CURRENT COORDINATES REGARDING THE AGRICULTURAL PRODUCTION POSIBILITIES AND THE FOOD CONSUMPTION IN ROMANIA

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Abstract. *The paper aims to synthesize the main aspects related to the agricultural production and food consumption in Romania. The analysis performed presents the main groups of agricultural food products (cereals, sunflower, sugar beet, vegetables, fruits, meat, milk, and eggs), at which are envisaged the production and the consumption.*
Nationally, under a three-dimensional form are detailed aspects that concern the following: achievable and usable production, current food consumption, value equilibriums of resources/consumption balance in the food system. Indicators expressed in absolute and relative values reflect the current situation that through the annual comparative forms of 2008-2014 dynamics reveal the overall and the achievement possibilities, along with the qualitative aspect that regards the structure for the main groups of agricultural products. From this paper it emerges the amplification trend of food products quantities, justified through the requirements that are becoming more complex and diverse.

Keywords: food consumption, production usable synthetic indicators of variation (standard deviation, coefficient of variation, annual rhythm, correlation, linear regression function).

1. Introduction

Food production is one of the human activities that generate the greatest resource of consumption and pollution. In the system of consumption, it may be mentioned that the latest consumers reviews relate mainly to: information, quality, technology and production systems, which constantly have to prove respect for the environment and, not least, fairness in the application of

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technologies in production and distribution of two-dimensional system.

Nowadays, the role and importance of consumer increase in whole-food sector. The increasing demand for food is one of the major causes that determine the steady increase agricultural yields and thus deforestation. With the increasing demands and requirements of their food products to these products are becoming more complex and diverse. Consumers want to eat healthy and cheap food, corresponding to the requirements and preferences of each one, questioning the quality of these products [6].

Another aspect of studying consumption approached by economists refer to the costs of satisfying those requests, basically the cost of productions reported to the final price.

In this context, the task of particular interest is to recognize the trends manifesting in the current period in terms of food consumption. Those are the most important reasons for whom studying consumption is an important component of any market research [5].

Through this paper it is seeking the knowledge of national trends demand of food products whose rhythm is growing as one of the major causes that determine the steady growth of agricultural crops. The issue is that in the system production / consumption there are permanents irregularities related to agri-food production possibilities default and structure of consumption. There are two dimensional production / use regarding the quantitative aspect which seek the overview and the practicability, along with the qualitative aspect of the structure of production and consumption. Quantities of foods consumed increased and consumer demand to these products are becoming more complex and diverse.

2. Materials and methods

The methodology used in this paper is based on the statistical data available in official documents at national level on 2008-2014. Production and consumption were focused both main vegetable products (total cereal grains, sugar beet, potatoes, vegetables, fruits) and animal products (meat, milk, wool and eggs). The data processing was focused on the emerging structure of specific indicators, expressed in concrete units (production / consumption per citizen), conventional units (calories / protein per citizen) but as value (levels of income / working expenses of households, supplemented by total consumption expenditure structure). The evolution of production /

consumption completed the current overview level of knowledge in a national perspective.

The interpretations were performed by comparisons of indicators expressed as a percentage share of the total consumption compared to 2008, considered basic in dynamics annual periods. The calculation of deviations in production / consumption per capita for the main products analyzed was performed by calculating the standard deviation, variation coefficient, rhythm of the year for each month and correlation report. Level emerged expressed in concrete units and the percentage of those indicators defines the possibilities of food production and consumption trends, and correlations production↔consumption that can be created[2].

In order to determine the trend of the statistical link were used estimative equations corresponding to the analytic function expressed as the relationship between the characteristic factor (output) and the resultant (consumption) by plotting the regression function (which is given by the line / curve regression type $ax^2 + bx + c = y$)[1]. Values arising from the use of regression functions have played as statistical / mathematical variation levels that emerged from the production / consumption oscillations.

The evolutionary shape of the relationships of these correlations and production / consumption reports was presented graphically based on the variation details.

The synthesis of all of these is presented in tables and graphs that, through an appropriate form substantiates the production and consumption possibilities in Romania.

3. Results and discussions

3.1. Agricultural production feasible and usable in Romania

Agricultural and agro-food production has to be seen in the implications on food consumption regardless of the territorial aria analyzed. For Romania food production/consumption system is a permanent exchange of views that can be fit in optical of food policies through an analysis based on levels of the main productions per capita. Territorial, for Romania it is necessary a knowledge that can be rendered as the production realized / used per capita, analysis deepened by a structural comparison of the dynamics of the years 2008-2014. On its output per capita, shown in Table 1 and the annual growth in product structure can be seen:

Table 1. Production achieved by the main products per capita in Romania

Specification	MU	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Grain cereals	kg	819.3	730.2	825.5	1034.5	639.3	1045.7	1108.6
	% 2008	100	89.12	100.75	126.26	78.03	127.63	135.31
Sunflower	kg	57.0	53.9	62.4	88.8	69.7	107.2	110.0
	% 2008	100	94.56	109.47	155.78	122.28	188.07	192.98
Sugar beet	kg	34.4	40.1	41.4	32.8	35.9	51.5	70.2
	% 2008	100	116.56	120.34	95.34	104.36	149.70	204.06
Potatoes	kg	177.7	196.6	162.2	202.3	122.9	164.6	176.8
	% 2008	100	110.63	91.27	113.84	69.16	92.62	99.49
Vegetables	kg	186.0	191.6	190.8	207.3	176.2	198.2	191.0
	% 2008	100	103.01	102.58	111.45	94.73	106.55	102.68
Fruits	kg	57.4	65.0	70.1	73.5	56.3	65.1	65.4
	% 2008	100	113.24	122.12	128.04	98.08	113.41	113.93
Meat*	kg	64.9	70.8	64.5	67.4	66.4	65.0	66.1
	% 2008	100	109.09	99.38	103.85	102.31	100.15	101.84
Milk	liters	287.3	276.8	242.7	248.5	241.0	243.8	253.8
	% 2008	100	96.34	84.47	86.49	83.88	84.85	88.33
Wool	kg	1.1	1.1	1.0	0.9	1.0	1.0	1.1
	% 2008	100	100	90.90	81.81	90.90	90.90	100
Eggs	piece	326	305	306	314	319	320	333
	% 2008	100	93.55	93.86	96.31	97.85	98.15	102.14

*) Calculations for the weight of live animals slaughter for consumption Source (basic calculation): Romanian Statistical Yearbook 2014, INS [3, 4]

- Annual production variation fall differentiated rhythms, finding a predominance of growth trend;

- Compared to 2008 increases per capita, these productions are different, finding very sharp increases in grain, sunflower and sugar beet (comparative values are between 135.31% and 204.06%) and also below levels compared to year 2008 for potatoes and milk (from 99.49% to 88.33%);

- Levels of achieved productions with very small variations (considered stagnation) are registered at products: vegetables, fruits, meat, wool and eggs.

Hence the conclusion of the existence of differentiated levels in achieving annual production, the trends being oscillatory.

Production used per capita interests the flow analysis performed because has those quantities of primary products produced during the reference period, including amounts used by producers from their own production (self-consumption) and / or quantities of processed products (not included losses in the production process). Nationally, the values shown in table 2 outlines in the structure of the products studied the following aspects:

Table 2. Usable production for main products per capita in Romania

Specification	**MU**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Cereals	Th.tons	16678	14723	16534	20619	12620	20569	21715
	% 2008	100	88.27	99.13	123.63	75.66	123.33	130.20
Vegetables	Th.tons	3882	3955	3925	4253	3599	3955	3874
	% 2008	100	101.88	101.10	109.55	92.70	101.88	99.79
Fruits	Th.tons	2189	2313	2160	2359	1875	2292	2085
	% 2008	100	105.66	98.67	107.76	85.65	104.70	95.24
Meat	Th.tons	1013	1045	946	976	965	940	956
	% 2008	100	103.15	93.38	96.34	95.26	92.79	94.37
Milk	Th.tons	6687	6406	5710	5789	5628	5651	5877
	% 2008	100	95.79	85.38	86.57	84.16	84.50	87.88
Eggs	Th.tons	335	311	310	316	320	319	332
	% 2008	100	92.83	92.53	94.32	95.52	95.22	99.10

Source (basic calculation): Romanian Statistical Yearbook 2014, INS [3, 4]

- Variations in the annual level, the comparative oscillations to year 2008 are between 84.16% and 130.20 %;

- Annual variations in the products structure highlights: annual percentage increases that are only recorded for cereals (and this only for the period 2011-2014), stagnating levels in vegetables and fruits, and an effective decrease for animal products.

Of the presented, it is shown that usable production levels compared to the achieved production levels are in an annual decrease tendency, finding an emphasis on animal products.

3.2. Current food consumption

Since permanently the existence of most agricultural production is influenced by the permanent human consumption, the main concern is the human consumption. Analysis of national human food consumption is presented in a three dimensional presentation as: kg product / capita, no. calories/capita and protein grams/capita. Human consumption per capita in kg product/capita is played through dynamic comparative period 2008-2012 presentation made in absolute and relative figures. According to values in Table 3 can be deduced the following:

- Per capita consumption for vegetal products registers annual variations, with an increasing trend (growth rates of 2014 compared to 2008 are between 1.52 % and 20.24 %) ;

- For the main livestock products the annual oscillation are constant but annual in comparison to 2008, annual levels recorded a downward trend (of 2014 compared to 2008 levels are between - 8.56 % and -4.12 %) .

Table 3. Human consumption per capita in kg, product / capita in Romania.

Specification	MU	2008	2009	2010	2011	2012	2013	2014
Cereals	kg/pers.	204	200.8	199.6	205.4	208.5	218.5	207.1
	% 2008	100	98.43	97.84	100.68	102.20	107.10	101.52
Vegetables	kg/pers.	176	168.2	174.4	181	177.4	180.7	182.9
	% 2008	100	95.56	99.09	102.84	100.79	102.67	103.92
Fruits	kg/pers.	66.7	62.3	63.3	70.5	71.1	73.7	80.2
	% 2008	100	93.40	94.90	105.69	106.59	110.49	120.24
Meat	kg/pers.	66.6	62.3	60	56	58.7	57.5	60.9
	% 2008	100	93.54	90.09	84.08	88.13	86.33	91.44
Milk	kg/pers.	262.3	240.2	230.7	234.5	241.1	244.5	251.5
	% 2008	100	91.57	87.95	89.40	91.91	93.21	95.88
Eggs	kg/pers.	13.4	12.2	12	12.5	12.3	12.4	12.3
	% 2008	100	91.04	89.55	93.28	91.79	92.53	91.79

Source (basic calculation): Romanian Statistical Yearbook 2014, INS [3, 4]

Considered an analytical indicator human consumption expressed in no. calories / capita is analyzed in the same dynamic, the expression is carried out in absolute and relative values.

The data in Table 4 for consumption categories of vegetal and animal products expressed in calories reveals the same trend, namely:

- Increasing the number of calories for vegetal products (between + 0.64 % and + 9.63 %);

- Reducing the number of calories for animal products (between -8.92% and -3.96 %)

Table 4. Human consumption per capita in no. calories / capita.

Specification	MU	2008	2009	2010	2011	2012	2013	2014
Cereals	No. calories/ pers.	1299	1280	1268	1309	1323	1389	1321
	% 2008	100	98.53	97.61	100.77	101.84	106.92	101.69
Vegetables	No. calories/ pers.	156	145	146	153	156	154	157
	% 2008	100	92.94	93.58	98.07	100	98.71	100.64
Fruits	No. calories/ pers.	135	119	119	132	133	138	148
	% 2008	100	88.14	88.14	97.77	98.51	102.22	109.63
Meat	No. calories/ pers.	303	306	278	259	271	265	276
	% 2008	100	100.99	91.74	85.47	89.43	87.45	91.08
Milk	No. calories/ pers.	481	441	424	430	443	449	462
	% 2008	100	91.68	88.14	89.39	92.09	93.34	96.04
Eggs	No. calories/ pers.	63	57	56	58	58	58	59
	% 2008	100	90.47	88.88	92.06	92.06	92.06	93.65

Source (basic calculation): Romanian Statistical Yearbook 2014, INS [3, 4]

Further human consumption per capita in protein grams / inhabitant is assessed according to the same structure. The data outlined in Table 5, present in vegetal and animal products structure the following:

Table 5. Human consumption per capita expressed in grams protein / capita.

Specification	**MU**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Cereals	grams proteins/pers.	39.3	38.7	38.4	39.6	40.1	41.9	39.8
	% 2008	100	98.47	97.70	100.76	102.03	106.61	101.27
Vegetables	grams proteins/pers.	7.7	7.2	7.1	7.5	7.8	7.6	7.7
	% 2008	100	93.50	92.20	97.40	101.29	98.70	100
Fruits	grams proteins/pers.	2.2	1.7	1.7	1.8	1.8	1.9	2
	% 2008	100	77.27	77.27	81.81	81.81	86.36	90.90
Meat	grams proteins/pers.	26.3	26.8	23.8	22.1	23.3	22.8	24.3
	% 2008	100	101.90	90.49	84.03	88.59	86.69	92.39
Milk	grams proteins/pers.	25.2	23	22.1	22.5	23.1	23.5	24.1
	% 2008	100	91.26	87.69	89.28	91.66	93.25	95.63
Eggs	grams proteins/pers.	5.1	4.7	4.6	4.8	4.7	4.7	4.7
	% 2008	100	92.15	90.19	94.11	92.15	92.15	92.15

Source (basic calculation): Romanian Statistical Yearbook 2014, INS [3, 4]

- Cereals products recorded increasing rhythms, referring to the second half of the reviewed period (the growth rate of 2014 compared to 2008 is 1.27 %);

- For vegetables, the annual oscillations recorded very small decrements in most years, that may consider stagnating levels over time;

- For fruits and all animal products the decreasing consumption is certain for all years of the period analyzed (by comparison of 2014 versus 2008 decreases between -4.37% and -9.10 %).

Comparing the systems of human consumption it may be seen a variation of annual level, concomitant with trends which can be identified:

a) consumption increases for vegetal products and concomitant decreases in animal products expressed as kg. products/ capita;

b) less significant increases maintaining approximately the same level, but with concomitant decrease for all animal products expressed;

c) increase in grain consumption only, showing the decreased levels for the rest of all the animal and plant products.

3.3. Production/consumption and value equilibriums for the resources/consumption balance in the food system

Another aspect of studying the food production and consumption approached by economists is imposed by the knowledge of a three-dimensional assembly characterized by: medium levels and correlative variations; report production / consumption; revenues, earnings and consumers spending. Framed in the analysis structure of main products it was amplified by a deepening of the study focused on adequate statistical indicators, that can capture the implications and why not the real effect of production ↔ consumption interactions in the food market system. Nationally and based on the indicators system production/consumption previously discussed for the 2008-2014 period are given below variational and correlative knowledge levels that characterize the production and consumption in Romania.

Synthetic indicators were analyzed by variations levels, rhythms and annual report production and consumption correlation to the main food products. The data shown in physical units and percentage are shown in Table 6 where it can be deduced the following:

- The average and standard deviation of average estimate the uniformity value of average which records the highest values at cereals and eggs (these amplitudes representing a lower level of consumption of 4.3 times and respectively 25.5 times towards production), so that the output it is more dispersed towards consumption. For other products such deviations production / consumption levels have narrow ranges, so the data set values are clustered around the average;

Table 6. Middle levels and standard deviation variations that characterize production and per capita consumption of main food products in Romania

Product	Production per pers/ consumption per pers.	Mean (2008-2114) (kg/pers)	Standard deviation (kg/pers)	Variation coefficient (%)	Annual rate (%)	Correlation report(%)
Cereals/pers.	Production	886	178.1	20.10	5.17	0.58
	Consumption	206	6.3	3.04	0.25	
Vegetables/pers.	Production	191	9.7	5.04	0.44	0.43
	Consumption	177	5.0	2.82	0.64	
Fruits/pers.	Production	66.0	5.3	8.06	0.33	0.19
	Consumption	69.7	6.2	8.95	3.12	
Meat/pers.	Production	66.4	2.2	3.27	0.31	0.52
	Consumption	60.3	3.5	5.79	1.48	
Milk/pers.	Production	256	18.4	7.17	2.05	0.68
	Consumption	243	10.6	4.37	0.70	
Eggs/pers.	Production	317	10.2	3.21	0.35	0.68
	Consumption	12.4	0.5	3.62	1.42	

Source (basic calculation): Romanian Statistical Yearbook 2014, INS [3, 4]

- The coefficient of variation expresses in relative data the standard deviation, finding a variation of the levels between production / consumption. Regarding this variational interpretation can be notified two scenarios: a) for cereals, vegetables and milk consumption values are lower than production; b) for fruit, meat and egg the production is lower than the consumption;
- The correlation report describes the degree of linear association between production /consumption considerate as quantitative variables. There is a very strong positive association for most products (levels being between 0.43 and 0.68), but although very weak for fruits (value of only 0.19).

Thus it can be seen that there is a variability that is differentiated between production / consumption and also a pronounced difference in the structure of the products types. It thus appears that there is a linearity between the two variables of interest (production and consumption), which is why the correlation graphs production / consumption were made for the analyzed products for the period 2008-2012. Shown in fig. 1 (grains), fig. 2 (vegetables), fig. 3 (fruit), fig. 4 (meat), fig. 5 (milk) and fig. 6 (eggs), results suggestive that there is a direct link of a polynomial form $y = ax^2 + + bx + c$, between production and consumption.

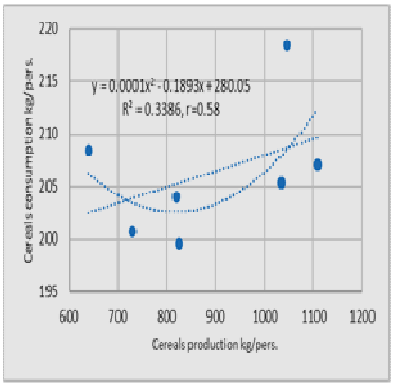

Fig. no. 1. Correlation between production and consumption of grain per capita in 2008-2014

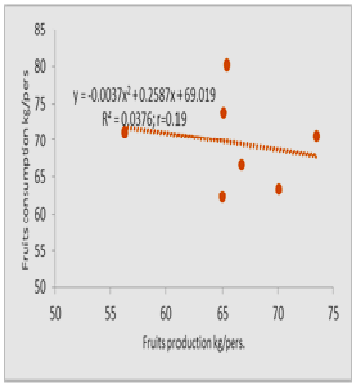

Fig. no. 2. Correlation between production and consumption of vegetables per capita in 2008-2014

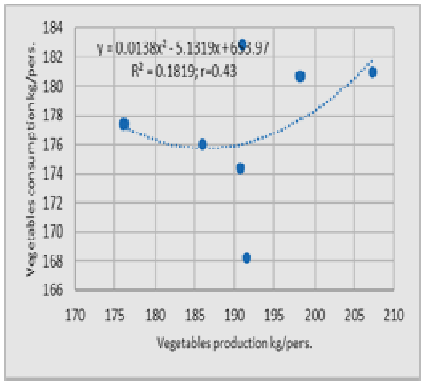

Fig. no. 3. Correlation between production and consumption of fruits vegetables per capita in 2008-2014

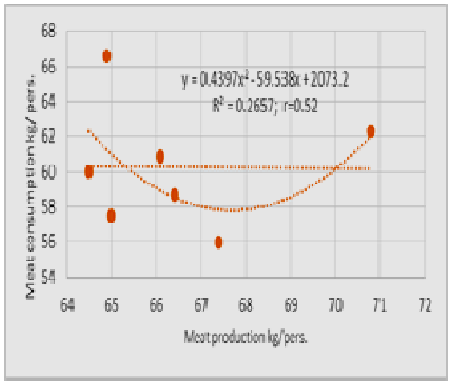

Fig. no. 4. Correlation between production and consumption of meat per capita in 2008-2014

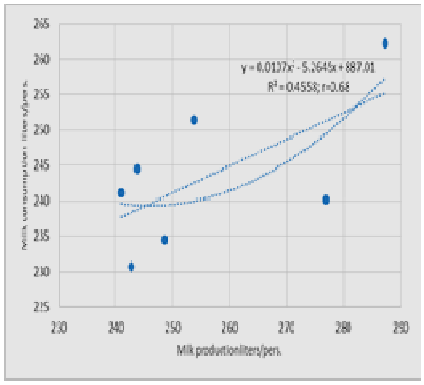

Fig. no. 5. Correlation between production and consumption of milk per capita in 2008-2014

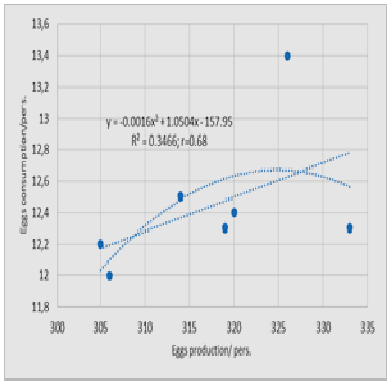

Fig. no. 6. Correlation between production and consumption of eggs per capita in 2008-2014

Through the polynomial regression model parameters is confirmed the correlative form of each product. The report of determination confirms that production is considered a significant factor influencing variation in different proportions for the consumption of each product.

The actual production/consumption ratio in the period 2008-2014 in Romania is analyzed further and by annual variations of this report but also to comparisons to the year 2008. In table 7 are presented these rates which show the following:

Table 7. Evolution of consumption / production the main food products in Romania

Specification	MU	2008	2009	2010	2011	2012	2013	2014
The consumption of grain/production of cereals	%	24.90	27.50	24.18	19.86	32.61	20.90	18.68
	% 2008	100.00	110.44	97.11	79.74	130.98	83.92	75.03
The consumption of vegetables/production of vegetables	%	94.62	87.79	91.40	87.31	100.68	91.17	95.76
	% 2008	100.00	92.77	96.60	92.27	106.40	96.35	101.20
The consumption of fruit/fruit production	%	100.00	95.85	90.30	95.92	126.29	113.21	122.63
	% 2008	100.00	95.85	90.30	95.92	126.29	113.21	122.63
The consumption of meat/meat production	%	102.62	87.99	93.02	83.09	88.40	88.46	92.13
	% 2008	100.00	85.75	90.65	80.97	86.15	86.20	89.78
The consumption of milk/production of milk	%	91.30	86.78	95.06	94.37	100.04	100.29	99.09
	% 2008	100.00	95.05	104.12	103.36	109.58	109.85	108.54
The consumption of eggs/production of eggs	%	4.11	4.00	3.92	3.98	3.86	3.88	3.69
	% 2008	100.00	97.31	95.41	96.85	93.81	94.27	89.86

The source (the basis of calculation): Statistical Yearbook of Romania, 2014, INS [3, 4]

- The existence of some products in which the report consumption/ production had registered very high levels (for year 2008 these rates are between 91.30% and 102.62%), resulting that these consumptions (for the products vegetables, fruit, meat and milk) take most of the production and the trend in the annual rate analyzed is growing ;

- A very low level for the consumption / production report is noted for other categories of products, namely for year 2008 at cereals (24.90%) and eggs (4.11%), the trend in the annual dynamics of the period analyzed is decreasing.

From here, as regards the report on consumption/ production results at national level on the one hand an annual variation, but also differentiated trends on the types of products. Respectively the manifestation of an excessive deficit in order to ensure the food consumption at the national level for vegetables, fruit, meat and milk and which is worse still (which it emerges from the dynamics of the years); the manifestation of a surplus in ensuring the food consumption at the national level for cereals and eggs, to which this level of consumption is reduced (arising from the dynamics of the years).

In regard to this study that includes all those to which food consumption has a specific mobility, of a socio-economic level, it is a matter of knowledge of the revenue and expenditure of the households. This is because the income and expenditure influence the food consumption, and in this case the variations in the rate of the annual levels. It is presented below on the one hand this structure of income, earnings and total expenditure of households, and on the other hand the structure of the total expenditure of households' consumption. From the data presented in value and percentage units in table 8 frames the deduction of a comparative form of the presented indicators, which analyzed in the dynamics of the period 2008-2014 shows the following:

- the total revenues and earnings has a trend growth, given that the comparisons made with the year 2008 these levels amplifies with +17.31 % and +29.64 %;

- from the analysis of the total expenditure recorded annually results a share with an increasing level, this increase having a much higher rhythm than the increase in earnings (compared to the revenues this increase is between + 46.30 % and +51.22 %);

-the consumption total expenditures of households has also an increase but whose annual intensification are lower compared with the other analyzed indicators.

Table no. 8.Income, earnings and the total expenditure (monthly on a household)

Specification	UM	2008	2009	2010	2011	2012	2013	2014
The total income of	Lei monthly /household	2,131.67	2,315.99	2,304.28	2,417.26	2,475.04	2,559.05	2,500.7

households	% t 2008	100	108.647	108.09	113.39	116.10	120.049	117.31
Nominal earning average monthly neto	lei/employee	1,309	1,361	1,391	1,444	1,507	1,579	1,697
	% t 2008	100	103.972	106.264	110.31	115.126	120.626	129.64
	% t total income	61.40	58.76	60.36	59.73	60.88	61.70	67.86
The total expenditure of the households	Lei monthly /household	1,915.18	2,047.33	2,062.95	2,183.76	2,244.47	2,317.4	2,269.25
	% t 2008	100	106.9	107.71	114.024	117.194	121.002	118.48
	% t total income	89.84	88.39	89.52	90.34	90.68	90.55	90.74
	% t Nominal earning average monthly	146.30	150.42	148.30	151.22	148.93	146.76	133.72
The total expenditure of consumption of households	lei monthly /household	1,365.36	1,468.6	1,486.43	1,532.29	1,614.06	1,670.04	1,637.46
	% t 2008	100	107.561	108.86	112.226	118.21	122.315	119.92
	% t total income	64.05	63.41	64.50	63.38	65.21	65.26	65.48
	% The total expenditure of the households	71.29	71.73	72.05	70.16	71.91	72.06	72.15
	% t The total income of households	104.30	107.90	106.86	106.11	107.10	105.76	96.49

The source (the basis of calculation): Statistical Yearbook of Romania, 2014, INS [3, 4]

From the analysis on matters which concern the production /consumption report in conjunction with the population incomes/ expenditures, on the background of the annual differences, it appears on the one hand in the comparison consumption/ production of the structure of the products analyzed deficient and surplus forms but also concomitant intensification of both annual rates of increase of revenue and expenditure. The lowest annual growth rate is represented by the increase in the total consumption expenditures, in this case it is necessary the identification of other factors considered significant for food consumption.

Conclusions

From the study concerning the interaction between agricultural production ↔ food consumption nationwide for the period 2008-2014, we can conclude the following:

Conclusion (1). In Romania for the period under review, differentiated levels are manifested in annual agricultural production, the trends being oscillators. Regarding the expressing systems for human consumption it can be seen a variation in annual level, mentioning the increasing trends of consumption/person (for vegetal products) and decreases (for animal products). Differences are represented in the structure of expressions through product/capita, calories/capita, proteins/capita.

Conclusion (2). Regarding the relationship of interference between production and consumption may notice a very strong and positive association with the majority of products, concomitant with the existence of variability between the levels of consumption/production report. In the structure of products have been reported two cases: cereals, vegetables and milk where the consumption values are lower than the production; fruit, meat and egg situation where production is lower than consumption.

Conclusion (3). The level expressed by linear regression model parameters is confirmed for each product correlative forms between the two variables of interest (production and consumption). Correlation report confirms that the production is considered a significant factor that influence the variation in different proportions the consumption for each product (for the period 2008-2014 have been carried out concerning the correlation graphics production/consumption confirming the direct and linear form link).

Conclusion (4). Income/expenditures of population, on the background of the existing differences in the dynamics of the analyzed period, falling under the annual rhythms of the specific indicators through the existence of surplus and also deficit situations (at the same time there is the increase of both the annual growth rates of revenues and expenditure). The lowest annual rate of growth is of total expenditure for consumption, which is why it requires an identification of others indicators considered relevant for the forms of manifestation of food consumption.

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