

# **ASSESSING THE ECONOMIC DEVELOPMENT OF THE FOOD INDUSTRY: TRENDS, INDICATORS AND IMPLICATIONS WITH EVIDENCE FROM UZBEKISTAN**

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## **Abstract**

This paper assesses the economic development of the food industry by analysing key indicators such as production volume, value added, export performance and processing capacity. The study employs descriptive statistical analysis of national time-series data, complemented by processing-capacity indicators. The findings show that while Uzbekistan's food industry is expanding rapidly, it faces structural bottlenecks in processing, value addition and export diversification. Policy implications include strengthening processing infrastructure, improving value chains, boosting technology adoption and targeting higher-value exports.

**Key words:** Food industry; economic development; industrial output; investment; fixed assets; per capita production; Uzbekistan; sustainable growth.

## **INTRODUCTION**

The food industry is one of the most important sectors of the national economy, directly influencing food security, employment, and overall economic growth. In Uzbekistan, this sector has been developing steadily over the past decade as a result of industrial modernization, increased investment, and supportive government policies. In the context of global economic changes, the development of the food industry has become a key factor in ensuring sustainable growth and improving the quality of life. Modernization of production, effective resource use, and innovation in processing technologies are now among the main priorities for the country's industrial policy. In fact, in his address at the Fourth Consultative Meeting of the Heads of State of Central Asia, President Sh. Mirziyoyev stressed that "the potential of our states allows us to consistently provide the domestic markets with grain crops, livestock, fruit and vegetables, basic foodstuffs, as well as the necessary fertilizers."

In recent years, Uzbekistan has paid special attention to improving the efficiency and competitiveness of its food industry. Continuous growth in production volumes, the expansion of export potential, and the attraction of investment resources have become the main indicators of progress in this field. This study aims to evaluate the economic development of Uzbekistan's food industry for the period 2010–2023 based on statistical data. The analysis focuses on indicators such as industrial output, investment, fixed assets, and per capita production. The results will help to identify major development trends and propose directions for further improvement of the sector's performance.

### **Literature review**

The economic development of the food industry has been widely discussed in both international and national research. According to FAO (Food and Agriculture Organization) and UNIDO (United Nations Industrial Development Organization) reports, the food industry serves as one of the leading drivers of industrial growth and agricultural modernization in developing countries. Scholars such as *Porter (1990)* and *Rodrik (2004)* emphasize that industrial competitiveness in the food sector depends on innovation, investment efficiency, and government support policies. In the context of transition economies, several studies (*Gorton et al., 2013; Lerman, 2017*) have analyzed the restructuring of the agri-food sector and its contribution to GDP growth. These works highlight the importance of technological renewal, value chain integration, and regional specialization in improving the efficiency of the food industry.

In Uzbekistan, recent research on industrial policy and food sector development (*Rasulov, 2020; Turaeva, 2022; Karimov, 2023*) shows that the modernization of the processing industry and the increase of production capacities have significantly influenced the dynamics of economic indicators. However, most of these studies focus on general industrial development and do not provide a detailed statistical evaluation of the food industry's specific contribution to the economy. Therefore, this study aims to fill this analytical gap by conducting a comprehensive statistical assessment of the economic performance of Uzbekistan's food industry. By analyzing trends in output, investment, fixed assets, and employment, the research seeks to

identify key development patterns and propose data-driven recommendations for sustainable growth.

### **Research Methodology**

This research is based on official statistical data of the Republic of Uzbekistan for the period 2010–2023. The data were obtained from the publications of the State Committee on Statistics and include key indicators of industrial and food sector performance. The analysis focuses on three main data sets that characterize the economic development of the food industry.

The first dataset presents the main indicators of the industrial sector, including total investments, fixed assets, and employment in the food industry compared with the overall manufacturing and industrial sectors. The second dataset shows the volume of industrial output, highlighting the share of the food industry within the total and manufacturing output.

The third dataset provides data on industrial output per capita, which allows for evaluating productivity and living standards related to the food industry. The study employs a comparative and trend analysis approach to assess changes over time. Descriptive statistics such as growth rates, structural proportions, and dynamics are calculated to identify the main tendencies of industrial and food sector development.

### **Results and Discussion**

The analysis of statistical data for the period 2010–2023 clearly demonstrates the steady development of Uzbekistan's industrial sector, particularly the food industry. During this period, the country experienced consistent growth in industrial output, investment, and employment, reflecting the positive impact of industrial modernization policies.

According to the data (Table 1), total industrial production in Uzbekistan increased from 38.1 trillion UZS in 2010 to 655.8 trillion UZS in 2023, representing a growth of more than 17 times. Within this structure, the manufacturing industry accounted for the largest share, rising from 28.7 trillion UZS to 553.3 trillion UZS. The food industry, as a key component of manufacturing, showed remarkable growth — from 5.5 trillion UZS in 2010 to 65.1 trillion UZS in 2023, or almost 12-fold increase.

This upward trend highlights the food industry's strengthening role in the national economy. The expansion of domestic demand, the introduction of modern technologies, and growing export potential have contributed to the steady rise in production volumes.

**1. Main indicators of the industrial sector by type of economic activity, (mlrd. sum)**

| Years       | Volume of investments,<br>mlrd. sum |                               |                      | Fixed assets,<br>mlrd. sum |                  | Number of employed,<br>thousand people |                               |                   |
|-------------|-------------------------------------|-------------------------------|----------------------|----------------------------|------------------|----------------------------------------|-------------------------------|-------------------|
|             | Total<br>industr<br>y               | Manufactu<br>ring<br>industry | Food<br>industr<br>y | Total<br>industr<br>y      | Food<br>industry | Total<br>industry                      | Manufactu<br>ring<br>industry | Total<br>industry |
| <b>2010</b> | 4859,2                              | 2334,9                        | 225,3                | 25454,1                    | 1748,3           | 1605,7                                 | 1339,1                        | 84,8              |
| <b>2011</b> | 6214,1                              | 3016,4                        | 330,9                | 31090,7                    | 2105,7           | 1640,7                                 | 1365,9                        | 84,9              |
| <b>2012</b> | 8080,7                              | 3714,7                        | 372,9                | 38718,1                    | 2458,1           | 1669,5                                 | 1393,7                        | 85,4              |
| <b>2013</b> | 10368,0                             | 4082,0                        | 469,9                | 48608,9                    | 2986,7           | 1703,1                                 | 1423,4                        | 85,4              |
| <b>2014</b> | 13874,9                             | 4780,7                        | 618,3                | 58961,6                    | 3654,2           | 1736,5                                 | 1448,2                        | 81,8              |
| <b>2015</b> | 17738,4                             | 5346,2                        | 622,8                | 68185,6                    | 4562,8           | 1768,7                                 | 1476,2                        | 84,4              |
| <b>2016</b> | 19605,5                             | 8992,1                        | 651,8                | 94809,8                    | 6465,9           | 1802,4                                 | 1507,7                        | 89,1              |
| <b>2017</b> | 32877,7                             | 12238,1                       | 1181,3               | 115516,5                   | 8954,6           | 1826,8                                 | 1599,9                        | 91,4              |
| <b>2018</b> | 59821,6                             | 25741,2                       | 2685,5               | 169675,4                   | 11230,4          | 1802,9                                 | 1598,3                        | 95,6              |
| <b>2019</b> | 96065,3                             | 50990,2                       | 3729,0               | 221267,5                   | 12895,2          | 1821,5                                 | 1612,9                        | 106,8             |
| <b>2020</b> | 94178,9                             | 55943,3                       | 4472,8               | 282254,0                   | 14988,3          | 1809,5                                 | 1597,7                        | 113,9             |
| <b>2021</b> | 98516,5                             | 52427,8                       | 4932,0               | 354306,3                   | 16958,6          | 1883,3                                 | 1659,2                        | 111,2             |

|             |          |          |        |          |         |        |        |       |
|-------------|----------|----------|--------|----------|---------|--------|--------|-------|
| <b>2022</b> | 117317,9 | 67818,3  | 4202,6 | 420348,6 | 18935,2 | 1810,6 | 1630,1 | 110,5 |
| <b>2023</b> | 187818,7 | 100639,8 | 6522,9 | 479885,9 | 20911,8 | 1828,8 | 1648,4 | 111,6 |

The dynamics of investment and fixed assets (Table 2) indicate active capital inflows into the industrial sector. Investments in the food industry grew from 225.3 billion UZS in 2010 to 6,522.9 billion UZS in 2023, while total industrial investments increased almost 39 times. Similarly, fixed assets in the food sector expanded from 1,748.3 billion UZS to 20,911.8 billion UZS over the same period, showing the effects of modernization and re-equipment projects.

The number of employees in the food industry remained relatively stable, fluctuating between 84.8 thousand and 111.6 thousand, which suggests a gradual increase in labor productivity and automation in production. Thus, output growth has been achieved not by expanding employment but through efficiency gains and technological renewal.

## 2. Industrial output by type of economic activity, (mlrd. sum)

| <b>Year</b> | <b>Total Industrial products</b> | <b>Of which, Manufacturing Industry products</b> | <b>Including, Food industry products</b> |
|-------------|----------------------------------|--------------------------------------------------|------------------------------------------|
| <b>2010</b> | 38119,0                          | 28742,8                                          | 5521,5                                   |
| <b>2011</b> | 47587,1                          | 37295,3                                          | 7305,8                                   |
| <b>2012</b> | 57552,5                          | 44347,0                                          | 8610,6                                   |
| <b>2013</b> | 70634,8                          | 56068,7                                          | 11373,7                                  |
| <b>2014</b> | 84011,6                          | 68225,7                                          | 14387,2                                  |
| <b>2015</b> | 97598,2                          | 78492,3                                          | 18511,6                                  |
| <b>2016</b> | 111869,4                         | 91483,0                                          | 22400,5                                  |
| <b>2017</b> | 148816,0                         | 120686,9                                         | 23217,7                                  |
| <b>2018</b> | 235340,7                         | 189642,6                                         | 25256,0                                  |
| <b>2019</b> | 322535,8                         | 254860,9                                         | 35337,3                                  |

|             |          |          |         |
|-------------|----------|----------|---------|
| <b>2020</b> | 368740,2 | 305928,6 | 42314,9 |
| <b>2021</b> | 456056,1 | 378186,4 | 48643,3 |
| <b>2022</b> | 553265,0 | 460491,8 | 57547,3 |
| <b>2023</b> | 655821,9 | 553333,4 | 65174,7 |

The analysis of per capita industrial output (Table 3) also confirms the overall positive dynamics. The volume of total industrial production per person rose from 1.3 million UZS in 2010 to 17.8 million UZS in 2023, while per capita food industry output increased from 189.6 thousand UZS to 1.77 million UZS. This growth reflects the increase in production capacity, improved productivity, and rising living standards in the country. The pace of growth in per capita food production is particularly noteworthy, as it demonstrates that the food sector has developed faster than population growth, ensuring greater food availability and economic resilience.

The statistical evidence shows that Uzbekistan's food industry has become one of the most dynamically developing branches of the national economy. The rise in investments and production capacity indicates a strong government focus on industrial diversification and food security. However, despite the positive trends, several challenges remain — including the need for deeper processing, expansion of export-oriented products, and the introduction of energy-efficient technologies.

### **3. Per capita industrial output by type of economic activity, (thousand sum)**

| Years | Permanent population | Per capita (thousand soums) |                                 |                        |
|-------|----------------------|-----------------------------|---------------------------------|------------------------|
|       |                      | Total industrial products   | Manufacturing industry products | Food industry products |
| 2010  | 29123,4              | 1 308,9                     | 1334,6                          | 189,6                  |
| 2011  | 29555,4              | 1 610,1                     | 1622,0                          | 247,2                  |
| 2012  | 29993,5              | 1 918,8                     | 1933,0                          | 287,1                  |
| 2013  | 30492,8              | 2 316,4                     | 2335,6                          | 373,0                  |
| 2014  | 31022,5              | 2 708,1                     | 2731,4                          | 463,8                  |
| 2015  | 31575,3              | 3 091,0                     | 3118,3                          | 586,3                  |

|      |         |          |         |         |
|------|---------|----------|---------|---------|
| 2016 | 32120,5 | 3 482,8  | 3512,6  | 697,4   |
| 2017 | 32656,7 | 4 557,0  | 4594,7  | 711,0   |
| 2018 | 33255,5 | 7 076,7  | 7141,0  | 759,5   |
| 2019 | 33905,2 | 9 512,9  | 9604,9  | 1 042,2 |
| 2020 | 34558,9 | 10 669,9 | 10771,8 | 1 224,4 |
| 2021 | 35271,3 | 12 929,9 | 13061,9 | 1 379,1 |
| 2022 | 36024,9 | 15 357,8 | 15520,2 | 1 597,4 |
| 2023 | 36799,8 | 17 821,3 | 16248,7 | 1 771,1 |

The study confirms that the development of the food industry is closely linked to investment policy, technological innovation, and effective resource management. Strengthening the integration between agricultural producers and food processors, improving logistics and storage infrastructure, and expanding access to financial resources are key priorities for ensuring sustainable and inclusive growth in the coming years.

## Conclusion

The conducted analysis clearly shows that the food industry of Uzbekistan has undergone significant positive changes during the period 2010–2023. The steady growth of industrial output, increasing investment volumes, and modernization of fixed assets have contributed to the transformation of this sector into one of the key drivers of national economic development. The data indicate that production in the food industry increased more than twelvefold, while investments and fixed assets showed even faster growth rates. Despite relatively stable employment figures, production efficiency and labor productivity have improved substantially due to technological renewal and capital-intensive development. Per capita production indicators demonstrate that the growth of the food sector has outpaced population growth, ensuring improved food security and a higher standard of living. These results confirm the effectiveness of government measures aimed at supporting industrial modernization and diversifying production.

However, for sustainable future development, it is essential to strengthen innovation-driven growth, encourage deeper processing of agricultural raw materials, and improve export competitiveness. In addition, expanding access to investment resources, promoting environmentally friendly technologies, and enhancing cooperation between producers and processors will further increase the sector's contribution to economic growth. In summary, the food industry has become a vital component of Uzbekistan's industrial structure. Continued policy support, innovation, and investment will be key factors in ensuring its sustainable and inclusive development in the coming years.

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