

Population's life quality assurance: food security

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Abstract—This article is devoted to research of population's life quality assurance in interrelation with food security. Qualitative and quantitative methods of the analysis of data, methods of the comparative analysis and synthesis, methods of statistical data processing are applied. The result of the research is expressed in the recommendations of food security increase as one of the most important conditions of population's life quality assurance.

Keywords—Food security, quality of life, safety, population's satisfaction, indicators, level.

I. INTRODUCTION

Globalization of world economy raises questions of ensuring food security of national economies for the purpose of self-reliance strengthening, independence and sovereignty of the state. The benchmark of Russian Federation development is expressed in safety of the state, including food security increase for the purpose of life quality improvement and welfare of the population.

The purpose of the research is the analysis of a problem of population's life quality through ensuring food security.

A large number of works of the Russian scientists, such as Klimova N.W. [4], Samarukh V.I. [9], Sergeyeva I.A. [11], Sergeyev A.Y. [11], Khromova Y.S. [12], Chebotaryova M.S. [13] and others are devoted to questions of ensuring food security.

Such Russian scientists as Animitsa E.G. [1], Bestuzheva-Lada I. W. [2], Elokhova A. M [1], Mordovchenkova N.W. [6], Nikolaeva M.G. [6], Rimashevskaya N.M. [8], Sukhikh V.A. [1] and others did scientific research about analysis of indicators of life's quality.

Belekhov G. V. [14], Makarov A. N. [5], Sausheva O.S. [10], Shabunov A.A. [14] and others studied the influence of food security on population's life quality. Despite the knowledge, large volume of scientific works and publications, there are no works about influence of food security on population's life quality.

There are still insufficiently investigated key moments of interrelation of food security and population's life quality. The ways of improvement of population's life quality in connection with the priority directions of increase in food security of the country still are not defined.

Thus, carrying out systematic and comprehensive monitoring of assessment of population's life quality assumes identification of significant factors, definition of a technique of their assessment for adoption of the relevant effective decisions at the level of the state on improvement of ensuring food security of the country. In turn, the research of key problems of food security highlights the directions of increase in the level and quality of population's life.

II. RESULTS AND DISCUSSION

In recent years, problems of food security have been on the first place, because a considerable part of the Russian citizens has a poor food allowance. Norms of consumption of food per capita were significantly reduced that exerts negative impact on population's life quality. In turn, the worthy level and high population's life quality are the most important conditions of human development and factors of social and economic development of any state.

The modern social and economic situation in Russia, which has developed as a result of the decreasing living standards, high differentiation of the population's income, reductions of the production of the domestic food industry and consumption of potentially life-threatening and human health food, aggravates food security of the country [7].

For a more objective picture in the field of food security for the purpose of improvement of population's life quality, the authors have conducted a research (selection of 500 respondents in the temporary period of 2013-2017).

The respondents answered the following question: "Assess the level of the material prosperity" (table 1) [15].

TABLE I. ASSESSMENT OF MATERIAL WEALTH BY RESPONDENTS, IN PERCENT

Possible answers of respondents	2013	2014	2015	2016	2017
Middle (food, clothes, extremely necessary things, payments, money is enough, but to purchase expensive things, it is necessary to take the credit or to save)	61,6	61,1	59,4	56,2	54,8
Poorly (for modest food, there is enough money, but not for acquisition of clothes and other things and also payment of	17,7	22,3	23,7	24,4	25,2

utilities)					
Prosperous (there is monetary accumulation and an opportunity to buy practically all necessary for life)	9,4	8,2	7,9	7,5	7,1
Very poorly (there is almost no money even for food and payment)	3,5	4,5	4,9	5,6	6,2
Very well, wealthy (I don't refuse anything, monetary accumulation constantly increases)	1,4	1,0	1,0	1,0	0,9
Don't know / No answer	6,4	2,9	3,1	5,3	5,8

Results of research according to the material wealth show that a significant number of respondents assess the financial position as an average, and this situation has varied towards deterioration in recent years. Dynamics of respondents' answers for 2013-2017 to the second possible answer is of annual increase that has an adverse effect on population's life quality. The number of respondents who are well off in dynamics for 2013-2017 tends to decrease that also demonstrates a decline in quality of life of the population. The number of respondents who assess the situation as "very poor" grows. In turn, the number of rich respondents tends to decrease.

The level of income differentiation in the Russian Federation within Jeannie's coefficient during 2013-2017 is at the level of 0.4 (the standard from 0 to 1). The countries having the same degree of concentration of income in the range of 0.3-0.4 are Italy, Israel, Lithuania, Spain, Ireland, Great Britain, Portugal. A half of Russian regions at the level of stratification of society is closer to the European countries with developed economy, and other half of regions gravitates to indicators backward, poor and developing countries.

Thus, the level of material wealth in the period under review tends to decrease that is a negative tendency. The material wealth of citizens is not in time behind rates of inflation and increase in prices. An annual decrease in material wealth influences a decrease in population with monetary income lower than the size of the living level that respectively exerts impact on food security.

The next question was "Assess the Satisfaction with Separate Aspects of Quality of Life on Five-point System" for determination of the satisfaction level of the respondents with quality of food, water, health, life in general (table 2) [15].

TABLE II. ASSESSMENT OF SATISFACTION WITH SEPARATE ASPECTS OF LIFE QUALITY, IN PERCENT

Points	2013	2014	2015	2016	2017
Satisfaction with food quality					
"4"	33,9	31,7	31,3	31,9	31,5
"3"	18,2	19,1	19,6	18,7	19,4
"5"	20,7	19,8	20,2	19,6	18,2
"1"	–	5,1	4,8	4,5	5,7
"2"	9,7	10,1	8,4	9,3	9,7
No answer	17,5	14,2	15,7	16,0	15,5
Satisfaction with water quality					
"3"	21,8	22,3	23,0	23,7	23,2
"4"	38,0	37,4	36,8	35,4	34,6
"5"	22,1	21,5	20,9	19,6	18,7

"1"	–	1,2	1,3	2,8	3,9
"2"	13,4	14,0	13,9	14,3	15,1
No answer	4,7	3,6	4,1	4,2	4,5
Satisfaction with a health condition					
"4"	39,9	38,2	36,4	37,1	36,3
"3"	25,9	26,4	26,9	25,2	26,1
"5"	18,1	17,7	16,5	15,7	15,0
"2"	9,3	10,6	11,1	11,7	10,9
"1"	1,1	2,9	4,7	6,4	8,4
No answer	5,7	4,2	4,4	3,9	3,3
Satisfaction with life in general					
"4"	41,4	40,2	39,8	38,6	38,1
"5"	22,9	23,1	22,7	23,3	23,9
"3"	15,2	14,5	14,1	13,7	12,9
"2"	9,0	9,6	10,2	10,6	11,0
"1"	2,0	5,0	5,0	6,7	6,4
No answer	9,5	7,6	8,2	7,1	7,7

The satisfaction with food quality is one of important indicators of wellbeing of the population. Most of the interviewed respondents have highly appreciated the satisfaction with food quality – on "4" points and above (in the sum of 33,9% in 2013, 31,7% in 2014, 31,3% in 2015, 31,9 in 2016 and 31,5% in 2017). Despite high value of an indicator, the authors observed the negative tendency on this indicator of life quality. Also assessment of satisfaction of the population with quality of water – on looks "4" and higher than a point (in the sum of 38% in 2013, 37,4% in 2014, 36,8% in 2015, 35,4% in 2016 and 34,6% in 2017). The satisfaction of the population with water quality also tends to decrease for the last five years.

One of important indicators of life quality is the health indicator. Most of the interviewed respondents distinguish rather high degree "4" and above points with satisfaction with a condition of own health.

The generalizing indicator is the satisfaction with life which represents value judgment by the identity of level of realization of the material and spiritual needs, degrees of accommodation comfort [3]. In our research the satisfaction with life is estimated by a considerable number of respondents.

The conducted research confirms necessity of monitoring of population's life quality indicators, independent structures which will consider real indicators of population's life quality. In relation to this research, the authors offer the system of the generalized complex indicators of assessment of population's life quality taking into account the place in infrastructure of the state (Figure 1).

The developed system of the generalized complex indicators of population's life quality assessment, taking into account its place in infrastructure of the state, will give the chance fully in more detail and approach qualitatively questions of increase in food security.

Thus, the balanced system of complex indicators directed to improvement of population's life quality is capable to solve the problems about food security, and, therefore, to make an essential contribution to dynamic social and economic development of the whole country in general.

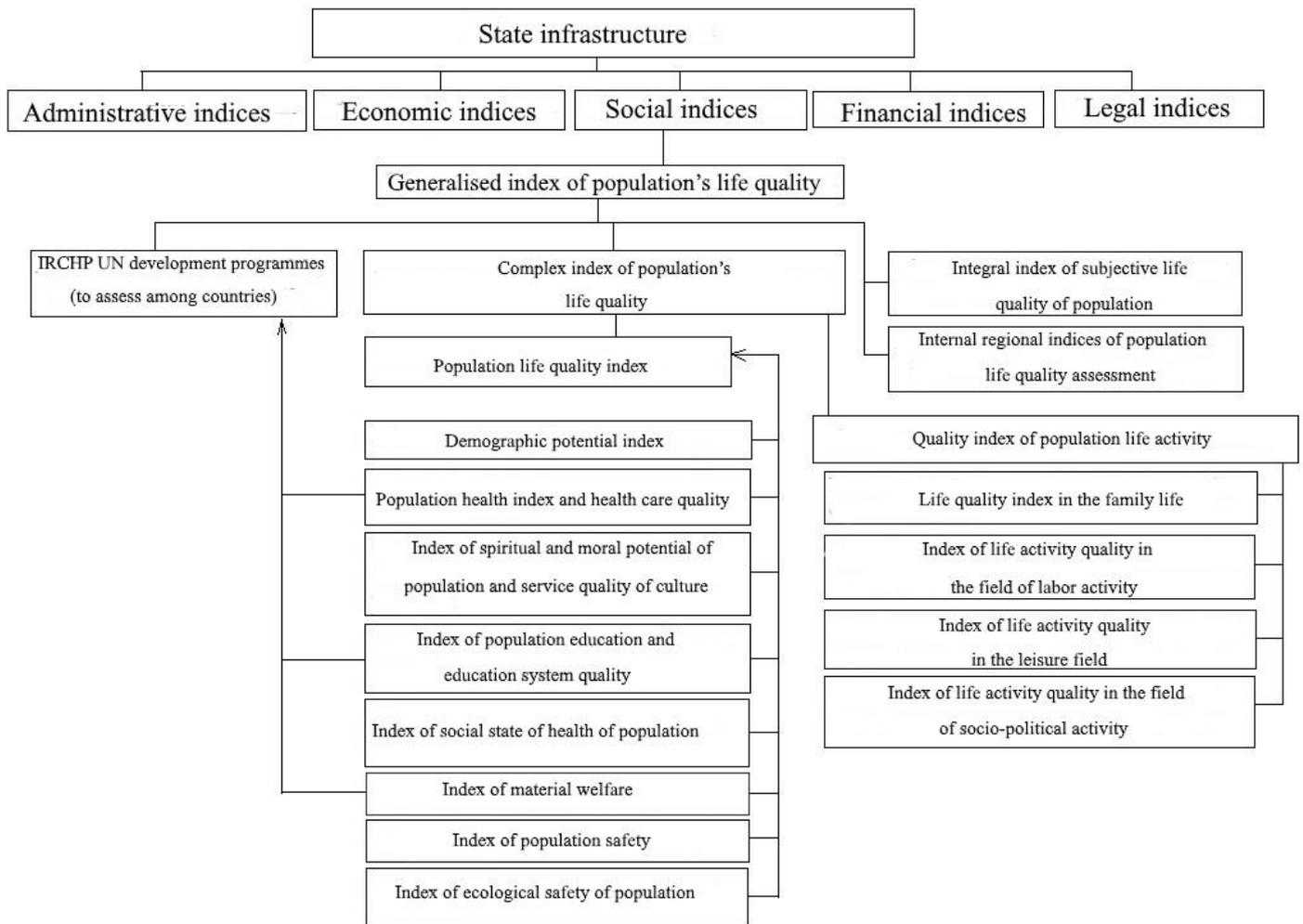


Fig. 1. The system of the generalized complex indicators of population's life quality assessment in infrastructure of the state

III. CONCLUSION

Food supply of the population available and qualitative food of particular importance are a factor of increase in the level and population's life quality.

In this regard, critical issues of increase in the level and quality of population's life within food security in Russia are:

- development of the domestic food market infrastructure;
- timely providing the population of the country with main types of food due to own domestic production;
- a quality guarantee and the high level of safety of the consumed food at the level of the state;
- state regulation of food prices;
- modification and additions in the current legislation and normative legal acts for the purpose of uniform body formation of the state control of quality and safety of foodstuff;

- stable ensuring growth in incomes of the population for the purpose of increase in living standards;
- establishment of strict state regulation of the socially important food prices;
- development of the system of targeted food aid to the population;
- decrease in the level of internal and external threats of violation of the country food security.

Only the measures named above will be able to give a tangible result in the long term, and provide improvement of population's life quality and food security of the country.

IV. FINDINGS

Results of the research demonstrate that the satisfaction of the population with the separate aspects of life quality exerting impact on food security in general was reduced during 2013-2017. Decrease in values of the studied indicators

demonstrates the general decline in population's life quality that is contrary to official statistics data.

The conducted research confirms necessity of monitoring population's life quality indicators by independent structures which could present real in population's life quality indicators. This research of respondents' opinions would allow one to reveal existence of positive and negative changes of population's life quality in a retrospective in five years and to make more effective administrative decisions.

In our opinion, researches of population's life quality have been based on the wrong conceptual installations which are not considering interrelation between continuous reduction of level of the population income and change of structure of consumption of food towards cheaper and low-quality products that as a result has pernicious effect on health of the nation in general. Annual growth of consumption of cheaper products (generally potatoes and bakery products) as researches show, excess admissible rational norms, in fact, are a characteristic result of impoverishment of the population. The existing level of the population income does not allow consuming food in necessary volume according to rational norms of consumption that as a result reduces the level of the country food security.

The system of the generalized complex indicators of population's life quality assessment offered by the authors, taking into account its place within priority state programs, will allow one to give more objective picture of the current state of food security in the country.

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