specific development cycles, immediately after 1990, is in stark contrast to its economy's growing involvement in world trade, and can be noted in the dynamics of exports and imports of goods and services. The analysis of the two lines of development reveals that the dynamics of the years 1996 to 1999, 2001 and 2003 to 2009, compared to 1995, favours imports, which slightly exceed exports, but in the last 5 consecutive years, the situation was reversed.

1. On 22 June 1995 Romania officially applied for EU membership.

The dynamics index of exports and imports of goods and services

Year 1995 = 100 %

Table 1

Years	Dynamics of exports of goods and services	Dynamics of exports (FOB), of which:		Dynamics of imports of goods and services	Dynamics of exports (CIF), of which:		Dynamics of export (FOB) of fuels and oils	Dynamics of import (CIF) of fuels and associated materials
		Goods	Services		Goods	Services		
1996	104.8	104.5	106.5	113.7	114.4	110.2	97.9	112.4
1997	121.0	122.9	111.9	125.6	126.7	119.7	94.1	110.7
1998	116.4	121.2	92.9	130.3	133.1	116.2	71.9	75.2
1999	128.3	132.3	109.0	124.8	126.2	117.6	80.3	58.3
2000	182.1	186.6	160.3	176.8	181.3	153.9	166.6	101.4
2001	204.7	208.3	187.0	210.4	218.4	169.3	163.5	129.3
2002	234.6	241.0	203.2	227.3	237.7	174.0	238.8	123.9
2003	249.5	255.9	218.2	253.4	267.0	183.7	210.5	136.2
2004	298.6	311.2	236.6	312.3	330.4	218.8	263.9	183.5
2005	360.3	365.7	333.5	393.7	409.5	312.2	489.5	268.0
2006	430.6	425.9	453.6	493.9	513.8	391.5	534.6	325.1
2007	498.8	485.3	565.4	621.5	645.8	496.6	460.6	324.6
2008	523.4	444.0	914.5	652.8	661.9	605.9	631.7	419.2
2009	449.8	395.5	717.0	464.0	445.6	559.0	356.9	214.8
2010	558.7	537.8	661.6	555.8	568.4	491.3	407.7	279.3
2011	670.3	658.6	728.2	645.0	668.4	524.2	533.5	366.2
2012	682.6	682.0	685.6	646.3	671.0	519.4	516.1	394.8
2013	782.5	720.7	1086.6	666.9	706.2	464.2	532.4	321.3
2014	845.1	768.8	1220.7	711.7	724.0	648.2	646.2	321.0

Source: The calculation was made by the authors based on the data from Eurostat [on-line] accessed on the 19th of January 2016 at http://appsso.eurostat.ec.europa.eu/nui/setupDownloads.do

Thus, the exports after 2010 had *a higher increase than the imports*, and the fact that there was a relatively low competitive start basis, against the background of an economy focused on an industry undergoing a very ample process of contraction, can practically account for the existence, in the past, of a chronic inability of the Romanian economy to export compared to the imports for nearly a decade and a half.

Direct comparison of the dynamics of the imports and exports of goods and services

Figure 2

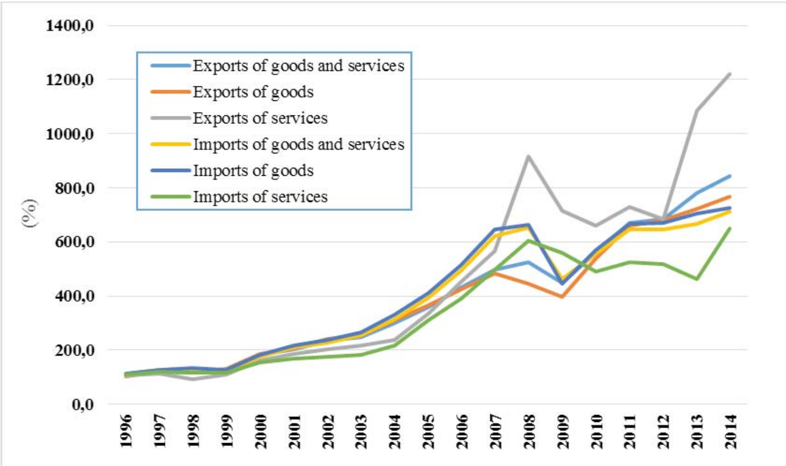


Figure 2 highlights a comparatively steady increase of the 6 indicators over the period 1996-2007, after which the rates got completely dispersed by the global recession that deeply affected the EU itself, not only Romania; for the latter it represented perhaps the only instrument of macroeconomic correction, which had, in addition and simultaneously, a deep structural character, and also a force to rebalance the trade balance by changing the flow of the export and import rates, by strengthening the exports.

The evolution of Romanian exports and imports and their percentage rates

Table 2

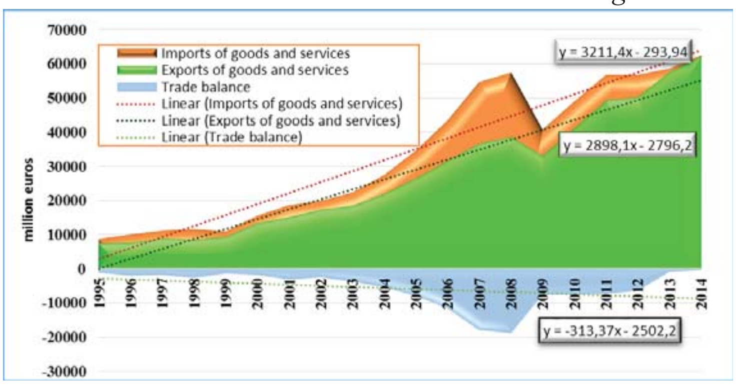
Year	Exports of goods and services (FOB)	Rates of		Imports of goods and services (CIF)	Rates of		Spread of mobile dynamics XRt/t-1 - MRt/t-1
		Fixed basis XRt/0	Mobile basis $XR_{t/t-1}$		Fixed basis MRt/0	Mobilă $MR_{t/t-1}$	
	Mil. euro	*%*	*%*	*Mil. euro*	*%*		*Mil. euro*
1995	7327.6			8766			
1996	7682	4.84	4.84	9966.1	13.69	13.69	-8.85
1997	8868.2	21.02	15.44	11010.2	25.60	10.48	4.96
1998	8530.3	16.41	-3.81	11424.1	30.32	3.76	-7.57
1999	9403.9	28.34	10.24	10936.9	24.77	-4.26	14.51
2000	13346.9	82.15	41.93	15501.6	76.84	41.74	0.19
2001	14996.7	104.66	12.36	18447	110.44	19.00	-6.64
2002	17193.2	134.64	14.65	19926.7	127.32	8.02	6.63
2003	18283.9	149.52	6.34	22214.9	153.42	11.48	-5.14
2004	21882.6	198.63	19.68	27372.1	212.25	23.22	-3.53
2005	26401.1	260.30	20.65	34512.3	293.71	26.09	-5.44
2006	31553.2	330.61	19.51	43296.7	393.92	25.45	-5.94
2007	36548.9	398.78	15.83	54484	521.54	25.84	-10.01
2008	38353.9	423.42	4.94	57222.5	552.78	5.03	-0.09
2009	32958.2	349.78	-14.07	40676.1	364.02	-28.92	14.85
2010	40941.4	458.73	24.22	48724.8	455.84	19.79	4.43
2011	49117.5	570.31	19.97	56537.9	544.97	16.04	3.94
2012	50018.8	582.61	1.83	56659	546.35	0.21	1.62
2013	57338.2	682.50	14.63	58457.2	566.86	3.17	11.46
2014	61926.3	745.11	8.00	62388.2	611.71	6.72	1.28

Source: The calculations were made by the authors based on Eurostat data [online], accessed on 25 January 2016 at http://appsso.eurostat.ec.europa.eu/nui/setupDownloads.do

From this perspective, the analysis of the spread of mobile dynamics highlights the anticipating nature of this statistical tool for major recessions, which is specific for the Romanian economy in a quite distinct manner.

Evolution of the flow of imports and exports, and the trade balance

Figure 3



In order to measure the degree of balance, or the compensation level of the exchanges, another statistical tool is made use of, which is called *coverage*, referring to either the trade in a particular product, or the entire trade balance, quantified as a simple ratio between the value of exports (FOB) and the value of imports (CIF).

The trade balance and the coverage of imports by exports

Table 3

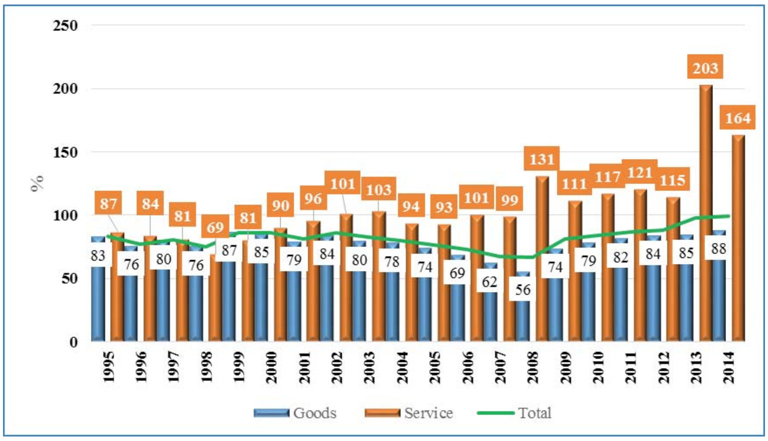
Years	Trade balance FOB / CIF (million euros)				Coverage of imports by exports %			
	Net exports of goods and services	Net exports of goods	Net exports of services	Mineral fuels, lubricants, etc.	Total foreign trade	Goods	Services	Mineral fuels, lubricants, etc.
1995	-1438.4	-1250.9	-187.5	-1211.2	83.59	82.96	86.83	28.63
1996	-2284.1	-2032.6	-251.5	-1432.3	77.08	75.79	83.97	24.93
1997	-2142	-1821.1	-320.9	-1421	80.55	80.43	81.18	24.33
1998	-2893.8	-2387.2	-506.6	-926.8	74.67	75.56	69.40	27.37
1999	-1533	-1206.4	-326.6	-600.1	85.98	86.97	80.50	39.38
2000	-2154.7	-1945.1	-209.6	-910.9	86.10	85.39	90.44	47.04
2001	-3450.3	-3351.4	-98.9	-1400.9	81.30	79.10	95.90	36.18
2002	-2733.5	-2768.9	35.4	-942.9	86.28	84.13	101.43	55.16
2003	-3931	-4013.5	82.5	-1289.4	82.30	79.52	103.15	44.23
2004	-5489.5	-5299.5	-190	-1831.9	79.94	78.15	93.90	41.17
2005	-8111.2	-7789.2	-322	-2170.1	76.50	74.09	92.76	52.28
2006	-11743.5	-11777.1	33.6	-2919.9	72.88	68.78	100.60	47.07
2007	-17935.1	-17855.1	-80	-3271.2	67.08	62.34	98.87	40.62
2008	-18868.6	-21549.8	2681.2	-4044.4	67.03	55.65	131.07	43.14
2009	-7717.9	-8623.8	905.9	-1911.1	81.03	73.64	111.38	47.57
2010	-7783.4	-8968.4	1185	-2759.3	84.03	78.51	116.93	41.79
2011	-7420.4	-8960.5	1540.1	-3623.4	86.88	81.74	120.63	41.70
2012	-6640.2	-7722	1081.8	-4192.7	88.28	84.32	114.62	37.42
2013	-1119	-7945.7	6826.7	-2865.4	98.09	84.67	203.25	47.44
2014	-461.9	-6327.7	5865.8	-2308.8	99.26	88.10	163.54	57.62

Source: The calculations were made by the authors based on Eurostat data [online], accessed on the 25th of January 2016 at http://ec.europa.eu/eurostat/web/national-accounts/overview

From the data in Table 3 one can notice that the coverage of imports by exports, calculated as ratio between the value of exports FOB (in Euro) and the value of imports CIF (in euros), is less than 100% throughout the period under review, a result which means that Romania does not, through its export activity, compensate imports, a situation that is actually reflected in the trade deficit. It should be noted that, over the last seven consecutive years, the *coefficient of coverage of import by export of services* is greater than one, which leads to a lower trade deficit; hence, in the last year the overall coverage was 99.26%, the best result throughout the period analysed.

Coverage of Romania's foreign trade

Figure 4



Another significant aspect of external trade is the analysis of the share of the goods and services in the total exports and imports. The liberalization trade policy adopted by Romania in 1990 aimed at openness of the country to the world, and the situation would have been positive if there had not existed imbalances generated by the trade balance, the deficit of which, of 5% to 14% throughout the period analyzed, affected the internal balance. To sustain this trade deficit, Romania had to seek resources from external financing, and as a result, perpetuating this deficit further eroded the GDP, which required, in the form of feedback, a reduction in imports by any means possible, in the context of crisis or recession pressure, when a significant increase in exports seemed impossible (since it involves competitive products, that is a massive restructuring of national economy, or its re-industrialization and reorientation towards the sphere of the services). The data in Table 4 show the indicators illustrating the opening of Romania's economy as to its foreign trade, which reflects its involvement in foreign trade in the period under review.

To get that intensity indicator the following factors were determined:

- the share of exports (FOB) in GDP, which indicates the proportion of the GDP that is intended for foreign markets;
- the share of imports (CIF) in GDP, or the rate of balancing the domestic resources through imports;
- the share of the trade balance (FOB-CIF, expressed in absolute values) in GDP;
- the degree (the ratio) of opening, or trade intensity, calculated by comparing the external trade, in euro, to GDP (determined as a sum of exports FOB and CIF import against the volume of GDP, in nominal values).

As can be seen from the data calculated, the degree of openness of the national economy significantly increased in the 20 years, from 55.95% to 82.75%, confirming once again the character and nature of the development of international trade. By 2009, Romania's opening had a mixed, meandering evolution, after which there was a constant annual increase. In the first 15 years analyzed, an important contribution was that of imports (on average 56% of the trade opening comes from imports), and then opening the upward dynamics was dominantly generated by exports.

Share of exports and imports in GDP and the openness of economy (%)

Table 4

Years	Share of exports (FOB) in GDP	Share of imports (CIF) in GDP	Share of trade balance in GDP	Level of economic openness (X+M)/GDP
1995	25.48	30.48	-5.00	55.95
1996	26.28	34.10	-7.81	60.38
1997	27.99	34.75	-6.76	62.74
1998	22.86	30.62	-7.76	53.48
1999	27.71	32.22	-4.52	59.93
2000	32.72	38.00	-5.28	70.71
2001	32.96	40.54	-7.58	73.50
2002	35.22	40.82	-5.60	76.05
2003	34.54	41.97	-7.43	76.51
2004	35.64	44.58	-8.94	80.21
2005	32.91	43.02	-10.11	75.93
2006	32.06	43.99	-11.93	76.05
2007	29.15	43.45	-14.30	72.59
2008	26.93	40.19	-13.25	67.12
2009	27.37	33.78	-6.41	61.15
2010	32.30	38.44	-6.14	70.74
2011	36.85	42.41	-5.57	79.26
2012	37.46	42.44	-4.97	79.90
2013	39.75	40.52	-0.78	80.27
2014	41.22	41.53	-0.31	82.75

Source: Calculations by authors based on Eurostat data [online] accessed on the 29th of January 2016 at http://appsso.eurostat.ec.europa.eu/nui/setupDownloads.do

Basically, Romania's trend towards opening within the international economic exchanges via foreign trade is obvious, and the fluctuations recorded in this period are too insignificant to say that there was a downward trend of openness, especially since they were due to the international economic and financial crisis and recession.

The trade intensity is largely due to the relations with the EU over the period prior to accession, and, respectively, to EU membership, in the post-accession period. The share of exports in GDP also recorded an upward trend over the past five years, and the maximum value was reached in 2014, when the percentage was 41.22% (the highest in the period under review), which shows a significant positive influence in connection with the development of the national economy susequent to the recession, in a format that was prevalently dependent on the EU market.

To have a better picture of the structural changes of export and import, and to be able to estimate them adequately, further indicators are comparatively determined, which concern the dynamics of:

- the share of exports of goods and services in total exports;
- the share of imports of goods and services in total imports;
- the share of fuels and mineral oils, and bituminous materials in the total exports of goods or imports of goods, etc. (Table 5).

Share of exports and imports of goods and services per total exports and imports in Romania

Table 5

Years	Share in total exports %		Share in total imports %		Share of fuels and mineral oild, bituminous materials % in the	
	Exports of goods	Exports of services	Imports of goods	Imports of services	Exports of goods	Imports of goods
1995	83.12	16.88	83.75	16.25	7.98	23.11
1996	82.85	17.15	84.26	15.74	7.47	22.72
1997	84.39	15.61	84.51	15.49	6.11	20.18
1998	86.53	13.47	85.51	14.49	4.73	13.06
1999	85.66	14.34	84.68	15.32	4.84	10.69
2000	85.15	14.85	85.86	14.14	7.12	12.92
2001	84.58	15.42	86.93	13.07	6.26	13.69
2002	85.38	14.62	87.57	12.43	7.90	12.05
2003	85.24	14.76	88.23	11.77	6.56	11.80
2004	86.63	13.37	88.62	11.38	6.76	12.84
2005	84.38	15.62	87.12	12.88	10.67	15.13
2006	82.22	17.78	87.12	12.88	10.01	14.63
2007	80.87	19.13	87.02	12.98	7.57	11.62
2008	70.51	29.49	84.92	15.08	11.35	14.64
2009	73.10	26.90	80.43	19.57	7.20	11.14
2010	80.01	19.99	85.64	14.36	6.05	11.36
2011	81.66	18.34	86.80	13.20	6.46	12.66
2012	83.05	16.95	86.94	13.06	6.04	13.60
2013	76.56	23.44	88.69	11.31	5.89	10.52
2014	75.62	24.38	85.20	14.80	6.70	10.25

Source: Calculations by authors based on Eurostat data [online] 2016, accessed on the 10th of February at http://appsso.eurostat.ec.europa.eu/nui/setupDownloads.do

According to the data in Table 5, during the 20 years under review, the goods' share in total exports was minimum 70.51% (2008), and maximum 86.53% (1998). The share of imports of goods was a little higher, but less hesitant: minimum 80.43% (2009), and a maximum of 88.69% in 2013. It is also interesting to see the evolution of the share of fuels and mineral oils, and bituminous materials in the total exports of goods or imports of goods. For both exports and imports, they show increased variations and different shares: in exports from 4.73% to 11.35%, and in imports from 23.11% to 10.25%. The flow trends are contrary and significant, outlining a clear upward tendency towards a increase in the independence of this major economic resource, and a balancing per flows for Romania.

By correlating the share of fuels and mineral oils in the total exports of goods (xi) and the share of fuels and mineral oils in total imports of goods (Yi), a regression function is obtained, $\boldsymbol{y = 0{,}5545x + 9{,}9474}$, with a determination ratio (Rsquared) $\boldsymbol{R^2 = 0{,}0657}$, which emphasizes that there is no statistical relationship between the variation of the two indicators analyzed, rather their evolutions are independent, being typucal of already formed market economies.

The value indices of GDP and of external trade complete the already formed picture with several other pieces of valuable information. The mutations manifest in the field of foreign trade are determined by both fluctuations in the value or price of products exported or imported, and fluctuations in their quantities, which is reflected in changes in the volume value and quantity of exports and imports, and are expressed by means of the indicators of with foreign exchange dynamics (terms of trade), defined as follows: *the indices of value and volume of export and import quantity*, *the elasticity coefficients* **and** *the exchange indices of trade***.**

The influence of the changes in the prices of import or export can be eliminated by comparing the value index of export, and import, respectively, with *GDP value index*.

The two indices, *unit value indices of imports* and *unit value indices of exports* are annual average price indices for exports and imports. Interpreting them is done in relation to the phenomenon of statistical stationarity, or the level of 100%, translating average unit values that usually grow. If for the export a unit value index above 100% is preferable, the situation is reversed for imports, where preference for lowering may be equally obvious.

In Table 6 the foreign trade indices (base: the previous year) are determined in comparable conditions, separately for exports and imports, from values expressed in Euro.

Indices of value, of physical amolunt and of price (IVU) for exports and imports

(previous year = 100)%

Table nr. 6

Year	Indices of value			Indices of price or unitary value index (UVI)		Indices of physical amount	
	GDP	Exports	Imports	Exports	Imports	Exports	Imports
	I^v_{GDP}	I^v_X	I^v_M	I^p_X or UVI_X	I^p_M or UVI_M	I^q_X	I^q_M
2000	120.2	141.9	141.7	108.9	103.6	130.3	136.8
2001	111.5	112.4	119.0	100.6	99.7	111.7	119.4
2002	107.3	114.6	108.0	98.5	98.7	116.3	109.4
2003	108.4	106.3	111.5	98.2	96.7	108.2	115.3
2004	116.0	119.7	123.2	105.1	100.7	113.9	122.3
2005	130.7	120.6	126.1	109.5	105.3	110.1	119.8
2006	122.7	119.5	125.5	108.2	103.6	110.4	121.1
2007	127.4	115.8	125.8	106	98.2	109.2	128.1
2008	113.6	104.9	105.0	103.8	103.4	101.1	101.5
2009	84.6	85.9	71.1	89.3	89.3	96.2	79.6
2010	105.3	124.2	119.8	107	104.2	116.1	115.0
2011	105.2	120.0	116.0	107.9	106.2	111.2	109.2
2012	100.2	101.8	100.2	103.9	100.8	98.0	99.4
2013	108.0	114.6	103.2	97	98	118.1	105.3
2014	104.1	108.0	106.7	98.5	97.6	109.6	109.3

Sources: Determinations compared by the authors in keeping with http://appsso.eurostat.ec.europa.eu and www.tempoonline INS accessed on the 12th of February 2016

According to the determinations above, it follows that, in 2004-2009 and 2010-2012, the *export unit value indices* indicated an increase in the average price compared to the previous years, although in the previous years declines had been recorded. The unit value indices of exports in 2001-2003 and 2007, 2013, 2014 were situated below the level of 100%.

The increased unit value indices of exports could have been felicitous if they had secured a surplus of balance and had not been accompanied by a similar trend of the unit value indices of imports, the growth of which frequently exceeded the increase in the unit value indices of exports. An even sharper decrease in imports than in exports means that, if the amount remains constant for the current period of time, the downward import price fluctuations exceed the export ones, a conclusion that can be interpreted as favourable in the context of the present methodology of calculation.

The exchange ratio indicators concretely represented a final analysis possible within such a narrow space, achieved in-depth, by getting relevant and objective conclusions.

The development of foreign trade can also be expressed by the ***exchange ratio***, by means of which the amount of goods is determined that needs to be exported from one country, from one period to another, in order to import the same amount of goods. For this indicator the following were determined:

1) *The index of value of trade –IVER, also known as the coverage index of imports through exports;*
2) *The index of gross exchange ratio – IGER (the gross barter terms of trade index), also defined as the quantitative exchange ratio;*
3) *The index of netexchange ratio – INER (the net barter terms of trade index), or term exchange ratio;*
4) *The price scissors in foreign trade – PSFT (the foreign trade price shears – FTPS), calculated only if the gross barter terms of trade index is smaller than 1 or 100%;*
5) *The purchasing power of exports index (PPI „X") or* $I^q_{M\,obtainable}$[1] etc.

Indexes of exchange ratio %

Table 7

Year	Index of exchange ratio			*PSFT or FTPS*	*PPI„X" or* $I^q_{Mobtenaible}$	Index of value exchange ratio (IVER) / Dynamics of coverage (Degree of Coverage Index -DCI)			
	Value IVER	*Gross IGER*	*Net INER*			Foreign trade of goods and services	Foreign trade of goods	Foreign trade of services	Fuel and mineral oils trade
2000	100.14	95.27	105.12	-	136.97	100.1	98.2	112.3	119.4
2001	94.45	93.61	100.90	-	**112.74**	94.4	92.6	106.0	76.9
2002	106.11	106.33	99.80	0.20	116.11	106.1	106.4	105.8	152.5
2003	95.34	93.88	101.55	-	**109.93**	95.4	94.5	101.7	80.2
2004	97.16	93.09	104.37	-	**118.87**	97.1	98.3	91.0	93.1
2005	95.64	91.97	103.99	-	**114.53**	95.7	94.8	98.8	127.0
2006	95.22	91.17	104.44	-	**115.35**	95.3	92.8	108.5	90.0
2007	92.05	85.28	107.94	-	**117.92**	92.0	90.6	98.3	86.3
2008	99.90	99.52	100.39	-	**101.45**	99.9	89.3	132.6	106.2
2009	120.82	120.82	100.00	-	96.19	120.9	132.3	85.0	110.3
2010	103.67	100.96	102.69	-	119.19	103.7	106.6	105.0	87.8
2011	103.45	101.82	101.60	-	112.99	103.4	104.1	103.2	99.8
2012	101.60	98.57	103.08	-	100.99	101.6	103.2	95.0	89.7
2013	111.05	112.19	98.98	1.02	116.94	111.1	100.4	177.3	126.8
2014	101.22	100.29	100.92		110.66	101.2	104.0	80.5	121.5

Note: The bold figures represent the years/ values where $I^q_M < I^q_{Mobtainable}$

Source: Determinations compared by the authors in keeping with http://appsso.eurostat.ec.europa.eu and www.tempoonline INS accessed on the 12th of February 2016

1. $I^q_M < I^q_{Mobtainable}$ *represents an effect of improving the trade balance (maximizing the previous excedent or lowering the deficit in relation to the base period) as a result of an actual import made under the obtainable limit according to the purchase power of the exports.*

In the literature (Ardelean, 2003), the index of the relations of net exchange (terms of trade index) is considered to be the index that shows most clearly the efficiency with which a country participates in international trade, because it measures costs at the rate of income of the imports in terms of exports, thus evincing the effect of prices. The index can be considered an indicator of external purchasing power of a nation, which is got through exports. If the products imported are on average more expensive than those exported, the terms of trade are unfavourable, because in order to obtain goods from abroad, the country in question must produce and sell more goods and services. A figure greater than l (or 100%) is a positive aspect of that country, because it shows a cheapening of imports compared to the base period. A figure smaller than l (or 100%) is a negative aspect because it shows a rise in imports price.

By comparing the purchasing power index of exports with the quantity index of imports, one can see that in 2001 and 2003 to 2008 Romania imported more than the purchasing power of exports would have allowed it to, and so its trade balance deteriorated continuously.

A Final Remark

The index of net exchange ratio expresses a well-supported and professionalized development of an economic school of foreign trade that has worked in international practice over the past two decades, an activity whose quality was mostly good, which managed to get a term of exchange favourable to the Romanian economy in international trade in the overwhelming majority of the period (it failed to get values greater than 1 or 100% only in 2002 and 2013). The price scissors, derived from a INER below the admitted level, signals a situation of gratuitous cession of newly created national value for businesses and the economy of Romania as a whole to remain on certain international markets, especially the EU market. The pilot indicator of foreign trade or marketing is still the external trade deficit, and unfortunately Romania still needs many years of favourable evolution and economic development until strictly surplus results are obtained.

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Annex 1 Romania's macroeconomic indicators in 1995-2014

Current prices, million euro

Year	Exports of goods and services	Exports of goods	Exports of services	Imports of goods and services	Imports of goods	Imports of services	External balance of goods and services	External balance - Goods	External balance - Services	Exports of mineral fuels and oils ; bituminous materials	Imports of mineral fuels , lubricants and related materials
1995	7327,6	6090,9	1236,7	8766,0	7341,8	1424,1	-1438,4	-1250,9	-187,5	485,8	1697
1996	7682,0	6364,4	1317,7	9966,1	8397,0	1569,1	-2284,0	-2032,6	-251,4	475,7	1908
1997	8868,2	7484,0	1384,2	11010,2	9305,1	1705,1	-2142,1	-1821,2	-320,9	457	1878
1998	8530,3	7381,4	1148,9	11424,1	9768,6	1655,6	-2893,8	-2387,2	-506,7	349,2	1276
1999	9403,9	8055,3	1348,5	10936,9	9261,7	1675,2	-1533,0	-1206,4	-326,6	389,9	990
2000	13346,9	11364,6	1982,2	15501,6	13309,7	2191,9	-2154,7	-1945,0	-209,7	809,1	1720
2001	14996,7	12684,5	2312,2	18447,0	16035,9	2411,1	-3450,3	-3351,4	-98,9	794,1	2195
2002	17193,2	14680,2	2512,9	19926,7	17449,1	2477,6	-2733,6	-2768,9	35,3	1160,1	2103
2003	18283,9	15585,6	2698,4	22214,9	19599,1	2615,8	-3931,0	-4013,6	82,6	1022,6	2312
2004	21882,6	18956,8	2925,8	27372,1	24256,3	3115,8	-5489,5	-5299,5	-190,0	1282,1	3114
2005	26401,1	22277,0	4124,1	34512,3	30066,2	4446,1	-8111,3	-7789,3	-322,0	2377,9	4548
2006	31553,2	25943,5	5609,7	43296,7	37720,6	5576,1	-11743,5	-11777,1	33,6	2597,1	5517
2007	36548,9	29556,1	6992,8	54484,0	47411,2	7072,8	-17935,1	-17855,1	-80,0	2237,8	5509
2008	38353,9	27043,9	11310,	57222,5	48593,7	8628,7	-18868,5	-21549,8	2681,3	3068,6	7113
2009	32958,2	24090,8	8867,4	40676,1	32714,6	7961,5	-7717,8	-8623,8	905,9	1733,9	3645
2010	40941,4	32758,9	8182,4	48724,8	41727,3	6997,5	-7783,5	-8968,4	1184,9	1980,7	4740
2011	49117,5	40111,8	9005,6	56537,9	49072,3	7465,7	-7420,5	-8960,4	1540,0	2591,6	6215
2012	50018,8	41539,5	8479,3	56659,0	49261,5	7397,5	-6640,2	-7722,0	1081,8	2507,3	6700
2013	57338,2	43899,7	13438	58457,2	51845,4	6611,8	-1119,0	-7945,7	6826,6	2586,6	5452
2014	61926,3	46829,5	15097	62388,2	53157,2	9231,0	-461,8	-6327,7	5865,9	3139,2	5448

Source: Calculations by the authors based on Eurostat data [online], accessed on the 9th of January 2016 at http://appsso.eurostat.ec.europa.eu/nui/setupDownloads.do