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Conference Paper

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The Research Institute for Agriculture Economy and Rural Development (ICEADR), Bucharest

Suggested Citation: Gavrilescu, Camelia (2019) : An analysis of the trade balance for the main agri-food products, In: Agrarian Economy and Rural Development - Realities and Perspectives for Romania. International Symposium. 10th Edition, The Research Institute for Agricultural Economy and Rural Development (ICEADR), Bucharest, pp. 26-34

This Version is available at:

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AN ANALYSIS OF THE TRADE BALANCE FOR THE MAIN AGRI-FOOD PRODUCTS

CAMELIA GAVRILESCU¹

Abstract: *The Romanian agri-food trade has registered a permanent deficit during the last three decades (with a brief exception period, 2013-2014). The deficit was deepened by the negative trade balance with the EU countries, but since 2010, the deficit has been partially offset by the trade surplus with the non-EU countries. The paper analyzes the evolution of the agro-food trade balance detailed by the main product groups, and the results highlight the product groups that were the main contributors to the deficit and have remained over time the main import goods (fruits, meat, vegetables, milk and dairy products), those with balances shifting from negative to positive depending on the economic situation (poultry, eggs), as well as those with a permanent positive balance (cereals, oilseeds). The imports of pork, apples and tomatoes are analyzed in detail, in terms of the quantity, value and countries of origin of the imports.*

Keywords: *agri-food trade deficit, pork, apples, tomatoes*

JEL Classification: F14, Q17

INTRODUCTION

In the last three decades, Romania's international agri-food trade has undergone major changes from the point of view of trade policies, and imports and exports geographical orientation and composition. The economic and political reforms have led to major changes in the agri-food sector, in the functioning of the agri-food chains, resulting in significant imbalances between the domestic supply and demand; as a consequence, imports exceeded exports by far. The negative agri-food trade balance has been (with a brief exception in 2013-2014) a constant during the last three decades. Accession to the European Union opened unprecedented opportunities for Romania; and despite severe health, sanitary, veterinary and quality requirements, the Romanian products have gradually entered the European and world markets, registering a spectacular expansion. Although the value of trade flows increased significantly, Romania still has a negative agri-food trade balance, due to the growing deficit in relation to the other EU member countries. This deficit is partially offset by the positive balance in the relation with non-EU countries. The analysis of the trade balance by product groups shows that the largest deficits are registered for some basic products: meat, dairy products, fruit, vegetables. The present paper tries to analyze these deficits: the main evolutions of imports and exports of these products in terms of value, volume and geographical orientation of the trade flows, elements that influence significantly the presence and competitiveness of Romanian products on domestic and international markets.

MATERIAL AND METHOD

In this paper, the analysis was made on the agro-food trade flows: the value of imports and exports, their (quantitative) volume on the 2 main directions (EU and extra-EU), with the detailed geographical orientation on the main countries of origin and destination, for the main product groups. Eurostat data (HS classification, chapters 01-24) were used at 2 and 4 digits, respectively 6 digits where necessary.

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RESULTS AND DISCUSSIONS

In the pre-accession period, which was a period of general economic growth, both general and agri-food trade showed upward trends. Romania's accession to the European Union marked the moment of opening to the Single Market, which meant a significant increase of the trade, not restricted by tariff barriers, but also a more important presence on the extra-European markets (table 1).

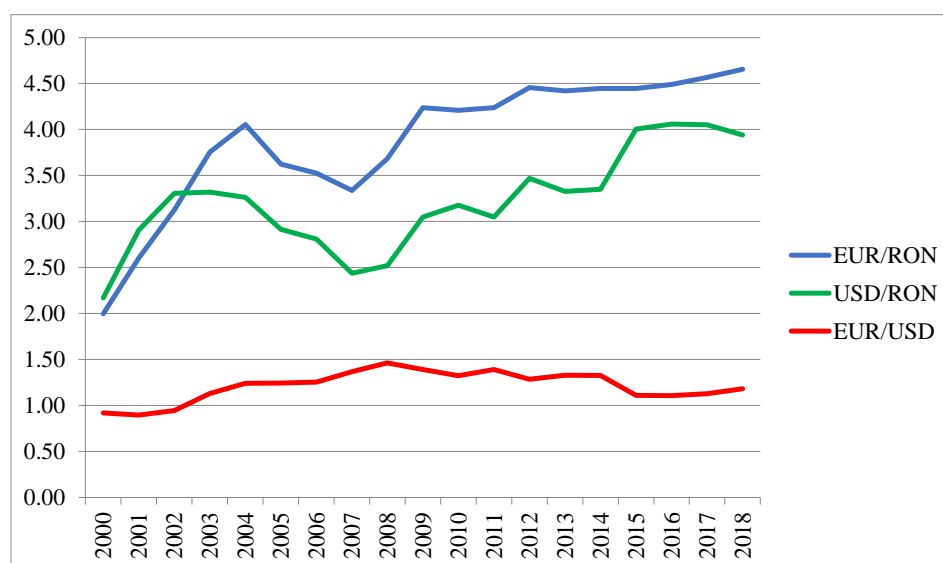
Table 1 – Romania’s general and agri-food trade dynamics

Item	Flow	Pre-accession period average (2000-2006) (EUR billion)	Post-accession period average (2007-2018) (EUR billion)	2007-2018 ----- 2000-2006	2018/2006
Total general trade	export	17.33	47.04	2.71	2.42
	import	24.47	58.89	2.41	1.86
Total agri-food trade	export	0.56	4.38	7.81	5.71
	import	1.62	5.22	3.23	3.06
General trade with the EU	export	11.80	34.34	2.91	2.71
	import	14.87	43.73	2.94	2.25
Agri-food trade with the EU	export	0.33	2.92	8.88	8.19
	import	0.72	4.26	5.95	4.69

Source: calculations using Eurostat data (2019)

Thus, agri-food exports increased on average 7.8 times in the post-accession period compared to the pre-accession period (up to EUR 6.5 billion in 2018), notably those to the EU, which increased on average 8.9 times (up to EUR 4.5 billion in 2018). The expansion of exports was also favored by the devaluation of the national currency (32% against EUR and 62% against USD in 2007-2018) (fig. 1).

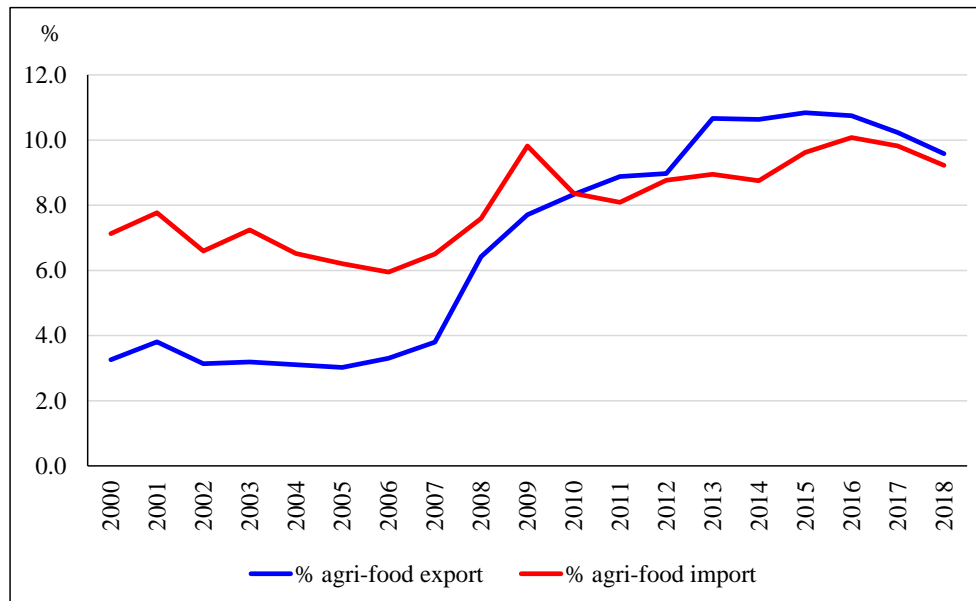
Figure 1 – Exchange rate RON/EUR/USD



Source: calculations using NBR (2019) data

In absolute terms, agri-food exports have increased continuously since 2000, as well as their share in general trade (fig. 2).

Figure 2 – Share of agri-food trade in Romania’s general international trade

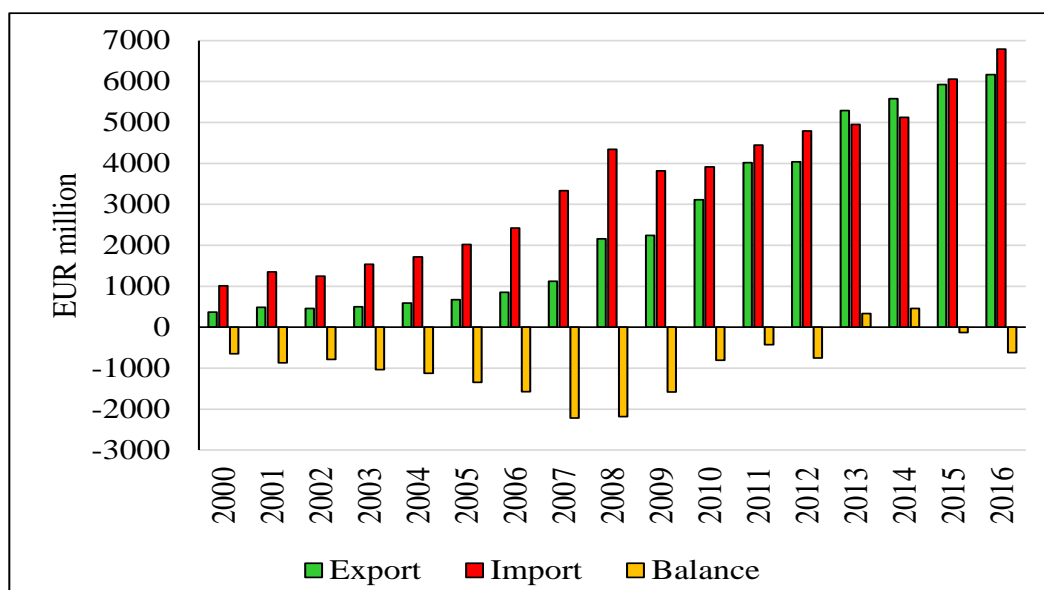


Source: calculations using Eurostat data (2019)

At the same time, imports also increased, but at a slower rate: 3.2 times total imports (up to 7.6 billion euros in 2018) and 5.9 times imports from the EU (up to 6.4 billion EUR).

As a result, the deficit of the total agri-food trade balance, which registered maximum values in 2007-2008, decreased steadily until 2012 and shifted to surplus in 2013-2014. Since 2015, the balance has turned negative again, the deficit increasing sharply to EUR -1.15 billion. However, the agri-food balance with the EU has been permanently negative, reaching EUR -1.93 billion, Romania failing to recover the competitiveness differences from other Member States for most agri-food products. The penetration of some Romanian basic products (cereals, oilseeds and live animals) on extra-EU markets (mainly in the Mediterranean area and in the Middle East) has meant the registration of a surplus of the agri-food trade balance with the extra-EU countries since 2010, which partially offset the trade deficit registered with the EU (Gavrilescu et al., 2017; Gavrilescu, 2018).

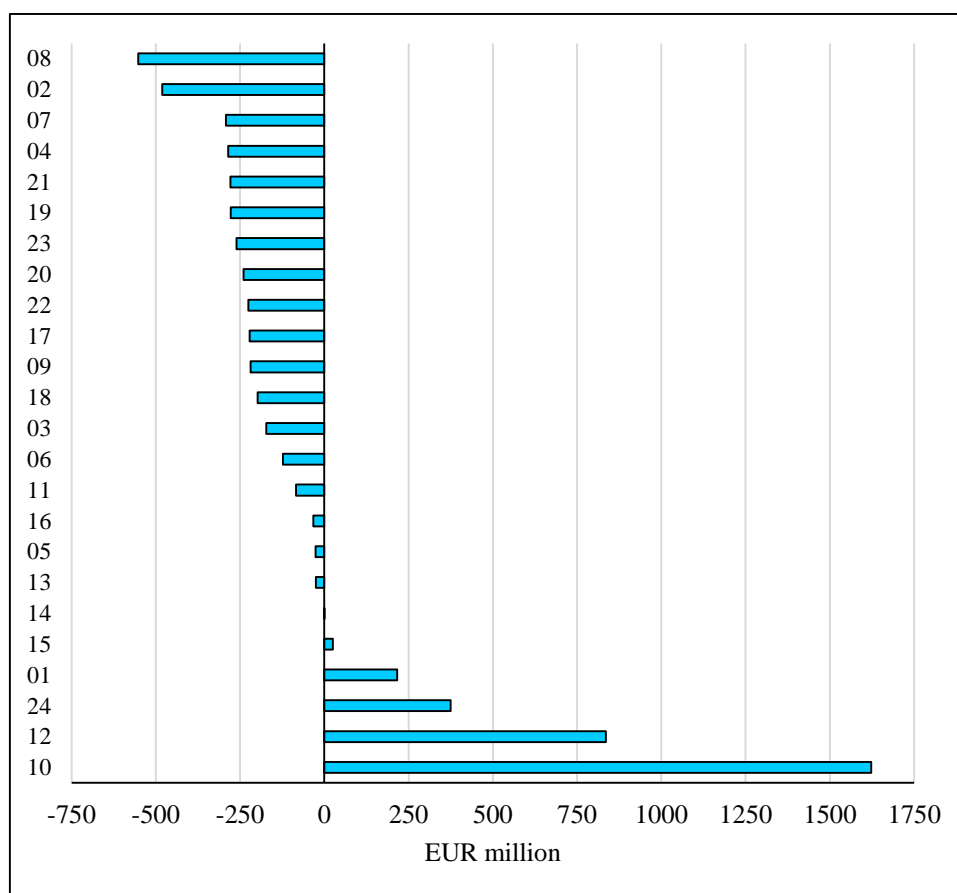
Figure 3 –Romania’s international agri-food trade in 2000-2018



Source: calculations using Eurostat data (2019)

The average values of exports, imports and balance were calculated, detailed by the main groups of agri-food products (01-24 in the classification of the Combined Nomenclature). In figure 4 are represented hierarchically the average values of the balance for the period 2016-2018.

Figure 4 – Trade balance by the main agri-food product groups (2016-2018 averages)



Notes: chapters HS (Harmonized System) 01-24, which are covering all agri-food products: 01-live animals; 02-meat and offal; 03-fish and seafood; 04-dairy products, eggs and honey; 05-other animal products; 06-live plants; 07-vegetables; 08-fruit; 09-coffee, tea and spices; 10-cereals; 11-products of the milling industry; 12-oilseeds; 13-lacs, gums and resins; 14-other vegetable products; 15-oils and fats; 16-meat and fish preparations; 17-sugar and confectionery; 18-cocoa and cocoa products; 19-cereal baking and pastry products; 20-vegetable and fruit preparations; 21-miscellaneous edible preparations; 22-beverages; 23-animal feed; 24-tobacco and tobacco products.

Source: calculations using Eurostat (2019) data

There are 4 groups of products with a significant trade surplus: cereals (+ € 1.6 billion), oilseeds (+ € 836 million), tobacco and tobacco products (€ 374 million) and live animals (€ 216 million). Cumulated, they represent 69.4% of the total value of the Romanian agri-food exports. This very high concentration of exports on a small group of products is unfavorable, due to the vulnerability to fluctuations in international markets.

Out of 24 groups of agri-food products, Romania registers trade deficits in 18 groups. The largest deficits (over EUR 200 million) occur in the groups: 08 - fruits; 02 - meat and offal; 07 - vegetables; 04 - milk and dairy products; 21 - various food preparations; 19 - bakery and pastry products; 23 - animal feed; 20 - vegetable and fruit preparations; 22 - beverages; 17 - sugar and sugar products and 09 - coffee, tea and spices.

Table 2 shows the quantitative share of imports of certain groups and sub-groups of agri-food products in human consumption.

Table 2 – Share of imports in human consumption (%)

Item	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Meat and offal	32.1	27.6	31.0	32.7	31.1	27.8	30.8	30.0	33.3	34.0	34.7	36.0	39.7
- pork	33.3	31.1	38.1	39.9	36.0	31.0	33.1	32.8	36.0	38.4	38.5	41.5	48.4
- chicken meat	33.6	30.9	29.5	30.1	27.7	28.0	33.4	30.5	32.7	30.1	32.0	32.4	30.7
- beef	26.0	7.6	10.4	12.8	13.8	10.9	13.0	14.7	21.8	27.2	26.7	18.8	20.8
- mutton + goat meat	2.1	1.9	1.9	2.0	2.1	2.2	4.1	2.1	2.2	2.3	2.2	2.2	2.3
Fish	84.7	82.7	87.1	85.3	0.0	91.0	89.3	0.0	88.8	87.0	82.1	83.7	86.2
Milk and dairy products ¹⁾	1.4	4.7	6.2	8.9	9.0	10.4	10.2	11.1	10.3	12.6	16.3	19.3	52.2
Butter	38.5	41.7	46.2	50.0	38.5	38.5	35.7	45.6	46.7	47.4	50.0	47.8	21.4
Sugar and confectionery ²⁾	25.4	22.6	41.2	42.9	53.7	42.1	40.0	38.4	50.5	39.6	51.0	54.8	94.3
Vegetables and vegetable products ³⁾	10.9	13.8	12.7	12.3	13.9	12.8	14.0	13.3	15.3	17.6	20.9	20.8	21.5
- tomatoes	22.0	25.3	23.5	25.9	30.9	25.0	26.8	23.8	31.1	32.5	36.7	32.2	33.4
- potatoes	12.6	7.5	8.6	8.0	8.0	11.2	15.4	15.1	13.4	14.1	19.8	18.2	21.8
Fruit and fruit products ⁴⁾	41.6	48.4	54.7	45.5	50.2	46.2	53.6	51.4	54.9	54.9	65.3	66.5	58.6
- apples	12.2	16.0	15.1	12.1	13.4	15.7	21.1	17.9	20.3	26.9	34.3	36.9	27.1

Notes:

- 1) In equivalent milk with 3.5% fat, butter excluded)
- 2) In equivalent refined sugar
- 3) In equivalent fresh vegetables
- 4) In equivalent fresh fruit

Source: calculations using NIS (2019) data

Of all products listed in table 2, only for sheep + goats and potatoes, the self-sufficiency rate exceeds 100%. These figures show that the main agri-food supply chains are not able to cover domestic demand. The fragmentation of agricultural land into numerous small farms, with low productivity and efficiency, inserted in the commercial chains, as well as the lack of concentration of supply through various producers' association forms are the main internal causes of the imbalance between the demand and the domestic supply. To these are added the changes in the food consumption model, expressed by an increasing demand for varied and better-quality products, which the current supply of the domestic food industry cannot satisfy.

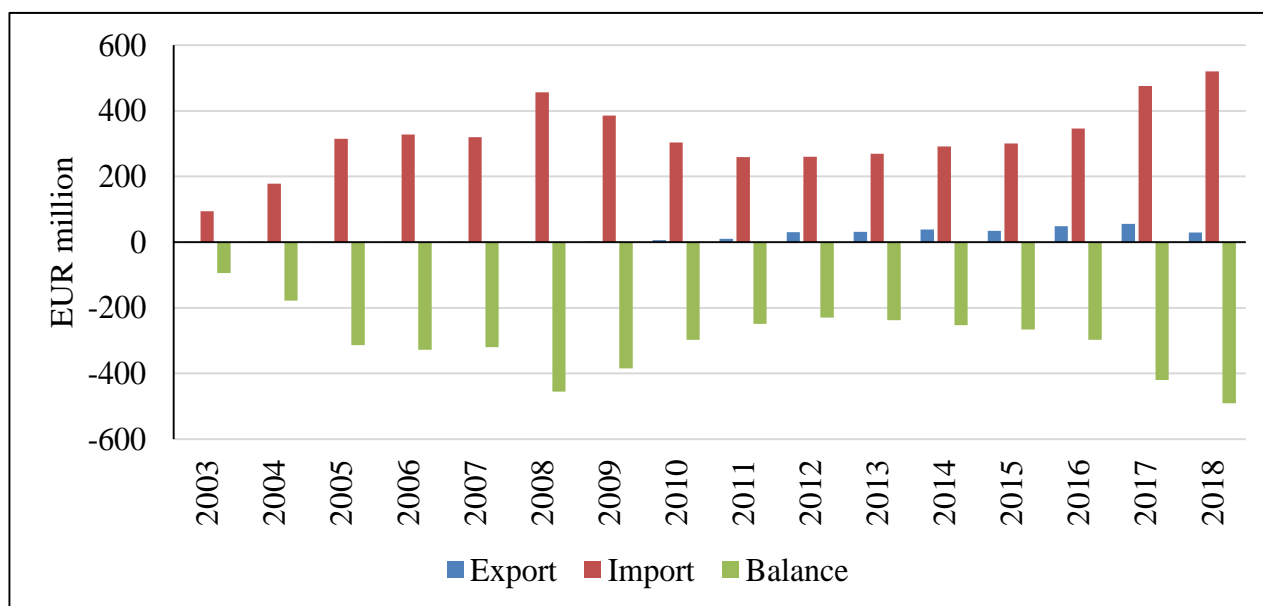
One may also notice an increase in the share of imports in human consumption for a number of commodities in recent years, such as: meat and offal (especially pork), fish, milk and dairy products, sugar and confectionery, vegetables and vegetable products (especially tomatoes). This increase may be partially correlated with the increase in population incomes in recent years, also reflected in the increase in food demand.

From the first three product groups with the highest trade deficit, we selected for analysis the most important product: from group 02 - meat and offal, we detailed the analysis in pork (code 0203); from group 08 - fruits, we detailed the analysis in apples (code 080810), and in group 07 - vegetables, we detailed the analysis in tomatoes (code 0402).

Trade in pork has resulted in a permanent deficit (after 1997, once Romania joined CEFTA); the imports were important in terms of quantity, and coincided in the first years after 1997 with the dissolution of the large state-owned pig breeding enterprises. The private sector started with significant difficulties, and Hungary and Poland were the main suppliers at that time. In the

pre-accession period, imports increased both in terms of quantity and value (figure 5), then decreased during the economic crisis; since 2010 they have resumed their upward trend, but at a lower growth rate, due to the increase of the domestic production of pork.

Figure 5 – Romanian international trade in pork



Source: calculations using Eurostat (2019) data

The growth of domestic production has been slower than the increase in consumption in recent years; as a result, imports have increased. The average values of pork imports and their origin in 2016-2018 are shown in table 3.

Table 3 – Pork imports origin (2016-2018 averages)

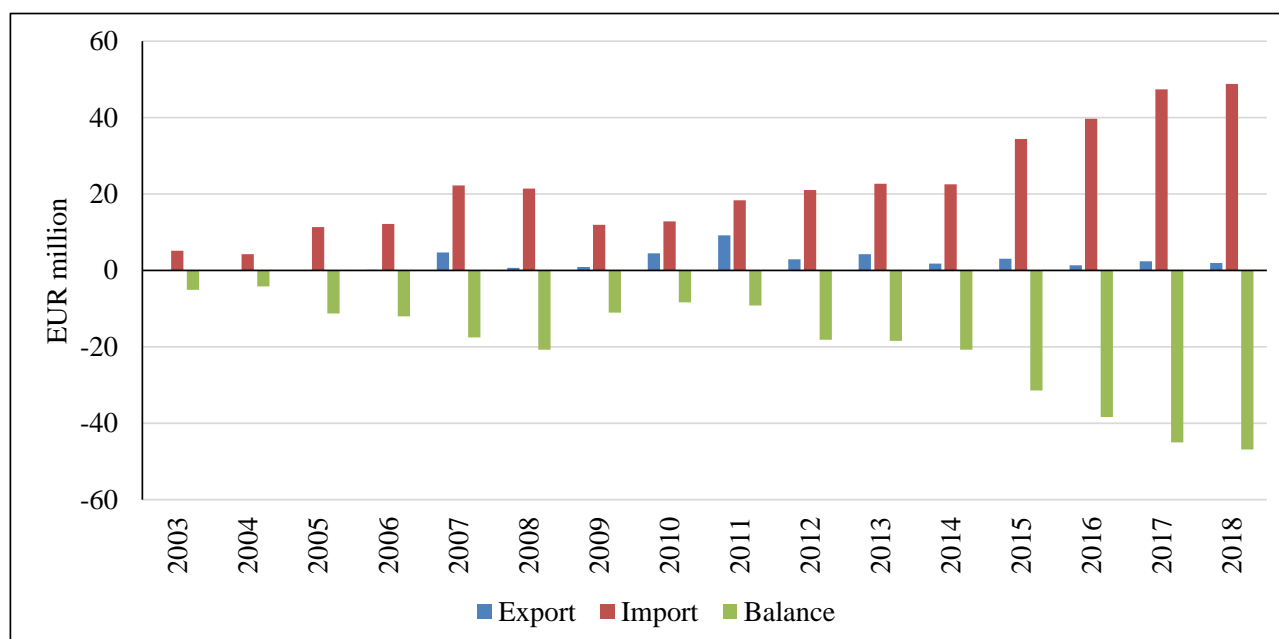
Item	Import - quantity		Import - value	
	1000 tons	%	EUR million	%
Total	717	100,0	1342	100,0
Germany	180	25.1	328	24.4
Spain	157	21.9	356	26.5
Hungary	127	17.8	219	16.4
Netherlands	72	10.0	132	9.8
Poland	57	7.9	96	7.2

Source: calculations using Eurostat (2019) data

The Romanian international fruit trade is worth EUR 676 million annually (average 2016-2018). Most of it is the trade in citrus fruits and bananas. Of the temperate zone species (cultivated in Romania), apples account for the most part (22%).

The self-sufficiency rate in apples has been on average 80% in the last 5 years, but to this it contributes largely to the high level of on-farm consumption; a relatively small quantity of apples from domestic production enters the commercial chains, and the supply of urban consumers is mainly provided by modern retail networks (supermarkets and hypermarkets), which, due to the atomization of the domestic supply, are mainly supplied by import. The decrease of the areas under apple orchards and the decrease of the domestic production of apples after 2011 also contributed to the increase of imports (fig. 6).

Figure 6 – Romanian international trade in apples



Source: calculations using Eurostat (2019) data

The average values of the apple imports and their origin during the period 2016-2018 are shown in table 4. The main suppliers are Poland (the largest producer of apples in the EU) and Italy. Among the non-EU countries, the Republic of Moldova is also a supplier.

Table 4 – Apples imports origin (2016-2018 averages)

Item	Import - quantity		Import - value	
	1000 tons	%	EUR million	1000 tons
Total	105.8	100.0	45.3	100.0
Poland	65.9	62.2	26.4	58.4
Italy	17.8	16.8	8.1	17.9
Germany	7.0	6.6	4.2	9.3
Hungary	4.2	3.9	1.6	3.5
Rep. Moldova	2.6	2.5	0.8	1.7

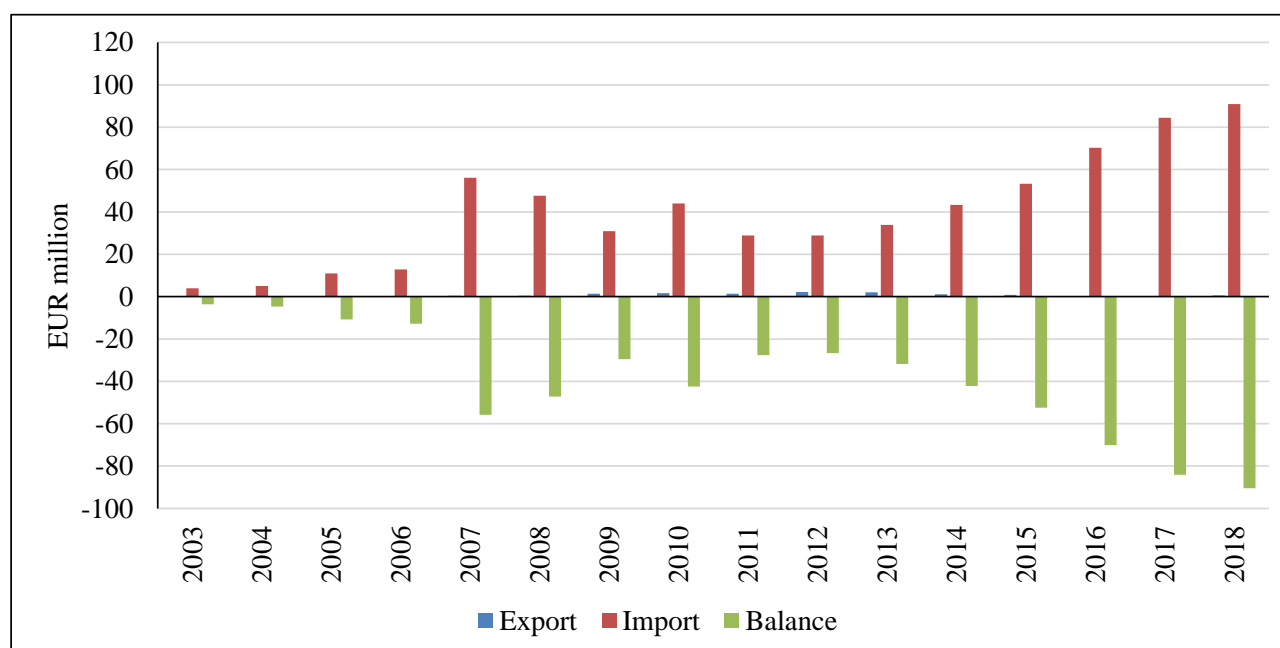
Source: calculations using Eurostat (2019) data

Similar trends were also recorded in vegetable production and trade. The total value of the Romanian international trade in vegetables amounts to EUR 508 million annually (2016-2018 average), of which only tomatoes represent 16%.

The self-sufficiency ratio in tomatoes has been on average 73% in the last 5 years, where again the on-farm consumption had a significant share. Tomato imports accounted for 32% of human consumption on average. The decrease in tomato production until 2017 contributed substantially to the increase in imports. Recent measures to stimulate tomato production under plastic tunnels (implemented from 2018) have led to an increase in domestic tomato production, but still to a lesser extent to help reduce imports (fig. 7).

The average values of tomato imports and their origin during 2016-2018 are shown in table 5. The main supplier is by far Turkey, where 46% of the imported tomato quantities come from.

Figure 7 - Romanian international trade in tomatoes



Source: calculations using Eurostat (2019) data

The hierarchical differences between the countries of origin of tomato imports (e.g. Italy ranks 3rd in terms of quantities exported to Romania, but 5th in value) are explained by the price differences of the tomato batches (differences given by the quality products and the period during which imports are made).

Table 5 – Tomatoes imports origin (2016-2018 averages)

Item	Import - quantity		Import - value	
	1000 tons	%	EUR million	1000 tons
Total	79.7	100.0	81.9	100.0
Turkey	36.4	45.8	34.5	42.1
Italy	8.7	10.9	7.5	9.2
Spain	7.9	9.9	8.6	10.4
Germany	6.2	7.8	9.5	11.6
Netherlands	5.9	7.4	8.9	10.9

Source: calculations using Eurostat (2019) data

CONCLUSIONS

Since early 1990, with the resumption of imports of agri-food products at the demand level, Romania has become a net importer. The agricultural and food production sector has been severely affected both by the destruction of the old agri-food chains of the centralized economy, but especially by the inefficiency of the economic agents faced with the tough demands of the market economy, which has led to a partial and dysfunctional re-creation of these chains. Their structuring under the new conditions and their efficiency has been intensely affected by external competition, intensified by the partial liberalization of trade during the membership of CEFTA (1997-2006), and then by the total liberalization in the post-accession period.

Unfortunately, Romania is net importer of most agri-food products, including the basic ones (meat, milk, fruit, vegetables).

The average values of the share of imports in the human consumption of the products studied in the present work (41% in pork, 29% in apples and 29% in tomatoes) illustrate the

inefficiency of domestic production and the lack of concentration of supply, thus a lack of competitiveness, both on the domestic market and on the international market.

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