

# STUDY ON THE PERFORMANCE IN THE SECTOR OF PRODUCTION, PROCESSING AND PRESERVING WHITE MEAT FROM ROMANIA, A MEMBER OF THE EUROPEAN UNION

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## Abstract

*In the context that consumption of white meat is increasingly recommended for a healthy diet, the study aims to highlight the main features of the performance in the manufacturing, processing and preserving sector of white meat in Romania. In this direction, the scientific approach was based both on a qualitative and the quantitative approach of the issues studied and the methods of analysis were descriptive and comparative. In order to better highlight the evolution of the performance in this sector was compared the national sector and the European one and the time frame for analysis is between the years 2008-2015, i.e. the period during the financial crisis and the after.*

*Keywords:* performance; white meat; food industry; Romania; European Union

*JEL Classification:* M49; O14; Q22

## Introduction

The food industry is the industrial sector most dependent on agricultural production and has the broadest spread on the surface of the earth, with various sub-branches, such as: the meat industry, the fish processing industry, the dairy industry, the vegetable oils industry, the sugar and sugar confectionery industry, the milling and bakery industry etc.

In the context of a doubling of the world population in the last half century and forecasts of continuous growth, food security, both in quantity but also in quality, is a global challenge. The limitation of natural resources, but also the desire for profit at any cost has led to compromises in the food industry through the acceptance and use of genetically modified organisms, food additives (colorings, preservatives, emulsifiers, stabilizers, antioxidants, etc.), nitrates and nitrites, antibiotics, with harmful effects on the human body. Thus, it is found that diseases triggered by eating disorders have multiplied. For this reason, a series of rules have been adopted, both at national and international levels, to regulate the food market, specifying certain standards to be observed in the production, processing and storage of food.

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The existence of different foods on the market, more or less naturally, has led to a new concern of the population, namely that of identifying "the healthy products". A very important role in providing these products is organic farming, which involves an efficient use of natural resources through environmental conservation. Along with fruits and vegetables, white meat is considered a healthy product because it has less fat compared to red meat. Regardless of colour, the meat is the most important source of protein with high biological value and therefore should not be missing from the diet.

White meat is poultry (chicken, turkey, goose, duck etc.) and fish and it is obtained from the process of production, processing and preservation of two economic sub-sectors, namely – the meat and meat processing industry and the fish processing industry.

The meat and meat processing industry uses meat from pigs, cattle, sheep, poultry or from hunting and include slaughtering establishments of animals (slaughterhouses) as well as those that convert meat in various preparations (canned, cold cuts).

The study captures the main features of the performance in the manufacturing, processing and preserving sector of white meat from Romania.

The nature of the research has a conceptual dimension and a methodological one and the research objectives consist of an analysis of the activity in the manufacturing, processing and preserving sector of white meat from Romania through a descriptive and comparative analysis of specific performance indicators.

The scientific approach is based on a qualitative approach, but also on a quantitative one to the issues studied and the analytical methods are descriptive and comparative.

The study results provide added value to the state of knowledge in this field through the following qualitative aspects of the scientific research: making a brief description of the sector analysis and the presentation of its evolution over the period 2008 - 2015 compared with the development at European level, using some performance indicators.

### **1. Literature review**

The performance of this activity sector is and will be a hot topic for experts in the field. However, there is no definition for this concept that universally fits, it has a multidimensional and interdisciplinary character.

On the World Wide Web there are over 150,000 websites devoted to this notion, and in all the books of financial analysis, distinct chapters are reserved for studying a company's performance by horizontal and vertical analysis of Profit and Loss Account, intermediate management balances

analysis, self-financing capacity of the company analysis, as well as rates of return analysis (Marion, 2001; Colasse, 1994; Mironiuc, 2006; Bușe, 2005; Petrescu, 2004; Petrescu, 2008; Achim, Borlea, 2012). Some authors (Ganea, 2012) have conducted extensive studies on modelling the economic and financial performance of the company.

The regulation of the food industry, in general, and the white meat industry, in particular, is achieved by means of international and national organisations which elaborate standards, principles and regulations. Thus, the European Parliament and European Union Council, on a proposal from the Commission, the Economic and Social Committee and the Committee of the Regions, approved Regulation no. 178/2002 on the general principles and requirements of food law and the establishment of the European Food Safety Authority.

Published on 1 September 2005, ISO 22000 "Food safety management systems - Requirements for any organization in the food chain" is the first international standard for the Food Safety Management System being developed by experts from the food industry, along with representatives of specialized international organisations and Codex Alimentarius Commission, an organization established by FAO (Food and Agriculture Organization of the United Nations) and the WHO (World Health Organization) to develop food standards.

The "Codex Alimentarius" is a collection of standards, codes of practice, guidelines and other recommendations, some of a general nature and others very specific to a food or food group or concerning the operations and management of production or the operation of government systems regulating for food safety and consumer protection.

At national level, there is the National Sanitary Veterinary and Food Safety Authority, established by GO no. 308/2004, by GO no. 1557/2007 and GO no. 42/2004 approved by Law no. 215/2004 and subsequently supplemented by GO no. 130/2006 regarding the organisation and functioning of the Authority National Sanitary Veterinary and Food Safety Authority. At county level, the Authority is represented by the Veterinary Offices and Food Safety Authority, and by Sanitary Veterinary and Food Safety Authorities at the local level.

The national body governing fisheries and aquaculture is the National Agency for Fisheries and Aquaculture, which was founded in 2004, and it is a public institution under the Ministry of Agriculture and Rural Development.

Regarding the national legislation on the white meat industry, we mention Order no. 206/447/86/2002 approving the rules regarding the marketing of poultry meat prepared by the Ministry of Agriculture, Food and Forestry, Ministry of Health and the National Authority for Consumer Protection. We also mention, Order no. 679 / 24.09.2004, published in the Official Gazette no. 699 / 24.09.2002, regarding the amendment Common Decision 206/447/86/2002,

approving the rules regarding the marketing of poultry meat, published in Official Gazette no. 966 / 21.10.2004 and Order no. 122/1999 approving the symbols companies active in the production of canned food for human consumption, packed in metal containers and serial numbers of groups and varieties of food cans, published in Official Gazette no. 9a / 12.01.2000.

## 2. The general evolution of white meat industry from Romania in the 2008-2015 period

To be able to capture the main aspects of the development of the performance from the activity of production, processing and preserving white meat from Romania, we proceeded to a reorganisation of the activities of the food industry, in the sense that we have analysed only those activities specific to the treated subject within the two major sectors, according to classification of the activities in the Romanian economy, namely: production, processing and preserving of meat and meat products (NACE code 101), from which it was analysed only the processing and preservation of poultry meat (NACE code 1012) and the processing and preservation of fish, crustaceans and molluscs (NACE code 102), from which it was analysed the processing and preservation of fish, crustaceans and molluscs (NACE code 1020).

The activity of production, processing and preserving white meat from Romania had largely the characteristics of a sector which was in a slight increase, the dynamics of turnover in the industry between 2008-2015 having an average rate of 9.84%/year (only one year of the analysed period recorded a slight decrease by 0.1% of the turnover in 2010).

The main players in the industry can be classified into two categories, namely:

- the processing and preservation companies of poultry meat: S.C. Transavia S.A., Alba Iulia, S.C. Avicola Buzău S.A., Buzău, S.C. Agrícola Internațional S.A., Bacău, S.C. Agrisol International RO S.R.L., Prahova, S.C. Avicarvil S.R.L., Vâlcea, S.C. Ave Impex S.R.L., Satu-Mare, S.C. Oncos Grup S.A., Cluj, S.C. Avicola Slobozia S.A., Ialomița, S.C. Bravcod S.A., Codlea, S.C. Avicod Broiler S.R.L., Brașov;
- the processing and preserving companies of fish, crustaceans and molluscs: S.C. Ocean Fish S.R.L., Ilfov, S.C. Negro 2000 S.R.L., București, S.C. Pescado Grup S.R.L., Bacău, S.C. Sabiko-Impex S.R.L., Timiș, S.C. Pomarom S.R.L., Alba Iulia, S.C. Elixir CD S.R.L., București, S.C. Rolux S.R.L., Hațeg, S.C. Group Omega Fish S.R.L., Brăila, S.C. Egan Prod S.R.L., Mureș, S.C. Delta Fish Distribution 2003 S.R.L., București.

If we analyse the turnover, as an indicator to measure the performance, it is observed that the highest values are recorded in the companies from the sector of processing and preserving of poultry meat. This confirms once again that the processing and preservation of poultry meat has the

largest share in the white meat industry from Romania and the processing and preservation of fish, crustaceans and molluscs had the characteristics of a sector which was in an increase.

### *2.1. The development of the white meat industry in Romania compared to other European Union member states*

Romania had a relatively constant level of production of poultry during the period 2008 - 2015 and occupied an honourable place in the standings of European countries in 2015, holding the 9th place after Poland, France, United Kingdom, Germany, Spain, Italy, Hungary and Belgium. This is indicated in Table 1.

**Table 1. Production of poultry meat**

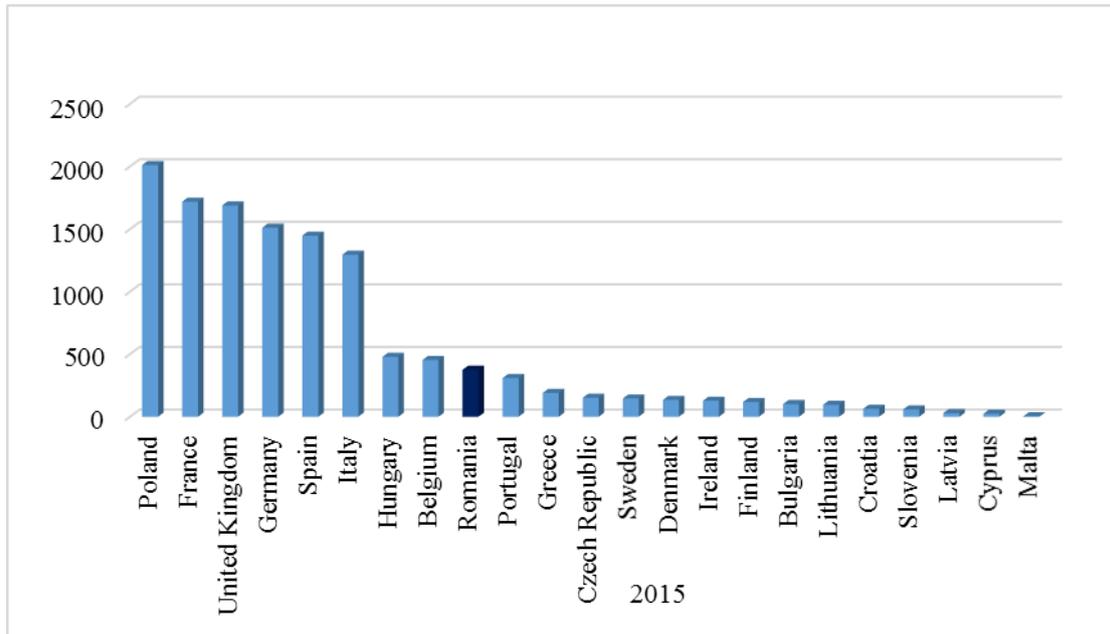
Country(1000 t) \Time	2008	2009	2010	2011	2012	2013	2014	2015
Belgium	-	361.22	404.34	402.75	410.22	388.09	433.27	452.94
Bulgaria	91.19	98.62	96.02	98.45	99.09	94.71	97.87	101.25
Czech Republic	210.27	194.29	188.18	170.08	152.61	148.17	149.41	151.41
Denmark	176.2	167.4	159.6	159.3	147.2	148.5	143	134.4
Germany	1,191.7	1,288.74	1,379.56	1,425	1,428	1,456	1,527	1,511
Ireland	117.41	-	-	128.21	132.41	117.05	115.9	128.02
Greece	171.75	174.1	178	175.23	181.65	180.47	190.53	189.63
Spain	1,375.3	1,316.67	1,349.43	1,373.61	1,384.24	1,342.58	1,436.69	1,446.99
France	1,706.22	1,670	1,712	1,733	1,709	1,695	1,678	1,718
Croatia	92.4	62	60.2	60.8	61.3	55.7	59.1	63.4
Italy	1,115.88	1,143.14	1,179.87	1,219.88	1,258.58	1,223.45	1,242.79	1,294.96
Cyprus	28.73	27.13	27.71	27.4	25.3	21.97	21.65	23.78
Latvia	23.08	23.15	23.39	22.81	24.49	26.71	28.56	29.52
Lithuania	70.65	65.36	71.93	75.63	81.76	89.77	94.41	95.79
Hungary	387.77	360	359.99	383.49	412.2	394.45	430.09	478.71
Malta	4.98	4.68	4.4	4.16	4.25	4.12	3.92	3.91
Poland	1,186.43	1,266.51	1,342.32	1,384.84	1,548.8	1,651.98	1,804.06	2,011.04
Portugal	284.09	291.58	296.35	292.11	292.16	291.74	295.21	308.69
Romania	343.07	289.86	287.47	293.86	312.73	325.55	345.62	374.79
Slovenia	58.69	59.54	61.43	58.28	58.66	57.09	59.8	58.76
Finland	100.86	94.88	96.33	101.51	107.41	111.09	113.37	117.31
Sweden	114.01	109.98	120.05	120.09	116.31	124.83	135.16	145.78
United Kingdom	1,432.62	1,463.14	1,567.72	1,557.52	1,607.94	1,662.2	1,642.62	1,688.84

Source: Author's processing using data from the Eurostat Database

From the data of Table 1, it can be seen that Romania occupies an honorable place in the standings of European countries, not only in 2015, but for the entire period, exceeding the more economically powerful countries, such as Portugal, Denmark, Greece and others.

The poultry production situation in European countries is shown schematically in Figure 1.

Figure 1. Production of poultry meat in European countries (2015)



Source: Author's processing using data from the Eurostat Database

The performance of the sector can be explained by the existence of a certain tradition, in the sense that the activity of poultry production was quite efficient in the period before 1989. Moreover, after 1989, many investments were made in this sector. Therefore, in the analysed period, total assets increased by 55.38%, from 163.6 million euro in 2008 to 254.2 million euro in 2015, according to National Agency for Fiscal Administration.

However, Romania's situation regarding the processing and preservation of fish, crustaceans and mollusks did not present itself as greatly. Except for 2008, when the share of national production from aquaculture represented 4.14% of the total European Union production, the share was insignificant in the other years analysed, as outlined in Table 2.

Table 2. Production from aquaculture excluding hatcheries and nurseries in millions euro

Specification	2008	2009	2010	2011	2012	2013	2014	2015
EU (28 countries)	437.48	3,336.50	no data	3,688.43	3,634.48	3,839.33	3,923.20	no data
<b>Romania</b>	18.13	16.99	5.61	15.89	18.15	20.65	19.19	no data
<b>Share of national production in European production</b>	4.14	0.51	-	0.43	0.50	0.54	0.49	-

Source: Author's processing using data from the Eurostat Database

This situation can be explained by poor organisation of this sector from Romania after 1989, when the privatization of companies was made erratically, with no major interest from strong investors. Therefore, the investments were very low. Thus, in the analysed period, the value of total

assets of the sector grew by only 9.74%, from 77 million euro in 2008 to 84.5 million euro in 2015, according to National Agency for Fiscal Administration. This sector could be developed if there is a greater involvement of the competent organisations. An example of this is the neighbouring countries that have adopted a series of rules and procedures that encourage investment in the processing and preservation of fish, crustaceans and molluscs sector.

## 2.2. Analysis of the performance evolution in the white meat industry from Romania

The white meat industry from Romania was marked by modest changes in the market during the period 2008-2015. The number of operating companies was around 70 and companies processing and preserving of poultry meat have the largest share, which is presented in Table 3.

**Table 3. Dynamics of the companies in the industry**

Specification	2008	2009	2010	2011	2012	2013	2014	2015
<b>No. companies Turnover &gt; 0</b>	<b>75</b>	<b>74</b>	<b>73</b>	<b>73</b>	<b>75</b>	<b>71</b>	<b>70</b>	<b>68</b>
Processing and preserving of poultry meat	41	43	44	43	45	43	43	37
Processing and preserving of fish, crustaceans and molluscs	34	31	29	30	30	28	27	31
Evolution in the number of companies		-1	-1	0	2	-4	-1	-2
<i>Dynamics of companies</i>		<i>-1.3%</i>	<i>-1.4%</i>	<i>0.0%</i>	<i>2.7%</i>	<i>-5.3%</i>	<i>-1.4%</i>	<i>-2.9%</i>

Source: Author's compilation using data from the National Agency for Fiscal Administration

According to the data from the table 4, sales volume in the sector increased between 2008-2015 from 246.49 million euro in 2008 to 465.9 million euro in 2015, an average annual growth by 9.84% being registered. It can also be noted that the activity of processing and preserving poultry meat held the largest share in the sales volume. The average number of employees increased during the period analysed from 5,103 people in 2008 to 6,439 people in 2015 (during two years of the review it declined, respectively in 2012 when the average number of employees decreased by 1.4% and in 2014 when there was a 0.5% decrease in the average number of employees) with an average growth rate of 3.45%. Here again we notice that the highest share of employees was registered in the processing and preserving of poultry meat sector.

**Table 4. Evolution of sales and employees**

Specification	2008	2009	2010	2011	2012	2013	2014	2015	Annual average
<b>Total turnover (mill. Euro)</b>	246.49	281.51	281.29	360.29	398.34	423.16	451.94	465.90	
Processing and preserving of poultry meat	167.73	203.27	209.97	282.41	312.04	342.31	366.50	366.27	
Processing and preserving of fish, crustaceans and molluscs	78.76	78.24	71.32	77.88	86.30	80.86	85.43	99.62	
<i>Dynamics of turnover</i>		<i>14.2%</i>	<i>-0.1%</i>	<i>28.1%</i>	<i>10.6%</i>	<i>6.2%</i>	<i>6.8%</i>	<i>3.1%</i>	<i>9.84%</i>

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<b>Average no of employees</b>	<b>5.103</b>	<b>5.437</b>	<b>5.538</b>	<b>6.128</b>	<b>6.044</b>	<b>6.289</b>	<b>6.258</b>	<b>6.439</b>	
Processing and preserving of poultry meat	3.524	4.124	4.317	4.988	5.083	5.149	5.100	5.091	
Processing and preserving of fish, crustaceans and molluscs	1.579	1.313	1.221	1.140	961	1.140	1.158	1.348	
<b>Growing rate</b>		<b>6.5%</b>	<b>1.9%</b>	<b>10.7%</b>	<b>-1.4%</b>	<b>4.1%</b>	<b>-0.5%</b>	<b>2.9%</b>	<b>3.45%</b>

Source: Author's compilation using data from the National Agency for Fiscal Administration

An analysis of the efficiency in the industry shows, with the exception of 2010, a clear upward trend in sales per employee in the period under review, from 48,302.66 Euro/year in 2008 to 72,356 Euro/year in 2015, according to data in Table 5.

**Table 5. Evolution of efficiency in industry**

Specification	2008	2009	2010	2011	2012	2013	2014	2015
<b>Turnover/employee (EUR/year)</b>	<b>48302.66</b>	<b>51776.57</b>	<b>50792.64</b>	<b>58794.53</b>	<b>65907.03</b>	<b>67285.99</b>	<b>72217</b>	<b>72356</b>
Processing and preserving of poultry meat	47596.62	49289.64	48637.33	56618.14	61388.50	66480.04	71863.2	71945.3
Processing and preserving of fish, crustaceans and molluscs	49878.42	59587.78	58413.03	68317.19	89806.83	70926.17	73776.5	73905.6
<b>Dynamic sales/ employee</b>		<b>7.19%</b>	<b>-1.90%</b>	<b>15.75%</b>	<b>12.10%</b>	<b>2.09%</b>	<b>7.33%</b>	<b>0.19%</b>

Source: Author's compilation using data from the National Agency for Fiscal Administration

### Conclusions

The analysis of the evolution of the performance in the white meat industry from Romania shows a moderate increase during the period 2008-2015. Thus, the dynamics of this period shows an average annual increase by 9.84% in sales and only 3.45% of the average number of employees, the largest share being held by activity of processing and preserving of poultry meat.

The performance analysis in the white meat industry from Romania compared to other European countries leads to other conclusions. If as regard to the activity of processing and preserving of poultry meat, Romania is in the top of the standings of European countries, not the same thing happens in the case of the activity processing and preserving of fish, crustaceans and molluscs, where Romania is stands at the bottom of the standings. Considering that the fish processing industry development is closely bound to fisheries both in inland waters and especially in oceanic waters and the largest quantity of fish is ensured by the tropical zone (approx. 55%), followed by the North Sea (40%) and the fact that the investments in this sector are relatively low in our country, so we can explain the place occupied by Romania at the bottom of the standings in this sector.

Finally, the white meat industry from Romania has seen a continuous development period and in combination with the implementation of national and European regulations on technical measures, standards, codes of good practice, guidelines and other recommendations in the food industry can not only lead to an improvement of the range of products offered to the public, both quantitatively and, especially, qualitatively.

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