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## THE IMPORTANCE OF FOOD INDUSTRY DEVELOPMENT AND INVESTMENT IN ECONOMETRIC MODELING

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### Abstract:

The article, an assessment of the development of the food industry in the Kashkadarya region on the basis of trending models makes it possible to compare the links between the elements of several sets. It provides for the construction of trend models of timed series on processes, the determination of quantitative solutions of connections between economic phenomena and processes through correlation coefficients, the assessment and forecasting of food industry development processes through trend models.

**Keywords:** regression model, predictive value, trend model, financial mechanisms of investments, domestic investments, accelerator model, limited inclination to capital, capital efficiency, effective use of domestic investments.

### Introduction:

At the same time, as in the case of other land plots, in this case, in the case of land plots, in this case-with land plots. Currently, the country is experiencing economic growth, abundant provision for the population, social protection of the population, and the need for more products to provide for the population. In order to solve this problem, it is necessary to develop, modernize and diversify the business sector in order to attract several interested investors.

In this regard, it is important to ensure that the functions set out in the laws and regulations adopted in our country are implemented in accordance with the goals of the organization. In particular, in accordance with the decree of the President of the Republic of Uzbekistan Shavkat Mirziyoyev dated January 28, 2022, ?? ... implementing the Roadmap for filling the domestic market with food products and ensuring price stability. It is stipulated to take into account the following measures in the cross-sectional area: reduction of reserves of food products and restrictions on



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intervention in the internal market; restoration of prices of the main types of food products, formation of reserves and exploitation of profit-making rules (intervention in consumer markets).

### **Method:**

In analyzing the factors affecting the revitalization of the food industry, the main attention of foreign scientists is focused on its large mesons. In addition, the British economist P. Krugman in his study identified the mesons that describe the degree of national competitiveness in the country. At the same time, a number of studies on the improvement of productivity and competitiveness of people with the help of econometric models have been carried out by scientists of the MDH G.L.Azoev, A.P.Chelenkov, R.A.Fathutdinov and others. In addition to operating in the country, enterprises can be competitive in terms of profitability, output, and personnel.

In manufacturing enterprises, especially in the food industry, there is an interdependent relationship between the competitive performance of the food industry enterprise and the competitive performance of food products. There are various approaches to ensuring the competitiveness of products in food industry enterprises, but there is no definite definition in the classification of the competitiveness of products.

During the investigations, H.A.Faschiyev praised the fact that a competitive product should be superior to similar analogues at a price that satisfies the consumer, while N.V.Yeremeyeva and S.L.Kalachev in their research work considered that the complex characteristics of product competitiveness, the quality of products, consumer prices, the effectiveness of the marketing and production activities of the construction enterprise, the reaction of the consumer to the product mix and the activities of the construction enterprise are necessary.

H.P.Abulkosimov and T.S.Rasulov expressed the view that the ways of ensuring food security in Uzbekistan reflect the fact that food security reflects the ability to provide the country's population with food products in a balanced and independent manner. These problems are caused by the fact that there is a shortage of recycling plants, their main operating funds are not very old, and the recycling plants are not well organized within the borders of the republic.



## Results:

In the Kashkadaryo region, which is the object of our research, the impact of factors on the processing of food products has been considered. As a result of this, the forecast factors for the production of products from the food industry in the Kashkadaryo region were clarified, while the forecast values of the production factors were implemented on the basis of various econometric models.

For the implementation of this analysis, the data of the statistical administration of Kashkadaryo region were used.

As important factors affecting the processing of food products in Kashkadarya region (Y), the number of employees in the food industry ( $X^1$ ), the number of investments in the processing of food products ( $X^2$ ) and the number of legal entities in the processing of food products ( $X^3$ ) will be selected.

Use of data from 2010-2023 for analysis.

Based on the data of the statistical administration of Kashkadaryo region, the following table 3.1.1 has been formulated.

## Statistical data on the output of food processing and factors affecting it in Kashkadaryo region (in nominal prices)

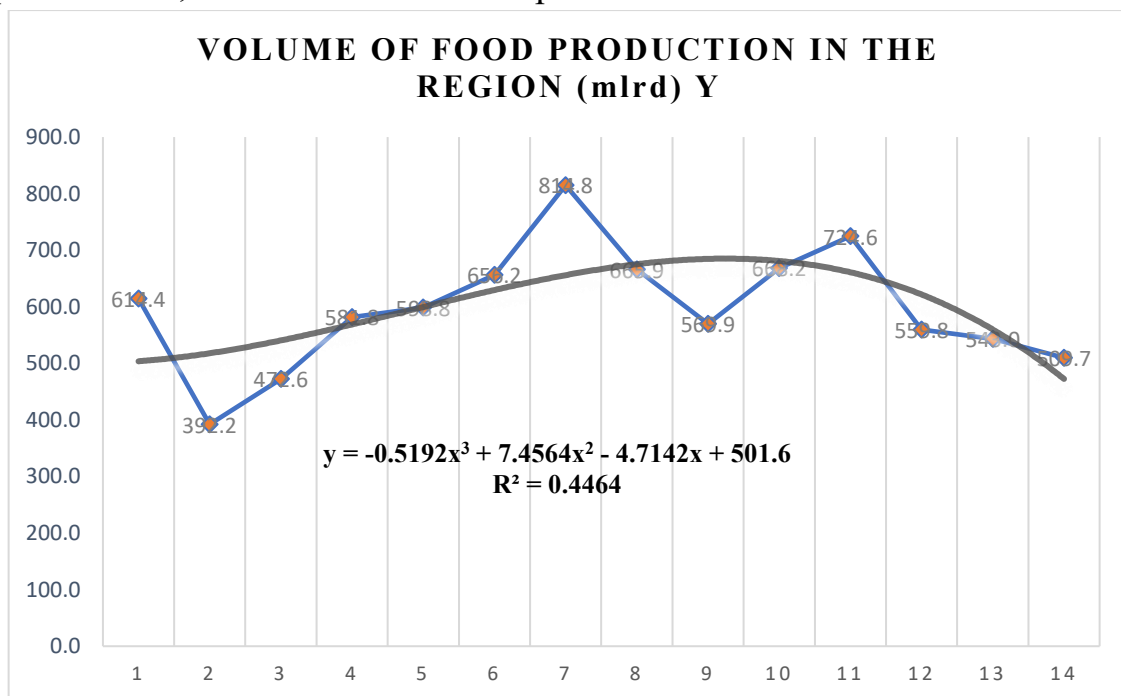
**Table 1.**

years	Export volume of processed food products in the region (mlrd) Y	Banded workers in the food industry (thousand people) $X^1$	Investments in processing and export of food products (in billions of dollars) $X^2$	Legal entities engaged in the processing of food products
2010	614,4	24,6	1,2	2,7
2011	476,9	36,6	2,1	3,0
2012	663,6	57,6	1,1	3,1
2013	914,6	76,8	2,4	3,4
2014	1073,1	88,6	6,7	3,5
2015	1299,0	92,1	2,9	3,6
2016	1757,5	95,0	6,5	3,9
2017	1710,8	96,1	7,0	3,9
2018	1858,0	102,2	8,7	4,2
2019	2566,5	103,4	21,5	4,5
2020	3101,1	104,1	42,7	4,6
2021	2720,6	103,2	43,0	4,6
2022	3032,6	107,8	50,3	4,2
2023	3194,7	108,9	53,8	4,9

The data provided,

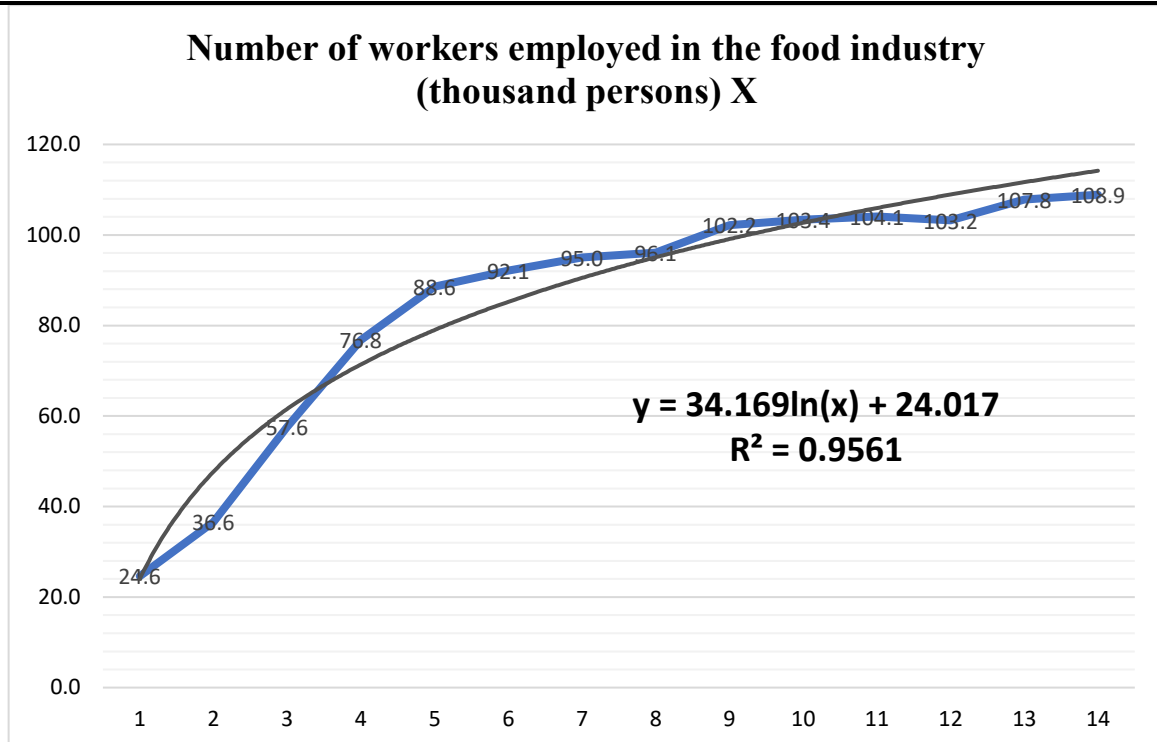
Processing of food products in Kashkadaryo region (Y) and the investments made in processing of food products (X<sup>2</sup>) are considered cost-nominal factors and ensure that the conclusions of direct benefit from them are not justified with that in mind, let's take a look at the real cost of a projector.

Based on the data of Table 3.1.1 of the Dashboard, the processing of food products in the Kashkadaryo region will be carried out according to the maximum (Y), i.e. trend model in the process of modeling, the most widely used method for selecting a model that matches the performance characteristics of the participants is the graphic method, which has been developed and used.



### 3.1.1 - Export of processed food products in Kashkadaryo region

The regression tensor at  $y = -0.5192x^3 + 7.4564x^2 - 4.7142x + 501.6$  was analyzed by applying the given analysis to all mesons.



### 3.1.2 - Businessmen in the food industry of Kashkadaryo region are trend models

The labor force, which is an important factor in the production of goods, makes it possible to determine the current production, the forecast prices, the level of demand for the labor resources needed in the future, and the possibilities for the future supply of the population.

A wide range of investment projects can be implemented in the Celtic schedule of Kurishimiz. This is because there is an exponential deviation in the model, but there is no coefficient of determination in the model, and the model is limited.

The fact that the results for all the mesons are in the required degree gives us the regression equation  $y = -0.0042x^3 + 0.1509x^2 - 0.7622x + 2.2729$ .





### **Discussion:**

It was found that in the Kashkadaryo region, the number of food industry employees increased by 1 percent, the total output of food processing in the region increased by 0.259 percent, and the cost of investments in food processing increased by 1 percent, the total output of food industry employees increased by 0.835 percent.

It was clarified that the number of employees in the food industry in Kashkadaryo region will increase to 1.22 in 2025 compared to 2023 and to 2.07 in 2029.

It is predicted that the volume of investments in the processing of food products in Kashkadaryo region will increase to 1.30 in 2025 compared to 2023, to 2.11 in 2029 and that of legal entities engaged in the processing of food products will increase to 0.93 in 2025 compared to 2023 and to 1.28 in 2029.

The growth rate of the flow of foreign direct investment and loans has also strengthened in projects of territorial importance, the total volume of which in 2019 amounted to 4.8 billion dollars (of which in fixed capital – 4.2 billion dollars), increasing 4 times compared to the corresponding period of 2018 and 24 times compared to 2017. With the participation of foreign capital alone, 167 projects with a total cost of 858.5 million dollars were put into use in the regions.

As an important factor affecting the revitalization of the food industry in the Kashkadarya region, i.e. the increase in the quantity of products produced from the harvest, the workers in the food industry will be considered

In addition to the results of the developed model, the increase of one percent by the workers in the food industry in the Kashkadaryo region will help to increase the volume of processing food products in the Kashkadaryo region by 0.107 percent.

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Название статьи	Оценка развития пищевой промышленности на основе эконометрических моделей	Assessment of the development of the food industry on the basis of econometric models
Аннотация	В статье дана оценка развития пищевой промышленности в Кашкадарьинской области на основе трендовых моделей, позволяющих сравнить связи между элементами нескольких наборов. Он предусматривает построение трендовых моделей временных рядов по процессам, определение количественных решений связей между экономическими явлениями и процессами с помощью коэффициентов корреляции, оценку и прогнозирование процессов развития пищевой промышленности с помощью трендовых моделей.	The article, an assessment of the development of the food industry in the Kashkadarya region on the basis of trending models makes it possible to compare the links between the elements of several sets. It provides for the construction of trend models of timed series on processes, the determination of quantitative solutions of connections between economic phenomena and processes through correlation coefficients, the assessment and forecasting of food industry development processes through trend models.
Ключевые слова	регрессионная модель, прогностическая ценность, трендовая модель, финансовые механизмы инвестиций, внутренние инвестиции, акселерационная модель, ограниченная склонность к капиталу, эффективность использования капитала, эффективное использование внутренних инвестиций	egression model, predictive value, trend model, financial mechanisms of investments, domestic investments, accelerator model, limited inclination to capital, capital efficiency, effective use of domestic investments