

## **Analysis of the Development Indicators of the Economy and Agro-Industrial Complex of the Republic of Karakalpakstan**

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**ABSTRACT:** This article analyzes the recent development indicators of the economy and agro-industrial complex of the Republic of Karakalpakstan. It examines the region's economic potential, the effectiveness of reforms in the agricultural sector, and the impact of implemented investment projects. The structure of the agro-industrial complex, production volumes, export potential, and its influence on employment levels are also thoroughly explored. The article identifies existing problems and proposes solutions for their elimination. Based on analytical approaches, key strategic directions for ensuring sustainable economic development in Karakalpakstan are outlined. Furthermore, practical recommendations are provided to improve regional economic policies and support sustainable rural development. The study concludes by identifying strategic priorities for fostering long-term, inclusive growth in Karakalpakstan's economy.

**KEYWORDS:** agriculture, export and import of products, industrial sector resources, efficiency.

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### **INTRODUCTION**

Clarifying the concepts related to the development of the agro-industrial complex enables a theoretical analysis of managerial decision-making in agricultural economics and its organizational and economic impact. In the current period, the management system of the agro-industrial complex faces the tasks of improving business processes that ensure competitiveness and sustainability, as well as developing regional-economic systems. Therefore, identifying the main directions that ensure the regional and economic development of the agro-industrial sector has become a pressing issue. This, in turn, serves to ensure development aligned with modern regional and sectoral prospects.

As a territorial unit of the Republic of Uzbekistan, the Republic of Karakalpakstan is home to various agricultural entities, including farms, household (subsidiary) plots, and enterprises engaged in agricultural activities. Agriculture is viewed not only as a source for meeting the population's food demands and supplying raw materials for processing industries, but also as a promising sector for increasing the country's export potential. In 2020, food exports in the Republic of Uzbekistan accounted for 6.7 percent of total exports. According to calculations, cultivating grapes on one hectare of land yields seven times more income than raw cotton, while cherries generate six times and walnuts five times more income. The agricultural base is being diversified by increasing the cultivation of valuable fruit and vegetable crops. These crops are not only highly profitable but also serve as a source of well-paid seasonal employment opportunities.

Analysis of Literature on the Topic These directions are determined based on the scientific principles of agricultural theory. They envisage the participation of producers developing within the framework of market relations at all stages of production. This approach is based on the concept of political economy founded by classical economists such as A. Smith and D. Ricardo. Later, these theories were enriched by foreign scholars such as I. Ansoff, M. Porter, and L. Mullins, through aspects like strategic management, competitive relations, and market modeling. At the same time, the perspectives of Russian economists who scientifically substantiated the advantages of state planning and regulation also played an important role in shaping this approach. These academic viewpoints, developed in scientific circles, express fundamental strategic tasks that must be addressed within the framework of social production relations at all stages of societal development.

As a territorial unit of the Republic of Uzbekistan, the Republic of Karakalpakstan has been the subject of various scientific studies on the development of the agro-industrial complex, ensuring food security, increasing agricultural production and food

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manufacturing, developing the food processing industry, reducing food imports, and increasing food exports. These issues have been researched by scholars such as Abduganiyev A.A. [1], Berkinov B.B. [2], Makhmudov N. [3], and Nazarova F. [4].

I.Ansoff defined strategic planning as an activity related to maintaining interaction with the external environment, which allows for achieving development goals in accordance with internal capabilities while remaining open to external demands by justifying the mission and objectives of the management object [5]. Modern conceptual strategic approaches are based on the perception of competition as a direct factor in the management process in realizing the potential of territorial-economic systems and their capabilities [6].

In addition to this, foreign researchers such as Wedowati E.R., Singgih M.L., Gunarta I.K. [7], Matthew N.O., Sadiku S.M., Tolulope J.A. [8], De Clercq M., Vats A., Biel A. [9], Panova A.V. [10], Bozsik N., Cubillos T.J., Stalbek B., Vasa L., Magda R. [11], Sandu I.S., Nechaev V.I., and Voiku I.P. [12] have conducted scientific research on ensuring food security, developing the food production and processing industry, and improving the food supply chain system.

### RESEARCH METHODOLOGY

The purpose of this study is to determine the economic efficiency of the country's agro-industrial complex based on an analytical study of its economic efficiency, vertical and horizontal analysis of the indicators of export and import of agricultural products. The advantages and disadvantages of the effective organization of a modern agro-industrial complex, the analysis of the place of the modern agroindustrial complex in the production of gross domestic product, and the identification of directions for its further development and formation. In the process of scientific study of the topic, statistical analysis, logic, analysis and research, various literature and articles were used.

### ANALYSIS AND RESULTS

The Republic of Karakalpakstan is an important economic and geographical region of Uzbekistan, possessing unique natural resources and economic potential. The agro-industrial complex plays a significant role in the region's economic development. The economy of Karakalpakstan is primarily based on agriculture, fisheries, and certain branches of industry.

The agro-industrial complex of Karakalpakstan includes sectors such as cotton growing, grain production, livestock breeding, and fisheries. In recent years, substantial efforts have been made to modernize the agro-industrial complex, improve irrigation systems, and introduce new technologies.

However, there are still a number of challenges in the development of the agro-industrial complex. These include water scarcity, soil salinization, and the use of outdated machinery and technologies.

Currently, the agricultural sector of the Republic of Karakalpakstan is experiencing rapid economic development, which is reflected in its significant contribution to the national economy, particularly in terms of gross domestic product. In evaluating the state of this sector, we applied both vertical and horizontal analysis methods to examine economic indicators.

**Table 1: Main Economic Development Indicators of the Republic of Karakalpakstan [13]**

Years	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Average Growth Coefficient
<b>GDP (billion UZS)</b>	5433,8	6703,8	8568,3	13292,6	18761,0	23392,7	25523,4	29738,2	35541,6	39430,3	1,22
<b>Agriculture, Forestry, and Fisheries (billion UZS)</b>	2659,3	3452,1	4062,9	4977,3	6995,5	8769,3	10532,2	12340,9	14374,0	16390,8	1,20
<b>Volume of Industrial Output (billion UZS)</b>	1717,2	2 387,6	4265,7	6773,3	10 911,9	12 736,1	13 981,3	16 630,4	17624,7	17791,1	1,26
<b>Transport and Communication (billion UZS)</b>	122,0	144,5	187,2	300,1	380,3	399,7	434,3	478,5	573,9	661,4	1,18
<b>Service Sector (billion UZS)</b>	2 148,1	2 550,3	3 100,5	3 611,3	4 600,2	5 671,8	6 520,3	8 458,4	10 595,3	12 875,6	1,20

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<b>Volume of Construction Works (billion UZS)</b>	1 053,5	1 219,3	1 171,8	1 398,8	2 182,7	3 315,4	3 992,5	4 480,6	5 272,4	5 315,9	1,18
<b>Number of Employed in Agriculture, Forestry, and Fisheries (thousand people)</b>	102,6	109,1	122,3	153,7	155,5	155,7	147,5	137,5	136,3	157,6	1,04

Based on the data from Table 1, it can be emphasized that during the period of 2014–2023, there was a consistent growth observed in the agriculture, forestry, and fisheries sector of the Republic of Karakalpakstan, with an average growth coefficient of 1.20 for this sector over the period. At the same time, the average growth coefficient of gross domestic product (GDP) at the national level amounted to 1.22. It is noteworthy that during the analyzed period, all major indicators exceeded the general economic indicators of the Republic of Uzbekistan.

Table 2 presents the key development indicators of the agricultural sector of the Republic of Karakalpakstan, including data on the export and import volumes of food products in the region. In particular, it should be noted that the share of the population employed in various sectors of the economy remains highest in the agricultural sector.

According to the data, during the period from 2014 to 2023, the average growth coefficient of exported food products from the region was 1.06, while the average growth coefficient of imported food products into the region was 1.32. This indicates that in recent years, the volume of imported food products has been 26 percent higher than that of exported food products. Furthermore, the fact that the volume of imported agricultural products exceeds that of exported ones highlights the necessity for the government to expand agricultural production in the region.

**Table 2: Key Development Indicators of the Agricultural Sector of the Republic of Karakalpakstan [13]**

Years	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Average Growth Coefficient
<b>Volume of Products Produced in Agriculture, Forestry, and Fisheries (billion UZS)</b>	1 717,2	2 387,6	4 062,9	4 977,3	6 995,5	8 769,3	10 532,2	12 340,9	14 374,0	16 390,8	1,25
<b>Volume of Exported Food Products (million USD)</b>	-	-	26605,0	26096,0	30 747,7	40660,0	48249,8	47456,5	39963,4	42068,7	1,06
<b>Volume of Imported Food Products (million USD)</b>	-	-	4662,7	3050,4	11 521,5	15851,7	27000,3	29733,4	28721,0	42223,6	1,32

According to the data presented in Table 3, the volume of investments in fixed capital in 2023 is outlined. In particular, it can be observed that the amount of investments directed to the agriculture, forestry, and fisheries sector increased by 5.46 times over the period from 2014 to 2023. According to the analysis, the average annual volume of investments in fixed capital in the manufacturing industry grew by approximately 18.7 times in 2023 compared to 2014. In addition, investments in the water supply, sewerage systems, waste collection, and disposal sectors increased by about 8.9 times in 2023 compared to 2014. Furthermore, investments in the construction sector rose by approximately 23.8 times over the period from 2010 to 2023.

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**Table 3: Investments in Fixed Capital by Types of Economic Activity (billion UZS) [13]**

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Total</b>	<b>3 990,6</b>	<b>6 021,2</b>	<b>3 778,3</b>	<b>2 822,0</b>	<b>6 757,8</b>	<b>8 750,6</b>	<b>7 089,8</b>	<b>8 110,7</b>	<b>10 254,0</b>	<b>12 959,2</b>
<b>Including:</b>										
<b>Agriculture, Forestry, and Fisheries</b>	133,1	140,2	167,0	234,4	349,6	1 328,2	1 457,6	1 394,8	923,7	727,2
<b>Mining and Quarrying</b>	2 506,9	4 230,8	464,8	629,0	1 354,0	1 694,5	1 732,9	1 558,5	2 269,8	3 453,1
<b>Manufacturing Industry</b>	108,1	109,1	1 803,6	331,7	585,3	1 307,0	592,7	593,5	902,7	2 017,2
<b>Electricity, Gas, Steam Supply, and Air Conditioning</b>	140,3	122,6	51,5	43,3	2 084,4	1 465,9	661,9	410,4	526,4	305,0
<b>Water Supply, Sewerage System, Waste Collection and Disposal</b>	60,2	94,6	70,0	94,3	104,1	204,6	175,2	218,7	319,8	534,5
<b>Construction</b>	33,6	111,7	155,1	192,1	136,1	107,4	318,8	667,8	896,9	798,9
<b>Transportation and Storage</b>	225,9	157,5	242,0	307,6	266,1	512,8	228,1	916,2	1 280,9	1 862,0
<b>Accommodation and Food Services</b>	8,5	10,7	8,3	8,6	8,0	16,3	11,4	17,4	18,9	76,9
<b>Other Types of Activities</b>	774,0	1 044,0	816,0	981,0	1 870,2	2 113,9	1 911,2	2 333,4	3 114,9	3 184,4

According to statistical data, in 2023 the total volume of industrial products in the Republic of Karakalpakstan amounted to 17,791.1 billion UZS, of which 15,219.5 billion UZS (85.5% of total industrial output) accounted for manufacturing industry products, and 2,937.1 billion UZS (16.5% of total industrial output) were attributed to food industry products (Table 4).

According to general statistical analysis, during the period from 2014 to 2023, the total volume of industrial products in the republic increased by 10.4 times compared to 2014. Additionally, the volume of food products increased by 6.8 times in 2023 compared to 2014. These figures also exceed the overall indicators of the Republic of Uzbekistan.

**Table 4: Data on the Volume of Industrial Products Produced in the Republic of Karakalpakstan in 2014–2023 (billion UZS) [13]**

<b>Years</b>	<b>Total Volume of Industrial Products</b>	<b>Including: Volume of Manufacturing Industry Products</b>	<b>Of which: Volume of Food Industry Products</b>
2014	1 717,2	1 153,8	439,4
2015	2 387,6	1 778,6	763,4
2016	4 265,7	3 614,8	860,4
2017	6 773,3	6 040,3	933,2
2018	10 911,9	9 838,8	1 186,1
2019	12 736,1	11 023,7	1 541,1
2020	13 981,3	12 193,6	1 993,8
2021	16 630,4	14 268,6	2 118,7
2022	17 624,7	15 187,6	2 461,9
2023	17 791,1	15 219,5	2 937,1

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The analysis of the data presented in Table 5 shows the distribution of the volume of food products produced in the Republic of Karakalpakstan by forms of ownership during the period under study from 2014 to 2023. According to the data in this table, it can be observed that over the ten-year period under review, the share of food products produced by farms increased from 27.3 percent to 30.8 percent. At the same time, the share of food products produced by household farms decreased from 69.0 percent to 62.3 percent, while the share of food products produced by agricultural enterprises increased from 3.6 percent to 6.9 percent during the same period.

**Table 5: Distribution of the Volume of Food Products Produced by Forms of Ownership (thousand tons) [13]**

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
<b>Farms</b>										
Grain Crops	141,1	189,6	216,9	216,1	168,3	238,8	222,8	213,2	250,9	253,9
Potatoes	11,6	11,3	13,5	14,5	18,8	25,1	26,2	29,0	32,4	32,9
Vegetables	85,8	84,1	86,9	69,6	73,9	96,8	103,3	111,9	126,8	131,2
Fodder Melon Crops	52,4	52,4	60,9	64,6	57,5	67,5	73,2	83,1	92,2	98,6
Meat	1,8	1,9	2,0	2,4	2,8	3,4	3,8	4,8	4,9	4,8
Milk	13,5	13,8	14,4	15,7	17,8	20,5	24,7	26,1	27,4	31,4
Eggs (million units)	11,1	11,2	12,4	13,3	18,8	24,5	25,7	30,7	33,1	33,2
<b>Household Plots</b>										
Grain Crops	70,5	69,2	69,8	71,5	71,3	42,8	39,3	37,1	31,9	29,9
Potatoes	31,0	34,4	38,5	46,3	50,8	57,7	58,4	59,8	60,1	62,5
Vegetables	130,7	147,5	157,1	172,3	176,0	171,8	175,9	180,7	184,7	191,8
Fodder Melon Crops	51,4	59,2	64,6	68,3	75,1	76,4	75,3	77,5	77,3	79,5
Meat	80,1	85,7	92,1	98,1	101,8	102,7	106,4	109,9	113,9	116,7
Milk	279,2	304,3	328,3	345,2	357,3	362,6	376,0	388,0	401,5	410,3
Eggs (million units)	158,5	186,5	218,1	241,1	264,0	265,0	277,0	280,8	284,7	292,7
<b>Agricultural Enterprises</b>										
Grain Crops	5,9	7,7	8,5	8,8	7,3	11,8	15,8	20,8	29,4	33,6
Potatoes	2,1	2,0	0,6	0,6	0,7	0,8	1,1	0,6	1,1	1,0
Vegetables	11,1	9,7	12,4	3,4	3,2	5,3	7,4	8,9	7,7	10,3
Fodder Melon Crops	2,2	2,2	2,1	2,1	1,8	2,9	4,1	4,1	4,0	5,4
Meat	0,8	0,8	1,0	0,8	0,6	0,8	0,9	1,7	2,1	2,3
Milk	3,8	4,0	4,2	3,2	2,9	3,2	4,1	4,8	5,5	6,0
Eggs (million units)	16,4	9,0	5,5	5,7	24,5	32,9	38,6	68,3	69,2	72,0

Table 6 presents the economic indicators of the districts of the Republic of Karakalpakstan for the year 2023. Based on this data, we have conditionally divided the Republic of Karakalpakstan into two main economic zones: northern and southern.

The Republic of Karakalpakstan can be conditionally divided into southern and northern economic regions, as each area is characterized by different natural and climatic conditions, resources, and levels of economic activity. These distinctions are of great importance when analyzing the economic orientation and potential of each region. According to the analysis of this table, the northern region includes the city of Nukus, Nukus district, Khodjeyli district, Takhiyatosh city, Kegeyli district, Amudarya district, Beruniy district, Ellikkala district, and Chimboy district.

The southern region includes the districts located near the Amudarya River. Their key characteristics include the development of the agricultural sector—specifically, cotton and grain production supported by the waters of the Amudarya—as well as the advanced cultivation of fruits and vegetables. In terms of industry, these areas are known for their centers of oil and gas extraction and processing, along with well-developed sectors for the production of construction materials.

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The agro-industrial complex in the northern region comprises the districts of Kungrad, Muynak, Shumanay, Kanlikul, Turtkul, Karauzyak, and Takhtakupir. These areas are distinguished by the development of greenhouse farming based on solar energy, as well as livestock and sheep farming in low-water lands.

In the industrial sector, the northern region is engaged in salt extraction and processing, mining of various mineral resources, and the development of ecological tourism in the receding areas of the Aral Sea, along with the establishment of handicraft centers.

**Table 6: Economic Indicators by Districts of the Republic of Karakalpakstan for the Year 2023 [13]**

No	Districts	Area (thousand km <sup>2</sup> )	Population (thousand people)	Gross Regional Product (billion UZS)	Gross Regional Agricultural Output (billion UZS)	Gross Regional Industrial Output (billion UZS)	Amount of Investments in the Agricultural Sector (billion UZS)
<b>Agro-Industrial Complex of the Southern Economic Region</b>							
1	<u>Nukus city</u>	0,22	339,2	1,2	0,65	0,9	48,4
2	<u>Nukus district</u>	0,94	53,9	0,6	0,33	0,47	48,0
3	<u>Xo'jayli district</u>	0,55	128,7	0,55	0,34	0,22	23,4
4	<u>Taxiatosh shahri</u>	0,18	76,8	0,5	0,31	0,23	41,3
5	<u>Kegeyli district</u>	0,92	74,8	0,3	0,21	0,13	15,0
6	<u>Amudaryo district</u>	1,02	212,1	0,4	0,27	0,16	48,3
7	<u>Beruniy district</u>	3,95	205,1	0,35	0,24	0,14	137,0
8	<u>Ellikgala district</u>	5,42	171	0,45	0,3	0,19	195,2
9	<u>Chimboy district</u>	1,44	115,7	0,5	0,33	0,21	50,5
<b>Jami</b>		<b>14,64</b>	<b>1377,3</b>	<b>4,85</b>	<b>2,98</b>	<b>2,65</b>	<b>607,1</b>
<b>Agro-Industrial Complex of the Northern Economic Region</b>							
1	<u>Qung'iro't district</u>	76,0	136	0,3	0,19	0,15	24,1
2	<u>Mo'ynoq district</u>	37,88	33,6	0,2	0,14	0,1	60,4
3	<u>Shumanay district</u>	0,78	58	0,28	0,17	0,13	39,2
4	<u>Qonliko'l district</u>	0,74	53,8	0,35	0,2	0,14	15,7
5	<u>To'rtko'l district</u>	7,48	228,8	0,45	0,3	0,19	95,4
6	<u>Qorauzaq district</u>	5,89	54,4	0,25	0,15	0,12	21,2
7	<u>Taxtako'pir district</u>	21,12	38,9	0,4	0,27	0,18	29,5
<b>Total:</b>		<b>149,89</b>	<b>603,5</b>	<b>2,23</b>	<b>1,42</b>	<b>1,01</b>	<b>285,5</b>

The analysis of the data in this table shows that the area of the districts included in the southern economic system of the agro-industrial complex covers 14.64 thousand square kilometers. The economic indicators of the districts belonging to the southern economic region of the agro-industrial complex demonstrate that these districts account for 8.9 percent of the total territory, 69.5 percent of the total population, 68.5 percent of the gross regional product, 67.7 percent of the gross regional agricultural output, 72.4 percent of the gross regional industrial output, and 68.0 percent of the total investments directed to the agricultural sector. These figures indicate the substantial importance of the southern agro-industrial region at the national level.

In contrast, the economic indicators of the districts included in the northern economic system of the agro-industrial complex show that they account for 91.9 percent of the total territory, 30.5 percent of the total population, 31.5 percent of the gross regional product, 32.3 percent of the gross regional agricultural output, 27.6 percent of the gross regional industrial output, and 32.0 percent of the total investments in the agricultural sector. This analysis reveals that although the area of the northern economic districts is 10.2 times larger, the southern economic region surpasses the north by an average of 2.2 times across all other key indicators.

In our view, in order to further develop the agro-industrial complex and enhance the economic efficiency of its enterprises, it is necessary to study the current state of the sector, compare the results, and conduct a quantitative econometric analysis of the factors influencing economic efficiency.

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Table 7: Indicators of Factors Affecting the Volume of Agricultural, Forestry, and Fisheries Production in the Republic of Karakalpakstan [13]

Years	Agriculture, Forestry, and Fisheries (billion UZS)	Number of Employed in Agriculture, Forestry, and Fisheries (thousand people)	Export Volume of Food Products (million USD)	Import Volume of Food Products (million USD)	Investments in Fixed Capital of Agriculture, Forestry, and Fisheries (billion UZS)	Value of Fixed Assets in the Food Industry (billion UZS)
	Y	Q	EX	Im	In	B
2014	2659,3	102,6	22541,4	39874,1	133,1	118,8
2015	3452,1	109,1	23342,3	44214,6	140,2	158,1
2016	4062,9	122,3	26605	4662,7	167	227,3
2017	4977,3	153,7	26096	3050,4	234,4	300,7
2018	6995,5	155,5	30 747,70	11 521,50	349,6	419,2
2019	8769,3	155,7	40660	15851,7	1 328,20	522,8
2020	10532,2	147,5	48249,8	27000,3	1 457,60	630,8
2021	12340,9	137,5	47456,5	29733,4	1 394,80	689,8
2022	14374	136,3	39963,4	28721	923,7	788,5
2023	16390,8	157,6	42068,7	42223,6	727,2	847,1

Table 7 presents several factors influencing the production of agricultural, forestry, and fishery products in the Republic of Karakalpakstan, which have been analytically examined by us as explanatory variables affecting the outcome variable. The data in this table indicate that a number of factors were selected to assess their impact on the formation of the output indicator. In our study, we identified and analyzed several variables that influence the volume of agricultural production in the region. Based on the degree of impact, scope, and the number of factors, five key variables were selected.

These variables were thoroughly examined for their effect on the outcome variable, and based on the results, a mathematical model was developed using the Cobb-Douglas function. The adequacy of the model was evaluated using the Fisher criterion, and the level of multicollinearity was assessed.

It is also important to note that the development of a model based on the selection of influencing factors to determine the volume of agricultural, forestry, and fishery production in the Republic of Karakalpakstan is highly appropriate. Based on this model, the influencing factors selected include:

- the number of people employed in agriculture, forestry, and fisheries;
- the volume of exported food products;
- the volume of imported food products;
- the volume of investments in the fixed capital of agriculture, forestry, and fisheries;
- and the value of fixed assets in the food industry.

The Cobb-Douglas function used to construct the model takes the following form:

$$Y = A_0 * Q^{a1} * EX^{a2} * IM^{a3} * IN^{a4} * B^{a5}$$

Where:

Y – volume of agricultural, forestry, and fishery production,

Q – number of employed in agriculture, forestry, and fisheries,

EX – volume of exported food products,

IM – volume of imported food products,

IN – volume of investments in fixed capital of the agriculture, forestry, and fisheries sector,

B – value of fixed assets in the food industry,

A, a<sub>1</sub>, a<sub>2</sub>, a<sub>3</sub>, a<sub>4</sub>, a<sub>5</sub> – unknown parameters of the model, determined using the method of least squares.

To calculate the model, both sides of the Cobb-Douglas function are logarithmized, and the equation is rewritten as

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follows:

$$Y = 68.973 * Q^{-0.238} * EX^{-0.0776} * IM^{0.079} * IN^{-0.058} * B^{1.038}$$

From the calculations above, it is evident that when evaluating the model using the Fisher criterion, the calculated value of the Fisher statistic significantly exceeds the tabular value. This confirms the adequacy of the proposed model:

$$F_{\text{calc}} > F_{\text{table}} = 240.6569 > 15.52186 \quad (1)$$

Consequently, the model is considered statistically significant, and based on the constructed function, it can be effectively used to generate forecast values.

## Conclusion and suggestions

Based on the above analysis, it can be concluded that in order to ensure the future development of Karakalpakstan's economy and agro-industrial complex, it is essential to continue efforts in the following key areas:

1. Efficient management of water resources – Modernization of irrigation systems and the introduction of water-saving technologies.
2. Improvement of soil reclamation conditions – Implementation of measures to combat soil salinization and waterlogging.
3. Diversification of the agro-industrial complex – Increasing the production volume of agricultural crops beyond cotton and grain.
4. Development of the industrial sector – Establishment of new industrial enterprises based on existing mineral resources.
5. Development of agro-industrial infrastructure – Enhancement of transportation, energy, and communication systems.
6. Introduction of innovations – Broad application of modern technologies and innovations in agriculture.
7. Enhancement of export potential – Expansion of opportunities to bring Karakalpakstan's agricultural and industrial products to foreign markets.

There is significant potential for the development of the agro-industrial complex in the Republic of Karakalpakstan. However, to fully realize this potential, it is necessary to address a range of existing problems and continue focused efforts in the directions outlined above.

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