

## THE EVOLUTION OF THE PORK MARKET IN ROMANIA

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### Abstract

*Consumption of different types of meat and meat products has substantial effects on human health. The meat sector is an important one both globally and in Romania. The meat sector is an important one both globally and in Romania. The objective of the paper is to analyze the evolution of the pork market in Romania, between 2013-2018. Therefore, a series of indicators were analyzed, such as the number of pigs, production, consumption of pork, average prices, import and export of pork meat and trade balance. As a result of the analysis, it was found that all indicators are increasing. The highest value for meat consumption per inhabitant was 74.6 kg in 2017, for the average monthly consumption was 1.283 kg in 2018, and for the average monthly quantity of pork bought by a household of was 1,001 kg in 2018. The trade balance regarding the trade in pork was deficient during the period analyzed.*

**Keywords:** *pork, consumption, market, import, export*

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### Literature review

Romania has high potential in what concerns the livestock sector through the resources it has. The meat market is an important food sector for both the EU and Romania. The meat sector throughout Europe has been continuously transformed. Lately, production has been moved from developed countries to developing countries (Beciu et al., 2016). The market for this product is the most requested at national level, being followed by that of poultry and then beef.

Currently, the level of consumption of animal products is considered as an indicator of the development of the countries (Uzunöz and Karakaş, 2014). The global population prefers the consumption of meat because it provides the necessary vitamins and especially the proteins rich in essential amino acids that consumed in moderate quantities are beneficial for human health. Pork meat has nutritional value through high protein composition 41.3g /100g, lipids 33.3g / 100g and mineral salts 0.9g /100g (Soare and Chiurciu, 2017).

The meat sector must meet several conditions such as environmental, food security and adapt to market requirements. One of the factors determining the tendencies of supply, prices and foreign trade was the enlargement of the European Union by the inclusion of new Member States (Stępień and Polcyn, 2016).

Romania is an importing country for several sectors. Imports of pork are increasing. The high dynamics of meat sales can be observed after 2004, when the new EU member countries became important export markets, and in 2015 Romania became the 8th consumer of meat ([www.statista.com/statistics](http://www.statista.com/statistics)). At national level, there are many pig farms, occupying an important place in the European Union. However, production is small. Pig farms have declined in recent years from 1.65 million pig farms (in 2010) to 1.28 million in 2016, a decrease of 22.18%; but with 300 more farms than in 2013 (Lădaru and Petre, 2019).

The objective of the paper is to present the changes that took place on the pork market in Romania between 2013-2018. The study aims to evaluate the situation of Romania's trade balance, as well as the evolution of some indicators.

## Materials and Methods

In order to reach the objective proposed in this study, a series of indices regarding the pork market in Romania was analyzed.

The analysis covered the changes of the offer regarding the pig herds, the average monthly consumption per person of pork, the average monthly quantity of pork bought by a household, the average price of the pork per kg / live, the average monthly expenses for buying the pork and foreign trade. The data were taken from databases such as the National Institute of Statistics, Faostat, research reports and were interpreted using the comparisons method and the percentage method.

## Results and discussions

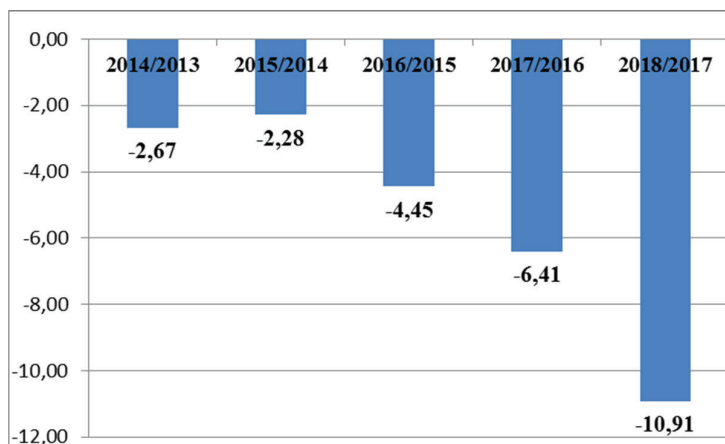
At national level, in 2013-2018, the highest number of pigs was in 2013 of 5,180,173 and the lowest in 2018 of 3,925,283 (table 1). The number of pigs from the analyzed period had a downward evolution. Thus, in 2018 there was a fall of over one million, which is 24.22% compared to 2013. This decrease is due to the problems existing in the European Union, as well as the African swine fever that has spread to Romania as well, during this period a significant number of animals have been slaughtered. As a result of this epidemic, the breeders were discouraged. Other authors consider that these reductions of livestock can be attributed to the high costs for this species, the highest share being the cost for feed, but also the aging and migration of the rural population (Lădaru and Petre, 2019).

**Table 1. The number of pigs in Romania**

Year	2013	2014	2015	2016	2017	2018
The number of pigs in Romania	5,180,173	5,041,788	4,926,928	4,707,719	4,406,014	3,925,283

*Source: National Institute of Statistics*

Figure 1 shows the consecutive percentage decreases, where there is a growing gap from year to year. It started from 2,67% and, while in 2018 was recorded a sharp decrease that reached 10,91%.



**Figure 1. The percentage change of the pig herd**

The change in the number of pigs is also noticed by other authors who assert that there have been significant decreases in animal husbandry regarding pigs and horses (Beciu et al, 2016). The surveys in the political economy of meat combine key aspects of social and economic development, between the human-animal division. Foods derived from pigs are increasingly sought after in the meat industry (Lundström, 2019).

Regarding the average monthly consumption per person of pork during the study period, it increased from 0.989 kg in 2013 to 1.283 kg in 2018 (table 2). Also, the average monthly quantity of pork bought by a household had an upward evolution, the largest quantity being in 2018 of 1,001 kg. It is found that each year the consumption of pork / pers is higher than the quantity purchased. This difference may come from the fact that in Romania, meat is sold in fairs or consumed from its own production.

**Table 2. The average monthly consumption / person and the average monthly quantity bought of pork**

Year	Average monthly consumption per person of pork (Kg)	Average monthly quantity of pork bought by a household (Kg)
2013	0,989	0,695
2014	1,043	0,717
2014/2013 (%)	105.46	103.17
2015	1,161	0,794
2015/2014 (%)	111.31	110.74
2016	1,194	0,858
2016/2015 (%)	102.84	108.06
2017	1,257	0,928
2017/2016 (%)	105.28	108.16
2018	1,283	1,001
2018/2017 (%)	102.07	107.87
Average	1,15	0,83

*Source: National Institute of Statistics, own calculation*

The average monthly consumption in 2018 was 29.72% compared to 2013, and regarding the average monthly quantity purchased of pork in 2018 it was 44.02% compared to 2013.

Meat consumption increases annually as human populations grow. There has been a particularly sharp increase in global consumption of chicken and pork (Charles et al., 2018). Since 1961, global pork production has increased 4-5 times to 112 million tons in 2014. Total meat production has grown much faster than the population growth rate. As a global average, pork consumption per capita is the largest of the basic meat products; In 2013, the average person consumed about 16 kilograms of pork (Ritchie and Roser, 2019).

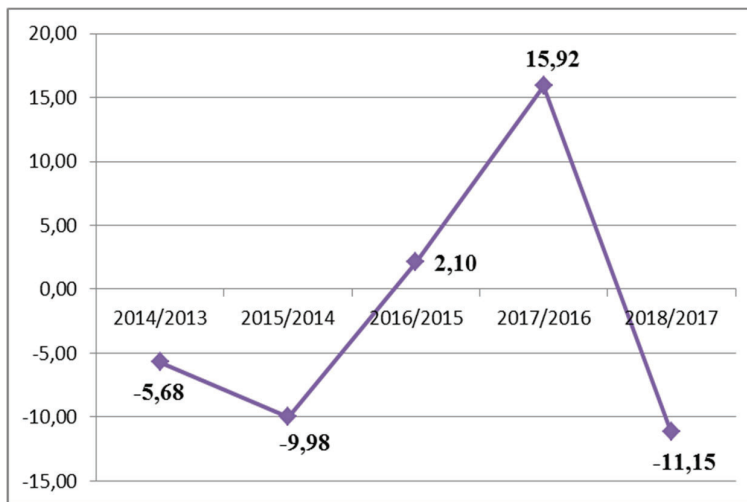
The average price of pork per kg / live on the Romanian market varied during the analyzed period. The highest price was in 2017 of 6.19 lei / kg live, and the lowest in 2015 of 5.23 lei / kg live (table 3). In 2018 the price fell to 5.5 lei with 10.71% compared to 2013.

**Table 3. Average price of pork per kg / live**

Year	2013	2014	2015	2016	2017	2018
RON/ Kg live	6.16	5.81	5.23	5.34	6.19	5.5

*Source: National Institute of Statistics*

The price may be influenced by the level of inflation or the level of market demand. Regarding the annual percentage evolution of the average price of pork, this was oscillation during the analyzed period. The biggest increase was in 2017 of 15.92%, and the largest decrease was registered in 2018 of 11.5% (fig 2). Total average consumption far exceeds domestic production, so this may justify rising prices (Lădaru and Petre, 2019).



**Figure 2. Percentage evolution of the average price of pork**

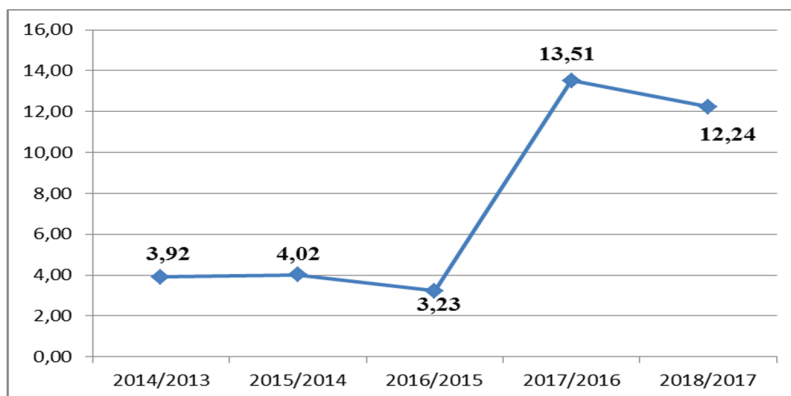
The African swine fever (PPA) had a strong impact on the market, generating a serious price crisis for pork. The average monthly expenses for the purchase of pork on a person have registered a constant increase, reaching in 2018 to 16.69 lei compared to 2013 of only 11.74 lei (Table 4). The lower price of pork led to an increase in consumption, so the population in Romania was stimulated to buy a larger quantity and implicitly higher expenses were recorded.

**Table 4. Expenses for buying pork – monthly average per person**

Year	2013	2014	2015	2016	2017	2018
Lei	11.74	12.2	12.69	13.1	14.87	16.69

Source: National Institute of Statistics

Analyzing the percentage evolution of the expenses for the purchase of pork, it was found that the highest increase was recorded in 2016 of 13.51% (Fig 3).

**Figure 3. Percentage evolution of expenses for purchasing pork**

The meat sector is an important one in terms of trade, being a consumed food. As the domestic production of pork does not cover the demand, the commercial balance of Romania regarding the quantity of pork, in the period 2013-2017 is strictly deficient.

**Table 5. Quantitative commercial balance of pork in Romania (2013-2017)**

Year	Exported quantity	Imported quantity	Trade balance (±)
2013	5,387	65,572	-60,185
2014	7,966	74,624	-66,658
2014/2013 (%)	147.87	113.80	-
2015	9,534	99,799	-90,265
2015/2014 (%)	119.68	133.74	-
2016	10,197	119,273	-109,076
2016/2015 (%)	106.95	119.51	-
2017	9,909	138,461	-128,552
2017/2016 (%)	97.18	116.087	-
<b>Average</b>	<b>8,598.6</b>	<b>99,545.8</b>	<b>-90,947.2</b>

Source: FAOstat, own calculation

Imported quantities increased annually, resulting in a maximum budget deficit of -128,552 tons in 2017, and on average -90,947.2 tons. The volume of imports doubled, being 211% in 2017 compared to 2013 (Table 5).

Romania's trade balance also registered a deficit. The value imported in 2017, doubled compared to 2013, reaching a total balance value of -304,147 thousand dollars. This is due to the increased imports of pork, especially in the last period, due to the problems of African swine fever (Table 6).

Stępień and Polcyn (2016) stated that Romania is characterized by a low level of self-sufficiency of pork, which amounted to 45% in 2015 (this means that imports accounted for more than half of the consumption of pork).

**Table 6. Trade balance of pork in Romania during the period 2013-2017 – value (\$ 1000)**

Year	Exported quantity	Imported quantity	Trade balance (±)
2013	19,488	158,512	-139,024
2014	28,249	177,113	-148,864
2014/2013 (%)	144.96	111.73	-
2015	24,141	173,901	-149,760
2015/2014 (%)	85.46	98.19	-
2016	24,139	230,156	-206,017
2016/2015 (%)	99.99	132.35	-
2017	27,224	331,371	-304,147
2017/2016 (%)	112.78	143.98	-
<b>Media</b>	24,648.2	214,210.6	-189,562

*Source: FAOstat, own calculation*

The total meat production in Romania compared to the European Union is small and implicitly results in reduced exports. Harnessing the opportunities in this sector would lead to covering the demand for meat on the domestic market and obtaining important benefits from the Romanian farmers (Stanciu, 2014).

Other authors assert that during the last 10 years, the balance of the whole foreign trade with agri-food products carried out by Romania has been negative, both for international trade, which makes Romania a "Country of net importer" (Vlad et al., 2015).

## Conclusions

The analysis of the pork market in Romania was carried out for the period 2013-2018. Pork is a sought after market, but the sector has been affected by the current problems. The number of pigs, in 2018 it decreased significantly with over one million, 24.22% compared to 2013. The consumption of pork is increasing, although our production in the country is low. The number of pigs is reduced, and the price is an oscillating one with a downward trend, being influenced by more economic factors, mainly due to the increased production costs. In 2018

the price of live pigs fell to 5.5 lei with 10.71% compared to 2013. The average monthly meat consumption per person in Romania is 1.15 kg.

The domestic market is dependent on imports. The trade balance is a negative one during the whole period analyzed. The deficit is increasing and it doubled in the period studied. As for agri-food products, in the case of pork trade, imports exceeded exports during the period studied.

In conclusion, it is necessary to support the national producers and increase the number of pigs in the local farms, but also to encourage the national trade with pork products.

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