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ANALYSIS OF THE SITUATION OF THE VEGETABLE SECTOR IN ROMANIA AFTER THE ACCESSION TO THE EUROPEAN UNION

ABSTRACT

This paper aims to analyze the evolution of the Romanian vegetable sector from 2007 (the year of Romania's accession to the European Union) to 2016. Given the particularities of the sector, the quantitative and qualitative analysis of data shows that the agricultural sector needs to increase the areas cultivated under protected areas, thus reducing the off-season periods, which would contribute to the diminution of dependence on vegetable imports. This would also have a significant role in reducing the trade deficit in this segment.

Key words: vegetable sector, imports, exports.

JEL Classification: Q11, Q17, Q19.

1. INTRODUCTION

Although the population of our country is under sharp and continuous decline, the demand for vegetables is on an ascending trajectory, as a result of raising living standards, coupled with the disappearance of family household farms, which represented an important source of agricultural products for households.

Romania benefited from a full range of financial aids, including those for the vegetable sector, both through direct payments and through the possibility of accessing European funds to achieve investments in this sector. However, investments were not sufficient to cover the domestic needs for fresh vegetables at country level, Romania being dependent on imports from countries like the Netherlands, Turkey or Italy.

The problems that vegetable growers complain about are particularly related to the fact that they do not have a reliable market to sell their products, and there are periods when they fail to sell part of their production, which leads to significant losses.

2. STATE OF KNOWLEDGE

Vegetables are of major importance in the country's economy, mainly in the population's diet. Vegetable production is also influenced by soil and weather conditions (Ciofu et al., 2004).

The goal of vegetable growing sector is to provide the necessary food for the population, as well as to ensure the raw products used in different industries, so that vegetables are used both under fresh and processed form. They can be also consumed under frozen form and as canned vegetables, so that consumption needs are covered throughout the year (Indrea et al., 1983).

The cultivation of vegetables has certain characteristics, such as:

– They are cultivated on small areas, unlike other crops, but they need high fertility soils, preferably irrigated;

– They usually require a large amount of labour input, as well as other material inputs;

– The use of protected areas is necessary to ensure fresh vegetable production all year round;

– Most crops are highly perishable;

– Certain crops need individual plant care (Ciofu et al., 2004).

As vegetables are becoming more and more important in people’s diet, the importance of this sector is increasing. Most of the cultivated vegetables can be used as raw products in the canning industry, and secondary production can be used for animal feeding, such as sugar beets, cabbages, cauliflowers, etc. (Ciofu et al., 2004).

In economic and social terms, the different cropping systems used in vegetable farming have the following advantages:

– By production scheduling, the population’s consumption needs are met all over the year;

– In vegetable farming, a large number of workers is necessary, which may result in the diminution of the number of unemployed;

– As vegetables can be produced, in certain situations, throughout the year, this can reduce the seasonal nature of the labor force;

– By production scheduling, farm incomes are secured throughout the year (Berbelich, 1974).

As greater productions can be obtained compared to other sectors, higher financial results can be obtained (Ciofu et al., 2004).

3. MATERIAL AND METHOD

In order to carry out the study, a number of key information were considered for drawing up representative conclusions, namely: area planted with vegetables in Romania, total production and average yields of the main vegetable crops, prices of main vegetables, annual consumption, consumption needs on the domestic market, domestic supply, financial support to this sector, import and export of vegetables.

The data analyzed at national level were provided by Tempo Online database of the National Institute of Statistics and by Trade Statistics for International Business Development, using the quantitative and qualitative analysis of data processing, as well as the S.W.O.T analysis.

4. RESULTS AND DISCUSSIONS

The total area cultivated with vegetables had a downward trend, except for the year 2008 (when it increased by 6.3% compared to 2007). Thus, while in 2007 the total area under vegetables was slightly over 253 thousand hectares, it totaled only 228 thousand hectares at the end of 2016, down by 10% in less than 10 years. In 2016, the North-West region had the most pronounced decline, namely by 19.3% compared to 2007, while in the Center region it increased by 4.3% compared to the first year of the analyzed period.

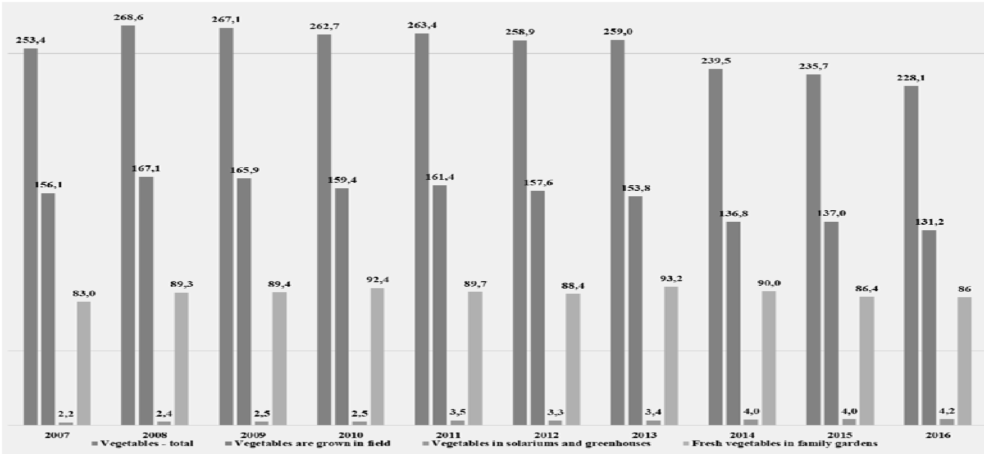
This decline of the area under vegetables can be attributed to the fact that the population employed in agriculture has undergone an aging process which has led to the continuous diminution of the number of persons who practiced this occupation. On the other hand, young people chose to migrate to urban centers or to leave to foreign countries, looking for better paid jobs.

Another factor was represented by the difficulties that farmers had to face in adapting to market requirements, since with the accession to the European Union (2007) the Romanian market of agricultural products, of vegetables implicitly, was invaded by a series of products from the EU countries. Their selling price was net lower than that of the Romanian products, due to the aid granted by the governments of the exporting countries (among others), which made buyers get oriented towards cheaper products.

At the same time, the decrease of the labor force in agriculture was another factor that contributed to the diminution of the area under vegetables, as vegetable growing needs high labour inputs.

The areas under field vegetables followed a downward trend in the investigated period. Thus, while in the year 2007, the area totaled 156 thousand hectares, by the year 2016 this decreased by about 15.9%, to reach only 131 thousand hectares. In the North-West region, the most drastic decrease was noticed, namely by about 27.9% compared to 2007, and the most significant increase was recorded in the Center region, by about 3.6% (Figure 1).

We can state that within the measures established under the National Rural Development Program 2007-2013, as well as under the next programming, financial aids have been granted to this sector, for the construction/modernization of greenhouses and solaria, which led to an increase by about 91.5% of the areas cultivated with vegetables under protected areas (Figure 1).

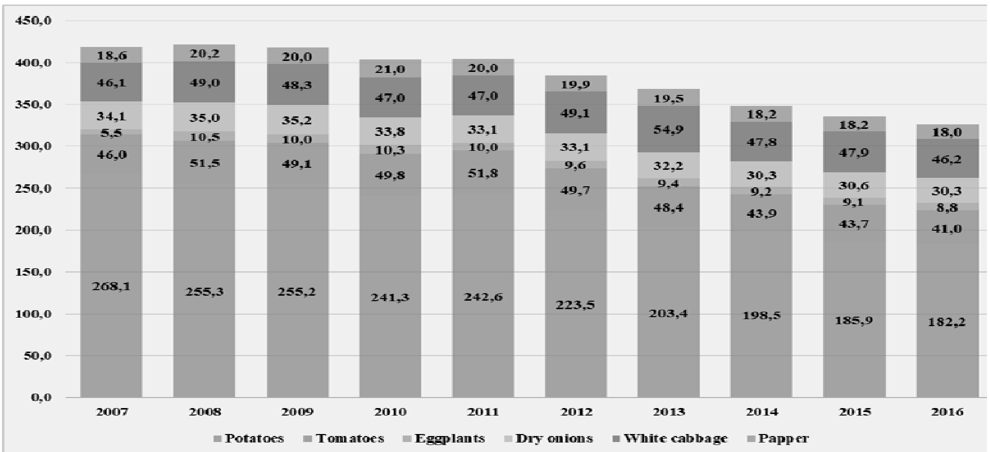


Source: Tempo Online, National Institute of Statistics

Figure 1. The evolution of areas under vegetables according to the cultivation modality, in 2007-2016 (thousand hectares).

The areas under potatoes decreased continuously in the investigated period. Thus, compared to 2007, when 268 thousand hectares were cultivated with potatoes, in the year 2016 the area under potatoes was 182.2 thousand hectares, which represented a significant decrease, by 32% (Figure 2).

We consider that the growing imports, mainly from Poland, which have invaded the agri-food markets in Romania, at prices much lower than those of potatoes from domestic production, constituted the main cause of the potato area decrease in the analyzed period (Figure 2).



Source: Tempo Online, National Institute of Statistics

Figure 2. Evolution of areas cultivated with main vegetables, in 2007-2016 (thousand hectares).

The dynamics of prices for early and summer potatoes is oscillating, with minimum values in 2011 and 2015, i.e. 1.12 and 1.15 RON/kg, and maximum values in 2013, of 1.5 RON. These variations are mainly influenced by the quantities of potatoes from imports, which tend to lower the prices, based on the low prices of these products coming from the Community area. Comparing the year 2016 to the reference year 2007, a decrease of the selling price on the agri-food markets by 8.16% can be noticed. These selling prices on the agri-food markets are also influenced by the cultivated areas and yields.

In the table 1, both in the case of autumn potatoes compared to early (and summer) potatoes, as well as in the case of white (and summer) cabbages and in the case of winter cabbages, we can notice higher prices for the crops harvested in autumn, due to the increased demand in this season, as the population is preparing for the winter period (and the demand for this type of products is increasing).

For other types of vegetables (cabbages and cauliflowers, tomatoes, bell peppers and mild round peppers, carrots and other edible roots, dry onions), the trend is similar to that in 2016, i.e. the urban population consumes more vegetables than the rural population.

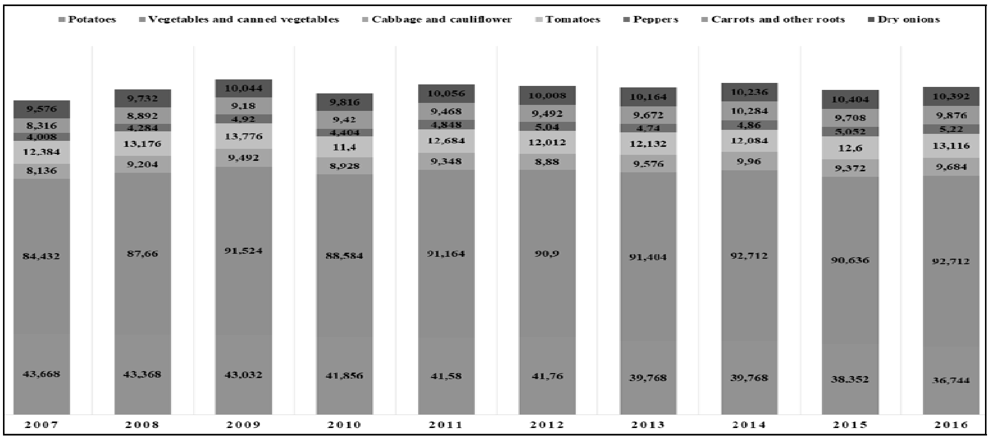
This can be attributed, on the one hand, to consumer habits due to the urban and rural lifestyle, and on the other hand, to the existence of a wider range of products, including those from imports, especially in off-season periods (Figure 3).

Table 1

The basic price for the main vegetables on the agri-food markets, in the period 2007-2016

Prices of products on the agri-food markets	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2016/2007
	UM: RON / kg										%
Early and summer potatoes	1.47	1.27	1.28	1.36	1.25	1.22	1.5	1.12	1.15	1.35	-8.16
Winter potatoes	1.1	1.06	1.22	1.36	1.67	1.27	1.77	1.53	1.32	1.54	40.00
Cauliflowers	2.89	2.99	2.94	3.77	2.99	3.82	3.73	3.59	3.95	3.97	37.37
Early white summer cabbages	1.68	1.53	1.22	1.49	1.02	2.13	1.43	1.21	1.42	1.38	-17.86
Winter cabbages	1.42	1.26	1.11	1.4	1.01	1.39	1	1.09	1.93	1.6	12.68
Field tomatoes	2.3	2.45	2.14	3.4	2.16	3.09	2.39	3.25	2.8	3.24	40.87
Dry onions	1.9	1.83	1.74	2.06	2.19	2	2.05	2.04	2.28	2.29	20.53
Pimiento peppers	2.79	3.98	3.09	3.54	2.78	3.04	3.63	3.81	3.6	3.61	29.39
Bell peppers	2.54	2.92	2.07	2.64	2.12	2.39	2.41	2.69	2.6	2.71	6.69
Mild round peppers	2.67	3.79	2.79	3.59	2.55	2.73	3.67	3.99	3.54	3.44	28.84
Eggplants	2.45	3.21	2.18	2.13	2.04	2.15	2.11	2.64	2.03	2.12	-13.47

Source: authors' calculations based on data from the National Institute of Statistics



Source: Tempo Online, National Institute of Statistics

Figure 3. Evolution of annual average consumption per capita (kg/capita).

The payments provided to the sectors and productions referred to in Art. 52 (2) of (EU) Regulation 1307/2013 apply to those who are considered important from economic, social and environmental point of view, and are affected by certain difficulties. Thus, among the vegetables for which such support was granted, we can find potatoes, tomatoes and cucumbers for agro-processing, as well as vegetables grown in greenhouses and solaria (Table 2).

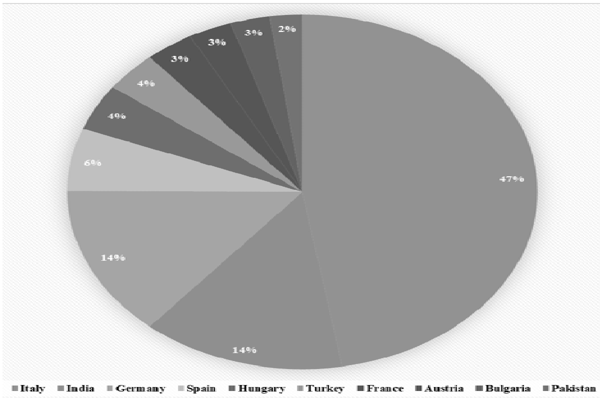
Table 2

Value of coupled support for the main vegetable crops (euro / ha)

Crop	2015	2016
Early potatoes	11257.5	2291.1
Mid early potatoes	11257.5	-
Potatoes for seed	23745.6	2291.1
Field tomatoes for processing	13669.9	7128.1
Cucumbers for industrialization	3065.6	5727.1
Vegetables grown in greenhouses	-	15060.0
Vegetables grown in solaria	-	15060.0

Source: authors' calculations based on data from the National Institute of Statistics

The top importers of Romanian vegetable products in the year 2016 is Italy, with imports of 37.4 million euro (up by 23.4% compared to 2007), India and Germany with imports worth more than 10 million euro each. It is worth noting India's entry on the list of top vegetable importers from Romania as well as Pakistan (a country in the proximity of India) that bought vegetables worth more than 1.7 million euro in 2016. As regards India, it is worth mentioning the fact that, due to an increasing growth rate of the population, in order to meet the population's needs for vegetables, imports from more distant markets, respectively from the European Union, including Romania, were used (Figure 4).

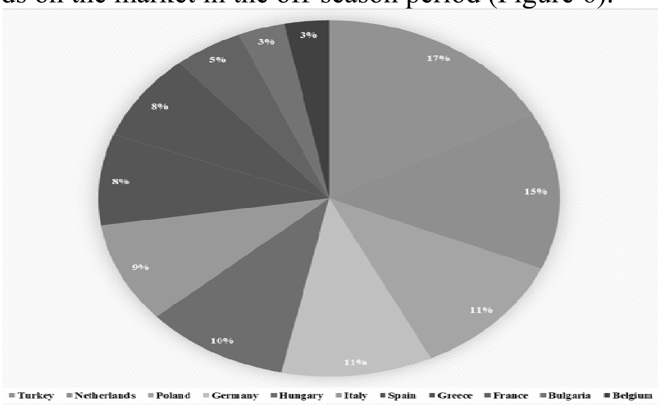


Source: Trade Map, Trade Statistics for International Business Development

Figure 4. Percentage distribution of fresh vegetables exports (in value terms) in 2016

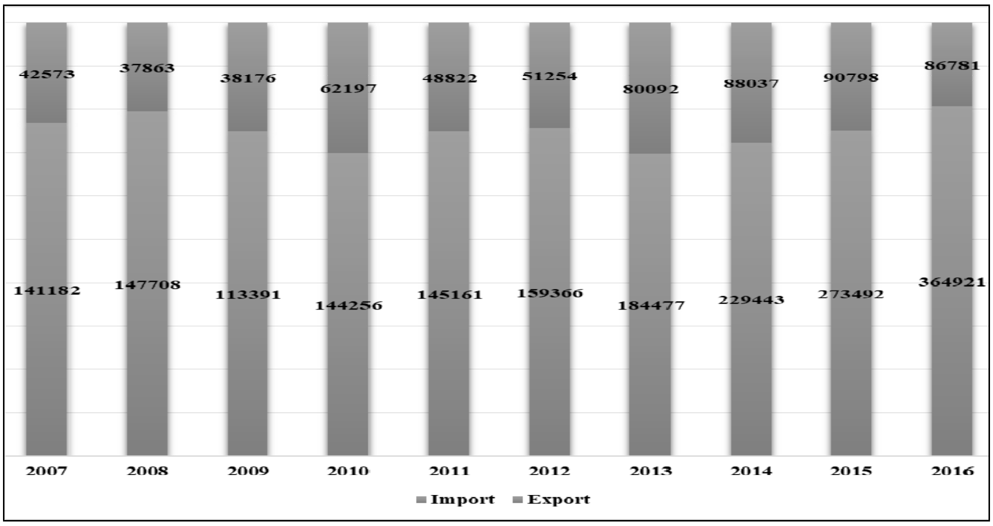
The countries from which Romania imported the most in value terms, in the year 2016, were Turkey (55 million euro), the Netherlands (46.2 million euro) and Poland (36.5 million euro0. By the facilities provided by their governments, as well as by the fact that these countries can produce vegetables out of season (the Dutch Greenhouse Infrastructure is well-known and Turkey has a favorable climate), these countries can cover the vegetable needs of Romanian consumers (Figure 5).

As regards the economic balance of vegetable imports and exports, a negative balance can be noticed, as in 2016 the total value of imports was 364 million euro, while the export value was only 86 million euro, more than 4 times lower; on the one hand, this is due to the lower prices of the imported products compared to domestic prices, a factor determined by the choice of the product by the Romanian, and on the other hand to the possibility of the other countries to cover the necessary vegetable needs on the market in the off-season period (Figure 6).



Source: Trade Map, Trade Statistics for International Business Development

Figure 5. Distribution of fresh vegetable imports (in value terms) in 2016.



Source: Trade Map, Trade Statistics for International Business Development

Figure 6. Evolution of the balance of trade in fresh vegetables in the period 2007-2016.

5. CONCLUSIONS

In the vegetable sector, according to the data presented, the areas cultivated with vegetables decreased (except for those grown under protected areas); although the areas under vegetables grown under protected areas increased, this is not sufficient to meet the Romanian consumers' needs, so that we have to import vegetables from countries like Turkey, Italy and the Netherlands, which developed facilities to grow vegetables out of season.

In this case, it is necessary to facilitate investments both from European and national funds for the creation and modernization of protected areas for vegetable growing, in order to obtain larger quantities of products, and mainly to ensure productions in the off-season period, thus gradually decreasing the dependence on imports.

These fluctuations in the sector of vegetables are directly influenced by the areas on which these are cultivated, on the one hand, and on the other hand, these fluctuations are determined by the weather conditions, so that investments in irrigation systems can represent an essential factor for production increase.

In terms of the obtained yields per hectares, two main causes are the weather conditions and the technology available to Romanian vegetable farmers, so that facilitating favorable bank loans and facilitating access to European funds are the two modalities to solve up this problem by acquiring state-of-the-art equipment and by creating irrigation facilities that are so much necessary in agriculture.

The selling price of vegetables plays an essential role, so that it changes according to the yields obtained. Price is also the main criterion according to which Romanian consumers make a choice with regard to a particular type of product.

The annual average consumption per capita has medium values, with small fluctuations in the investigated period.

Although the value of Romanian exports increased in 2016 compared to 2007, the value of exports is below the value of imports; while Romania manages to export vegetables during the season, in the off-season the quantities imported by Romania are quite impressive, cumulating not less than EUR 364 million in 2016, i.e. an amount more than 4 times higher than exports, so that the development of cultivation system under protected areas is absolutely necessary to reduce dependence on imports.

Although Romania imports vegetable products in impressive quantities, it still manages to export at an average price/ton higher than the imported one (in the case of potatoes, cabbages, cauliflowers), so that this difference is mostly due to the quality of the domestic products. At the same time, for tomatoes, onions, garlic and edible roots, the average price/ton is significantly lower.

Strengths

- Romania enjoys favorable conditions for the cultivation of a wide range of vegetables;
- The National Rural Development Program, through which a whole range of investments can be made, in this sector inclusively (4.1 - Investments on agricultural holdings, 4.2 - Investments in processing/marketing of agricultural products, 6.1 - Support for setting up young farmers, 6.3. Support for small farmers, 9.1 Setting up agricultural producer groups, 16.1 - Support for the establishment and operation of operational groups);
- Romania has a good market to sell its products, but is strictly conditioned by the selling prices;
- Special program dedicated to the increase of tomato production under protected areas, aimed at reducing the dependence on imports, by granting significant amounts to tomato growers;
- Consumer preference for domestic products.

Weaknesses

- The selling price significantly influences the consumption of vegetables;
- Massive imports of vegetables from other countries affect the Romanian producers;
- The insufficient storage, conditioning and processing facilities for vegetables is worth mentioning;
- The areas cultivated with vegetables under protected areas are not sufficient to meet the consumer needs out of season;
- Deficient labour force;
- Lack of facilities to encourage farmers to get associated;
- Production dependence on weather conditions.

Opportunities

- The National Rural Development Program can be a viable solution for the development of this sector;
- Young people who have worked in the farming sector in other countries can represent a resource in this field by the experience they acquired.

Threats

- Vegetable imports continue to threaten producers in this sector.

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