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COUNTRY'S FOOD SECURITY ASSURANCE: URGENT MEASURES AND SUSTAINABLE POLICIES

ABSTRACT

Diminishing country's vulnerability to risk factors can be promoted by applying a number of policies and carrying out certain actions: legal, economic, environmental, social, etc.

The increase of the agricultural productivity, being stimulated by government investments in rural infrastructure, agricultural science, extension, irrigation, as well as adequate financial incentives for non-farm activities could contribute to the economic growth and poverty alleviation in rural areas, and consequently to improve food security in the Republic of Moldova.

Key words: agri-food sector, food security, risks, sustainable development.

JEL Classification: Q01, Q10, Q18.

1. INTRODUCTION

The main objective of the food security policies is to assure a steady supply of safe and quality food products for the country's population from local production, to create the necessary stocks and to import food products in the case of insufficient local production.

At present, the excessive dependence on food imports mainly contributes to the vulnerability of the Republic of Moldova to the shocks on external markets.

The poverty incidence in the Republic of Moldova is the highest among the East-European countries. In these conditions, the non-farm activities alongside with the subsistence agriculture partly compensate the income insufficiency and reduce the risk of poverty proliferation in rural areas.

The food security policies have to set up the framework for a European model of agriculture, characterized by sustainable farming, linked to the market infrastructure, integrated with rural development and environmental protection.

2. STATE OF KNOWLEDGE

The problem of food security has been globally debated since the '50s of the last century. The initial solution to this problem was to provide food aid to countries affected by food insufficiency.

In the 1960s, when it became clear that food aid could hinder their development in food provision, the concept of “food for development” was introduced and institutionalized. The creation of the World Food Program (WFP) in 1963 is a striking, considerable example in this respect. The food crisis in the period 1972–1974 marked a dramatic turning point from the period of abundance of food from donor countries to unstable supplies and food prices.

In 80 years, following the success of “Green Revolution”, which allowed increasing food production and availability of food, it became clear that food emergency and even famine, hunger are caused not so much by the catastrophic decline in agricultural production, but rather by the dramatic diminution of the purchasing power in specific social groups. Therefore the concept of food security has been enlarged to include both the physical and economic access to food [6].

In the 2000s, improving food security situation in many countries is seen in the context of general development, reducing poverty and achieving the millennium development goals. These internationally recognized goals can be reached only in the case when access to food is provided for all members of society. Thus, according to the FAO (2001) concept, food security exists “when all people have permanent physical and economic access to sufficient safe and nutritious food, which corresponds to necessary food preferences, needed for an active and healthy life” [4].

3. MATERIAL AND METHOD

In order to characterize the evolution of food security, the following methods were used: socio-economic analysis of the economic indicators; evaluation of the public policies impact on the agri-food sector and rural areas.

Developments in per capita food production and consumption as well as the ratio of these indicators, were used to investigate the evolution of the countries’ food security. The analysis focused on several important food products (wheat, meat, milk and eggs). Proactive food security policies were designed and coordinated with experts’ opinions resulting from the public discussions organized in the Republic of Moldova.

4. RESULTS AND DISCUSSIONS

The problems in ensuring food for the population are largely created by constraints in agriculture caused by the limited availability of arable land and water resources, but also due to specific issues related to the storage, transport and distribution of agricultural products, expanding bio-fuel production. Increasing urbanization and changing diets also increase global food demand.

Traditionally, food security in many countries is assured from two sources: domestic production and food imports [6].

At the same time, a new paradigm of food security assurance became more obvious. This is particularly true for investing countries that procure agricultural land in underdeveloped countries with a high bio-climatic potential. These investments are often supported by governmental institutions from investing countries [2].

In the last years, countries like China, South Korea, Japan, Saudi Arabia and Kuwait became more and more interested to buy or lease agricultural land for a long period, as an attempt to satisfy the increasing domestic food demand.

According to the International Food Policy Research Institute (IFPRI), in the last five years, the underdeveloped countries sold between 15 and 20 million hectares agricultural land. This area could be compared with the acreage of agricultural land in France.

The procurement of agricultural land in poor countries is not a new phenomenon, but this practice became most evident in the last years, which is confirmed by a significant increase in the number of land transactions.

At global level, there is a range of risks that could have a severe impact on the food security of the vulnerable population, which followed an increasing trend in the last years [1].

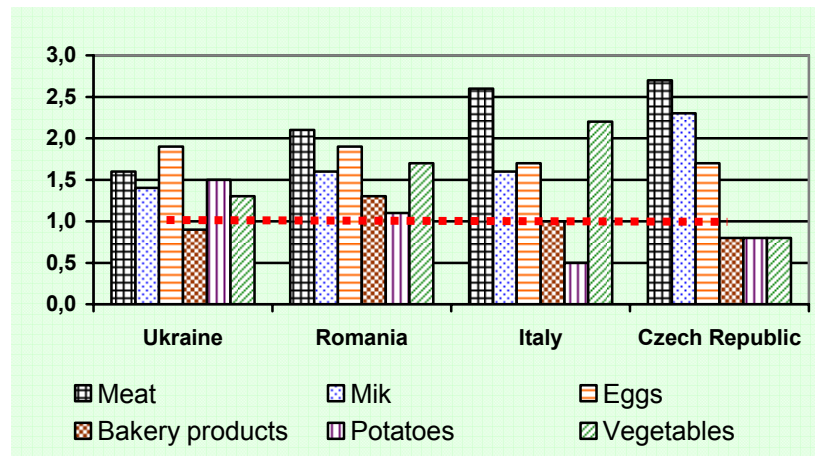
Food security instability at global level negatively influences the supply of the population with local food products in the Republic of Moldova.

The current food security challenges in the Republic of Moldova have two main dimensions. The first dimension seeks to maintain and increase the country's ability to face the national food demand through assurance of the domestic food production, import of food products that cannot be produced efficiently in the country, and exports of products that have a comparative advantage. The second dimension is related to the diminution of the increasing inequalities and expansion of poverty on most households in the Republic of Moldova, which is manifested by inadequate and unstable food supplies, lack of purchasing power, weak institutional support networks, weak food emergency management systems and unemployment.

At national level, the Republic of Moldova is food secure. It produces its main food products, exports its surplus food, and imports what it needs to meet its food needs.

Food security indicators prove that in the Republic of Moldova the level of food consumption per capita was stabilized in the last years. However, the consumption level is much lower than in the neighbour countries or other countries in the region. If we consider only the neighbouring countries – Romania and Ukraine, it can be noticed that in Ukraine the average per capita 60% consumed more meat, 40% more milk, more eggs by 90%, 30% more vegetables and cucurbits and 50% more potatoes.

Only in the bakery section the neighboring country consumes 10% less than in RM. Referring to Romania, the situation is largely similar. Thus, in Romania, is consumed the average per capita 2.1 times more meat, 60% more milk, 90% more eggs, 30% more bakery products, by 10% more potatoes and 70% more vegetables and cucurbits. Compared to other European countries, the difference is even greater (Figure 1).

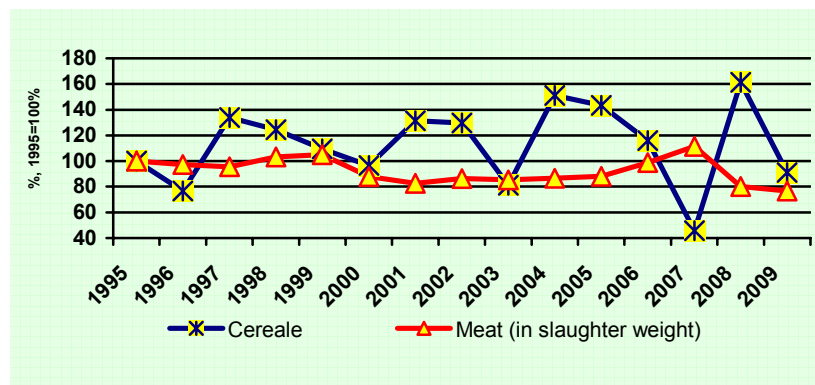


Source: Authors' calculations based on data from NBS, 2010.

Figure 1. Comparative consumption of main food products in selected countries, Moldova = 1, 2008.

The low level of food consumption compared to the neighboring countries could be partially explained by the decrease and instability of the agricultural and food production. Thus, taking as a point of reference the year 1995, the meat production decreased by 42%, milk production by 9% and potato production by 31%. In this period, only the production of eggs and wheat increased, by 10% and 54% respectively. However, in spite of this growth, the agricultural production is unstable and it is influenced by a wide range of natural hazards and especially by drought.

Thus, the most significant diminution in crop production is related to the negative impact of drought, the most recent being the drought from 2003 and 2007 (Figure 2).



Source: Authors' calculations based on data from NBS, 2010.

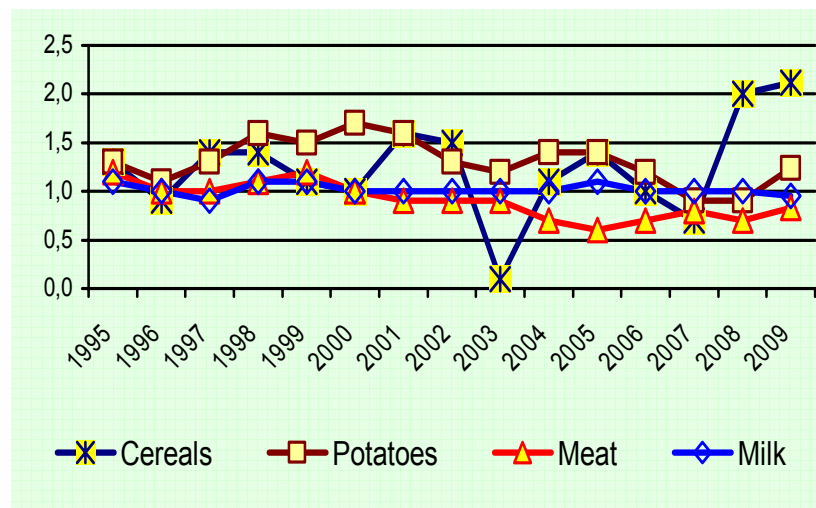
Figure 2. Production index of selected food products in the Republic of Moldova, 1995–2009, 1995 = 100%.

As a rule, in the years following the drought, there is a significant diminution or stagnation in the volume of animal production.

Given the main trends in the consumption of agricultural products per capita and production of main foodstuffs per capita in Moldova, the country's food sufficiency indicator can be also calculated, as the ratio of production to consumption of main agricultural products per capita.

The analysis of available data presents a significant decrease of this ratio in 2009 compared to 1995 for most food products except for cereals and potatoes.

As regards meat, one can mention that local production has not covered the population's consumption needs since 2000. A worrying trend can be noticed in milk production, which barely covers the consumers' needs. Despite the positive trends in the last two years, cereal production can be severely affected by drought, which can endanger the food security of the country (Figure 3).



Source: Authors' calculations based on data from NBS, 2010.

Figure 3. Ratio of *per capita* production to consumption in the main agricultural products, 1995–2009.

Recent events on the world cereal market create real concerns, mainly for the developing countries. World wheat prices have grown steadily since 2010. This increase was largely caused by the effects of devastating drought that hit large areas of Russia and the prohibitions imposed by the governments of Russia and Ukraine on grain exports to ensure the food security of these countries.

In these conditions, it is rational to protect the domestic markets from the price volatility on the international markets, but also from the massive exports of cereals into neighboring countries. Administrative methods were applied earlier in Moldova in the years 2004 and 2008. Restrictions for cereal exports imposed to food business operators from the Republic of Moldova permitted stabilization of the domestic cereal market and assured the country's food security.

The current situation has many similarities to that in the mentioned years, which confirms the opportunity of similar measures.

Arguments against these measures are mainly related to:

- Diminution of farmers' incomes, which took place in 2004 and 2008.
- Termination of contracts to supply grain and penalties imposed may affect the credibility of economic operators and the country's overall image.

Increasing food prices in neighboring countries results in increasing exports of these products from Moldova. Under these conditions, emergency measures are necessary to stabilize the domestic market in general and the cereal market in particular.

The negative effect of restrictive measures on cereal exports, which were taken in 2011, were diminished by the fact that their implementation period began in winter and will probably be relatively short, up to this year's harvest.

Diminishing country's vulnerability to risk factors and an integrated risk control can be promoted by applying a number of policies and carrying out certain actions: legal, economic, environmental, social, etc. A necessary step is the inclusion of measures of prevention, adaptation and mitigation of risks into all strategic documents on the development of Moldova's social and economic system.

Agriculture is one of the key driving forces in shaping Moldovan landscape, nature and culture over centuries. Favorable climate and high quality soils historically determined Moldova's agricultural specialization, particularly in the production of high value crops like fruits and vegetables. Agriculture contributed with 11.9% of the country's GDP in the year 2010, while about 28% of the active population of the country was employed in this sector. The status of the agricultural sector has changed dramatically over the last two decades along with the disruption of production and distribution networks. Land areas used for high value crops have been reduced by half. The shift in production has also been accompanied by a significant diminution of land productivity.

This situation is directly related to the lack of investments, capital and credit availability to the agricultural sector, which resulted in farmers' applying low yield technologies and drastically reducing their use of agricultural inputs, mainly fertilizers and other agricultural chemicals. The agricultural sector benefits from only 8.4% of capital investments, and the foreign investments in the Moldovan agriculture are even more modest, with only 1.5% of total investments in agriculture in 2009 [3].

The lack of labor opportunities in rural areas and small towns has generated a massive migration flow out of the countryside. The number of migrants in Moldova increased by about 50–60 thousand persons annually in the last years. Although the migration intensity has been stabilized in the last five years, however it remained at a high level (about 300,000 annually), which represents about ¼ of the economically active population.

The professional level of the rural population continues to decline, despite the high enough general educational level. Most of the population is characterized by weak professional adaptability and qualifications, and does not meet the requirements of the emerging labor markets.

The prestige of agricultural occupations has sharply diminished. Thus, the number of graduates of agricultural specialties was only 3% of the total number of specialists with higher university education. Agricultural colleges and vocational schools also reduced their activity.

The state policy in ensuring food security on medium and long term must be conducted in the following basic directions:

- Development of livestock sector and feed production.
- Implementation of advanced processing technologies for agricultural raw materials, storage and distribution of agro-food agricultural production.
- Improving market regulation mechanisms in agricultural and food products in order to reduce price distortions on these markets and improving market infrastructure.
- Reinforcement of the scientific potential and promotion of the innovation transfer in the agri-food sector.
- Improved training of the qualified personnel in the agri-food sector, including continuous training and retraining in order to assure the necessary level of food security.
- Development of protection against natural hazards in order to improve prevention and mitigation of the local soil erosion, landslide, flood and drought.
- Restoring the natural and ecological potential.

In addition to the implementation of policies that support farmers directly, it is important to apply measures that contribute to labor-intensive production and establish linkages with other sectors of economy. For this reason the following policy interventions could be considered.

- Supporting the creation of diversified jobs through local economic development, including SME development.
- Supporting public-private partnership programs with intensive use of rural labor force in order to address chronic problems related to food insecurity, unemployment and under-developed infrastructure.
- Strengthening the process of non-agricultural income generation, access to rural credit and development of market systems, such as information and infrastructure.

5. CONCLUSIONS

- In the agricultural sector, a stagnation tendency can be noticed both in crop and livestock production, as well as a growing vulnerability to natural and economic risks.

- The high level of poverty of the rural population places this social group among the most affected by food insecurity.
- There are a number of risks that could have a negative impact on food security of vulnerable groups in Moldova in the next years.
 - Increase of the agricultural productivity supported by state investments in rural infrastructure, science and agricultural extension, irrigation, and appropriate financial mechanisms could contribute to economic growth and poverty alleviation in rural areas.
 - It is important to assure the sustainability of the food security policies through their support by business, civil society and public administration.
 - Food security policies have to generate, starting with the implementation of initial stages, visible and benefic outcomes for population.

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