

The 3rd International Conference on Economics and Social Sciences
Innovative models to revive the global economy
October 15-16, 2020
Bucharest University of Economic Studies, Romania

**Romanian Foreign Agri-Food Trade
in the Context of Global Challenges**

Ioana PANAIT^{1*}, Marian Cătălin CUCU²

DOI: 10.2478/9788395815072-062

Abstract

Current challenges have led to major changes in economic activities around the world, and the agricultural sector is an area that must continue to develop in order to permanently provide the food needed by the entire population and there is a need for an agricultural system that is socially equitable, economically viable and environmentally friendly to ensure the sustainability of agriculture in the context of constant adaptation to the challenges it faces. Trade in agri-food products continued during the first half of the year, but with some difficulties in supply, being overworked periods in which demand was very high in a short time because the population was making supplies. The paper aims to analyse the situation in Romania in terms of international trade in agri-food products with a focus on the first quarter of 2020, which coincides with the beginning of the pandemic. As in every quarter of the year, Romanian agriculture is characterized by imports, domestic productions of fresh agri-food products being low during this period due to the seasonal character of agriculture, which is more developed in the warmer period. The purpose of the paper is to identify the level of foreign trade relations in this period, as well as an overall perspective of future agri-food trade. Despite the difficulties, the Romanian agricultural sector continued to work, but it must be effectively supported to ensure food security and safety while considering sustainable development. Based on the results obtained following the quantitative analysis performed on a series of statistical data in the agri-food field, several solutions are proposed to develop the Romanian agri-food supply chain.

Keywords: trade balance, adaptability, food safety, sustainable development.

JEL Classification: Q17

1. Introduction

2020 is a year that began under the emergence of a virus that after mid-February led to a pandemic, period during which the agri-food sector tried to maintain its activities despite all challenges and had to adapt in short time to a pandemic with all its protection requirements and to an instability of the demand on the market, from an over-demand in the first period of the pandemic to a linear demand along the way.

¹ Bucharest University of Economic Studies, Bucharest, Romania, panaitioana48@gmail.com.

² Bucharest University of Economic Studies, Bucharest, Romania, cmc.catalin02@gmail.com.

* Corresponding author.

Trade in agri-food products has to meet the food needs of the population, covering the deficit of domestic production for fresh products in the months when the quantities produced are lower, especially in the cold season. OECD (2020) considers that the spread of the virus has disrupted the supply of agri-food products on both national and cross-border markets, while the pandemic presents challenges for the food system, but is also an opportunity to build resistance to threats.

Food is a basic need, so the level of demand should be less affected by the crisis than the demand for other goods and services and according to OECD (2020), at the macroeconomic level, consumer demand and employment will slightly reduce the demand for food.

The World Bank (2020) mentions that the start of the pandemic has brought uncertainty to the international food market due to the potential for food insecurity, and increased attention has been paid to agriculture in order to maintain optimal conditions for a secure supply chain in order to deliver essential products to consumers, despite restrictions.

2. Problem Statement

FAO (2020) states that border closures, lockdown and supply chain instability and trade disruptions limit people's access to sufficient and nutritious food sources, so we need to know in detail the current situation we are facing with in order to plan actions against the consequences for agriculture imposed by the pandemic.

Two components of trade are imports and exports made during a year, being important activities in the international economic relations of a country (Patriche et al., 1999) International trade has a high contribution to the economic development of states and has developed gradually based on trade relations established through numerous agreements. (Jeníček and Krepl, 2009) The trade dynamics led to a free market that was established through globalization and the effects were seen, in addition to the increase of trade-specific activities, in consumer behavior (Storper, 1992).

Agriculture is an important branch of the economy in most countries, and international agri-food trade differs depending on the agricultural potential of the country and the degree of coverage of demand with local supply. (Gombkötő, 2019) As the authors argue (Popescu et al., 2017), the agricultural sector is an important component in Romanian international trade and must ensure high competitiveness in the European Union. Romania is a country dependent on agri-food imports, especially processed products and the seasonal nature of agricultural production determines a negative trade balance.

Through the study, it is desired to analyse the situation of international trade especially in Q1/2020 to determine how the pandemic is affecting the agricultural sector and international trade in food products. The value created by this study is conferred by the current situation in the context of the presented pandemic which includes information on the values of international trade in agri-food products that Romania has registered and the analysis of the first period of the year, both quantitatively and qualitatively, to create a basis to help determine the strategic directions needed to be implemented that must take into account the adaptability of the Romanian agricultural sector to increase competitiveness in international markets and a series of action plans if the situation worsens.

According to Henry (2020) the current pandemic will have long-term effects on agricultural activities, especially through the implementation of complex risk management on production and food supply in order to reduce dependence on imports. Kerr mentions that during 2020, international cooperation on food trade was essential for the proper continuation of activity and trade in agri-food products continued throughout the pandemic, being essential for providing food for the population. (Kerr, 2020)

3. Research Questions / Aims of the Research

The purpose of the study is to provide a comprehensive overview of the key challenges the Romanian agri-food sector is facing because of the coronavirus crisis. Following the interpretation of the results obtained and the findings made, a series of actions is envisaged, which support the Romanian agricultural sector in the face of challenges and which have in view its sustainable development.

4. Research Methods

The study includes a quantitative analysis about the situation of international trade in agri-food products, transactions being divided into quarters focusing on the first quarter of 2020 which includes an unprecedented situation, in which the population was affected by coronavirus and trade relations were vulnerable and had to adapt quickly to new trends. Using the descriptive statistical analysis, the study is based on a series of univariate numerical data, which characterizes the value of imports and exports made by Romania for the main 10 product categories in terms of developed figures, being static data showing the situation of the first quarter for 2007, 2014, 2019, and 2020. The statistical data about the situation of international trade come from the database of the International Trade Centre which provides updated and official data to determine the level of Romanian trade. Also, some qualitative aspects were addressed regarding the situation of Romania's international trade during the first quarter of 2020, the central objective of the research being the current context facing humanity that is under the incidence of the pandemic.

5. Findings

Following the study, the level of Romania's international trade in agri-food products was determined and the actual context with the presentation of the main aspects that led to the current situation of the agri-food market. Based on the analysed data and interpretations of the results, a series of actions have been proposed that should represent development plans for farmers for the development of their activities.

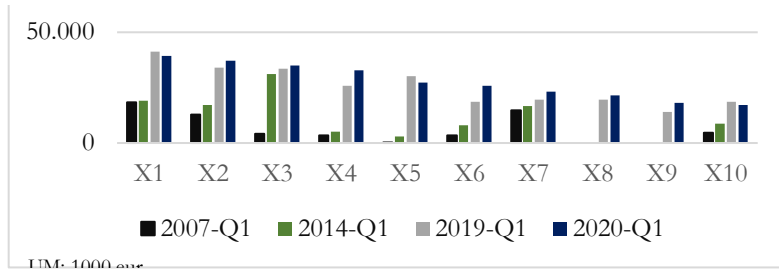
5.1. Structure

The study is based on an applicative part that includes a statistical analysis based on the declared values that illustrate the value level of imports and exports and a qualitative analysis that includes current issues that have influenced the development of trade in agri-food products in Romania.

5.2. Quantitative aspects regarding the situation of Romanian foreign agri-food trade

Following the analysis of the values of imports of processed food and agro-based products from graph 1 of the first quarter of the year in the last 14 years, there is an accelerated growth, registering small oscillations in 2009 and 2014. A comparison

between 2020 and 2007 reveals an increase in the import value of processed food and agro-based products by 278%, the year 2020 compared to 2014 registering an increase by 101%, and the year 2020 compared to 2019 registering an increase in the import value by 13 percentage points.



Graph 1. Evolution of import value for processed food and agro-based products in Romania

Source: adapted from ITC (2020)

Following the analysis of the values of imports of processed food and agro-based products in the first quarter of the year in the last 14 years, there is an accelerated growth, registering small oscillations in 2009 and 2014. A comparison between 2020 and 2007 reveals an increase in the import value of processed food and agro-based products by 278%, the year 2020 compared to 2014 registering an increase by 101%, and the year 2020 compared to 2019 registering an increase of the import value by 13 percentage points.

Table 1. Top 10 categories imported by Romania in Q1/2020

X	HS Code	Processed food and agro-based products
X1	'21069098	Food preparations, n.e.s., containing, by weight, >= 1.5% milkfat, >= 5% sucrose or isoglucose, >= 5% glucose or >= 5% starch
X2	'21069092	Food preparations, n.e.s., not containing milkfats, sucrose, isoglucose starch or glucose or containing, by weight, < 1.5% milkfat, < 5% sucrose or isoglucose, < 5% glucose or < 5% starch
X3	'23040000	Oilcake and other solid residues, whether or not ground or in the form of pellets, resulting from the extraction of soya-bean oil
X4	'17019910	White sugar, containing in dry state >= 99.5% sucrose (excl. flavoured or coloured)
X5	'33021029	Preparations based on odoriferous substances, containing all flavouring agents characterizing a beverage, containing, by weight, >= 1.5% milkfat, >= 5% sucrose or isoglucose, >= 5% glucose or >= 5% starch, of a kind used in the drink industries (excl. of an actual alcoholic strength of > 0.5% vol)
X6	'18063100	Chocolate and other preparations containing cocoa, in blocks, slabs or bars of <= 2 kg, filled
X7	'24022090	Cigarettes, containing tobacco (excl. containing cloves)
X8	'19059070	Fruit tarts, currant bread, panettone, meringues, Christmas stollen, croissants and other bakers' wares containing by weight >=5% of sucrose, invert sugar or isoglucose (excl. crispbread, gingerbread and the like, sweet biscuits, waffles and wafers, and rusks)
X9	04061050	HS Code 04061050 - Fresh, cheese, unripened
X10	'21039090	Fresh cheese "unripened or uncured cheese", incl. whey cheese and curd of a fat content, by weight, of <= 40% (excl. Mozzarella)
		Sauces and preparations thereof, mixed condiments and mixed seasonings (excl. soya sauce, tomato ketchup and other tomato sauces, liquid mango chutney and aromatic bitters of subheading 21039030)

Source: adapted from ITC (2020)

Analysing the top 10 categories of products with the highest share of value in the total value imported by Romania of processed food and agro-based products registered in the first quarter of 2020 that are in table 1, it is found that:

The category food preparations, containing, by weight, $\geq 1.5\%$ milkfat, $\geq 5\%$ sucrose or isoglucose is the import category with the highest share in total imports of processed food and agro-based products, this representing 5.79% in 2007 out of the total of the analysed import segment, in 2014 representing 3.21%, and in 2020 its share remaining approximately constant and representing 3.26% although the imports registered approximately a double value. Comparing this category with 2007, it increased by 113%, compared to 2014 registering an increase by 105%, and compared to 2019 its value decreased by approximately 5%.

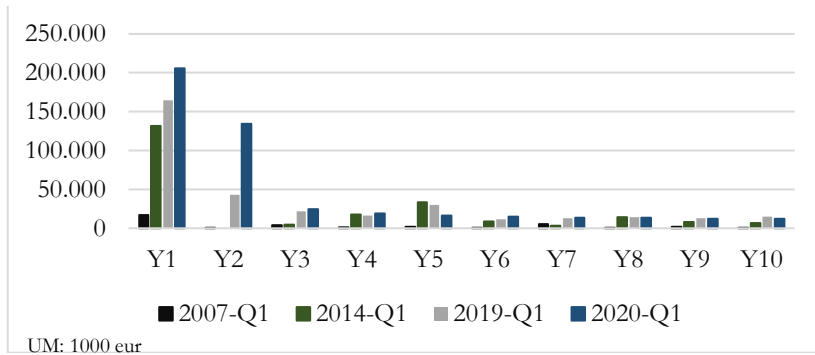
In second place is the category complementary to the above one, namely food preparations, not containing milkfats, sucrose, starch isoglucose or glucose category which recorded an increase by 9 percentage points in 2020 in comparison with 2019.

Compared to 2019, although in 2020 there were decreases in value by 10% and 7% respectively, the preparations based on odoriferous substances, containing all flavouring agents and sauces and preparations therefor, mixed condiments and mixed seasonings managed to register significant values so as to be located in the top value of imported products.

Regarding the cigarettes, containing tobacco category, although it registered a significant increase compared to 2007, 2014 and 2019, the share of the value in the total segment value is declining due to the faster pace of the overall segment.

The category white sugar, containing in dry state $\geq 99.5\%$ sucrose together with chocolate and other preparations containing cocoa, in blocks, slabs or bars of ≤ 2 kg, filled, and fruit tarts, currant bread, panettone, meringues, Christmas stollen, croissants and other bakers' wares are categories that recorded significant values, together representing 6.65% of the total value of imports from the segment analysed in 2020.

An increase by 30% recorded in 2020 compared to 2019 is found among fresh cheese "unripened or uncured cheese", incl. whey cheese and curd of a fat content, while the category of oilcake and other solid residues, whether or not ground or in the form of pellets registered an increase of only 4%, although compared to 2007 it registered a value increase by 761% (in 2014 representing 5.22% of the analysed segment). Analysing the exports of processed food and agro-based products in the first quarter of each year from 2007 to 2020 in terms of value from graph 2, it can be seen an upward trend in their value. In 2020, compared to 2007, the value of exports in this segment increased by 1,007 percentage points, compared to 2014, the value increased by 87 percentage points, and compared to 2019, they increased by 24 percentage points.



Graph 2. Evolution of exported value for processed food and agro-based products in Romania
Source: adapted from ITC (2020)

Table 2. Top 10 categories exported by Romania in Q1/2020

Y	HS Code	Processed food and agro-based products
Y1	*24022090	Cigarettes, containing tobacco (excl. containing cloves)
Y2	*24039900	Manufactured tobacco and tobacco substitutes, and tobacco powder, tobacco extracts and essences (excl. chewing tobacco, snuff, cigars, cheroots, cigarillos and cigarettes, smoking tobacco whether or not containing tobacco substitutes in any proportion, “homogenised” or “reconstituted” tobacco, nicotine extracted from the tobacco plant and insecticides manufactured from tobacco extracts and essences)
Y3	*21069098	Food preparations, n.e.s., containing, by weight, >= 1.5% milkfat, >= 5% sucrose or isoglucose, >= 5% glucose or >= 5% starch
Y4	*23063000	Oilcake and other solid residues, whether or not ground or in the form of pellets, resulting from the extraction of sunflower seeds
Y5	*15121191	Crude sunflower-seed oil (excl. for technical or industrial uses)
Y6	*15121990	Sunflower-seed or safflower oil and their fractions, whether or not refined, but not chemically modified (excl. for technical or industrial uses and crude)
Y7	*22021000	Waters, incl. mineral and aerated, with added sugar, sweetener or flavour, for direct consumption as a beverage
Y8	*23040000	Oilcake and other solid residues, whether or not ground or in the form of pellets, resulting from the extraction of soya-bean oil
Y9	*16023230	Prepared or preserved meat or meat offal of fowls of the species Gallus domesticus containing >= 25% but < 57% of poultry meat or offal (excl. sausages and similar products, finely homogenised preparations put up for retail sale as infant food or for dietetic purposes, in containers of a net weight of <= 250 g, preparations of liver and meat extracts)
Y10	*23064100	Oilcake and other solid residues, whether or not ground or in the form of pellets, resulting from the extraction of low erucic acid rape or colza seeds “yielding a fixed oil which has an erucic acid content of < 2% and yielding a solid component of glucosinolates of < 30 micromoles/g”

Source: adapted from ITC (2020)

Analysing the main ten categories of products that hold the most significant share in the total export value in Romania of the segment (accordingly to table 2), it is noticed that:

The category with the highest value share in the export of processed food and agro-based products is the cigarettes category, containing tobacco category which has a significant contribution since the analysed base year, 2007 (year in which it

represents 24.24% of the total value of the segment), in the first quarter of 2020 it represented 26.25%. The accelerated increase in the value of the processed food and agro-based products segment and at the same time the maintenance of the weight of the category at a high value made it to be in continuous upward trend, in 2020 compared to 2019, registering an increase by 25.37%.

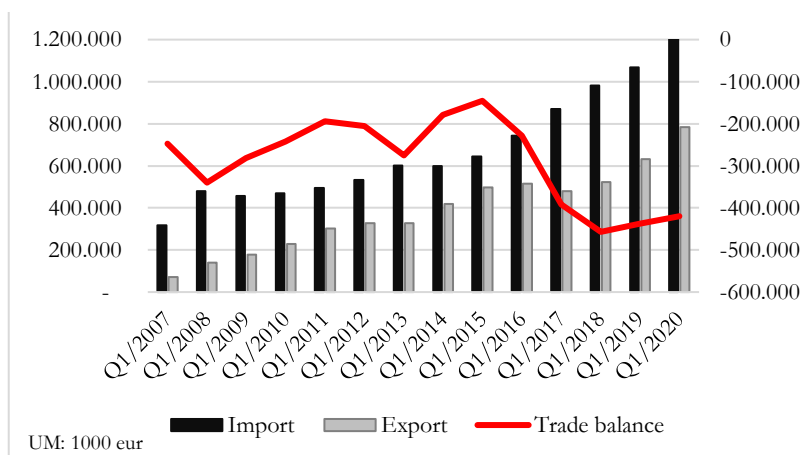
The second place is held by the category of manufactured tobacco and tobacco substitutes, and tobacco powder, tobacco extracts and essences which also registered a significant value in terms of export of the analysed segment, representing 17.14% of the total value in the year 2020.

Categories such as crude sunflower-seed oil; oilcake and other solid residues, whether or not ground or in the form of pellets; prepared or preserved meat or meat offal of fowls of the species *gallus domesticus*; oilcake and other solid residues, whether or not ground or in the form of pellets are categories that, although they registered value gaps regarding the year 2020 compared to 2019, they registered significant export values on the analysed segment; at the same time registering substantial increases in the period 2007-2020.

Regarding the category of food preparations, n.e.s., containing, by weight, $\geq 1.5\%$ milkfat, $\geq 5\%$ sucrose or isoglucose, this although reduced its share in the total segment value, it managed to register a significant increase, in 2020 increased by approximately 526 percentage points compared to 2007.

An increase by 5.41% in 2020 compared to 2019 also registered the category of waters, including mineral and aerated, with added sugar, sweetener or flavour, for direct consumption its value fluctuating during the analysed period, however it registered in 2020 values higher than 2007 and 2014. The category of oilcake and other solid residues, whether or not ground or in the form of pellets and the category sunflower-seed or safflower oil and their fractions, whether or not refined, but not chemically modified, are categories in full ascent, reporting both to the period 2007-2020 as well as reporting the year 2020 to the year 2019.

The graph 3 illustrates the evolution of balance trade for the processed food and agro-based products category in the first quarter of 2007-2020.



Graph 3. Trade balance of Romania for processed food and agro-based products

Source: adapted from ITC (2020)

During the entire analysed period, there is a trade deficit, Romania's exports being significantly lower for the processed food and agro-based products category, the largest deficit being in Q1/2018 when -456,884 thousand euros were registered, and in the last 3 years recorded the highest negative values. The value of exports had an increasing trend, except for 2017 when it decreased by 7% compared to the previous year but stabilized rapidly in 2018.

5.3. Qualitative aspects regarding the situation of Romanian foreign agri-food trade

This international situation has led to socio-economic challenges that in principle have had a negative impact because some economic activities have suffered due to precautions imposed at the national level, their activity being minimal or even completely blocked as employees were sent into technical unemployment, the income being reduced and consequently the purchasing power, being sought after the basic agri-food products. The rules on social distancing and multiple checks have caused problems with employees, most of whom are seasonal and who have given up these jobs, and for the remaining ones, safety conditions being imposed.

The high flow of entries into the country and border controls have led to delays of trucks with goods, and for fresh products this has led to quality depreciation. Also, because it was necessary to quarantine drivers, the cost of transport increased considerably because there was a small number of vehicles available for international shipping and the demand was high from Romania, being a period in which agri-food imports are high.

Given the limitation of economic activities, Romanian farmers have turned to online commerce and their own stores. Also, local products and Romanian producers were highly promoted, they quickly adapted to the events and tried to continue their commercial activity as much as possible because agricultural production existed, but it needed demand. Through social networks and online stores, farmers have moved to a modern trade, adapted to the current needs of customers who could no longer purchase the desired products from physical stores due to travel restrictions imposed to avoid crowded places, through which the products reached directly to the final consumer. Romanian consumers were delighted with this method and preferred to order and consume local products to the detriment of imported ones to support the Romanian farmer.

5.4. Strategic directions regarding the development of the Romanian agricultural sector

Farmers must move towards processing by developing infrastructure for processing Romanian raw materials and diversifying the range to meet consumer demand and limit imports for certain categories of agri-food products, investments in cultivation in protected areas for fruits and vegetables, optimal storage conditions in order to extend the storage time for products suitable for stock, innovations and innovative products that contribute to the increase of crop yields and to the improvement of product quality.

One way that leads to the development of farmers is the association, the cooperatives offering a greater power on the internal market by adapting to the needs of Romanian consumers and certifying them to the latest standards that will increase their competitiveness and through a continuous cooperative development will determine the development of foreign markets through exports. In order to develop

agricultural activities, it is necessary to optimize the farm and schedule production so to increase the season in terms of supply of fresh products for a longer period, to cover the off-season so that Romanian products are available for a longer time to limit imports and to have the security of an economic viability. Farmers must resort to the additional protection that assures them that they will obtain the discounted productions, such as anti-hail systems and irrigation systems, but also to the agricultural insurances in case of natural disasters.

6. Conclusions

Optimization of the supply chain management for agricultural sector and constant adaptability to the requirements of the population are necessary for the development of agriculture. Responding to the impact of COVID-19 on food security Romanian farmers must consider the medium and long-term development of agricultural activities to ensure a large part of the needs of consumers. For Romania, according to the quantitative analysis, the imports of processed food products are important to serve the market demand, in a context in which the processing of food raw materials is difficult due to the reduced investments in the processing infrastructure, so the Romanian producers must try to develop their activity towards processing.

References

- [1] FAO (2020). *COVID-19 pandemic – impact on food and agriculture*. Retrieved from <http://www.fao.org/2019-ncov/q-and-a/impact-on-food-and-agriculture/en/>.
- [2] Gombkötő, N. (2019). International Trade in Agricultural and Food Products. *International Journal of Commerce, Business and Management*, 6(3), pp. 2319-2828.
- [3] Henry, R. (2020). Innovations in Agriculture and Food Supply in Response to the COVID-19 Pandemic. *Molecular Plant*, 13(8), pp. 1095-1097.
- [4] ITC (2020). *International trade in goods – Monthly imports 2002-2020*. Retrieved from <https://www.intracen.org/itc/market-info-tools/statistics-import-country-product-monthly/>.
- [5] Jenicek, V., & Krepl, V. (2009). The role of foreign trade and its effects. *Agricultural Economics (AGRICECON)*, 55, pp. 211-220.
- [6] Kerr, W. A. (2020). The COVID-19 pandemic and agriculture: Short- and long-run implications for international trade relations. *Can J Agr Econ*, 68, pp. 225-229.
- [7] OECD (2020). *COVID-19 and the food and agriculture sector: Issues and policy responses*. Retrieved from <http://www.oecd.org/coronavirus/policy-responses/covid-19-and-the-food-and-agriculture-sector-issues-and-policy-responses-a23f764b/>.
- [8] Patriche, D., Stanescu, I., Grigorescu, M., & Felea, M. (1999). *The basics of trade*, Economica, Bucharest.
- [9] Popescu, G. H., Istudor, N., Nica, E., Vasile, A. J., Ion, R. A. (2017). The influence of land-use change paradigm on Romania's agro-food trade competitiveness – An overview, *Land Use Policy*, 61, pp. 293-301.
- [10] Storper, M. (1992). The Limits to Globalization: Technology Districts and International Trade, *Economic Geography*, 68(1), pp. 60-93.
- [11] World Bank (2020). *Food Security and COVID-19*. Retrieved from <https://www.worldbank.org/en/topic/agriculture/brief/food-security-and-covid-19>.