



Original Contribution

FOOD SELF-SUFFICIENCY: CONCEPTUAL FRAMEWORK, ESSENCE, STRUCTURE AND FUNCTIONS

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ABSTRACT

The aim of this study is to attempt to define the content of the concept of food self-sufficiency as a determining factor in the modern concept of food security. The following methods were applied: functional analysis, comparative analysis, and communicative approach. For the first time, the essence and qualitative characteristics of the fundamental concept in food studies – food self-sufficiency – are defined. The essence and functions of food self-sufficiency are clarified. In contemporary conditions, food self-sufficiency appears to be a basic factor for the sustainable development of any society, state, and nation. Revealing its role and significance is a topical problem of scientific-theoretical research not only in the field of food studies but also in the social sciences.

Keywords: food self-sufficiency, food studies, basic factors, structure and functions

INTRODUCTION

Food problems are increasingly becoming global issues (1). The creation of a sustainable food self-sufficiency system in modern Bulgaria, Europe, and other major regions of the world, one that responds to challenges and corresponds to the system of values, is among the priority targets of state and legal regulation. The need for radical transformations in the food self-sufficiency (FS) system of the Republic of Bulgaria is rooted in the understanding that food self-sufficiency is a fundamental factor for the sustainable development of Bulgarian society, state, and nation. Economic, political, scientific, technical, environmental, and informational factors are playing an ever more important role in relations between states. At the same time, in recent years there has been a clear retreat from developing a unified concept regarding food provision and from building a reliable system that ensures Bulgaria's food self-sufficiency. Developing a targeted state food policy is becoming increasingly necessary. There is a trend of decreasing food parameters in Bulgaria's development, which requires the

creation of long-term plans and programs not only at municipal and regional levels. This approach stems from the progressive transition from globalization to regionalization of food problems, often directly tied to the current food situation. In the context of multifaceted and dynamically evolving international relations, food security has not yet achieved notable effectiveness or efficiency.

METHODS

The use of the culturomic approach in the field of food self-sufficiency clarifies, systematizes, and organizes the components of socially significant collective activity in space based on contemporary culturomic knowledge. Applying this method in scientific research in the field of food studies, of which food self-sufficiency is a part, allows for a comprehensive examination of this complex phenomenon with the aim of implementing it in future strategies and measures in the increasingly relevant global issue related to food security.

The application of functional analysis allows the study of complex, systematically organized objects and finds wide application in the food security system, an extremely important phenomenon, of which food self-sufficiency is a critical component.

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A comparative analysis allows for an in-depth examination of the patterns and current trends in the field of food self-sufficiency.

The communicative approach involves clarifying the phenomenon of food self-sufficiency through the prism of the interweaving of sociological, anthropological, and cognitive factors.

DISCUSSION

The contemporary challenges facing humanity create new political and social risks and crises, whose essence and content need to be examined in their interconnection and regulation (2). The administrative reform carried out in the country did not lead to tangible positive changes in resolving accumulated food problems. Attention to this segment of state policy has noticeably weakened. Food security is an important element of national security and holds one of the key positions within its system. Nevertheless, it can be stated that there is still no systematic concept for state governance of the food sector. Food self-sufficiency is a complex economic and social category reflecting a country's or community's ability to meet its needs for food goods and services through its own internal production. In other words, it measures to what extent the population can be supplied with food products produced within the national economy, without critical dependence on imports. According to the Food and Agriculture Organization of the United Nations (FAO), "the concept of food self-sufficiency is understood as the degree to which a country can meet its food needs through its own domestic production." In this sense, food self-sufficiency is closely related to the notion of food independence – a state in which the country minimizes its external vulnerability and dependence regarding the supply of food goods and services.

The conceptual framework of food self-sufficiency encompasses several key aspects. On the one hand, it is a principle of self-provision, expressed in the national food system's aspiration to secure the necessary products primarily through local production. On the other hand, the concept carries a strong socio-economic dimension – it concerns the food rights of the population, the sustainability of the agricultural sector, rural development, and national security. Contemporary scientific interpretations recognize food self-sufficiency as a multidimensional phenomenon, which can

be viewed in different directions: as a guiding principle of policy; as a development goal (achieving a certain level of self-provision); as a research concept; and as the result of specific economic and political processes.

In essence, food self-sufficiency reflects the potential of the agri-food system – agriculture, livestock farming, food industry – to produce sufficient quantity and quality of food for the population. Structurally, the concept can be distinguished by levels of manifestation: household level (families' ability to produce or secure food themselves, e.g., via private farming), regional level (self-provision of a region or community), and national level (self-sufficiency of the state). In a broader context, there is also regional self-sufficiency (e.g., within the European Union as a common market). The structure of food self-sufficiency includes multiple components or subsystems: agricultural production (crop and livestock), processing and storage, distribution and markets, infrastructure (irrigation, warehouses, transport), resources (land, water, labor, technologies), etc. Each of these plays a role in the overall level of self-provision with food goods and services. From a functional perspective, food self-sufficiency performs several critical societal tasks. First, it has an economic function – by stimulating local production and reducing the need for imports, it improves the trade balance and supports local farmers and the food industry. Second, it has a social function – guaranteeing access to food goods and services for all social strata contributes to public welfare, poverty reduction, and inequality mitigation. Beltran-Pena et al. have proposed a self-sufficiency ratio to determine the ability of a certain country to meet the requirements and needs for producing and supplying its food resources. The calculations involved are based on the changes in diet, climate, agricultural intensive farming, and population growth over a year. The authors also emphasize three types of scenarios for the future of food self-sufficiency: sustainability, middle-of-the-road and business-as-usual where businesses and states apply different approaches to tackle the complex economic relationships in the 21st century. With respect to geographical location, the researchers emphasize the dependency of African and Middle Eastern countries on imports (3). The level of self-sufficiency is interconnected with security functions – a highly developed

domestic food potential protects the country from external shocks, such as international crises, trade wars, or conflicts disrupting food imports. Not surprisingly, food self-sufficiency is often considered an element of “food sovereignty” – the right of a state to determine its own food policy and protect its domestic market from unfavorable external influences.

Attitudes toward food self-sufficiency have gone through different stages. In the mid-20th century, many countries (including Bulgaria during centralized planning) sought a high degree of self-provision with food goods and services as part of their economic policy. With globalization and trade liberalization at the end of the 20th and early 21st centuries, the focus partly shifted toward trade-based approaches – it was considered more efficient to import cheaper foods than to produce everything domestically. However, global crises such as the 2007–2008 world food crisis, and later the COVID-19 pandemic (2020–2021), brought renewed attention to the importance of local production and self-sufficiency. With partial border closures (including in the Schengen Area), disrupted supply chains, and volatile global market prices, countries with stronger domestic agricultural sectors found it easier to feed their populations. Thus, many states announced strategies to increase their self-sufficiency – for example, Russia introduced food import substitution policies after 2014, while countries like Senegal and the Philippines set targets for self-provision at least regarding key products such as rice. China’s response to the challenges for its food security during and after the pandemic have increased the effort to place sustainability at the forefront of its strategic policy paradigm. It also attempted to reduce the level of poverty, utilize more resources to fight hunger and support producers in their overseas activity that would guarantee a more stable food supply (4). Climate extremities, such as drafts and floods in Kazakhstan in recent years have disrupted the predictability of food chain and food supply, inclining the country’s regional development towards a more heavily import dependent economy. These factors, together with the specifics of social unrest have contributed to a more problematic implementation of self-sufficient policies in the past four years (5). Bulgaria, as a country with favorable natural conditions, traditionally has the potential for high food self-sufficiency in many sectors.

Natural resources – fertile soils (including chernozems), suitable climate, water resources – allow for diverse crop production and animal husbandry. In the past (e.g., the 1980s), Bulgaria was a major exporter of certain foods (grain, tobacco, fruits and vegetables, canned goods, etc.). After the transition to a market economy, structural changes occurred – part of the production capacities were lost, rural areas faced depopulation, and dependence on imports increased for some products. In the modern geopolitical context, clarifying the essence, structure, and functions of food self-sufficiency for Bulgaria is particularly important to ensure national security and sustainable development. The pandemic and military conflicts (e.g., the Ukraine crisis in 2022) demonstrated that each EU member state must assess its critical dependencies in food production and work to reduce them.

In scientific literature, food self-sufficiency is also considered as a system of principles characterizing a „self-sufficient model“ of food economy. For example, the following leading ideas can be identified: (1) Food self-determination – the process through which the nation recognizes its opportunities and goals in the global food system and chooses its optimal role; (2) Food self-awareness – creating public understanding of the importance of local production and responsible consumption; (3) Self-organization of the food system – encouraging cooperatives, producer organizations, and local supply chains to strengthen the domestic market; (4) Food self-control – the ability of the state and society to monitor and regulate processes in the food sector (e.g., quality control, reserve management, preventing speculation); (5) Food self-significance – recognizing that food security and self-sufficiency are of paramount importance for national policy and economy. These principles outline the value and ideological foundation of the modern concept of food self-sufficiency.

RESULTS

The essence and qualitative characteristics of the fundamental concept in food studies – food self-sufficiency – have been defined. The essence and functions of food self-sufficiency, necessary for undertaking current and holistic measures and strategies that respond to contemporary food challenges and the need to transition to sustainable development, have

been clarified. In the context of increasing anthropogenic impacts on the natural environment, issues of ensuring food self-sufficiency acquire strategic significance for the economy, security, demographic crisis, and social sphere.

The results obtained can be useful for forming a contemporary organizational model for the effective and efficient management of food risks and for improving the food mechanisms both at the regional and national levels, as well as for developing a model for integrating the food, economic, and management aspects in the formulation of a long-term strategy for sustainable development of the food self-sufficiency system.

The results of the study can be successfully used by state and municipal authorities in the development of food programs, as well as in the educational process of university programs with a food profile. The proposed methodological approaches have practical applicability and can serve as a good basis for improving municipal, regional, and national food management systems.

This study in the field of 'food self-sufficiency' can serve as an opportunity for a wide range of scientific research and reflects the most modern understanding of the fundamental importance and role of food self-sufficiency for the sustainable development of any society, state, and nation. It not only raises questions related

to the global significance of a food crisis but also provides specific and beneficial solutions for addressing it.

CONCLUSION

Food self-sufficiency represents a strategic goal and measure of a nation's resilience. It synthesizes economic, social, ecological, and even cultural dimensions – from production and distribution of resources to consumption habits of the population.

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