Impact of food quality on the economic security of the region

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Abstract. The article outlines the importance of food quality in ensuring the safety of the region. The main directions of reducing the quality of food have been determined. The statistics of the increase in the number of persons suffering from alimentary diseases is presented. The growth of food-dependent diseases has been demonstrated. Information is provided on the dynamics of the number of disabled people among children and adults, the number of persons of draft age, unfit for military service. Conclusions are made about the effectiveness of measures aimed at increasing the efficiency of using the labor potential of the region. Measures aimed at improving the working-age population by improving the quality of food are outlined.

1. Introduction. Food security as one of the factors of economic security of the region

Economic security is ensured by a number of factors that, in the interpretation of different authors, are considered and grouped in different ways. However, one of the unconditional factors indicated by all authors is food safety. In this article, we want to show that food security is a much more complex and deeper issue than it might seem at first glance. Food security issues need to be considered not only from the point of view of sufficient provision of the population with food, but also from the point of view of the quality and useful properties of the products that the population is provided with. Socio-demographic factors of economic security are directly related to the quality of food supply to the population. Thus, the factor of food security can be considered basic, on the basis of which socio-demographic factors are manifested.

Quality food is the basis of public health. It has always been that way. But it should be noted that the very concept of nutritional quality changes over time. If before the turn of the XX - XXI centuries, high-quality nutrition was mainly understood as a balance between plant and animal food, between proteins, fats and carbohydrates, but recently these factors have been added to the factors of naturalness of the product, the absence of harmful additives in it, the presence of vitamins and microelements necessary for human health.

According to the Research Institute of Nutrition of the Russian Academy of Medical Sciences, approximately 30-50% of all cases of diseases in Russia are associated with eating disorders. Depending on the severity of the disease, the state loses a unit of labor resources for a shorter or longer period.
According to the Research Institute of Nutrition of the Russian Academy of Medical Sciences, diseases of an alimentary nature annually bring economic damage to the state up to 13 trillion rubles.

2. The main part. Influence of food quality on the efficiency of use of labor resources in the region

The number of factors that negatively affect the quality of food is quite high. Nevertheless, there are two main directions of changes in the quality of food products that negatively affect the health of the consumer:

- the appearance or increase in the proportion of harmful components in the composition of the product;
- reducing the proportion of nutrients in the product.

The study of statistical data on the morbidity of the population by the main classes of diseases showed that with a general fairly even picture of the dynamics of the morbidity of the population, an increase in the density of alimentary-dependent diseases is observed. Below are excerpts of the general table of morbidity of the population, characterizing the dynamics of the density of diseases (table 1).

**Table 1. The incidence of the population for certain classes of diseases in 2006 - 2018 (for 1000 people)** [1].

| Classes of diseases                                      | Periods | Changes 2018 to 2006 | Growth rate |
|----------------------------------------------------------|---------|----------------------|-------------|
| Diseases not related to nutritional infectious and parasitic | 37.2    | 32.8                 | 30.8        | 27.0  | -10.2 | 72.6 |
| diseases of the eye and its adnexa                        | 35.7    | 33.0                 | 34.7        | 31.4  | -4.3  | 88.0 |
| diseases of the ear and mastoid                          | 24.5    | 27.1                 | 27.7        | 25.5  | +1.0  | 104.1 |
| Alimentary diseases                                      | 9.9     | 10.8                 | 11.6        | 11.6  | +1.7  | 117.2 |
| Neoplasm diseases                                        | 11.7    | 10.2                 | 11.2        | 13.1  | +1.4  | 112.0 |
| Endocrine system diseases, metabolic disorders           | 26.5    | 26.1                 | 28.8        | 32.6  | +6.1  | 123.0 |
| Iseases of the circulatory system                        |         |                      |             |       |       |      |

Indicators of the density of nutritional diseases do not seem to be high enough, however, given the fact that their number is steadily growing, it raises concerns that in the near future both the natural indicators of the number of cases and the relative ones per 1000 population may change significantly [2]. A significant increase in the number of unhealthy citizens is an indicator of the potential for economic growth in both the region and the country as a whole. The presented dynamics is a signal for the need to take adequate measures aimed at improving the nation's health.

One of the indicators of population health is the dynamics of the number of disabled people. The Minister of Labor and Social Protection of the Russian Federation, Maxim Topilin, notes that in Russia "the number of disabled people has changed slightly over the past years, downward." The Ministry of Labor uses data from the Russian Pension Fund. According to this information, from 2014 to 2020 the number of disabled people in Russia decreased from 12.65 million to 12.42 million. Therefore, based on official data, the number of disabled people has decreased by 230 thousand people over the past 5 years.

The official reasons for the decline in the number of people with disabilities are as follows:

- natural decline. In recent years, the number of disabled veterans has sharply decreased;
- the number of persons applying for a disability assessment is decreasing.
Official statistics indicate that the country is becoming healthier. At the same time, independent authors associate the decline in the number of disabled people to a greater extent not with an increase in the level of health of the population, but with a change in the very procedure for recognizing a person as a disabled person in accordance with the social policy of the state and adopted by the relevant regulatory documents. In early 2015, the order of the Ministry of Labor and Social Protection of the Russian Federation No. 664n began to operate, which defined a new system for assessing disability based on the degree of loss of body functions. In accordance with this document, obtaining the third (lightest) group of disability is possible only if the body has lost at least 40% of its functions. Disability and severity of the diagnosis ceased to play a role of determining factors.

“The number of people with disabilities has seriously decreased” - these are the words of the ONF expert on disabled people Alexander Lysenko. He notes that with the chosen system of health assessment, even practically immobilized people can lose disability. In addition, the system introduced in 2015 did not take into account citizens with Down syndrome, diabetes mellitus, asthma, many hereditary genetic diseases and hormonal disorders. After a public reaction, instead of order N 664n, order N 1024n was approved, which began to take into account some diseases, but left the same principle of determining disability unchanged. At present, Order No. 1024n is already history. On August 27, 2019, a new order N 585n was approved, which defines the criteria used in the implementation of medical and social expertise of citizens. This order is based on the division of citizens into those who have reached 18 years of age, and citizens who have not reached this age.

You do not need to be an expert to link the decline in the number of registered disabled people over the past five years with the validity of the above documents.

Citizens who want to get a disability due to existing pathological changes in the body or other diseases are forced to undergo a series of medical examinations included in the ITU every year, even if the changes in the body are irreversible. This procedure is provided for confirming disability. In general, according to the testimony of persons who undergo this procedure annually, it takes a lot of time. If we take into account that groups 2 and 3 are “workers”, and the amount of the pension is relatively small, it can be assumed that some of the working disabled people stopped applying for confirmation of disability due to the complexity and high time cost of the procedure itself.

In general, it can be concluded that information on the number of persons with disabilities in the country, which is available from official sources, is not complete and accurate. In particular, in the society of the blind, the situation with the visually impaired was explained as follows: “There are actually much more blind people. A simple example: people with diabetes mellitus are prone to decreased vision and often go blind. But they rarely fall into the category of the blind, because passing into the blind status, they are deprived of the opportunity to receive insulin for free. In addition, not all blind people apply to the society of the blind, and statistics are based on the number of its members."

Another indicator that allows us to doubt the positive dynamics of the number of disabled people in the country. This is an indicator of childhood disability. The number of disabled children is growing every year. In 2012, their number was 571.5 thousand people, in 2020 there are already 612 thousand people. Unlike the adult population, minors are assigned an indefinite group until they turn 18.

The authors of scientific research note several patterns in the dynamics of the demographic situation in the country. Against the background of a comparatively high standard of living and improving indicators of population reproduction, the proportion of the adolescent population that can be called up to serve in the Armed Forces of the Russian Federation remains low. Even less is the proportion of conscripts with health category "A".

Efimova S.V., Candidate of Medical Sciences, Associate Professor of the Orenburg State Medical University, notes the negative dynamics of the level of suitability of young people for military service. According to the results of a study carried out over the period 2001–2010, an increase in the proportion of conscripts with diseases of the circulatory system, musculoskeletal system, and endocrine system was revealed. There are consequences of trauma, poisoning, mental disorders. There is a large percentage of people with disharmonious physical development [3].
Doctor of Medical Sciences Sogiyaynen A.A. on the material of a wider time range: from 1995 to 2017 revealed the same trends in the level, dynamics and structure of morbidity in young men of pre-conscription age. In the structure of the general morbidity in the territory of the Russian Federation, the following diseases prevail: eyes and its adnexa; digestive organs; musculoskeletal system and connective tissue; injury, poisoning and other consequences of external causes. In general, there are negative trends in both primary (+16.0%) and general (+15.2%) morbidity [4]. We draw attention to the fact that among the listed diseases, a large proportion belongs to diseases that are clearly alimentary in nature.

The dynamics of the percentage of fitness of persons of military age to serve in the army is indicative.

The adult population cannot be healthy, despite the fact that the health of children and young people has a clear tendency to deteriorate.

The social policy of modern Russia is aimed at the adaptation of disabled people in society. According to labor legislation, if the number of employees of an enterprise is more than 100 people, it is obliged to have places for disabled people and to employ them. At the same time, both the employer who hired a disabled specialist and the educational institution in which the disabled person received a specialty must create special conditions for the training and work of disabled people. The cost of a specially equipped workplace (or place for training) can go up to 600 thousand rubles. Not every employer can afford the luxury of providing working conditions for a disabled person.

The adaptation of persons with a disabled status is a noble cause. However, we must not forget that the destabilization of the labor resource of the economic system begins with the creation of special conditions for the selected representatives of the population. From the standpoint of ensuring the economic security of the region, in conditions of unemployment and low profitability of industrial enterprises, it is more humane to hire healthy workers who, on the one hand, do not require significant costs for preparing a special workplace, and on the other hand, cannot count on a disability pension. If we take into account the fact that getting a disability is currently quite troublesome, then in fact, a person claiming the right to take a job, and who is not a disabled person, in fact, may also have significant deviations from ideal health.

Considering the fact that the economy is mainly based on able-bodied citizens, it makes sense to direct the main stream of efforts to improve the health of the nation, to prevent the development of a number of diseases that, over time, can lead an able-bodied person to disability.

The decline in the quality of the use of human capital in Russia in the past 15-20 years is evidenced by two facts:

- decrease in the number (relative) of the able-bodied population;
- a decrease in the quality of labor resources.

The decline in the working-age population is evidenced by the data of official statistics. An extract from the data of the website of the Federal State Statistics Service is presented in the table.

| Table 2. Distribution of the population by age groups [5]. |
|----------------------------------|---------|---------|---------|---------|---------|
| Total population, thousand people |
| including:                       | 2004    | 2008    | 2012    | 2016    | 2019    |
| younger than able-bodied, thousand people | 25136   | 22842   | 23568   | 26360   | 27430   |
| Share in total,%                 | 17.4    | 16.0    | 16.5    | 18.0    | 18.7    |
| able-bodied, thousand people      | 89852   | 89745   | 87055   | 84199   | 81362   |
| Share in total,%                 | 62.3    | 62.9    | 60.9    | 57.5    | 55.4    |
| older than able-bodied, thousand people | 29346   | 30161   | 32433   | 35986   | 37989   |
| Share in total,%                 | 20.3    | 21.1    | 22.6    | 24.5    | 25.9    |
The share of the working-age population has been steadily declining in recent years. According to official sources, it is increasingly difficult for the state to support a part of the population of disabled age. This very foundation, together with the increasing, again according to statistics, life expectancy, was laid in the theoretical "scientific" basis of the pension reform carried out since 2019, which has postponed the retirement period by 5 years. Of course, attracting elderly people to work will change the indicators in the table above. And what the economy will actually receive is still worth calculating. At the very least, increasing the retirement age in conditions of unemployment does not seem to be a completely rational decision. Instead of pensioners, we will get a lot of unemployed, and, most likely, young people, yesterday's graduates "without work experience." This scenario will provide us with two effects. The first is that we will get a whole generation of people who have not received the skills of a permanent job and have lost their qualifications. The second is an aging workforce. In a sharp increase in the number of those who do not work, but "work on". To this should be added an increase in the number of sick people, and, as a consequence, a decrease in life expectancy.

The quality of food is one of the most important components of ensuring a long life and labor activity of the population. In order to stabilize and improve the unfavorable situation with nutritional diseases, it is necessary to work in several directions at once. In order to improve the health of the population and improve the quality of food, a number of measures have been taken.

3. Generalization of research results
The state strategy in the field of food safety is based on the following development directions:

- an increase in the volume of domestic production of basic types of food raw materials and food products;
- development of production of products enriched with irreplaceable components;
- introduction of advanced technologies into agriculture and processing industry.

The development of an action plan for the implementation of the state policy in the field of healthy nutrition is being prepared. The basic factor of economic development is the able-bodied population. There can be no healthy population with unhealthy diet. Not only the population itself, but also the state must take care of the working capacity of the population, and, therefore, the quality of food.

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