

SOME CONSIDERATIONS REGARDING MEAT CONSUMPTION IN ROMANIA (2014-2018)

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Abstract

Meat is an essential food used by the population to meet food needs, it is an important source of protein and fat. Meat consumption is highly variable worldwide, at least due to the preponderance of certain species in its establishment. The structure of consumption is linked to the customs and traditions of each region. For this reason, the purpose of the paper was to analyze meat consumption in Romania in the period 2014-2018 pointing out its dynamics, structure and annual change. At national level, there is a preponderance - in consumption - of pork, followed by poultry (about 87% of total consumption at national level). It can be seen that the total level of meat consumption was 65.78 kg, a level which was constituted by actual contributions of: 0.58 kg - other types of meat, 2.26 kg - sheep and goat meat, 5.62 kg - beef, 23.80 kg - poultry and 33.52 kg - pork. The consumption of edible organs was 3.10 kg (4.71% of the total consumption). There is a need to improve the structure of total meat consumption by increasing the share of beef and other meats.

Key words: meat, consumption, evolution, structure, variation

INTRODUCTION

Meat, as an agricultural product, is obtained from adult, semi-adult and young animals [1]. Consumer meat demand results from a combination of economic, political, technical and other socio-cultural factors [4].

The consumption of meat is undoubtedly linked to the production obtained and trade with this product. In Romania, the variation of meat production can be observed (27.38% - beef, 9.70% - poultry, 6.19% - pork, 4.25% - sheep and goat meat) [6]. Meat production is influenced by many factors, most notably technological factors [10]. The Romanian meat market is dependent on the imports made, which influences to a significant extent the consumption [14].

Meat consumption is mainly influenced by the type of food and the price level [3]. In this context, it can be shown that the level of meat consumption is also influenced by the health care of the consumer [12]. It can be mentioned that the young consumer segment is willing to pay a higher price if it is correlated with a higher quality of the purchased product [2]. The evolution of meat

consumption is variable, so it is found that in the EU it had declining trends between 2008 and 2014 [13]. For Romania, there can be an uneven evolution of consumption between 1990 and 2010 [9]. Meat consumption is also linked to the traditions associated with a particular territory or region. Thus, for Romania, pork is a traditional product preferred by most of the population [11]. In terms of consumption expenditure, meat is the main product purchased [8].

MATERIALS AND METHODS

The paper was written based on the levels of the indicator - meat consumption (kg/inhabitant), an indicator that was highlighted based on accessing two specialized databases [5, 7]. Meat consumption is presented in general, but also for the main species: pigs, cattle, sheep and goats, birds, other meat. At the same time, organ consumption is mentioned.

Documentation was followed by data processing.

The comparison method was used. In addition to the time sequences included in the analysis

(2014-2018), we also operated with their average. Also, structural indices were determined (annually) and the absolute variation of the indicators from one year to another was established.

The structure indices were determined according to the formula:

$$IS_C = \frac{C_1, C_2, C_3, \dots, C_n}{CT} \times 100 (\%), \text{ în care:}$$

- IS_C – structure index (%);
- C_1, C_2, \dots, C_n = meat consumption by type (kg);
- CT = total consumption (kg).

The relationship was used to calculate the absolute variation of consumption:

$$\Delta C = C_n - C_{n-1} (\pm \text{kg}),$$

where:

- ΔC – consumption variation (kg);
- C_n – meat consumption of the year n (kg);
- C_{n-1} – meat consumption from the previous year (kg).

The analysis was carried out both at national level, but the comparison was also made - in space with the existing situations at world, European and Community level (EU).

RESULTS AND DISCUSSIONS

Table 1 shows the structure of the average annual meat consumption per capita, for the period 2014 - 2018.

Table 1. The structure of annual meat consumption per capita in Romania (kg)

No.	Specification	Year									
		2014		2015		2016		2017		2018	
		Effective*	Str. %**	Effective*	Str. %**	Effective*	Str. %**	Effective*	Str. %**	Effective*	Str. %**
1	Meat and meat products	57.80	100	63.40	100	65.50	100	68.40	100	73.80	100
2	Beef	5.60	9.70	6.30	9.94	6.10	9.32	4.90	7.17	5.20	7.04
3	Pork	29.00	50.18	31.30	49.36	32.90	50.23	36.10	52.78	38.30	51.90
4	Goat sheep meat	2.30	3.98	2.20	3.47	2.30	3.51	2.30	3.36	2.20	2.98
5	Bird meat	20.10	34.75	23.00	36.28	24.10	36.79	24.90	36.40	26.90	36.45
6	Other types of meat	0.80	1.39	0.60	0.95	0.10	0.15	0.20	0.29	1.20	1.63
7	from which: edible organs	3.10	5.28	3.30	5.21	3.10	4.73	3.10	4.53	2.90	3.93

Source: *<http://statistici.insse.ro:8077/tempo-online/#/pages/tables/insse-table>, Accessed on 15.03.2021 [7].

** own calculations.

If we refer to the specific situation of 2014, there is a total consumption of 57.80 kg, constituted by percentage contributions as follows: 50.18% pork (29.0 kg), 34.75% poultry (20.10 kg), 9.70% beef (5.60 kg), 3.98% sheep and goat meat (2.30 kg) and 1.39% other meat (0.80 kg). Edible organs accounted for 5.28% of annual consumption (3.10 kg).

In 2015, the total level of the indicator was 63.40 kg, of which at the product level the contribution was as follows: 0.60 kg other meat (0.95%), 2.20 kg sheep and goat meat (3.47%), 6.30 kg meat beef (9.94%), 23.0 kg of poultry (36.28%) and 31.30 kg of pork (49.36%). For edible organs a level of 3.30 kg was registered (5.21% of the total consumption).

At the level of 2016, there is a discussion of variable levels of meat consumption from 0.10 kg in the case of other types of meat up

to 32.90 kg for pork (extreme weights of 0.15 and 50.23%), and the general situation of the indicator showed a share of 65.50 kg. Poultry meat with 24.10 kg (36.97%), beef with 6.10 kg (9.32%) and sheep and goat meat with 2.30 kg (3.51%) also contributed to the total consumption. The share of edible organs, in total, was 4.73% (3.10 kg).

If we refer to the specific situation of 2017, there is a national situation characterized by a total consumption of 68.40 kg, consisting of percentage contributions as follows: 52.78% pork (36.10 kg), 36.40% poultry (24.90 kg), 7.17% beef (4.90 kg), 3.36% sheep and goat meat (2.30 kg) and 0.29% other meat (0.20 kg). The situation of consumption of edible organs is reflected by a weight of 4.53% in the general level of the indicator (3.10 kg).

In 2018 the indicator recorded a general level of 73.80 kg, of which for each type of meat the contribution was as follows: 1.20 kg other

types of meat (1.63%), 2.20 kg sheep and goat meat (2.98%), 5.20 kg beef (7.04%), 26.90 kg poultry (36.45%) and 38.30 kg pork (51.90%). For edible organs there was a level of 2.90 kg (3.93% of the national total).

Figure 1 shows the situation of meat consumption at national level for the period 2014-2018.

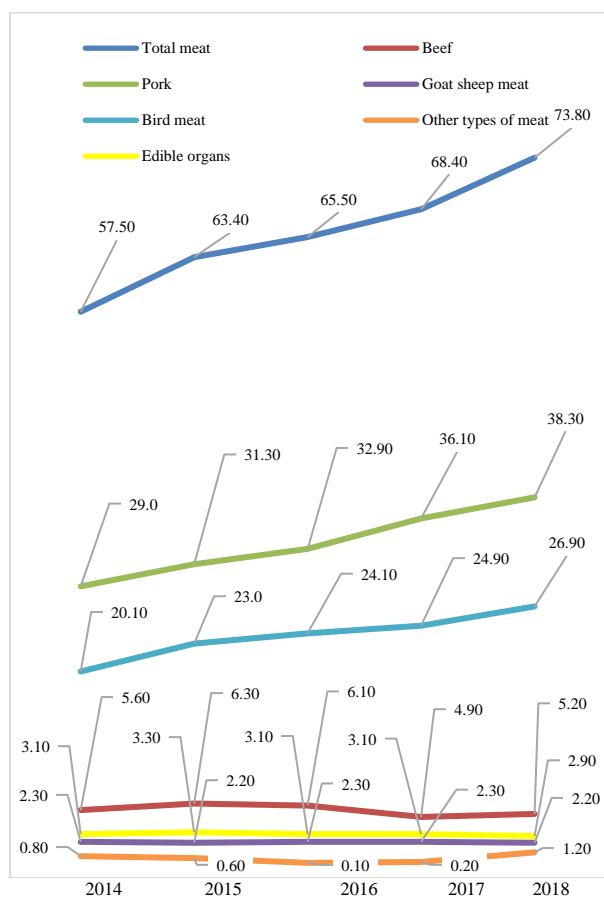


Fig. 1. Meat - average annual consumption per capita (kg)

Source: Own design and calculation.

Table 2 presents the situation of the absolute variation of the annual meat consumption per inhabitant.

At the level of beef, there is a fluctuation in consumption, the lowest negative differences being 0.20 kg in 2016 compared to 2016, and the most pronounced reached 2.10 kg for 2017 compared to 2016. There are also increases in 2015 compared to 2014 - 0.70 kg and in the case of 2018 compared to 2017 - 0.30 kg.

In the case of pork, it is found that the indicator showed only growth trends: +2.30,

+1.60, +3.90 and +2.20 kg for 2015, 2016, 2017 and 2018 respectively.

Consumption for sheep and goat meat is characterized by the existence of a situation when the indicator increases, compared to the terms of reference, respectively the year 2016 (+0.10 kg), an equitable situation (2017) and by two situations of decreasing the level of the indicator - years 2015 and 2018 (-0.10 kg each).

Table 2. Absolute variation of annual meat consumption per capita in Romania (kg)*

No.	Specification	±Δ 2015 vs. 2014	±Δ 2016 vs. 2015	±Δ 2017 vs. 2016	±Δ 2018 vs. 2017
1	Meat and meat products	+5.60	+2.10	+2.90	+5.40
2	Beef	+0.70	-0.20	-2.10	+0.30
3	Pork	+2.30	+1.60	+3.90	+2.20
4	Goat sheep meat	-0.10	+0.10	-	-0.10
5	Bird meat	+2.90	+1.10	+0.80	+2.00
6	Other types of meat	-0.20	-0.50	+0.10	+1.00
7	from which: edible organs	+0.20	-0.20	-	-0.20

Source: * own calculations.

For total consumption there are increases in 2015, 2016, 2017 and 2018 respectively compared to previous years, as follows: +5.60, +2.10, +2.90 and +5.40 kg respectively (Fig. 2).

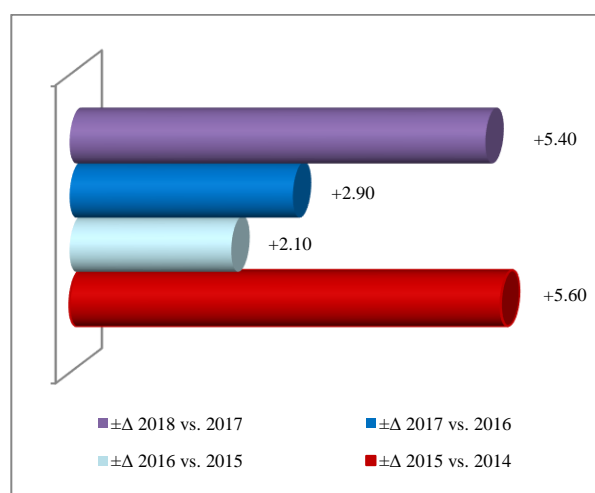


Fig. 2. Total meat consumption per capita - the absolute variation (±kg)

Source: Own design and calculation.

Consumption of poultry meat is characterized, strictly, by successive annual increases of the

indicator: +2.90, +1.10, +0.80 and +2.0 kg - in the years 2015, 2016, 2017 and 2018 respectively.

For other types of meat, there are two situations of decrease in 2015 and 2016 (-0.20 and -0.50 kg), as well as two situations of increase in 2017 and 2018 (+0.10 and +1.0 kg).

In the case of organ consumption, there are decreasing trends of the indicator level in 2016 and 2018 (-0.20 kg each), a stationary trend in the case of 2017 as well as an upward trend in 2015 (+0.20 kg).

Table 3 shows the situation of total meat consumption and its structure, by types of meat as an average of the analysed period (2014-2018).

Table 3. Annual meat consumption per capita in Romania - average of the period (kg)

No.	Specification	Effective*	Str. %**
1	Meat and meat products	65.78	100
2	Beef	5.62	8.54
3	Pork	33.52	50.96
4	Goat sheep meat	2.26	3.44
5	Poultry meat	23.80	36.18
6	Other types of meat	0.58	0.88
7	from which: edible organs	3.10	4.71

Source: * own calculations

It can be seen that the total level of meat consumption was 65.78 kg, a level which was constituted by actual contributions of: 0.58 kg - other types of meat, 2.26 kg - sheep and goat meat, 5.62 kg - beef, 23.80 kg - poultry and 33.52 kg - pork (Fig. 3). The consumption of edible organs was 3.10 kg (4.71% of the total consumption).

The percentage structure of the indicator was as follows: 50.96% pork; 36.18% poultry meat; 8.54% beef; 3.44% sheep and goat meat; 0.88% other types of meat (Fig. 4).

Compared to the world, European and Community situation (European Union), Romania ranks as follows (Table 4): below all three reference levels for beef (negative differences of 37.49, 59.01 and 60.45%); above the world level (2.18 times ahead), but

below the continental and community levels (-1.38 and -13.36% respectively), in the case of pork; superior to all reference levels in sheep meat and goat meat (exceedances by 15.90, 26.26 and 13.57% respectively); above world and Community levels (1.55 and 1.03 times respectively), but below the continental level (-1.57%), for poultry; below all three reference levels for beef (-24.68, -67.96 and -62.82% - Fig. 5).

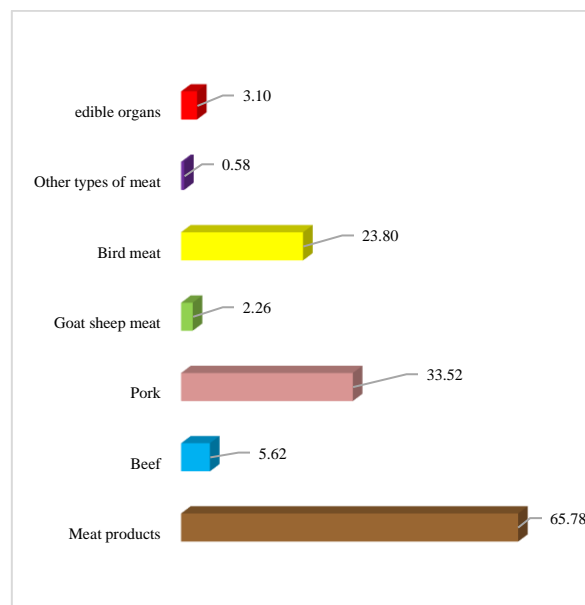


Fig. 3. Meat consumption per capita - the average of the period (kg)

Source: Own design and calculation.

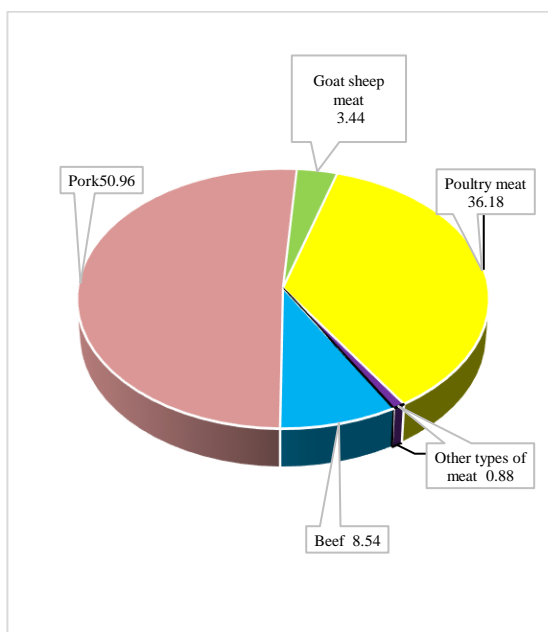


Fig. 4. Meat consumption per capita - average period, structure (%)

Source: Own design and calculation.

Table 4. Annual meat consumption per capita - Romania's position in the international context - average of the period (kg)*

No.	Specification	World level	European level	U.E. level	Positioning in relation to the situation (%):		
					Global	European	U. E.
1	Beef	8.99	13.71	14.21	62.51	40.99	39.55
2	Pork	15.35	33.99	38.69	218.37	98.62	86.64
3	Goat sheep meat	1.95	1.79	1.99	115.90	126.26	113.57
4	Bird meat	15.29	24.18	23.06	155.66	98.43	103.21
5	Other types of meat	0.77	1.81	1.56	75.32	32.04	37.18

Source: * own calculations.

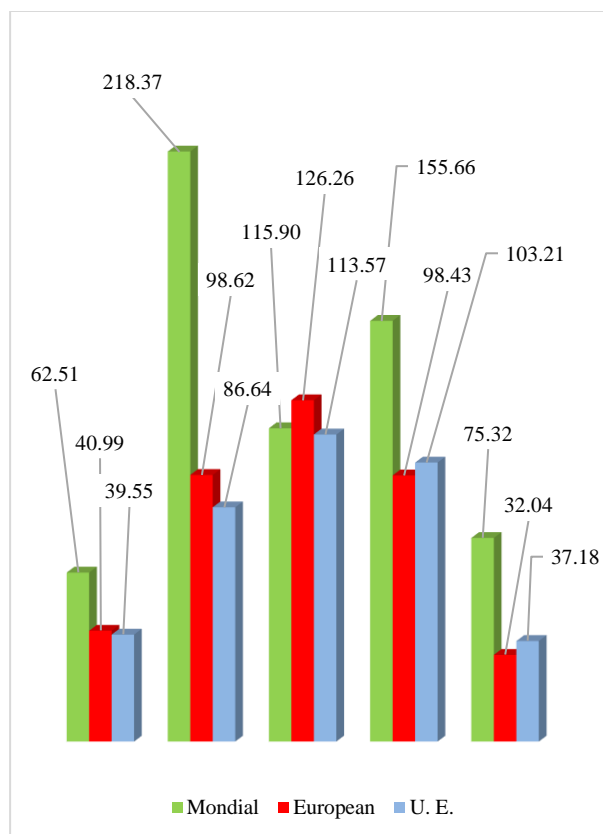


Fig. 5. Romania's positioning, at international level, in terms of annual meat consumption (%)

Source: Own design and calculation.

CONCLUSIONS

Romania must pay special attention to the livestock sector, which must be the main supplier of raw materials for the food industry, which can contribute to increasing the surplus value resulting from meat processing and reducing the national balance of payments deficit, to the products concerned.

Appropriate subsidization of raw material suppliers and processors can be achieved through appropriate government support measures as well as access to European funds.

At the same time, there is a need to improve the structure of total meat consumption by increasing the share of beef and other meats.

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