THE TRADE DEFICIT CONTINUES TO AFFECT ECONOMIC GROWTH

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Abstract

Gross Domestic Product is influenced in its evolution by a number of factors. This category also includes the activity of international trade, which has a special effect on the formation and modification of the Gross Domestic Product.

The two sides of international trade, exports and imports, have opposite influences on the formation and growth of Gross Domestic Product. Thus, imports mean consumption of the value of domestic productive activity, which, through foreign exchange, ensures their payment. In turn, exports mean additional revenue.

The main objective of this article is to analyse the effect of imports and exports on the balance of trade in the formation and change of Gross Domestic Product.

It is found that in the time segment under analysis the trade deficit increased, causing the reduction in the value of the Gross Domestic Product, in the current prices of each year. In order to achieve the proposed objective, we used from a methodological point of view, the statistical indicators specific to international trade, we analysed by chronological study the evolution from one period of time to another, we interpreted the data contained in tables and graphs and finally we performed a analysis based on the simple linear regression that was established between the Gross Domestic Product c resultant variable and the net export (trade balance), factorial variable.

Keywords: *international trade, capital, labour, resources, economy, developments.*

JEL classification: *C10, H10*

Introduction

In this article, based on the data obtained from the National Institute of Statistics (tempo online) as well as from the latest communiqués, we set out to analyse the effect of international trade activity on the formation and modification of the Gross Domestic Product.

Thus, we analysed the total level of trade between January 2017 and January 2022, then moved on to the analysis and interpretation of the evolution of imports and exports. It was found that in each period considered imports grew faster than exports, which permanently led to a deficit in the trade balance.

The same is true of the growth rates of imports and exports in favour of imports of goods. The favourable balance of imports would not be so negative if the share of imports were represented by technologies, machinery or materials and materials that are strictly necessary for the continuation and development of industrial production.

In reality, in the category of imports we find a series of agri-food products that replace the domestic ones, inducing a negative perspective on the development of this sector in the Romanian economy.

To exemplify and facilitate the interpretation of the mentioned aspects, we presented databases, tables and graphs.

Finally, we performed a statistical-econometric analysis using the regression model.

Literature review

A significant number of researchers have turned their attention to international trade. Thus, Aisen and Veiga (2013) analysed the way and the extent to which political instability influences economic growth. Amiti, Itskhoki and Konings (2014) addressed issues related to the participants in the foreign trade activity. Anghel M.G., Iacob S.V., Haseganu D.A. (2020) and Anghelache C., Anghel M.G. (2017) studied and disseminated a series of studies on the evolution of international trade in goods, the analysis of international trade or international trade as a factor of economic growth, the analyses being accompanied by the use of statistical-econometric models, based on which estimates were made and forecasts. Bardsen, Nymagen, and Jansen (2005) presented aspects of macroeconomic modelling. Bernard A.B., Jensen J.B., Redding S.J., Schott P.K. (2012) dealt with the analysis of the role of large international corporations in international trade in goods. Elgstrom O. (2007) pays attention to the activity of international trade in terms of content and negotiation technique, and Fajgelbaum P., Grossman G., Helpman E. (2011) a study on revenue, production quality and international trade, in which elements related to foreign trade are currently being addressed. Harrison, McLaren, and McMillan (2011) studied trade inequalities. Hill C., Smith M. (2011) published an extensive paper on international trade relations and relations with the European Union, and Hummels D. (2007) published a paper on the cost of transport in international trade in the age of globalization.

Staiger R., Sykes A. (2011) published an analysis of international trade, national treatment and domestic regulations in the countries involved in such transactions.

Methodology

In order to facilitate the understanding of the content of the indicators used, we have further presented some clarifications from the methodology used by the National Institute of Statistics. Thus, the balance of the FOB / CIF trade balance is calculated on the basis of the value of the FOB export and the CIF import, as the difference between them. The negative balance of the trade balance is called the deficit, and the positive balance is called the surplus.

The FOB (Free on Board) price represents the frontier price of the exporting country, which includes the value of the goods, all transportation costs to the point of embarkation, and all taxes that the goods must bear in order to be loaded on board.

The CIF price (Cost, Insurance, Freight / Cost, Insurance, Shipping) represents the border price of the importing country, which includes both the components of the FOB price and the cost of insurance and international transport.

Regarding the statistics on international trade in goods, they are established by summing the data from the INTRASTAT and EXTRASTAT statistical systems: the INTRASTAT system for INTRA-EU trade (trade in goods between Romania and the other Member States of the European Union) and the EXTRASTAT system for trade EXTRA-EU (exchanges of goods between Romania and non-member states of the European Union).

Intra-EU trade includes shipments of goods from Romania to another EU Member State and introductions (entries) of goods into Romania with another EU Member State as the country of dispatch.

Shipments from Romania include goods in free circulation that leave the statistical territory of Romania to another EU Member State and goods that have been placed under the customs procedure of inward processing (within the country) or processing under customs control in Romania and which are destined for other states. member.

Introductions (entries) in Romania include: goods in free circulation in an EU Member State entering the statistical territory of Romania and goods that have been placed under the customs procedure of inward processing or processing under customs control in another EU Member State and entering on the statistical territory of Romania.

The EXTRA-EU trade includes the exchange of goods between Romania and the non-EU member states, having as object: the direct import

of goods for consumption, the imported goods taken out of the customs warehouses or the free zones to be put for consumption, the export of goods of national origin, as well as the export of imported goods, declared for domestic consumption.

Also included are: temporary imports of foreign goods for inward processing (within the country); exports of compensating products result from inward processing and temporary exports of goods for outward process (processing in other countries). Imports shall take into account imports of compensating products resulting from processing abroad and goods imported or exported under the financial leasing system (at full value of the goods) and quasi-exports, for which customs declarations are made at the national border. export related to the international transactions of non-resident economic operators.

Not included in international trade: goods in transit, goods temporarily admitted / removed in / out of the country (except for those for processing), goods purchased by international organizations for own use in Romania, goods for and after repairs and related parts.

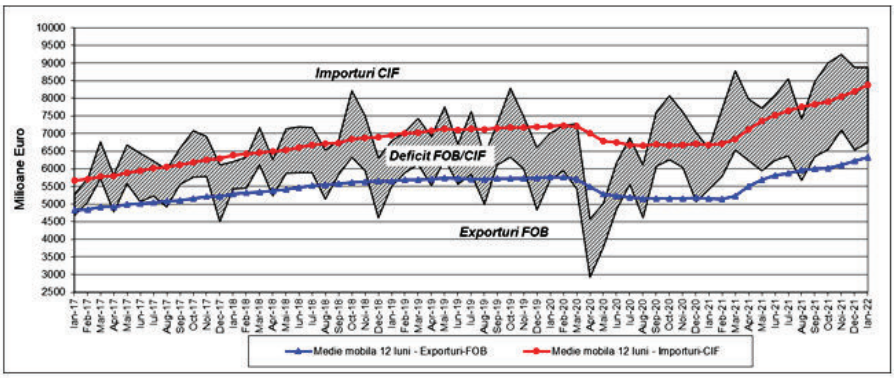
Data, results and discussions

FOB exports in January 2022 amounted to 6,755.9 million euros, and CIF imports amounted to 8,881.9 million euros. The trade deficit (FOB / CIF) deficit in January 2022 was 2,126.0 million euros, 944.9 million euros higher than in January 2021. Compared to January 2021, exports in January 2022 increased by 24.9%, and imports increased by 34.8%.

Data on exports, imports and trade balance between January 2017 and January 2022 are presented in the following graph.

Exports, imports and trade balance between January 2017 and January 2022

Chart 1



Source: INS release number 64/14 March 2022

Table number 1 structures the data on international trade by product groups according to CSCI Rev.4, in January 2022.

International trade by product groups according to CSCI Rev.4, January 2022

Table 1

	FOB exports			CIF imports		
	January 2022			January 2022		
	Millions of euros	Share in total exports (%)	in% compared to January 2021	Millions of euros	Total import share (%)	in% compared to January 2021
TOTAL	**6755,9**	**100,0**	**+24,9**	**8881,9**	**100,0**	**+34,8**
of which, in relation to the EU 27	4920,9	72,8	+20,2	6183,0	69,6	+26,0
Food and live animals	**563,8**	**8,3**	**+54,5**	**676,8**	**7,6**	**+18,6**
of which, in relation to the EU 27	223,0	3,3	+29,9	576,8	6,5	+17,8
Drinks and tobacco	**109,7**	**1,6**	**+43,9**	**57,2**	**0,6**	**+15,8**
of which, in relation to the EU 27	90,6	1,3	+32,0	42,8	0,5	+20,9
Raw, inedible materials, excluding fuel	**275,0**	**4,1**	**+54,7**	**266,9**	**3,0**	**+43,3**
of which, in relation to the EU 27	170,2	2,5	+126,0	137,4	1,5	+30,0
Mineral fuels, lubricants and derived materials	**374,4**	**5,5**	**+131,2**	**922,5**	**10,4**	**+130,9**
of which, in relation to the EU 27	159,3	2,4	+124,9	417,7	4,7	+307,0

Animal and vegetable oils, fats and waxes	**40,1**	**0,6**	**+323,4**	**22,2**	**0,2**	**+84,9**
of which, in relation to the EU 27	38,5	0,6	+390,5	17,9	0,2	+61,8
Chemicals and derivatives not specified in another section	**337,4**	**5,0**	**+24,1**	**1463,8**	**16,5**	**+55,7**
of which, in relation to the EU 27	246,1	3,6	+32,7	1048,2	11,8	+34,4
Manufactured goods classified mainly by raw material	**1333,2**	**19,7**	**+43,7**	**1728,2**	**19,5**	**+39,1**
of which, in relation to the EU 27	981,5	14,5	+37,1	1116,9	12,6	+24,7
Transport machinery and equipment	**2869,0**	**42,5**	**+6,5**	**2878,2**	**32,4**	**+15,3**
of which, in relation to the EU 27	2306,9	34,1	+5,5	2184,8	24,6	+12,2
Miscellaneous manufactured articles	**841,7**	**12,5**	**+17,2**	**864,3**	**9,7**	**+25,1**
of which, in relation to the EU 27	700,4	10,4	+15,3	639,1	7,2	+18,4
Goods not included in another section of the CSCI	**11,5**	**0,2**	**+71,8**	**1,8**	***)**	**+16,1**
of which, in relation to the EU 27	4,3	0,1	+88,2	1,5	*)	+28,4

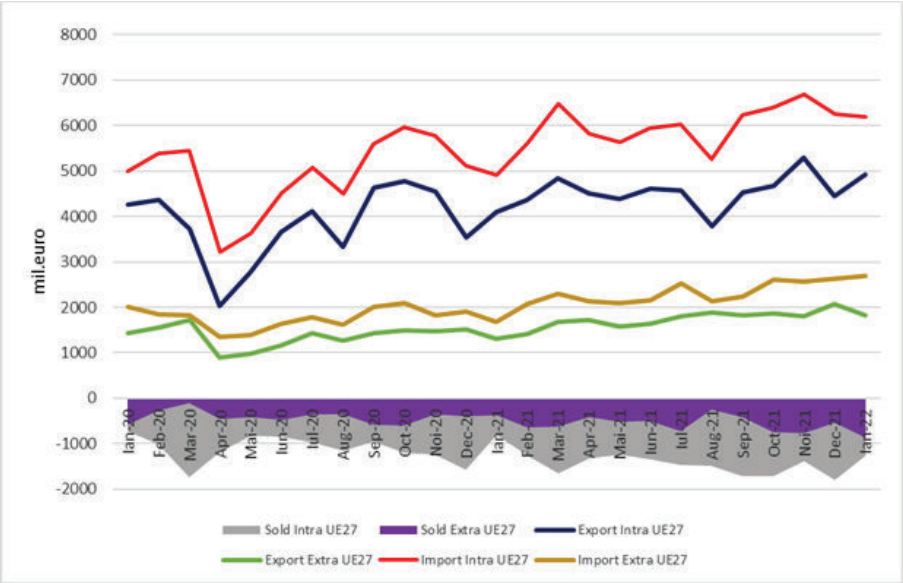
Source: INS release number 64/14 March 2022

We find that in January 2022, important shares in the structure of exports and imports are held by product groups: transport machinery and equipment (42.5% for export and 32.4% for import) and other manufactured products (32.2% for export and 29.2% for import).

Chart number 2 shows the exports, imports and balances of Intra-EU27 and Extra-EU27 trade balances between January 2020 and January 2022.

Exports, imports and balances of intra-EU27 and Extra-EU27 trade balances between January 2020 and January 2022

Chart 2



Source: INS release number 64/14 March 2022

Interpreting the data presented, we find that the value of intra-EU trade in goods in January 2022 was 4,920.9 million euros for shipments and 6,183.0 million euros for introductions, representing 72.8% of total exports and 69.6% of total imports. The value of extra-EU27 trade in goods in January 2022 was 1,835.0 million euros for exports and 2,698.9 million euros for imports, representing 27.2% of total exports and 30.4% of total imports.

In order to analyse the negative effect of the trade deficit on economic growth, we will further use a study using the simple linear regression equation.

Data on the evolution of the two macroeconomic indicators studied, Gross Domestic Product and Net Export, are presented in table number 2.

Evolution of Gross Domestic Product and Net Export in the period 1996-2020

Table 2

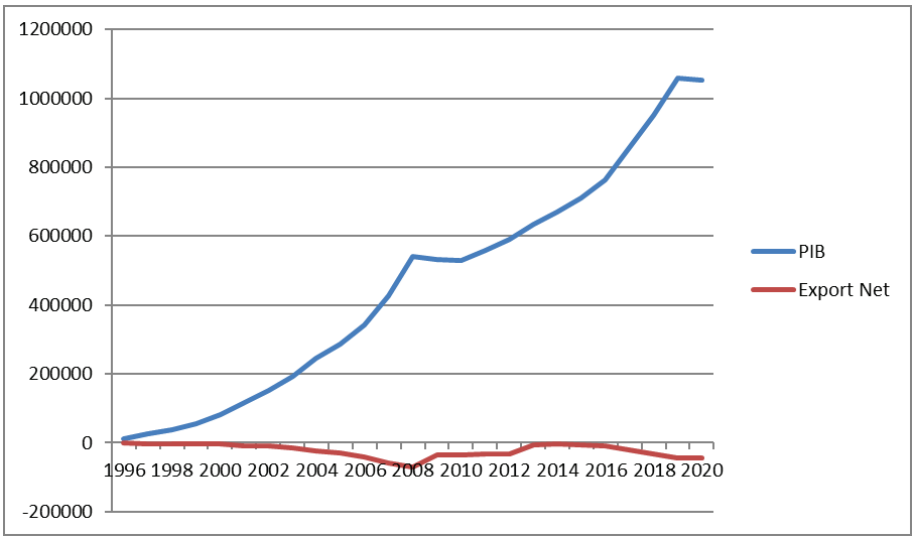
Year	GDP million RON	Export Net mil. RON	Net Export Weight %
1996	11388	-896	**-7,87**
1997	25500	-1737	**-6,81**
1998	37008	-2889	**-7,81**
1999	55126	-2563	**-4,65**
2000	80873	-4321	**-5,34**
2001	117391	-9058	**-7,72**
2002	152272	-8655	**-5,68**
2003	191918	-14881	**-7,75**
2004	244688	-22361	**-9,14**
2005	286862	-29519	**-10,29**
2006	342762	-41615	**-12,1**
2007	425691	-59952	**-14,1**
2008	539834	-69445	**-12,9**
2009	530894	-34113	**-6,4**
2010	528514	-35044	**-6,6**
2011	558889	-32918	**-5,9**
2012	591799	-31289	**-5,3**
2013	634967	-5729	**-0,9**
2014	669703	-2821	**-0,4**
2015	711929	-5859	**-0,8**
2016	763652	-7971	**-1,0**
2017	857895	-21185	**-2,5**
2018	951728	-32485	**-3,4**
2019	1058190	-43759	**-4,1**
2020	1053881	-44306	**-4,2**

Source: http://statistici.insse.ro:8077/tempo-online. Data processed by the authors.

Graph 3 was made for easier interpretation of the data series.

Evolution of Gross Domestic Product and Net Export in the period 1996-2020

Chart 3



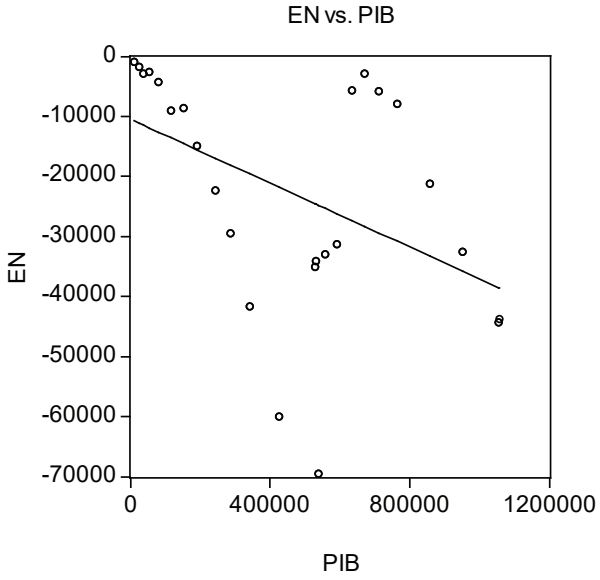
Interpreting the data in table number 2 and presented graphically, we find that the evolution of net exports was negative. In statistical terms, the export contributed to the formation and growth of the Gross Domestic Product, only taking into account the higher volume of imports, in the end we obtain a negative net export (trade balance). Thus, in 1996 the net export had a share in GDP of -7.87%, in the period 2005-2007 it was around -14%, and in 2020 of -4.2%.

It is found that the indicator of coverage of imports by exports is not super unitary either. A closer analysis of international trade is needed for the domestic economy in order to find solutions to reduce net exports in absolute terms.

The correlation between the Gross Domestic Product and the Net Export made by Romania in the period 2006-2020 according to the data structured in table number 2 is presented in the following graph.

Correlation between Gross Domestic Product and Net Export

Chart 4



The graph above shows that the point cloud related to the values recorded by the two macroeconomic indicators studied in their evolution describes a straight line, which allows us to continue the study, making a statistical-econometric analysis, using a simple linear regression model, which has the following form:

$$PIB = a + b \cdot EN + \varepsilon \qquad (1)$$

where: GDP (Gross Domestic Product) is the dependent variable;
EN (Net Export) is the independent variable;
a and b are the regression parameters;
ε is the residual variable.

The EViews statistical-econometric analysis program was used to test the significance of the model, and the results are presented in table number 3.

Results of the analysis

Table 3

Dependent Variable: GDP
Method: Least Squares
Sample: 1996 2020
Included observations: 25

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	282989.6	93554.07	3.024877	0.0060
EN	-7.691613	3.160118	-2.433964	0.0231
R-squared	0.204818	Mean dependent var		456934.2
Adjusted R-squared	0.170244	S.D. dependent var		331394.9
S.E. of regression	301870.7	Akaike info criterion		28.15000
Sum squared resid	2.10E+12	Schwarz criterion		28.24751
Log likelihood	-349.8750	F-statistic		5.924178
Durbin-Watson stat	0.069244	Prob(F-statistic)		0.023112

According to the results, we conclude that the model is a good one and can be used in estimating the evolution of GDP, a fact confirmed by the values of the F-statistic and t-Statistic tests superior to those tabulated. According to the data in table number 3, we can estimate the theoretical values of the dependent variable, according to the relation:

$$\widehat{GDP} = 282989.6 - 7.691613 \cdot \widehat{EN} + \varepsilon \quad (2)$$

The value of R-squared confirms that there are other factors that influence the evolution of the Gross Domestic Product in Romania, which were not taken into account.

Conclusions

From the study of the article *The trade deficit continues to affect economic growth*, a number of theoretical conclusions are drawn, but especially practical. The trade deficit is found to increase over time. This trend is found to be characteristic of the current period, in which the national (world) economy is facing the effects of the pandemic crisis, combined with the economic and financial crisis.

Recently, economic developments have been negatively influenced by the effects of the Ukrainian-Russian war. The restrictions imposed by Russia on the export of natural gas and oil, as well as the restrictions promoted by the USA and the states of the European Union, have disturbed the proportions and macroeconomic correlations, which have led to destabilization. Thus, the prices of these restricted products have increased with effect on the whole range of goods and services.

In this context, imports have further increased, which will affect the macroeconomic results through the level of Gross Domestic Product.

Exports are also more difficult to promote in the context of the provisions of the European Union Directive on the free movement of goods. In these circumstances, on the European Union market, the offer is interpreted strictly in terms of price and quality.

It is noted that more careful analysis is needed to encourage domestic producers to increase exports. Agriculture and the agri-food industry must also be supported by domestic subsidies and allocations from the European Union through the recovery and resilience program.

The final conclusion is that under current and foreseeable conditions, international trade will further affect concrete domestic results. We specify this on the basis of current prices, but if we take into account the level of the annual inflation rate which is over 8% at the end of March, the reduction of GDP (of economic growth) in real terms is even greater.

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