

DYNAMICS OF FOOD CONSUMPTION IN ROMANIA IN THE PERIOD 2008-2019

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Abstract

The goal of the paper was the analysis of food consumption in Romania in the period 2008-2019 using the data put at the disposal by National Institute of Statistics. The data were processed using descriptive analysis reflected in mean, standard deviation, variation coefficient and also annual growth rate. First, the value of the minimum consumption basket increased accounting for Lei 7,278 in 2020 for ensuring a decent living for a family with two adults and two children. Food consumption in Romania accounts for about 21% in the total expenses for the minimum consumption basket. Food consumption was analyzed by category of food products and the results proved a growth of consumption in case of poultry, pork and mutton meat, cheese and butter, fruit, vegetables, jam, honey, ice cream, coffee and tea, and a decline in consumption of bread, beef, milk, beans, potatoes, sugar and chocolate. These trends reflect that the Romanian consumer is aware that his daily diet must be healthier and more balanced than before. For the future, consumption have to be focused on three criteria: health, sustainability and convenience. This means that consumption to be based on fresh, natural, organic, healthy, safe and in-season food offered mainly by local producers and the offer could be completed by imports especially for the extra season food products,

Key words: consumption, food, living standard, dynamics, Romania

INTRODUCTION

Nutrition plays an important role in promoting and maintaining health. An unhealthy diet can lead to metabolic imbalances and emergence of diseases that have become more common nowadays: obesity, diabetes, cardiovascular disease, cancer, osteoporosis and dental diseases.

Changes in eating habits in the sense of orientation to products rich in protein, fats, carbohydrates, calories, with a low content of fibers, to which is added an increasingly sedentary lifestyle have been caused by the development of industrialization, urbanization and mechanization, changing technologies in food manufacturing, the emergence of fast food and catering, the daily stress of busy working days.

However, consumer has become more conscious that food has to be seen not only as a mean to satisfy the basic needs but also to cover a spiritual satisfaction during and after consumption. More attention is paid to the information available on products, which are

carefully studied to be natural, healthy products, with high nutritive value.

Despite that we live in the so called "consumption society", stomach capacity is limited, therefore people cannot consume more food, but could chose higher quality products and consume less. In general consumer have their own criteria to buy a food product: utility, novelty, habits, quality (aspect, freshness, taste, flavour, nutritional value), impact on health (naturalness, low calories food, organic food, food safety etc), country or region of origin, landmark, price, and also other criteria such as to be environment protective [22].

Despite that in the EU it is available a large variety of food and drinks, consumptions and purchases are different from a member state to another taking into account local, regional and national cuisine and cultural identity and also regarding household income spent on food and beverage products.

In the EU, in the final consumption household expenses, food and beverages accounts for

about 21.5%, but in Romania they have a higher weight, 30.9%).

Meat has the largest share of household consumption expenditure, 3.3 % in average in the EU, but 7.8% Romania. Also, Romania is the only country in the EU with the highest share of overweight people, which increased from 50.3% in 2008 to 62.9% in 2017.

The EU promotes healthy, safe, sustainable diets, for avoiding nutritional deficiencies, overweight, reduction of food wastes and ensuring animal welfare. Therefore, this has a deep impact on what farmers have to produce and how they produce, how food is manufactured, packed, labelled, transported, stored and traded around the world and finally, on what we eat and drink [7].

Analysis of consumption is usually reflected by a large range of indicators which could be classified in three groups:

(1) value indicators: consumption fund, total expenses of the population and population consumption expenses,

(2) consumption indicators in natural measure units (volume of total consumption of goods and services; consumption per inhabitant;

(3) food consumption in terms of nutritional factors: calories, proteins, fats, carbohydrates, minerals.

Besides the material, food and non-food goods, the population appeals to a large range of services (education, culture, tourism, banking etc), and these all together characterize the standard of living which is also closely related to the economic development of a country [46].

The minimum threshold below which expenditure cannot be set to ensure a reasonable living standard is called "Minimum monthly consumption basket", which is an important item for establishing the minimum basic salary in the economy.

Taking into account food balances for all the food products we could describe the images of total consumption and also the average consumption per inhabitant in physical units.

In this context, the purpose of the paper was to analyze the dynamics of food consumption in Romania by food category in the period 2008-2019 in order to identify the main trends in order to establish the principal direction in

which offer of food products could better satisfy the population needs for a more balanced and healthier diet.

MATERIALS AND METHODS

For setting up this paper a large range of information sources (reports, published articles etc) were carefully studied, paying a special attention to the ones in close relationship with the approached topic and the purpose of interest.

The empirical data were taken from National Institute of Statistics for the period 2008-2019.

Descriptive techniques of knowledge were used for indentifying the problems in consumption for each group of food products in terms of average consumption per inhabitant per year both regarding food of vegetal origin and of animal origin, expressed in physical units.

The main groups of products were the following ones:

- bread, corn, flour, pasta and rice;
- meat meat preparations, and fish;
- milk, cheese, orange cheese, cottage cheese and butter;
- fruit (apples, pears, plums, grapes, bananas, oranges);
- vegetables (tomatoes, peppers, cabbage, cauliflower, beans, potatoes);
- sugar, jam, chocolate, ice cream, bee honey, coffee and tea.

The main methods used to process the data have been:

- average - calculated with the formula:

$$\bar{X}_i = \frac{\sum X_i}{n},$$

- standard deviation was calculated with the formula:

$$\delta = \sqrt{\frac{\sum_{i=1}^n (X_i - \bar{X}_i)^2}{n}},$$

- coefficient of variation was calculated based on the formula:

$$CV\% = \frac{\delta}{\bar{X}_i} \times 100$$

- average annual growth rate

$$\bar{\Delta} = (\bar{X}_n - \bar{X}_1) / (n - 1)$$

RESULTS AND DISCUSSIONS

Minimum monthly consumption basket- as an expression of decent living

The legal definition of "minimum monthly consumption basket" is given by Emergency Ordinance No. 2017 of November 24, 2000 issued by Romania's Government and consists on the following text: "Minimum monthly consumption basket represents the essential item for establishing the basic minimum salary in the economy, of wage policy and other policies in the social field" [41].

According to Decision No.7/2018 of National Agency for Consumer Protection (ANPC), regarding the approval of the general criteria for establishing a reasonable living standard "The value of the minimum monthly consumption basket is the minimum threshold below which expenditure cannot be set to ensure a reasonable standard of living. This amount represents the amount of money from the debtor's that cannot be stopped for the payment of debts because it is necessary for him to cover the expenses indispensable to ensure the daily living for himself and his family" [16].

In 2020, it was issued Law 174 from August 14, 2020 for modifying and completing Emergency Ordinance of the Government no.217/2000 regarding the approval of the minimum monthly consumption basket.

According to this Law the minimum consumption basket is the basic item for establishing the minimum gross salary at the country level guaranteed in payment and of the wage policy.

The chapters of the minimum monthly consumption basket for a decent living are: (i)Food, (ii)Clothing and footwear, (iii)House, (iv)Housing equipment, (v)Housing expenses, (vi)Products for house use and personal hygiene, (vii)Communication appliances and transportation, (viii)Education and culture, (ix)Health care, (x) Recreation and vacation, (xi)Family savings fund.

The monthly consumption basket includes a list of basic foods consisting of: milling and bakery products, cereals, fresh and canned vegetables, fresh and canned fruits, meat and

meat preparations from all the farm species, fresh and frozen fish, milk and dairy products, eggs, fats and oils, sugar and sweets, soft drinks [42].

The value of the minimum monthly consumption basket is the minimum necessary to ensure respect for the rights, fundamental freedoms and human dignity of the debtor and of the persons to whom he provides or owes them, in accordance with the law, routine maintenance. The value of monthly minimum consumption basket is annually updated by National Institute of Statistics and approved by the Romanian Government [5].

In September 2019, Romanian Government established that for a family consisting of four persons a decent living standard could be assured by "a sum of Lei 6,954, representing the value of the minimum consumption basket" at that time.

In September 2020, Romania's Government approved the updated value of the minimum consumption basket for a decent living for a family with two adults and two children: Lei 7,278, which is by +4.7% higher than in September 2019 (Lei 6,954) and in September 2018 (Lei 6,762) (Table 1).

For a family consisting of two adults and one child, the value of this basket was update at Lei 6,194 and for a family of two adults without children at Lei 4,597.

In case of a family consisting of four persons, the highest increase in the expenses structure was +8.8% at the chapter "house", followed by " Food" where the growth rate was 5.5% in 2020 compared to September 2019 [11].

Barbuta et al (2014) defined "minimum consumption basket", compared the methodology applied in Romania and in other EU countries regarding the setting of minimum salary based on the minimum consumption basket, also they compared the methods for establishing the social policies and pointed out the important of the alignment of Romania to the modern standards used by other EU member states for ensuring a decent living [3].

Between the economic development of a country and the living standard of the population is a close relationship [44, 45].

Table 1. Minimum consumption basket for a decent living for a family (2 adults and 2 children), 2020 vs. 2019 (Lei)

Expenses Chapter	Sept. 2019	Sept. 2020	Variation Sept.2020 versus Sept.2019		Structure of Minimum consumption basket in 2020 (%)
			Absolute change (Lei)	Relative change (%)	
1. Food	1,459	1,532	+73	+5.0	21.1%
2. Clothing and footwear	670	686	+16	+2.4	9.4
3. Housing	1,822	1,982	+100	+8.8	27.2
4. Housing equipment	225	229	+4	+1.8	3.1
5. Housing expenses	483	484	+1	+0.2	6.6
6. Household and hygiene products	243	250	+7	+2.7	3.4
7. Services	507	518	+11	+2.3	7.1
8. Education and culture	562	574	+12	+2.1	7.9
9. Health care	111	116	+5	+4.2	1.6
10. Recreation and vacations	240	246	+6	+2.3	3.4
11. Family savings fund	632	662	+30	+4.7	9.2
TOTAL Consumption basket	6,954	7,279	+325	+4.7	100.0

Source: Own calculation based on the data from [11].

It was emphasized that growth rate of GDP per capita (PPC) reflects the best this correlation between economic growth and the raise of the living standard.

Also, the living standard could be expressed in terms of purchasing power which means the number of products and services which could be bought with a monetary unit. Purchasing power is closely related to population's income and also to price level. If prices go up, and the income remains constant, the purchasing power decreases. If the population income is multiplied by inflation rate, purchasing power remains constant. Also, purchasing power depends on the net salary and the index of consumption prices.

In Romania purchasing power and average salary income are much lower than the UE average and the levels reached by most of the EU countries.

Consumption behaviour depends on many factors such as: income level, price, needs, preferences, habits, family size, etc.

Regarding food consumption, despite that Romania has natural premises to ensure an optimal level for nourishing the whole population, the model of food consumption is different compared to the one in other EU countries. The share of food expenses in total expenses is high, a large part of consumption is ensured from the own agricultural production obtained in the rural households, the high consumption of cereals and potatoes

which have a low nutritive value and high risk of diabetes [44].

The decent standard of living has two dimensions: a quantitative and a qualitative one, which could differ as importance from a region to another and from a country to another, and that, besides the objective component regarding the biological and social needs, there is also a subjective component translated in terms of humans' perception on a decent living. This subjective component is deeply influenced by life style, being closely linked to income level and social status of each person. The individuals who get a higher income and have a higher social position, have always a higher decent standard [8].

Consumption of food products

Regarding the term "consumption", the National Institute of Statistics defined the following consumption types:

(a) Human consumption or available human consumption which represents the amounts of agro-food products (primary and manufactured) available for human consumption, no matter the supply source (wholesalers, retailers, collective consumption, self consumption); (b) Average annual gross food consumption per inhabitant which represents the amount of products in terms of commercial weight, which still need a few processing for being effectively utilized in human diet.

(c) Average net food consumption per inhabitant which refers to specific products (cereals, honey, fats);

(d) Average daily net food consumption per inhabitant, in grams; (e) Average daily net food consumption per inhabitant, in calories;

(f) Average daily net food consumption per inhabitant, in protein;

(g) Average daily net food consumption per inhabitant, in fats;

(h) Average daily net food consumption per inhabitant, in carbohydrates;

(i) Energy intake of nutrients in the calorie content of the average daily intake of proteins, carbohydrates and fats [17].

Average consumption of food products

Cereals consumption

Cereals play an important role in Romanians' diet being used as bread and other milling and bakery specialities, maize and wheat flour, pasta and rice [39].

- *Average bread consumption* during the analyzed period was 8.48 kg/capita/month and its dynamics reflected a general decreasing trend from 9.22 kg in 2008 to 7.93 kg in 2019, accounting for - 14%. The average annual decline rate was -1.37% and the variation was very small, CV = 4.4% (Table 2).

- *Average consumption of maize flour.* Maize flour is used for preparing polenta, a typical

dish mainly in the country side of Romania. Usually, it is associated with cheese and sour cream or other meals like cabbage leaves filled with chopped pork meat, named "sarmale" (in Romanian) which belong to culinary traditions [24].

In average, a Romanian consumed 0.88 kg maize flour per month in the last decade, the general tendency being a decreasing one from 1.02 kg in 2008 to 0.73 kg in 2019, the average decline rate accounting for -3.08%. The variation coefficient, CV = 10.97% reflects a homogeneous distribution of the values across the studied period (Table 2).

- *Wheat flour* is consumed in a small amount than maize flour per month, accounting for 0.81 kg/capita during the studied interval. From 0.78 kg used in 2008, in 2019, a Romanian utilized 0.77 kg, despite that across the period it was reached a peak of 0.87 kg in the year 2015. Therefore, the decline rate is very small, only -0.19% in the whole period, The variation coefficient, CV = 3.39% reflects very small changes from a year to another (Table 2).

- *Pasta* is not a specific food for Romanians and that is why its consumption remained relatively stable at 0.30 kg/month/capita, the variation not being significant from a year to another (Table 2).

Table 2. Evolution of average monthly consumption for bread, maize flour, wheat flour, pasta and rice in Romania in the period 2008-2019 (kg/month/capita)

	Bread	Maize flour	Wheat flour	Pasta	Rice
2008	9.22	1.02	0.78	0.30	0.43
2009	8.97	1.01	0.82	0.30	0.43
2010	8.73	0.95	0.82	0.30	0.43
2011	8.57	0.97	0.82	0.30	0.42
2012	8.58	0.91	0.80	0.29	0.42
2013	8.50	0.86	0.82	0.31	0.43
2014	8.33	0.85	0.82	0.31	0.43
2015	8.49	0.86	0.87	0.30	0.44
2016	8.24	0.80	0.80	0.29	0.43
2017	8.20	0.80	0.80	0.30	0.43
2018	8.04	0.77	0.78	0.32	0.43
2019	7.93	0.73	0.77	0.32	0.43
Mean (kg)	8.48	0.88	0.81	0.30	0.43
St. Dev. (kg)	0.37	0.10	0.03	0.01	0.00
Variation Coeff. (%)	4.40	10.97	3.39	2.75	1.06
Annual growth rate (%)	-1.37	-3.08	-0.19	0.53	0.02

Source: Own calculation based on the data from [18].

-Rice is a cereal included in a few dishes in Romanian gastronomy (soup, pilau, rice pudding, and "sarmale" etc) and for this reason its consumption is not so high, in average accounting for 0.43 kg/month/capita (Table 2).

Meat consumption. Meat is a very important component of the daily diet in Romania, and for the consumed amount the country is situated on the top position in the EU. Compared to other member states where poultry meat comes on the 1st position, Romanians consume especially pork, which is traditional in the local gastronomy. On the 2nd position comes poultry meat, followed by beef and veal and mutton, lamb and goat meat [25, 29, 33, 37].

The general trend regarding average monthly meat consumption is an increasing one for

almost all sorts of meat, but in a very small proportion from a year to another. In average, the monthly consumption in the period 2008-2019 accounted for 5.29 kg/capita for total meat, 0.49 kg for beef and veal, 2.76 kg pork, 1.81 kg poultry meat, 0.20 kg mutton and lamb, and 1.11 kg meat preparations.

Analysing the average annual consumption, it was noticed a decline for beef from 0.67 kg in 2008 to 0.45 kg in 2019 (- 32.84%) and in case of mutton and lamb meat (-0.37%).

Pork and poultry meat are the most preferred. Consumption increasing by 0.86% average growth rate in the whole interval for pork and in case of poultry meat by 2.99%.

Fish and canned fish consumption accounted for 0.67 kg/month/capita and the general trend is an increasing one, having a mean growth rate of 1.99% annually (Table 3).

Table 3. Evolution of average monthly consumption for meat and fish in Romania in the period 2008-2019 (kg/capita/month)

	Total meat	Beef and veal	Pork	Poultry meat	Mutton, lamb	Meat preparations	Fish
2008	5.50	0.67	2.88	1.68	0.21	1.11	0.60
2009	5.61	0.61	2.86	1.89	0.21	1.11	0.64
2010	4.99	0.48	2.78	1.52	0.19	1.07	0.67
2011	4.67	0.46	2.54	1.46	0.19	1.02	0.64
2012	4.61	0.42	2.47	1.52	0.20	1.04	0.63
2013	4.53	0.43	2.43	1.46	0.20	1.03	0.64
2014	4.82	0.47	2.42	1.68	0.19	1.04	0.64
2015	5.28	0.53	2.61	1.92	0.18	1.12	0.72
2016	5.46	0.51	2.74	2.01	0.19	1.12	0.70
2017	5.70	0.41	3.01	2.08	0.19	1.20	0.73
2018	6.11	0.43	3.19	2.24	0.18	1.24	0.74
2019	6.20	0.45	3.17	2.32	0.20	1.24	0.74
Mean (kg)	5.29	0.49	2.76	1.81	0.20	1.11	0.67
St. Dev. (kg)	0.57	0.08	0.27	0.31	0.01	0.08	0.05
Variation Coeffic. (%)	10.78	16.33	9.94	16.85	4.25	7.07	7.46
Annual growth rate (%)	1.10	-3.51	0.86	2.99	-0.37	0.99	1.99

Source: Own calculation based on the data from [18].

Milk and dairy products consumption.

Milk and dairy products are important in the daily diet bringing an important intake of protein of animal origin and of calcium as well. Milk is a complete food from a nutritional point of view but in small quantities of nutrients. Due to its special

flavour, cheese could be served as such or in various dishes or with fruit (apples, grapes etc) [28, 30, 35].

In the analyzed interval, in a month, a Romanian consumed 5.9 kg milk, 1.37 kg cheese and sour cream and 0.06 kg butter.

Regarding cheese consumption, the most preferred sorts are fresh cow cheese, cottage cheese, 0.43 kg/month/capita, then sheep cheese 0.23 kg and orange cheese ("cascaval" in Romanian) 0.11 kg.

While in case of milk, consumption declined by -0.97% per year in average in the studied period, cheese consumption registered an increasing trend, the average annual growth rate being 4.27% for orange cheese, 1.32% for cheese and sour cream, 1% for sheep cheese and 0.42% for cow cheese.

Romanians prefer much more cottage cheese either made from cow or sheep milk or combined. Orange cheese is also preferred, but it is consumed in a smaller amount due to the high price compared to cottage cheese.

Butter is consumed in a small quantity, just 0.06 kg/month, but CV = 20.03% reflects a large change from a year to another, the general tendency being an increasing one, with an average growth rate of 5.61% (Table 4).

Table 4. Evolution of average monthly consumption for milk, fresh cheese, cottage cheese, orange cheese and butter in Romania in period 2008-2019 (litre/month for milk; kg/month for cheese and butter)

	Milk	Cheese and sour cream	Cow cheese	Sheep cheese	Orange cheese	Butter
2008	6.151	1.319	0.427	0.234	0.096	0.045
2009	6.168	1.329	0.425	0.233	0.098	0.052
2010	6.186	1.299	0.408	0.228	0.095	0.054
2011	5.962	1.284	0.416	0.219	0.083	0.053
2012	6.062	1.318	0.423	0.22	0.086	0.054
2013	5.870	1.354	0.439	0.22	0.088	0.057
2014	5.794	1.369	0.439	0.222	0.091	0.06
2015	5.835	1.287	0.447	0.232	0.116	0.068
2016	5.813	1.337	0.442	0.236	0.124	0.076
2017	5.768	1.464	0.45	0.243	0.141	0.078
2018	5.632	1.519	0.456	0.263	0.144	0.078
2019	5.523	1.524	0.447	0.261	0.152	0.082
Mean (litre; kg)	5.90	1.37	0.43	0.23	0.11	0.06
St. Dev. (kg)	0.21	0.09	0.01	0.01	0.02	0.01
Variation Coeffic. (%)	3.62	6.33	3.42	6.38	22.75	20.03
Annual growth rate (%)	-0.97	1.32	0.42	1.00	4.27	5.61

Source: Own calculation based on the data from [18].

Fruit consumption. Fruit plays another important role in human diet bringing us vitamins and fructose. For this reason, fruit consumption is recommended before breakfast, between breakfast and lunch and between lunch and dinner. About 300-400 grams of fruit is recommended to be consumed daily.

During the period 2008-2019, the average monthly consumption of fruit increased from 3.31 kg in 2008 to 4 kg in 2019, meaning +20.8%, as the domestic market is full of a large variety of fruit in all the seasons and for a healthy diet fruit have to be consumed daily.

However, annual consumption in Romania is smaller than in other EU countries.

The most consumed fruit are apples, and also plums, pears, cherries, peaches, apricots, grapes, nuts and also citrus and bananas from the imported fruit [31, 36].

The annual average growth rate in fruit consumption is 1.74% with a smaller variation, CV = 6.83%.

The average monthly consumption increased for all the categories of fruit. Apples and pears account for 1.5 kg/month/capita, the variation from a year to another being very small, CV = 4.4%.

Plums registered an average consumption of 0.13 kg/month with a slight increase in the analyzed period and a moderate variation caused by the deviation in the internal production and market offer, CV = 15.8%.

A Romanian consumed in average 0.26 kg grapes/month in the whole studied period with a slight increasing trend, + 0.93% annual growth rate.

Oranges are the most consumed fruit from import. In average, in a month, a Romanian

consumed 0.57 kg oranges and also 0.54 kg bananas during the last decade. An increasing trend was noticed for the both fruit, + 5.06% for bananas and +2.83% growth rate for oranges.

A large variation of the average monthly consumption was noticed in case of bananas, CV =23.84%, reflecting heterogeneous value along the data series compared to CV = 9.98% for oranges, showing an uniformity in the chronological values (Table 5).

Table 5. Evolution of average monthly fruit consumption in Romania in the period 2008-2019 (kg/month/capita)

	Total fruit	Apples and pears	Plums	Grapes	Bananas	Oranges
2008	3.312	1.401	0.123	0.27	0.453	0.473
2009	3.552	1.590	0.097	0.286	0.454	0.505
2010	3.557	1.616	0.132	0.196	0.458	0.555
2011	3.399	1.466	0.104	0.226	0.448	0.561
2012	3.389	1.49	0.13	0.247	0.425	0.511
2013	3.449	1.512	0.131	0.241	0.427	0.519
2014	3.574	1.518	0.131	0.221	0.474	0.576
2015	3.742	1.549	0.152	0.274	0.528	0.595
2016	3.831	1.517	0.163	0.271	0.608	0.619
2017	3.897	1.456	0.108	0.286	0.688	0.61
2018	4.028	1.444	0.157	0.301	0.733	0.643
2019	4.006	1.417	0.127	0.299	0.78	0.643
Mean (kg)	3.64	1.50	0.13	0.26	0.54	0.57
St. Dev. (kg)	0.25	0.07	0.02	0.03	0.13	0.06
Variation Coeffic. (%)	6.83	4.40	15.80	12.86	23.84	9.98
Annual growth rate (%)	1.74	0.10	0.29	0.93	5.06	2.83

Source: Own calculation based on the data from [18].

Vegetable consumption. Vegetables are important in daily diet as a component of various dishes (fresh salads, soups, garnishes, pickles etc) being a source of important minerals and vitamins.

In salads are usually used: lettuce, tomatoes, green peppers, cucumbers, onion, garlic, carrots, celery, mushrooms etc), other vegetables like egg plants, cauliflower, cabbage, potatoes, pumpkins, carrots, celery, peas, beans are used in various dishes.

Canned vegetables are also used mainly during winter season when the offer is relatively limited to the imported one [21, 26, 32].

In average, in a month, a Romanian consumed 7.69 kg fresh and canned vegetables, meaning 92.28 kg/year and 0.248 kg per day.

However, daily consumption of vegetables is smaller compared to 400-500 grams which is recommended for a balanced diet.

Despite that it is a good point that vegetable consumption recorded an increasing trend from 7.3 kg/capita/month in 2008 to 8.06 kg in 2019, meaning by 10.49% more than at the beginning of the studied period.

Tomatoes consumption is in average 1.06 kg/capita/month with a slight increase from 1.098 kg in 2008 to 1.133 kg in 2019, meaning +3.18 % more.

Green peppers consumption has raised from 0.357 kg/month/capita in 2008 to 0.469 kg in 2019, which reflects a growth of +31.37%. The average consumption in the analyzed interval is 0.42 kg green peppers.

Cabbage and cauliflower consumption accounted for 0.79 kg/capita/month in the last decade. The evolution shows a slight increase from 0.767 kg in 2008 to 0.806 kg in 2019, meaning + 5.08%, with an annual growth rate of 0.45%.

Beans consumption is small and accounted in average for 0.35 kg/month. During the studied period, its consumption declined by -0.66% growth rate. This situation is caused by the

low internal production of beans and the high price of the imported beans in supermarkets and agro-food markets.

Potatoes are a basic food in Romania, unfortunately domestic production decreased very much due to the drought of last years and the offer was completed by imports to assure the requirements. Also, potatoes price raised and this reduced consumption,

In the analyzed interval, the average monthly potatoes consumption declined from 3.61 kg/capita in 2008 to 2.89 kg in 2019, meaning by -20% less, the average annual decline rate being -2% (Table 6).

Table 6. Evolution of average monthly consumption of vegetables in Romania in the period 2008-2019 (kg/month)

	Total vegetables	Beans	Potatoes	Cabbage and cauliflower	Tomatoes	Green and peppers
2008	7.305	0.368	3.614	0.767	1.098	0.357
2009	7.627	0.362	3.586	0.791	1.148	0.41
2010	7.382	0.349	3.488	0.744	0.95	0.367
2011	7.597	0.358	3.465	0.779	1.057	0.404
2012	7.575	0.353	3.48	0.74	1.001	0.42
2013	7.617	0.338	3.314	0.798	1.011	0.395
2014	7.726	0.336	3.314	0.83	1.007	0.405
2015	7.654	0.353	3.239	0.791	1.064	0.427
2016	7.726	0.344	3.062	0.807	1.093	0.435
2017	7.983	0.349	3.073	0.857	1.089	0.44
2018	8.077	0.347	3.018	0.823	1.124	0.462
2019	8.066	0.342	2.894	0.806	1.133	0.469
Mean (kg)	7.69	0.35	3.30	0.79	1.06	0.42
St. Dev. (kg)	0.24	0.01	0.24	0.03	0.06	0.03
Variation Coeffic. (%)	3.17	2.73	7.27	4.30	5.74	8.14
Annual growth rate (%)	0.90	-0.66	-2.00	0.45	0.29	2.51

Source: Own calculation based on the data from [18].

Consumption of sugar, sweets, ice cream honey, coffee, tea

Sugar consumption declined in the analyzed period from 0.759 kg/capita/month in 2008 to 0.703 kg in 2019, the average in the whole decade being 0.74 kg and the annual decrease rate accounting for -0/69%. This is a positive evolution in consumption, as sugar must be less consumed for a healthy diet (Table 7).

Jam consumption registered 3.69% annual growth rate in the studied period. If in 2008, a Romanian consumed 0.249 kg jam, in 2019,

consumption reached 0.371 kg, being by about 49% higher (Table 7).

Chocolate consumption accounted for 0.22 kg/month/capita in average in the whole analyzed interval, but the general trend was a decreasing one, with an annual decline rate of -1.64%. The cause is not a reduced desire of Romanian for chocolate, but the price growth as cocoa production decrease (Table 7).

Ice cream consumption is very small in Romania, accounting for 0.07 kg/month/year. Despite that it increased in the last decade

from 0.053 kg/month/capita in 2008 to 0.1 kg in 2019, meaning by + 88.67% more, which is a good trend. However, ice cream is less consumed in Romania than in other EU countries (Table 7).

Honey consumption accounted in average for 0.07 kg per month and capita, meaning 0.84 kg per year. In the analyzed period, it increased by 87.75% from 0.049 kg/capita/month in 2008 to 0.092 kg in 2019, which is a positive aspect, taking into account the nutritive value of honey (Table 7).

However, honey consumption is still very small in Romania compared to other EU countries. Romanians must appreciate much more honey qualities, its high nutritional and energetic value and to consume less sugar [23, 27, 34, 40].

Coffee and Tea consumption accounted for 0.21 kg per capita and month in the studied interval having an annual growth rate of + 2.96%. (Table 7).

Table 7. Evolution of average monthly consumption of sugar, sweets, jam, chocolate, ice cream, bee honey, coffee and tea in Romania in the period 2008-2019 (kg/capita/month)

	Sugar	Jam	Chocolate	Ice cream	Bee honey	Coffee/Tea
2008	0.759	0.249	0.24	0.053	0.049	0.185
2009	0.758	0.267	0.242	0.055	0.055	0.189
2010	0.754	0.276	0.231	0.048	0.057	0.191
2011	0.741	0.28	0.219	0.05	0.058	0.187
2012	0.732	0.293	0.217	0.062	0.061	0.187
2013	0.745	0.305	0.224	0.055	0.061	0.197
2014	0.759	0.318	0.237	0.053	0.061	0.208
2015	0.777	0.342	0.191	0.07	0.073	0.217
2016	0.746	0.344	0.188	0.071	0.078	0.22
2017	0.743	0.349	0.196	0.083	0.083	0.235
2018	0.713	0.351	0.197	0.092	0.086	0.241
2019	0.703	0.371	0.2	0.1	0.092	0.255
Mean (kg)	0.74	0.31	0.22	0.07	0.07	0.21
St. Dev. (kg)	0.02	0.04	0.02	0.02	0.01	0.02
Variation Coeff. (%)	2.76	12.62	9.31	26.39	20.60	11.53
Annual growth rate (%)	-0.69	3.69	-1.64	5.94	5.89	2.96

Source: Own calculation based on the data from [18].

Factors influencing food consumption in Romania

Food consumption is determined by many factors:

- biological and physiological (age, weight, health status, reproduction),
- economic factors (net income, price of food products, inflation rate) [38],
- safety factors (food security, food safety, health, convenience),
- spiritual and emotional factors (the value of the product in consumer's eyes and mind, the feeling of satisfaction, advertising, price discount etc),

-technical means of communication (mobile phones, internet, TV channels etc) [1, 2, 4, 9, 12, 14].

However, the main factors with the deep impact in purchase decision of food products is income and price, which determine the own budget distribution by destination.

Despite that Romanians are more tempted to buy products based on price level, choosing in general cheaper products, which suit much better to their income level, modern consumer started to pay more and more attention to quality, even though price is a little bit higher. Therefore, during the last decades, substantial

changes have been occurred in Romanians' diet and consumption level [19, 20].

In Romania, the low living standard and monthly average income (Lei 2,300 average minimum gross salary; Lei 3,323 average net salary etc) have a deep impact on purchasing power and determine people to buy most of products based on the price level and not based on the their quality. Having a higher price, organic products have a lower chance to be bought by the categories of population with low incomes (young people, pensioners etc). In this way, the potential of organic food consumption is still low [6, 13].

Advertising plays a very important role in increasing consumption because it creates a harmonious combination between product, price, image, package, information available on the package, which could stimulate consumer's decision to purchase and help producers and merchants to increase their sales [15].

Modern consumer is more conscious of his/her own needs, pays more attention to product quality, the correlation between price and quality, and besides the purpose to cover his physiological needs, the new consumer is more and more oriented to satisfactions from a psychological point of view. Modern consumer has access to valuable last minute information put at his disposal by media (TV and Radio channels, internet, mobile phones, leaflets, etc) on the products sold in the market from which could be compared and the final choice to be the product which could satisfy the best consumer's preference, needs, and spiritual culture.

Synthesizing the studied literature on consumer-oriented marketing mix, Hemmerling et al (2015) concluded that the main factors in decision making for purchasing a product are: "consumer value and benefits, cost to the consumer, communication and information needs and convenience and distribution" [10].

CONCLUSIONS

This research pointed out the fact that a decent living standard is ensured by the value and structure of the minimum consumption

basket. In 2020, its value increased by 4.7% compared to 2019, and reached Lei 7,278 for a family with two adults and two children.

In the minimum consumption basket, food expenses accounts for 21 %.

In the total consumption expenses, food products have a share of 30% in Romania, representing the highest level in the EU.

From the large range of factors with a deep impact on food consumption, income and price are the most important.

Food consumption in the period 2008-2019 increased in Romania for the following categories of products: meat (poultry, pork, mutton etc), cheese, butter, fruit, vegetables, jam, honey, ice cream, coffee and tea.

At the same time, the consumption declined in case of: bread, beef, milk, beans, potatoes, sugar, and chocolate.

"Health, sustainability and convenience" are the main priorities in the future food consumption [43].

Fresh, natural, healthy, safe and in-season food mainly produced locally and sustainably is much more required and has the tendency to revolutionize consumers' preferences. Having in mind the climate change impact, consumers pay more attention to free waste and environmentally protective food. Flavorful, meatless and eco-friendly dishes as well as ordered food by means of media are more and more among consumer preferences, in order to ensure a healthy diet and saving time.

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