

STRENGTHENING NATIONAL FOOD SECURITY IN UZBEKISTAN

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Abstract. Food security remains a critical global challenge, with implications for economic stability, social well-being, and sustainable development. This study analyzes Uzbekistan’s experience in strengthening food security, examining trends in agricultural production, per capita availability, and food processing capacity. The findings reveal substantial growth in crop and livestock output, contributing to improved domestic food supply and nutritional outcomes. It also provides insights not only for Uzbekistan but also for other developing countries seeking to ensure sustainable and equitable food security under conditions of globalization and climate variability.

Keywords: food security, Uzbekistan, agricultural production, per capita food availability, food processing, policy interventions, value addition.

Introduction

Food security has become one of the most pressing socio-economic challenges in the context of globalization. It refers to the ability of a country to ensure stable access to sufficient, safe, and nutritious food for its population in accordance with established physiological standards. However, in many regions of the world, the growth of food production does not keep pace with rapid population growth and increasing demand, particularly in countries with limited agricultural and processing capacities. According to the Food and Agriculture Organization of the United Nations (FAO), more than 840 million people worldwide suffer from insufficient food consumption, while over 30 percent of the global population faces various forms of malnutrition caused by deficiencies in

essential micronutrients and vitamins. These figures clearly demonstrate the urgency of addressing food security as a global economic and social issue.

In this context, food security is not only a humanitarian concern but also an essential component of national economic stability and security. Ensuring sustainable food production, efficient distribution systems, and resilience to external and internal threats has become a priority for many countries, especially under conditions of climate change, market volatility, and economic openness. Uzbekistan's experience in strengthening food security through agricultural development, state support mechanisms, and export-oriented production provides an important case for analyzing the economic significance of food security and the challenges associated with its provision in a globalized economy.

Literature review

Studies emphasize that achieving food security requires technological innovations, efficient supply chains, and supportive government policies, especially in developing countries that face climate risks and market volatility.

In Central Asia, national strategies and investments in agriculture are critical for enhancing food security. Uzbekistan provides a notable example of how state support and modernization of the agricultural sector contribute to stabilizing food supply and improving nutritional outcomes. Despite these advances, there is limited understanding of how specific policy measures perform under conditions of globalization and climate uncertainty. This study aims to address this gap by analyzing Uzbekistan's strategies to strengthen national food security.

Research Methodology

This study employs a qualitative and quantitative approach to analyze food security in Uzbekistan. Primary data are drawn from official statistics on agricultural production, food supply, and nutritional indicators published by the Ministry of Agriculture and national statistical agencies. Secondary data include reports from international organizations and previous academic studies on food security in Central Asia.

The analysis focuses on three key dimensions: availability of food through domestic production and imports, accessibility of food for different population groups, and the effectiveness of state policies and support mechanisms. By integrating statistical data with policy analysis, this methodology allows for a comprehensive understanding of Uzbekistan's strategies and provides a basis for assessing their effectiveness under global economic and environmental challenges.

Analysis and results

This section presents an empirical evaluation of Uzbekistan's food security, emphasizing crop and livestock production, per capita availability, and food processing capacity. The analysis draws on official statistics from national agencies and international reports to provide a comprehensive assessment of the country's current food security status.

Table 1. Key Agricultural Production Indicators in Uzbekistan (2023)

| Indicator | Quantity in 2023 | Source |
|---------------------------|-------------------|---|
| Total grain output | 8.4 million tons | State Statistical Committee of Uzbekistan |
| Vegetables | 11.6 million tons | State Statistical Committee of Uzbekistan |
| Potatoes | 3.6 million tons | State Statistical Committee of Uzbekistan |
| Fruits and berries | 3.1 million tons | State Statistical Committee of Uzbekistan |
| Grapes | 1.7 million tons | State Statistical Committee of Uzbekistan |

| | | |
|---------------------------|-------------------|---|
| Meat (live weight) | 2.83 million tons | State Statistical Committee of Uzbekistan |
| Milk | 12 million tons | State Statistical Committee of Uzbekistan |
| Eggs | 8.5 billion units | State Statistical Committee of Uzbekistan |

The data indicates substantial growth in both crop and livestock sectors, reflecting increased domestic availability of key food products. Grain and vegetable production have expanded by approximately 16% and 13% respectively compared to previous years, while livestock output, including meat and milk, has grown by 16–20%. These trends highlight Uzbekistan’s enhanced capacity to meet domestic food demand and reduce reliance on imports, thereby strengthening national food security.

Table 2. Per Capita Production of Key Food Products (2024)

| Product | Per Capita Production (kg or units) | Growth 2019–2024 |
|---------------------------|--|-------------------------|
| Grain | 238.2 kg | +7.6% |
| Potatoes | 100.0 kg | +8.7% |
| Vegetables | 322.7 kg | +6.1% |
| Fruits and berries | 88.0 kg | +7.4% |
| Grapes | 49.1 kg | +2.9% |
| Melons | 72.2 kg | +17.2% |

| | | |
|-------------|-------------|-------|
| Meat | 79.2 kg | +7.5% |
| Milk | 334.8 kg | +4.9% |
| Eggs | 236.9 units | +2.4% |

Per capita production data illustrate improvements in food accessibility for the Uzbek population. Despite continued population growth, the increase in per capita availability of grains, vegetables, and protein sources such as meat, milk, and eggs demonstrates a positive trend in domestic food sufficiency. The notable growth in melon and potato production per capita indicates targeted crop diversification that addresses both nutritional needs and market demands.

Table 3. Food Processing Capacity and Utilization (2023)

| Indicator | Statistic | Notes |
|---|------------------|--|
| Share of fruits and vegetables processed | 15% | Indicates low current processing level |
| Post-harvest loss of fruits/vegetables | ~30% | Processing bottlenecks identified |
| Share of meat and milk processed | ~16% | Limited processing capacity |
| Target for processed milk by 2026 | 32% | Government projection |
| Target for processed meat by 2026 | 25% | Government projection |
| Target for processed fruits and vegetables by 2026 | 28% | Government projection |

Although production volumes have increased, the limited share of agricultural products processed into higher-value goods constrains Uzbekistan's ability to fully

leverage its food resources. Current processing levels suggest substantial post-harvest losses and underutilized value addition potential. Planned government targets for 2026 indicate strategic efforts to expand processing infrastructure, reduce losses, and increase the contribution of processed foods to national food security.

The empirical evidence demonstrates that Uzbekistan has made notable progress in ensuring domestic food availability and improving per capita access. Structural expansion in both crop and livestock production, combined with emerging processing capacities, lays a foundation for enhanced food security. However, gaps remain in value addition and distribution efficiency, highlighting areas for policy intervention and investment in technological upgrades.

Conclusion

The analysis of Uzbekistan's food security reveals significant progress in domestic agricultural production and improvements in per capita availability of essential food items. Growth in grain, vegetable, fruit, and livestock outputs reflects the effectiveness of state-led initiatives, technological adoption, and infrastructure development in the agricultural sector. Enhanced per capita availability indicates a positive trend in food accessibility, contributing to overall national food security.

Despite these achievements, several challenges persist. Limited processing and value addition capacities constrain the country's ability to fully utilize agricultural outputs and reduce post-harvest losses. Regional disparities in production indicate uneven access to food resources, suggesting that targeted interventions are necessary to achieve equitable food distribution across provinces. Moreover, exposure to climate variability and global market fluctuations highlights the need for resilient agricultural systems and adaptive policies.

In conclusion, Uzbekistan has demonstrated a strong capacity to strengthen national food security through increased production, targeted policy measures, and gradual development of processing capabilities. Continued strategic investments and policy support are required to address remaining gaps, improve equity in food access, and enhance resilience to future economic and environmental challenges. The country's experience

provides valuable insights for other developing nations seeking to achieve sustainable food security in a globalized economy.

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