

Iuliana IONEL

*Institute of Agricultural Economics, Romanian Academy, Bucharest
48ionel@gmail.com*

ROMANIAN PIGMEAT FROM THE PERSPECTIVE OF INTERNATIONAL FORECASTS

ABSTRACT

Pork is the most popular meat type in Romanians' consumption, accounting for more than half of total meat consumption per capita. With the lifting of the export ban on Romanian pork on the EU market (2014), the experts expected that this would have a positive impact on exports. Despite this, the Russian embargo on the EU pork made Romania become, like other countries from Eastern Europe, an outlet of the big Western European pork producers. In these conditions, the forecasts of international experts tend to point to the continuation of the Romanian pork sector dependence on frozen and refrigerated pork imports. Productivity increase, based on price cuts and technological efficiency improvement, represents the main driver for increasing pork production in the developing countries. It is estimated that compared to the previous decade, pork consumption will increase more slowly, due to high production costs and slowdown in population growth.

Key words: pork, price, new technologies.

JEL Classification: Q110, Q13.

1. INTRODUCTION

The food products of animal origin hold an important place in population's nutrition. Animal proteins are superior to proteins of vegetable origin from biological point of view, ensuring a good functioning of the body from metabolic point of view.

The pork chain occupies an important place in the world economies, as a significant part of the world's population eats pigmeat and pork products.

Romania has a long tradition in pig raising on the population's households, as well as under industrial system. Before 1989, about 18-19 million pigs were raised annually, most of them going to export. After 1989, some of the many pig raising big complexes were privatized or got out of business. Romania's accession to the European Union has had important effects on national economy, but an important aspect is the increase of competition between the Romanian pig farmers and the European pork producers. At present, in Romania, about 5 million pigs are raised annually, covering 40-45% of the consumption needs. The economic and financial crisis led to the decrease of investments in general, as well as of those in the pig industry in particular, with negative impact upon domestic production. Out of this reason, the domestic production does not satisfy the market demand and imports are needed.

Romanians are faithful, by tradition, to the consumption of pork. Romania ranks 9th in the EU in terms of pig herds (next to Germany, Spain, France, Denmark, Netherlands, Poland, Italy and Belgium). The pork processing units are generally based on pork imports. Investments were made on the commercial pig farms, mainly for the adjustment to the minimum animal welfare standards. There is a production concentration trend (the first 30 producers obtain 65% of the sector's turnover). Imports continue to ensure around 33% of the pigmeat needs, while the balance of trade remains negative. According to the statistical data, the pig herds on the household farms are more numerous than those from the industrial raising system.

Thus, the representatives of the pigmeat sector, the Romanian agricultural researchers and also the decision-makers have developed various strategies for the sector revigoration and for covering the demand from domestic production. In this paper we shall present the future of the Romanian pork sector from the international forecasts perspective.

2. STATE OF KNOWLEDGE

The agricultural production forecasting has certain particularities, as agricultural production has a special behaviour by comparison to the greatest part of other businesses, due to the strong dependence on the biological processes. Farmers have a minimum capacity to change the development rate of crops or animals. Secondly, for most agricultural products, the production cycle is measured in months or years. The agricultural production has a dynamic structure, mainly regarding prices: their seasonal impact upon production, the high cost of ongoing production adjustment at the level of stocks.

Agricultural production seems to fulfil the four conditions established by Armstrong (1985, pp. 196) in order to obtain good predictions by econometric measures: strong causality relationships should exist, the relationships should be measured exactly, the causal variables should be substantial, and it should be possible to estimate the modifications of the causality variables. Unfortunately, we cannot obtain an accurate forecast of agricultural production and prices through econometric methods. The most probable reason is the big influence of the random shocks upon production. Agriculture is strongly influenced by unpredictable random events such as: droughts and various infestations (diseases, pests, weeds).

According to Allen P.G (1994), out of the 60 investigated sectoral models, the great majority (43) were intended for the animal production modelling, of which 12 refer to the poultry sector, 10 to the beef sector and 9 to the pig sector. All the models contained exogeneous variables and were based on one or two macro-economic variables and on aggregate indices, and the values of the exogeneous variables used were utilized for ex-ante forecasts.

The forecasts on production, prices and trade with agricultural products and inputs in most countries are made by the government. Thus, the governments are the main suppliers of information on the perspectives of agricultural products in Australia, Canada and USA (Johnson et al., 1982).

The European pork supply chains, like the other agri-food supply chains, are facing many challenges at present, such as: globalization, emerging markets, changing consumer requirements and the new governmental regulations linked to food security and environment pollution. These challenges need continuous innovation of the structures along the supply chain, business reconsideration, relocation of logistics infrastructure in order to achieve sustainable performance. (Aramyan, 2011)

The literature often uses the hypothesis according to which the vertical integration and contracts are of crucial importance for the future competitiveness of the pork chain. However, worldwide, we can notice the coexistence of the two different types of pork production chains – less integrated systems (in several countries of Europe) and vertically integrated systems (in countries like USA and Denmark), in which coordination is strictly based on contracts. Many authors consider that vertical integration is the solution for the future of the pork chain and the model based on free collaboration relationships practiced on certain European markets is considered outdated. (Schulze, 2007)

3. MATERIAL AND METHODS

In order to analyze and assess the situation and prospects of the pork sector we collected data from the National Institute of Statistics, the Ministry of Agriculture and Rural Development, the National Sanitary Veterinary and Food Safety Agency, Eurostat and FAO data for the period 2007-2016. At the same time, we analyzed different studies on the prospects of the pigmeat sector worldwide by OECD-FAO, USDA and ReportLinker. Worldwide, the evolution of the pork sector provides for slower increases of meat consumption, due to the high production costs and to the slowing down of the population growth process. The demand increase is largely due to the economies of Asia and Latin America, and also of the oil exporting countries.

Under these conditions, the goal of the paper was to identify the evolutions on the Romanian pork market and to present the short-term forecast, from the vision of international experts. We intend, by the present study, to bring to your attention the short-term forecasts on the evolution of the Romanian market for: frozen pork meat; fresh and refrigerated pork meat; pork fat without lean meat; salted pork meat and concentrated feed production for pigs.

4. RESULTS AND DISCUSSIONS

Worldwide, according to the US Department for Agriculture (USDA, 2017) data, the global pork meat is estimated to increase by almost 2% in 2018, up to 113.1 million tons, first of all due to the development of the pig raising sector in China and to a lower extent to production increase in the USA. Pork production in China will increase for the second year consecutively, as far as producers obtain profits in this sector. The increase of sow numbers and higher slaughter weight of pigs will lead to production increase in 2018. The high pork demand from consumers will result in production increase in Russia, Philippines and Mexico. Among the main pork producers, only the European Union will reduce its production due to the stagnation of pork meat demand on the internal market and to export sales.

The global exports are forecast to increase by around 3% in 2018, determined by the increase of demand in Mexico, Philippines and South America (Argentina, Chile and Columbia), where competitive prices will determine the increase of consumption per capita. China will remain a top importer, but imports will decrease for the second year consecutively because of the increase of domestic production. European Union will remain the biggest exporter, with the pork exports remaining unchanged at 2.8 million tons, but the stagnation of the exported quantities is determined by the diminution of China's imports and the appreciation of the euro.

Imports are estimated to decrease for the second year consecutively in 2018, as the increases of local production will diminish the pork demand from import. Although pork production is expected to recover in 2018, the faster growth of demand will support growth of imports. Nevertheless, it is expected that imports will decrease up to their level in 2014. Together with production increase in most main exporting countries, the decrease of world pork prices will maintain the imports competitive. The European Union, the United States and Canada will remain the main suppliers, competitors mainly in terms of prices. With a relative high pork processing demand, imports are unlikely to contract to the previous levels, maintaining China as a pork importer.

The European production. In 2015 pork meat accounted for 9% of total agricultural production of the EU and was the most important type of meat produced. With 150 million pigs and an annual production of about 22 million tons carcass meat, the EU is the second world pork producer next to China, and at the same time the biggest exporter of pork meat and pork preparations.

Self-sufficiency in pork is 111% in the EU. The EU exports almost 13% of its meat production. The main commercial partner of the EU is East Asia (mainly China). Pork meat is in the category of products regulated by the Single Common Market Organization. The EU European Carcass Classification System offers the basis for the objective classification of carcasses in slaughterhouses and for fair payment to producers. Starting with April 2012, all export refunds in the pigmeat sector were reduced to zero. The EU trade with pigs and pork meat is subject to regional or bilateral agreements.

Specialization in the pig sector is very pronounced in the EU (Germany, the Netherlands and Denmark). The livestock sector in Europe is vulnerable to the global volatility of grain and protein feed prices, as about half of the vegetable proteins utilized in animal feeding each year are imported. The increase of feed costs made many farms become unprofitable in the period 2008-2010.

Diseases still remain a challenge for the industrial pig raising sector. In order to comply with the provisions from the increasingly strict animal welfare regulations, additional investments were made on the pig farms, and business specialization increased in Western Europe.

Russia restricted EU imports of pork meat and preparations starting with January 1, 2014, which has determined an over-supply of pork meat on the EU market with the decrease of prices, and reorienting exports towards the South-Eastern Asia market, and placing some smaller quantities in countries from Eastern Europe.

According to Eurostat, the pig herds decreased by 9% in EU-28 in the period 2007-2016, to reach 147,202 thousand heads in the year 2016. In the same period, their number in Romania decreased by 29%, to 6,565 thousand heads, Romania being on the 9th position in Europe (after Spain, Germany, Denmark, France, Netherlands, Italy, Poland and Belgium), from the 8th position in 2007. This situation was caused by the low profitability, as result of the economic and regulation conditions, with impact on the weak performing farms. For example, as a result of the requirements imposed by the animal welfare conditions, according to the Directive 2008/120/EC, the cost per fed sow increased. The implementation of this regulation led to the increase of pig farm size in the EU, as measured by the number of sows, as an efficient market reaction in this context.

The drastic diminution of the number of pigs in the period 2000-2016, both in the breeding and fattening pigs, favoured the imports of live animals (which accounted for 20-30% of the pigs for fattening and 3-6% of slaughter pigs), in order to satisfy the domestic demand of pigmeat.

On the other hand, there are large-sized farms, vertically integrated, which are involved in various activities, namely feeding, reproduction, fattening, slaughtering and pigmeat processing, which are competitive in terms of prices.

Romania ranks 1st in the EU in terms of the share of very small farms (63%), which own under 10 pig heads/farm and ranks last as regards the share of farms with over 400 animals/farm (33%). At the same time, countries like Denmark, Netherlands, France and Germany have over 90% of their herds on farms with more than 400 heads. In Germany, for instance, 5% of the small farms disappeared in the last 25 years.

EU largely depends on the soybean and maize imports from third countries, so that any interruption in the supply of these products has a very costly impact on the European feed industry. In the feed industry of the European Union, there is a strong concentration tendency, so that the largest 10 companies in Germany and Netherlands have over 50% and 65% respectively of the market share.

Romania has grain surplus available for the pig industry but, like in the EU's case, it depends on protein feed imports. While in the EU there are companies specialized in the production and marketing of pig feed, in Romania, as a rule, feed is produced on the farm, and the compliance with the feed recipes depends on the financial resources available at farm level (Oțiman, 2013).

In Romania, the investments in the pork sector were made mainly with own funds, but also from funds attracted from the European Union (Alexandri, 2017).

While in the EU-28 pork production in the period 2007–2016 increased by 6%, to reach 23,222 thousand tons, in Romania pork production drastically diminished by almost 31%, to reach 337 thousand tons. According to pig slaughter meat production in authorized slaughterhouses, Romania accounts for only 2% of the EU-28 market.

Romania ranks 13th in the EU by the meat production obtained in 2016.

An analysis of the evolution of pig slaughtering in Romania, in the period 2000–2016, shows that this followed an increasing trend on the specialized slaughterhouses. On the individual households, pigs are mainly slaughtered during the winter holidays and are destined for the household members' own consumption or for sale on the local market.

The annual average prices for the E pork carcass in the period 2007–2016 followed the same fluctuating trend both in Romania and in the EU. Romania has higher prices than in the EU. It is noticed that the gap between the two prices begins to vanish beginning with the year 2014, while in the year 2016 the two prices were similar.

Pork consumption in EU-27 slightly decreased by 2% in 2015 compared to previous year, reaching 40.9 kg/capita. The greatest pork consumption, of over 50 kg/capita, are found in Austria, Poland, Spain and Germany, and the smallest consumption is noticed in the UK, France and Romania (under 31.3 kg/capita). The highest consumption decrease was in France, by 12% and Romania, by 10%. Germany and Spain had modest decreases, i.e., -4% and -3% respectively.

Several studies revealed that an increase of pork consumption per capita is expected to continue in the EU New Member States, where consumers mainly focus on prices (De Winter and Tacken, 2010; Hoste et al, 2004. Trienekens and Wognum, 2009).

In the EU-27, self-sufficiency in pork meat was constantly over 100%, in the period 2000 – 2015, while in Romania self-sufficiency in pork decreased from 91% in 2000 to 62 % in 2005 and 2009, to reach 70% in 2015. Although the European pork chains are extremely self-sufficient and have a competitive position on the world market at present, this position is threatened by countries like Brazil, Canada, China and USA (Lehmann, 2009).

Due to the high prices on the domestic pork market and to the very high domestic supply fragmentation, Romania has become dependent on the imports of pigs, pork meat and pork preparations. For Romania there are no available data on the price of pork meat in different points of the chain. In the Netherlands, the

studies reveal that the prices on the pork meat chain are unevenly distributed, so that a farmer who raises pigs receives around 40 eurocents per kg of produced meat (6% of the final selling price), while a retailer receives around 24% of the selling price (Hoste et al., 2004).

In the investigated period, Romania has become a net importer of live pigs, pork and pork preparations. The low production prices in the EU and the export restrictions on the Russian market resulted in the non-competitive Romanian farmers giving up pig farming, while the imports of live animals for fattening decreased, yet the pork imports continued to remain high.

On the other hand, Poland and Romania are seen as the best positioned countries in order to become major producers of pork and poultry meat and possible exporting countries on the long term. Both countries have a population that prefers pork meat, the grain production is sufficient and presents interest for foreign investments that will be able to speed up the modernization of the pork meat sector (Vernooij, 2011).

At the same time, according to the representatives from the Romanian industry, there is an increasing interest for investments in the pork meat sector. The foreign investments made in the western parts of Romania have proved that the vertically integrated business is successful, and the pork meat price can be competitive both on the domestic and foreign markets.

The top 30 pig raisers in Romania cover 65% of the total turnover of the pig farming sector, a sector where 610 companies operated in 2016, with a cumulated business worth 2.9 billion RON (645 million euro), according to the National Trade Register Office data. The leader of the industry, Smithfield Romania, which belongs to the Group with Chinese shareholding WH Group, ended the last year with a turnover of 732.7 million RON, with a net profit of 89.3 million RON and 1,141 employees. The second big pig raising company is the group with Danish shareholding Premium Porc, present on the top list with three companies: Danegro, which was on second place on the list, Premium Porc Negreni (third place) and Premium Porc SRL (fifth place).

Table 1

International forecasts on the sales of pork and concentrated pig feeds in Romania – thou. tons

	Frozen pork	Fresh and refrigerated pork	Pork fat without lean meat	Salted pork	Concentrated feeds for pigs
2015	3.6	147.6	1.2	47.5	259.6
2016	4.6	153.6	1.7	53.7	267.3
2017	3.1	166.9	1.2	44.9	187.6
2018	3.2	169.4	1.3	48.4	190.8
2019	3.5	171.0	1.4	51.8	196.8
2020	3.7	171.3	1.5	54.5	207.9
2021	4.1	174.1	1.6	55.6	228.6

Source: ReportLinker Research, forecasts based on Eurostat data

The local distribution of the pig raising companies ranks Timis county on the first place, followed at great distance by Vrancea, Argeş, Neamţ and Bihor, and on the last places the counties Tulcea Sibiu and Brăila. We can notice that there is not always a correlation between the local supply of grains/oilseeds and the location of investments in the pig raising business (Neamţ, Braşov, Satu Mare, Maramureş, Sibiu).

We shall next present the international forecasts on the pork sales in Romania, by meat types, made by ReportLinker Research for the period 2018–2021.

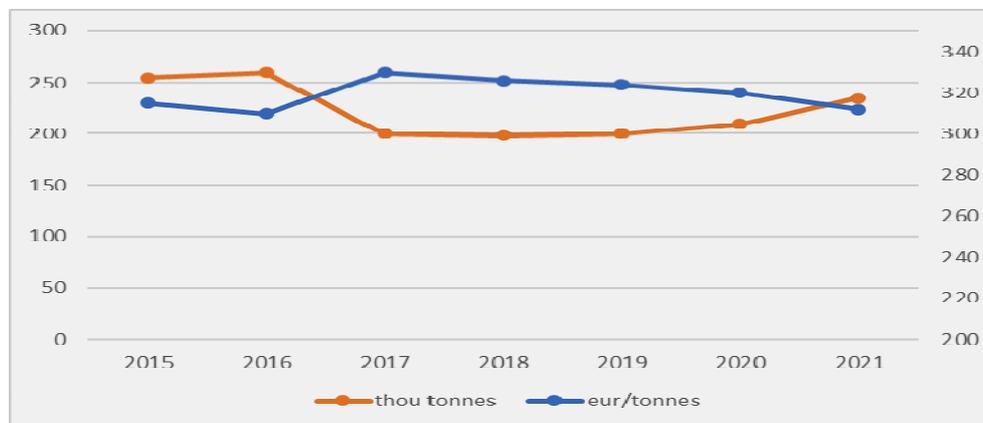
Table 2

International forecasts on the prices of pork and concentrated pig feeds in Romania – euro/ton

	Frozen pork	Fresh and refrigerated pork	Pork fat without lean meat	Salted pork	Concentrated feeds for pigs
2015	1516	2243	1378	3036	340
2016	1954	2111	1189	2889	309
2017	2580	1316	1295	3093	328
2018	2719	1418	1281	2929	327
2019	2902	1533	1264	2793	324
2020	2780	1664	1243	2713	320
2021	3077	1756	1218	2726	314

Source: ReportLinker Research, forecasts based on Eurostat data

Forecasts show an increase of productions for all types of meat (by about 15%), but fresh and refrigerated meat still owns 74% of production, followed by salted pork meat (24%).

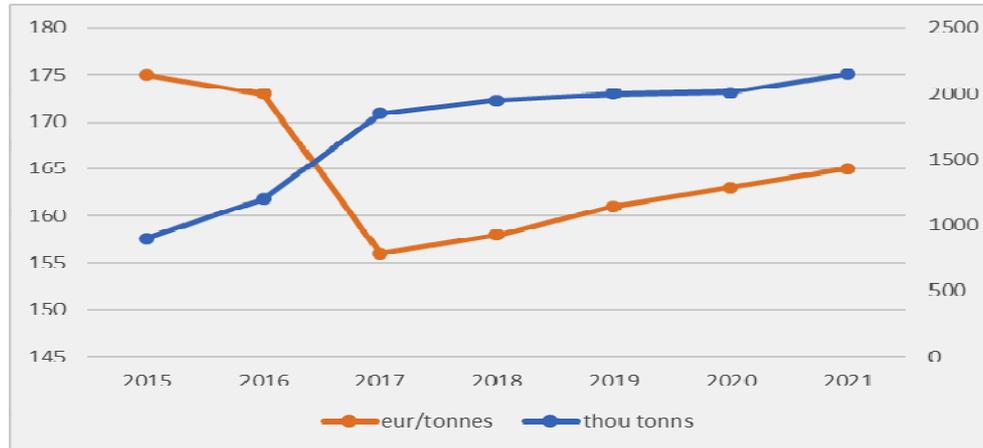


Source: ReportLinker Research, forecasts based on Eurostat data

Figure 1. Romania: international forecasts on concentrated feed production for pigs

On the short term, together with the increase of concentrated feed prices, the quantities produced decreased in 2017, the same thing taking place in 2018; feed production is expected to revigorate continuously, until 2021, together with the

decrease of feed prices. Hence, on the short term, the number of pigs on the Romanian industrial farms are expected to increase, and the feed industry will positively react to this stimulus.



Source: ReportLinker Research, forecasts based on Eurostat data

Figure 2. Romania: international forecasts on fresh and refrigerated meat production.

With the pig farm revigoration in Romania, an increase of fresh and refrigerated meat production can be noticed, although prices will also increase by 6% (2021/2016).

5. CONCLUSIONS

Although Romania is an important grain and oilseed producer, the recovery of the Romanian pork sector will take place as result of substantial investments in the sector, so that the pork prices will become competitive at European and world level.

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