

Original scientific paper UDC 338.439.5(477)

THE FORMATION OF EFFECTIVE DEMAND IN THE FOOD MARKET OF UKRAINE

Inna Salo¹, Svitlana Cheremisina^{1*}, Volodymyr Rossokha², Marina Mohilova³, Natalia Romanchenko³

 ¹Pricing and Agricultural Market Department, National Scientific Centre "Institute of Agrarian Economics", Heroiv Oborony str. 10, 03127 Kyiv, Ukraine
 ²Organization Management and Public Administration Department, National Scientific Centre "Institute of Agrarian Economics", Heroiv Oborony str. 10, 03127 Kyiv, Ukraine
 ³Marketing and Business Management Department National University "Kyiv-Mohyla Academy", Voloshskaia 10, 04070 Kyiv, Ukraine

*e-mail: cheremisinasvitlana@gmail.com

Abstract

The food market is recognized as aggregate because it consists of many interconnected markets for crop, livestock and industrial products. Problems of development of the food market of Ukraine, in particular features of formation of demand at low purchasing power of the population are investigated. The aim of the study is to reveal the features of the formation of effective demand for food products and determine the optimal level of wages of Ukrainians to achieve the consumption of the basic set of food products at the level of established rational norms.

The research used the information database of the Ministry of Agrarian Policy and Food of Ukraine, the State Statistics Service of Ukraine, the Food and Agriculture Organization of the United Nations and information and analytical material on retail prices of the Ukrainian Research Institute of Agricultural Productivity. The conducted studies are based on the Guidelines for expanding the capacity of the domestic market of agricultural products and food, developed at the National Research Center "Institute of Agrarian Economics". The methodology of the study is structured as follows: 1. Determination of indicators of price and physical affordability of food (absolute and relative indicators comparison, price index formula) 2. Calculation of actual and total food costs (constructive-calculation method) 3. Calculation of regulatory (potential) and total (actual) capacity of the food market of Ukraine (potential and actual calculation) 4. Calculation of the amount of necessary wages of Ukrainians to ensure food consumption at the level of rational norms (methods of determining the amount of wages to ensure food consumption at the level of rational norms).

The normative and actual capacity of the domestic food market at the minimum and rational norms of consumption is established. Calculations have shown that the actual capacity of the domestic food market is almost 30% lower than calculated on the basis of rational norms, which indicates additional opportunities to replenish the income of the agricultural sector. It was found that even with increasing effective demand of the population, the improvement in consumption is offset by rising food prices. Consumption of the population group with almost three times higher total incomes compared to the group with the lowest material security is much better in terms of quantity and quality of food. The level of consumption is elastic relative to effective demand only for lower income groups. The level of wages of Ukrainians under the conditions, at which the level of consumption of basic foodstuffs corresponds to rational norms, is determined. It is determined that in 2021 the salary level should be at least 1,132 euros per person per month, it is three times more than the actual average value in 2020 -362 euros.

It is proved that the destructive impact of price dynamics on the food market of Ukraine contributes to a decrease in the level of consumption. Given the increase in inflation for most food products and a slight government increase in the minimum wage, in the near future changes in the structure of the "consumer basket" of the population of Ukraine are not expected.

Key words: Market, Food, Effective demand, Availability and sufficiency of consumption, Supply, Price.

HED

1. Introduction

Favorable natural and climatic conditions, available resource potential, favorable geographical position, fertile and highly productive agricultural lands of Ukraine create all conditions for obtaining stable yields of various agricultural crops and the development of animal husbandry. However, the problem of food supply has been and remains one of the priorities for the world community. In turn, the main task of the Ukrainian agricultural sector is to ensure the food security of the state. This, mainly, determines the importance and relevance of research on the development of the food market and its parameters.

The Ukrainian food market cannot yet be considered optimal in terms of the level of functioning, structure and content. For a long period, it was caused, on the one hand, by the low effective demand of the population, and, consequently, by the inconsistency of the level of food consumption with the established rational norms, as well as by weak economic positions in the world market. On the other hand, it is characterized by underdevelopment and low profitability of many branches of crop and livestock farming, lack of sufficient areas of industrial plantations, declining livestock, the formation of the supply of certain types of food products mainly by households, noncompliance with commercial quality standards, resale through a number of intermediaries, ineffective market infrastructure.

Among the main problems hindering the further development of agricultural sectors, it is necessary to highlight: insufficient development of logistics, cooperative associations of food producers which leads to low marketability of industrial production and often spontaneous sale of products; low provision of irrigation for agricultural crops, in particular, drip irrigation; the available storage facilities do not always meet the modern requirements for storage of products; and limited or lack of direct government support, including financial support.

Issues of formation, functioning and development of the food market, infrastructure, its capacity, pricing problems, efficiency of agricultural sales channels, and purchasing power of the population since the beginning of the market economy in our country attract the attention of scientists.

Trokhimets and Ryabchenko note the importance of further development of the food market taking into account the growing role of globalization factors and the need to deepen research on the formation of markets for basic products [1]. Given the integration of Ukraine into the European space, it is important to study the structure of the domestic food market by major food

groups, its content and establish the level of import dependence, self-sufficiency, which pays attention to Dukhnytsky [2]. An important indicator of assessing the food security of the country and determining food independence for a particular product in the balance of supply and demand is the capacity of the domestic food market, says Mostova [3]. Problems of food security of any country should be considered at the global macro and micro level, including in the regional context, for a more reliable description of the situation, as discussed in the works of Lupenko [4], Szeged [5], etc. Problems and prospects for the development of the organic food market in Ukraine were studied by Bazalyuk [6], and Milovanov [7]. The substantiation of the methodological approach to the assessment of the formation of demand for food in unforeseen situations (in the context of the pandemic COVID-19 in 2020) is considered by Gadzalo and Sychevsky [8].

At the same time, it is necessary to assess food security taking into account three main components - energy supply, weather conditions and rationality and quality of consumption, says Popadynets [9]. Shpychak, Bodnar, and Lupenko [10], and others, investigated the issues of food market capacity assessment, prospects of its expansion and directions of value added increase in Ukraine.

The purpose of this study is to reveal the features of the formation of effective demand for food products and determine the optimal level of wages of Ukrainians to achieve the consumption of the basic set of food products at the level of established rational norms.

Achieving this goal involves solving the following tasks: reducing the quantitative and qualitative differentiation of nutrition of the population of Ukraine, depending on the size of the average per capita total income; increasing the effective demand of the population with the lowest income; and providing state support to socially vulnerable groups.

Hence, the aim of the study is to reveal the features of the formation of effective demand for food products and determine the optimal level of wages of Ukrainians to achieve the consumption of the basic set of food products at the level of established rational norms.

2. Materials and Methods

The methodology of the study can be structured as the following algorithm:

1. Definition of indicators of price and physical affordability. Regarding the first, the share of food expenditures in the family budget of the average Ukrainian is set. The share of the world's leading countries is taken as the norm in the study - it should



not exceed 10 - 15%. The affordability of foods indicator characterizes the actual consumption of food during the year relative to their rational consumption norms. Ideally, the ratio between actual and rational consumption should be equal to one.

- 2. Actual and total food costs are established. Actual costs are calculated based on the actual level of consumption and average retail sales prices that have developed over a period of research. Total costs are calculated similarly, but depending on the rational norms of food consumption.
- 3. The food market size is formed under the influence of the solvency of the population, the state of development of the agricultural sector, the development of foreign economic activity. The normative (potential) capacity of the domestic food market is determined under the conditions of food consumption at the level of rational or minimum consumption norms. The total (actual) capacity of the domestic food market depends on actual consumption and prices of consumed products. As a result, the market size is set based on the real effective demand of the population, except for the amount of food that is outside the commoditymoney relations.
- 4. The level of wages under the price situation in the food market and the level of average monthly wages in Ukraine as a whole for a specific period is calculated. It takes into account the possibility of ensuring the level of food consumption by the population of Ukraine in accordance with rational norms, as well as their share in total costs. The calculations were carried out according to the method of determining the amount of wages to ensure food consumption at the level of rational norms.

We present a step-by-step algorithm for determining the capacity of the food market and the level of wages, which ensures food consumption at the level of rational norms in accordance with the existing methodology [10].

 The normative capacity of the domestic food market is defined as the sum of the products of the norm of consumption by the population of a certain (nth) type of food and their average consumer price.

$$FMC = \sum_{n=1}^{c} (Nc_n \times CP_n) \times P \tag{1}$$

2. The total (actual) capacity of domestic food consumption (commodity and natural part) is determined by market retail prices by the formula:

$$TCC = \sum_{i=1}^{a} N_i \times P_i \tag{2}$$

Where: TCC - is the total capacity of domestic food consumption, euros; N_i - the number of i-th consumed products per year (units); P_i - the price of the i-th product, which is an aggregate value euros; i - type of products consumed by the population; a - the number of types products consumed by the population.

3. Volumes (capacity) of domestic consumption of food that is outside the commodity-money relations is determined by the formula:

$$VDC_{cm} = \sum_{i=1}^{a} N_i \times SH_i \times P_i$$
(3)

Where: Shi - the share of consumed i-th type of product that has avoided commodity-money relations.

The market size based on the actual effective demand of the population is determined by the formula:

$$Ms_i = TCCn_i - VDCN_{icm}$$
(4)

Where: Ms_i - the capacity of the domestic consumer market of the i-th type of agricultural products, t; TCCn_i - total capacity of domestic consumption of the i-th type of products in kind, t; VDCN_{icm} - capacity of consumption of the i-th type of products that have avoided commodity-money relations, t.

The materials of the State Statistics Service of Ukraine were used to calculate the level of wages and the following algorithm was used.

Amount of total expenditure of one person for food during the month under conditions of consumption at the level of rational norms, taking into account the cost of food outside the home and the consumption of soft drinks is determined by the formula:

$$BX_R = K_{\rm kr} \times (\sum_{i=1}^n R_i \times P_i)/12$$
(5)

Where: BX_R - the total costs under conditions of consumption at the level of rational norms, taking into account the costs of meals outside the home and consumption of soft drinks per person per year, euros; K_{kr} - adjustment factor for the cost of meals outside the home and the consumption of soft drinks by groups of the population where food consumption is closest to the rational norms; R_i - rational rate of consumption of the i-th food product, kg; P_i - the average annual consumer price of the i-th type of food.

The adjustment factor for the cost of meals outside the home and the consumption of soft drinks is determined by the formula:

Where: FMC - food market capacity, euros; Ncn – consumption rate of the n-th type of product per person, kg; CPn - consumer price of the n-th type of product, euros; N - average annual number of permanent residents, persons; n - type of food that forms the capacity of the market; c - the number of products that form the capacity of the market.



$$K_{\rm kr} = \frac{BX_{kr\,j}}{BX_{j}} \tag{6}$$

Where: BX_{kr j} - the aggregate food costs, including food supplies outside the home and consumption of soft drinks in the j-th group of population per person per year, euros; BX_j - the aggregate food costs except for food outside the home and consumption of soft drinks in the j-th group of population per person per year, euros; j - a group of people where food consumption is the most close to the level of rational norms.

Amount of total costs of one person during the month under conditions of consumption at the level of rational norms is determined by the formula:

$$TC_r = \frac{BX_R}{K_{shr}}$$
(7)

Where: Kshr - the share of total nutrition costs in total costs in the food consumption at the level of rational norms.

Share of total food costs in terms of food consumption at the level of rational norms is based on the formula:

$$K_{shr} = \frac{BX_{krj} + \sum_{k=1}^{n} (R_k - C_{kj}) \times P_k}{TC_j \times ZC_{Rkj} \times K1\%_{kj}}$$
(8)

Where: R_k - rational rate of consumption of the k-th food product, kg; k – food product, the consumption of which is below the rational norms; C_{kj} - the actual level of consumption of the k-th food product in the j-th group of the population, kg; j - population group where food consumption is closest to the level of rational norms; P_k - average annual consumer price of the k-th type of food, euros; TC_j - total expenditures in groups of the population where food consumption is closest to the rational norms per person per year, euros; $K1\%_{kj}$ - growth rate of consumption of the k-th food product per 1% growth of total expenditures in the j-th group of the population; ZC_{Rkj} - the ratio of consumption of the k-th type of food between the rational norm and the level of consumption in the j-th group of the population.

The ratio of consumption of the k-th type of food between the rational norm and the level of consumption in the population group, where food consumption is closest to the level of rational norms is by the formula:

$$ZC_{Rkj} = \frac{R_k}{C_{kj}} \tag{9}$$

Growth rate of food consumption per 1% increase in total costs is based on the formula:

$$K1\%_{kj} = \frac{C_{kj} \times TC_{j-1}}{C_{kj-1} \times TC_{j}}$$
(10)

Where: $C_{k_{j-1}}$ - the actual level of consumption of the i-th food product in the previous group of the population, where the consumption of food products is the closest to the level of rational norms per person per year, kg; ZB_{j-1} - total aggregate expenditures in the previous group of the population, where food consumption is closest to the rational norms per person per year, euros.

At the end, the amount of wages required to ensure the consumption of food at the level of rational norms is determined by the formula:

$$W_r = TC_r \times \frac{W_m}{TC_m} \tag{11}$$

Where: W_m - average monthly salary in Ukraine, euros; TC_m - the amount of total aggregate expenses of one person during the month on average in Ukraine, euros.

3. Results and Discussion

The problems of food security of any country should be investigated at the macro and micro levels, as well as in the regional aspect. At the same time, food security should be assessed by objectively taking into account three main components - energy supply, weather conditions, rationality and quality of consumption [9]. Our research is focused on the analysis of a set of macro-level indicators characterizing the state of the food market in Ukraine, and a system of quantitative and qualitative indicators of food consumption. Before proceeding to a detailed study and assessment of the domestic food market, it is necessary to briefly reveal its essence. We believe that the food market in Ukraine should be recognized as aggregative (uniting, connecting). It consists of separate food markets and is characterized by a set of economic relationships in the "production-sale-consumption" system of food products at the country level. First of all, the food market differentiates into the markets for raw materials of crop and livestock production, then into the products of their food and technical processing. Further, it is delimited into submarkets of the following hierarchical levels - fresh, frozen, dried, canned products, and the like. The main operator of a civilized food market is usually the consumer. The foundation of the market is its infrastructure, with the help of which the functioning and implementation of market interests of a set of enterprises and organizations of various organizational and legal forms is carried out.

Among the main functions of the food market infrastructure are: bringing products from producer to consumer and providing feedback between them, the accumulation of free money and their redistribution within a single industry or between agricultural sectors.

Types of food	Rational nutritional norms	Consumption level in 1990	CSI *	Consumption level in 2000	CSI	Consumption level in 2020	CSI		
Per person per year, kg									
Meat and meat products	80	68	0.82	33	0.40	54	0.67		
Milk and dairy products	380	373	0.98	199	0.52	202	0.53		
Eggs (pcs)	290	272	0.94	166	0.57	278	0.96		
Bread and bakery products	101	141	1.40	125	1.24	97	0.96		
Potatoes	124	131	1.06	135	1.09	134	1.08		
Vegetables and melons	161	103	0.64	102	0.63	164	1.02		
Fruits, berries, grapes	90	47	0.52	29	0.33	57	0.63		
Fish and fish products	20	18	0.90	8	0.42	12	0.62		
Sugar, confectionery	38	50	1.32	37	0.97	28	0.73		
Vegetable oil	13	12	0.92	9	0.72	12	0.95		

Table 1. Indicators of sufficiency of food consumption in Ukraine

Legend: * CSI - consumption sufficiency indicator: if more than one - a surplus, if less than one - a deficit of food in the diet. Source: calculated according to the State Statistics Service of Ukraine [11; 12].

When assessing the effectiveness of the food market and the formation of its capacity should be guided by two main criteria - price and physical affordability. Thus, the share of food expenditures in the family budget should not exceed 10 - 15% (as in the leading countries of the world), and the actual consumption of food during the year should correspond to the rational norm (the ratio between actual and rational consumption should be 1). The calculation of the dynamics of indicators of sufficiency of consumption is presented in Table 1.

Note that this set of food products was approved by the Resolution of the Cabinet of Ministers of Ukraine "On the approval of food sets, sets of non-food products and sets of services for the main social and demographic groups of the population" [13]. In 2020, for such products as bread and bakery products, potatoes, vegetables and melons, vegetable oil, eggs, proximity to rational consumption rates was revealed, that is, we can state the sufficiency of consumption of these commodity and food groups. Critical should be considered indicators for the consumption of milk and dairy products - 59% of the established minimum standards and 53% of the rational. For twenty years (from 2000 to 2020), the growth was only 1.5%. Poultry meat is cheaper than pork and beef, therefore it is due to it that a positive dynamics of consumption of meat and meat products is formed. The best situation is observed in the egg market, the consumption of which in 2020 amounted to 278 pieces or 96% of the norm, which is 2.2% higher than the 1990 level. Thus, among the main factors contributing to the expansion of the commodity supply of poultry products, one should single out an increase in investment in the industry, technical re-equipment and expansion of production capacities of poultry enterprises, a qualitative improvement of breeding resources and a modern management system [14, 15].

The analysis of household expenditures on food products revealed the progressive dynamics of their increase, and their share in the family budget remains stably unchanged - 47 - 55% (Table 2). In 2020 this figure was 52.9%. For comparison, in such countries with developed economies as the USA, Poland, Germany, this figure does not exceed 20%.

It should be noted that in the developing countries, the characteristic feature is inadequate consumption and high spending on food. Therefore, the development of their economies should be based on the improving the quantitative and qualitative consumption, taking into account the reduction in food costs.

Calculations have established that the consumption of basic food products in accordance with the normative indicators for the average citizen of Ukraine in the price conditions of 2020 will cost 1,073.63 euros per year, while in fact, 680.62 euros per year was spent, that is, 1.6 times less. At the same time, the main value of purchases in the structure was made up of meat, milk and meat and dairy products - 68%. To achieve the level of consumption in accordance with rational norms in 2020, it was necessary to additionally 393.01 euros per year, or 32.75 euros per month. Analysis of the dynamics of the purchasing power indicator of one percent of budget expenditures revealed a tendency for a twofold decrease in food availability in 2020 compared to 1990. Population expenditures on food accounted for 32.8% of the family budget, and consumption of 3597 kcal per day per person (109.7 kcal per one percent), then in 2020 these indicators amounted to 48.1%,



respectively, 2674 kcal or 55.6 kcal. Analysis of the dynamics of consumption and expenditure on food has revealed that the rise in the cost of food over the past decade is more due to the increase in food prices than the quantitative increase in the level of consumption. Let us analyze the situation of consumption of the most expensive component of the consumer basket meat and meat products. Thus, over the past decade, the physical consumption of these products increased by 3.5%, while the cost of purchasing them increased by 3.5 times. Thus, a 1% increase in the consumption of meat and meat products accounts for a 73% increase in its cost. It should be noted that a simultaneous increase in consumption and value is also observed for such products as: potatoes, vegetables and melons, fruits and berries, sugar. During the analyzed period, food costs increased 4.1 times with an annual growth of 5-15%.

Thus, the growth of incomes of the population has an extremely insufficient effect on the increase in its effective demand, since it is leveled by the rise in prices for foodstuffs. To determine the qualitative structure of demand, an assessment of the energy value of food consumption by the population was carried out. So in 2020, the total calorie content of the diet practically corresponded to the rational norm (2928 kcal) and amounted to 2674 kcal. However, the basis of consumption (70%) is made up of products of plant origin, and in terms of calorie content, their consumption exceeds the norm by 5%. For a more objective characterization of the level of development of the food market, we consider it necessary to present a cost estimate of the total capacity of domestic demand - the cost expression of the commodity part of the food market, in other words, the cost of food products, transformed into a commodity mass (Table 3).

Table 2. Actual and total ex	penditures on food	products by the	e population of Ukr	aine, euros per l	person per month
Tuble 1071etual and total ex	penantai es on rooa	products by the	e population of one	anne, caros per	person per monun

	2010		2020		Deviations	Aggregate	
Types of food	Cost, euros for 1 person	Structure, %	Cost, euros for 1 personStructure, %in structure, 2020 to 2010,%		in structure, 2020 to 2010,%	expenses for foodstuffs according to rational norms, euros per person	Structure, %
Meat and meat products	38.29	23.0	135.13	19.9	-3.1	57.27	5.3
Milk and dairy products	22.16	13.3	327.28	48.1	34.8	200.94	18.7
Eggs (pcs)	5.34	3.2	13.39	2.0	-1.2	39.81	3.7
Bread and bakery products	7.31	4.4	54.78	8.0	3.7	615.97	57.4
Potatoes	24.20	14.5	40.40	5.9	-8.6	13.97	1.3
Vegetables and melons	14.17	8.5	30.53	4.5	-4.0	11.62	1.1
Fruits, berries, grapes	24.39	14.6	32.37	4.8	-9.9	51.57	4.8
Fish and fish products	11.35	6.8	24.68	3.6	-3.2	29.98	2.8
Sugar, confectionery	15.63	9.4	11.07	1.6	-7.7	37.38	3.5
Vegetable oil	3.98	2.4	10.99	1.6	-0.8	15.13	1.4
Total per year for 1 person	166.81	100	680.62	100	-	1073.63	100
Share of food in total costs,%	51,6	x	48,1	х	x	x	x

Source: calculated according to the State Statistics Service of Ukraine [11; 12].

Table 3. Capacity of the domestic food market in Ukraine, 2020, in billion euros

Types of food	Regulatory market capacity (minimum norms)	Regulatory market capacity (rational norms)	Aggregate actual capacity of the domestic food market	The ratio of actual indicators to standard indicators,%	The share of food outside of commodity- money relations,%	Capacity of the domestic food market
Meat and meat products	5.43	8.36	6.52	78.0	10.6	5.83
Milk and dairy products	22.99	25.62	15.86	61.9	16.2	13.28
Eggs (pcs)	0.46	0.58	0.46	79.9	33.9	0.31
Bread and bakery products	2.22	2.38	2.18	91.5	1.1	2.16
Potatoes	1.20	1.55	1.01	64.8	52.3	0.48
Vegetables and melons	0.81	1.25	1.35	108.1	32.6	0.91
Fruits, berries, grapes	1.62	2.14	0.86	40.0	19.8	0.69
Fish and fish products	0.99	1.65	1.19	72.0	2.8	1.16
Sugar, confectionery	0.53	0.63	0.52	82.1	5.6	0.49
Vegetable oil	0.30	0.48	0.62	129.2	3.9	0.60
Total staple foods	36.56	44.65	30.56	68.4	х	25.90
Other food, soft drinks, food consumed outside the home	4.02	4.91	3.36	x	x	3.36
Total	1625.9	49.56	33.92	х	х	29.26

Source: calculated according to the State Statistics Service of Ukraine [11; 12].



Table 4	Determination	of the size of	f wanes to	o ensure rational	norms of food	consumption
laple 4.	Determination	of the size of	n wayes u	o ensure rational	norms or roou	consumption

Index	2020	Subject to the consumption of food by the population at the level of rational norms and food outside the home
Level of consumption, kg:		
meat and meat products	53.8	80
milk and dairy products	201.9	380
fruits, berries, grapes	56.5	90
Total expenses for food products for 1 person, euros/month	595.06	894.70
Share of expenses for meals outside the home,%	2.5	2.5
Share of total food costs in the total cost structure,%	52.9	25.4
The total amount of total costs for 1 person, euros/month	1,128.00	3,524.25
Ratio of wages and total expenses in 2020		2.57
The required amount of wages in Ukraine, euros per month	x	36,232.0

Note. The actual salary in 2020 is 289.42 euros. Source: author's calculations based on the data of the State Statistics Service of Ukraine [12].

Studies have revealed that of all consumed products, most of all outside the sphere of commodity-money relations (produced in subsistence farming) are such types of food as: potatoes - 52.3%, eggs - 33.9%, vegetables - 32.6%, fruits and berries - 19.8%. Least of all excluded from the production and commodity circulation are bread and bakery products, fish, fish products, butter, sugar.

Thus, the capacity of the domestic food market is 25.88 billion euros, which is 18.75 billion euros (or 42%) less than the level of its standard capacity established on the basis of rational consumption rates. We consider it necessary to identify this cost difference as losses in the budget of the country's agricultural sector.

Not only is there an inadequate consumption of such products as meat, milk, fruits, berries, fish, but the tendency of significant differentiation in the nutrition of the population is progressing, depending on the size of the average per capita total income. So, as of 2020, the difference in food expenditures between the population groups with the lowest (114.80 euros per person per month) and highest (653.39 euros) income levels was almost 6 times.

The population with a low level of income in comparison with its high-income segment consumes 1.9-2.7 times less meat and meat products, fish and fish products, milk and dairy products, fruits. The fact of a higher quality level of consumption of energetically expensive food products in population groups with high incomes has been established.

According to the method of determining the amount of wages to ensure food consumption at the level of rational norms, it was found that the share of total food costs in 2020, including the cost of food outside the home, is 25.4% [10]. It is determined that in 2020 the salary level should be at least 904.25 euros per person per month, i.e. it is three times more than the actual average value in 2020 - 289.41 euros (Table 4).

It should be noted that the destructive influence of price dynamics on the food market of Ukraine contributes to a decrease in the level of consumption. So, at the beginning of 2021, inflation accelerated significantly. Consumer inflation already in January 2021 in annual terms increased by 1.1% compared to January 2020 and amounted to 6.3%, accelerating from 5% recorded in December 2020. In July 2021, inflation in annual terms accelerated to 10.2%. Milk rose in price by 6.5% during the year, butter - by 8.9%, meat - by 11.1%, cheese and cottage cheese - by 7.2%, bread - by 16%.

This rise in prices is due not only to an increase in world prices due to a decrease in the harvest of cereals (and, therefore, mixed fodders), oilseeds, sugar beets, but also an increase in tariffs for energy resources. Since January 2021, the government has increased tariffs for electricity by 36.6% (due to the abolition of the feed-in tariff), for water supply and sanitation - by 10.9% and 17.3%, respectively. This forced food producers to include the rise in utility bills in the cost of goods.

The average price for A-95 gasoline in August 2021 exceeded the price of the same period in 2020 by 31% and amounted to 0.76 euros/liter. Consequently, already from the beginning of 2021, prices for essential consumer goods, especially for sunflower oil and sugar, have increased significantly. The inflation index for these products in January-August was the highest compared to other product groups - 45 and 34.1%, respectively (this inflation rate can already be identified as galloping). We believe that a slight increase in the minimum wage in Ukraine from January 1, 2021 to 149.74 euros per person per month, in accordance with the Law of Ukraine "On the State Budget of Ukraine for 2021", a significant impact on the increase in the



effective demand of the population and the structure of food consumption will not be able to render [16].

4. Conclusions

- In the food market of Ukraine, there is a lack of provision of the population with food products, especially of animal origin. The proportion of products grown by households for their own consumption, that is, those that are outside the sphere of commoditymoney relations, remains high. The established actual capacity of the food market is formed mainly due to the products of Ukrainian production. Its cost estimate is significantly inferior to the normative indicator, calculated taking into account the compliance with the norms of rational consumption. Revealed a significant quantitative and qualitative differentiation in the consumption of food products by the population, depending on their material well-being. The established level of wages, at which the consumption of food by the population would correspond to rational norms, is almost three times higher than the actual one. Due to a significant rise in food prices and limited effective demand, significant changes in the structure of nutrition of the Ukrainian population are not expected in the near future. We believe that households of the population will continue to play a leading role in the production of certain types of food and their share of consumption due to subsistence farming will practically not change.

- Taking into account the existence of an association between Ukraine and the European Union, it is necessary to expand the export of domestic foodstuffs, to intensify the introduction of world quality and product safety standards into production. The need for the development of a modern market infrastructure and marketing system is urgent, in particular, the creation of an effective system of cooperation for the production, procurement and storage of products, a variety of its assortment with the subsequent development of organic production of agricultural products and products of its processing. State support, both financial and legislative, is urgently needed, aimed at creating an attractive investment environment for the further development of the agricultural sector with a focus on resource and energy-saving technical and technological support.

5. References

- Trokhymets O. I., Riabchenko K. M. (2018). Food market of Ukraine: Current state and prospects of development. Scientific Bulletin of Uzhhorod National University, 17, pp. 171-178.
- [2] Duchnytskyi B. V. (2018). Self-sufficiency of the domestic food market of Ukraine. Economics AIC, 12, pp. 25-30.
- [3] Mostova A. D. (2019). *Food market of Ukraine: Current state and prospects of development*. Black Sea Economic Studies, 43, pp. 59-68.

- [4] Lupenko Y. O., Kopytets N. H., Voloshyn V. M. (2021). Structural changes in the meat market. BIO Web Conferences, No 36. <URL:https://doi.org/10.1051/bioconf/20213608006. Accessed 10 June 2021.
- [5] Seheda S., Datsenko G., Otkalenko O., Musil P. (2019). The agrarian food consumption in Ukraine and its association with socio-demographic indicators of human development. Economic Annals-XXI, 1-2, (175), pp. 45-52.
- [6] Bazaluk O., Yatsenko O. Zakharchuk O. Ovcharenko O., Khrystenko O., Nitsenko V. (2020). Dynamic development of the global organic food market and opportunities for Ukrain. Sustainability, 12, pp. 35-37.
- [7] Mylovanov E. (2019). Development of the market of organic agricultural products: World trends and Ukrainian realities. Scientific Bulletin of Polissya, 2, (18), pp. 65-75.
- [8] Gadzalo I., Sychevskiy M., Kovalenko O., Deineko L., Yashchenko L. (2020). Assessment of global food demand in unexpected situations. Innovative Marketing, 16, (4), pp. 91-103.
- [9] Popadynets N., Panukhnyk O., Fedotova Y. (2019). Analysis and modelling of factor determinants of food provision at consumer market of Ukraine. Global. J. Environ. Sci. Manage, 5, (SI), pp. 215-226.
- [10] Shpychak O. M., Bodnar O. V., Lupenko Y. O., Zhuk V. M., Pashko S. O., Komarnitska O. P., Kompaniets O. V., Kutsi T. V., Ponomarenko N. V. (2017). *Methodical* recommendations on expanding the capacity of the domestic market of agricultural products and food and areas of increasing value added in the middle of the country (in Ukrainian). NRS - IAE, Kyiv, Ukraine.
- [12] Prokopenko O. M. (Ed.) (2021). *Balances and consumption of basic food products by the population of Ukraine* (in Ukrainian. Derzhstat, Kyiv, Ukraine.
- [13] Cabinet of Ministers of Ukraine. (2016). Resolution No. 780 about the statement of sets of foodstuff, sets of nonfoods and sets of services for the basic social and demographic groups of the population (in Ukrainian).
 <URL: https://zakon.rada.gov.ua/laws/show/780-2016-%D0%BF#Text. Accessed 15 February 2022.
- [14] Shpychak O. M., Bodnar O. V., Kopytets N. G. (2017). Analysis of the current situation and forecast of livestock markets in Ukraine. NRS - IAE, Kyiv, Ukraine.
- [15] Polegenka M. A. (2019). *Analysis of the current state of poultry production in Ukraine.* Economy and state, 3, pp. 137-143.
- [16] Verkhovna Rada of Ukraine (2021). Law of Ukraine, No. 1082-IX on the State Budget of Ukraine for 2021 (in Ukrainian). <URL:https://zakon.rada.gov.ua/laws/show/1082-</p>

20#Text. Accessed 15 February 2022.