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Statistical Analysis of Economic Reforms Carried Out in Agriculture

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ABSTRACT.

The relevance of the work has led to the need to find ways to reduce the competitive ability of the agricultural sector of the economy, especially in the face of high challenges such as climate change, market instability and limited resources. The development of agribusiness as a form of entrepreneurship allows not only to solve these problems, but also to accelerate the socio-economic development of territories.

Keywords: product of the agrarian sector, GDP, GDP, agricultural production, farms, farms, current and Comparative Estimates, growth rate.

Introduction

The growth of the economic efficiency of agribusiness depends on a number of factors that increase productivity, reduce costs and maintain income.

The economy of Uzbekistan in 2023 demonstrated outstripping dynamics. According to the Statistics Agency, gross domestic product grew by 6% last year (5.7% in 2022).

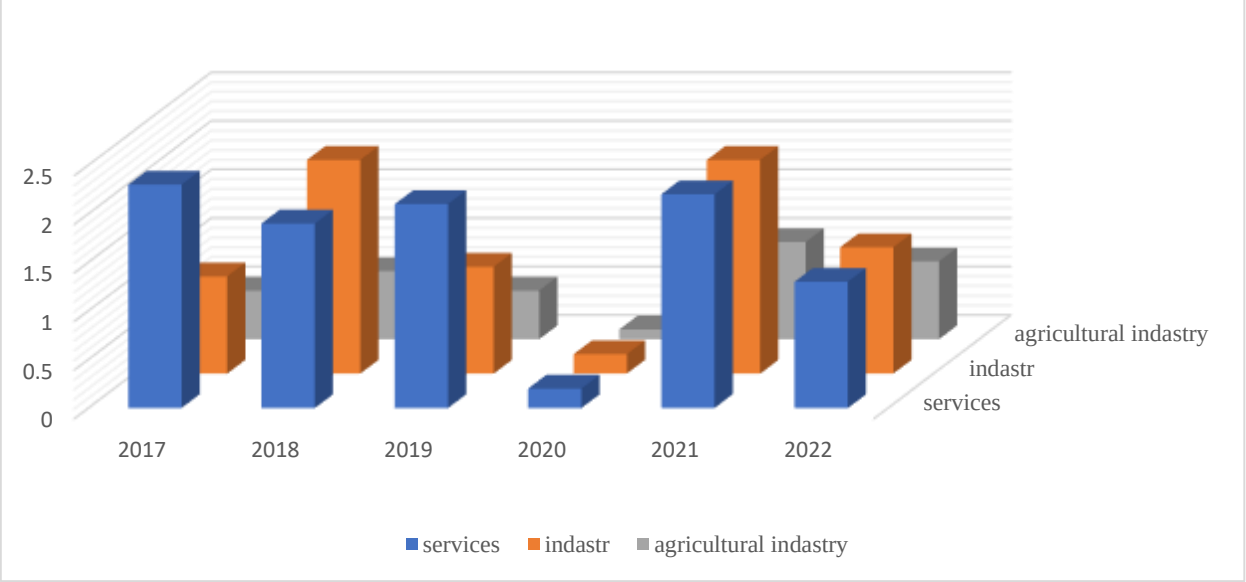

Figure 1.Share of sectors in additional GDP growth, %

(Source: Republic of Uzbekistan.Under the PresidentCalculated based on data from the Statistics Agency.)

Positive trends were also observed in the main trading partner countries, despite continued geopolitical tensions. Thus, in Kyrgyzstan, despite the slowdown compared to last year, economic growth remained high – 6.2%. In Uzbekistan, GDP growth is expected to be about 5%. In China, the economy grew by 5.2% last year. There was a slowdown in price growth in Uzbekistan during the year. At the end of the year, the consumer price index was 8.77% (compared to 12.25% in 2022). For comparison, last year's inflation in Kazakhstan was 9.8%, and in Russia it was 7.4%. In Uzbekistan, food prices increased by 9.7% over the year, 7.7% for non–food products, and 8.7% for services.

In 2023, investment activity increased sharply, with an increase of 22.1% compared to 0.2% in 2022. The increase was due to a 26% increase in non–centralized investments. In particular, foreign direct investment and loans increased by 58.9% (FDI almost doubled), investments due to loans from

commercial banks and borrowed funds increased by 17.9%, at the expense of the population – 8.9%. However, there is a decrease in investment by enterprises of their own funds by 2.7%.

Centralized investments decreased by 0.7% in 2023. In particular, the decrease in investments from the budget amounted to 11.4%. At the same time, the volume of foreign investments and loans secured by the government increased by 30%.

Table 1.

Volume and dynamics of the main macroeconomic indicators in the Republic of Uzbekistan

Years	GDP and GNP volume in 2020 prices, trillion soums			Share of agriculture, forestry and fisheries in GDP, %		Agricultural output, trillion soums				Growth rate, %		
	GDP	NQF networks		In GDP	Networks in the New World District	At 2020 prices	At the current price	Including, %		Agricultural products	Including	
		General	Hence in agriculture, forestry and fisheries					in agriculture	in animal husbandry		in agriculture	in animal husbandry
A	1	2	3	4	5	6	7	8	9	10	11	12
2010	338.9	311.3	97.4	27.0	30.6	160.2	30.9	58.7	41.3	106.3	105.9	106.9
2011	364.4	335.3	103.3	29.7	33.5	170.1	45.3	57.1	42.9	106.2	104.9	108.0
2012	390.2	360.4	110.5	28.9	32.6	182.4	55.7	54.9	45.1	107.2	107.1	107.4
2013	418.7	387.1	117.6	27.8	31.0	194.4	66.4	54.5	45.5	106.6	106.1	107.3
2014	447.6	414.2	124.7	28.7	31.8	206.7	81.8	52.8	47.2	106.3	105.9	106.7
2015	479.8	444.4	132.3	29.2	32.1	219.3	99.6	55.6	44.4	106.1	105.5	106.9
2016	508.1	471.1	140.5	29.3	32.1	233.1	115.6	53.4	46.6	106.3	105.7	107.0
2017	530.5	491.3	142.2	28.7	32.2	235.4	148.2	56.2	43.8	101.0	98.2	104.1
2018	559.1	517.4	142.6	26.8	30.0	235.9	187.4	52.5	121.8	100.2	95.8	105.7
2019	591.0	547.4	147.0	24.6	26.9	243.7	216.3	51.7	48.3	103.3	104.8	101.6
2020	602.2	557.8	151.3	25.1	27.1	250.3	250.3	49.5	50.5	102.7	103.2	102.1
2021	646.8	599.8	157.3	25.0	26.9	260.0	303.4	50.1	49.9	103.9	104.3	103.5
2022	685.6	644.5	143.7	20.9	22.3	269.4	345.2	51.6	48.4	103.6	103.8	103.3
2023	728.8	693.1	149.7	20.5	21.6	280.1	405.4	50.1	49.9	104.0	104.3	103.7

Source: Author's calculations based on data from the Statistical Agency under the President of the Republic of Uzbekistan.

The economic efficiency of an individual agricultural enterprise shows the final beneficial effect of the use of means of production and live labor, in other words, the return on total investments.

In agriculture, it is the production of the maximum amount of products per unit area at the lowest cost of living and materialized labor.

Production efficiency is distinguished between purely economic and socio-economic. Socio-economic efficiency is the degree to which the needs of the population are met through the product being created. It is also aimed at improving the standard of living of the population, improving working conditions, and increasing people's free time. The economic and social aspects of production efficiency should not be opposed to each other. They are in an organic unity.

At the end of the year, the share of centralized investments in the total volume of investments in fixed assets continued to decline – from 15.7% in 2022 to 12.7%. The share of non-centralized investments increased from 84.3% to 87.3%, respectively. There was an increase in output in all sectors of the economy.

Agriculture grew by 4.1% (3.6% in 2022). The growth of forestry also accelerated to 2.7% (1.7%) and fishing – 7.4% (6.4%).

The growth rate of industrial production accelerated, reaching 6% (5.3% in 2022). By sector: mining grew by 1% (in 2022 - 1.9%), manufacturing – 6.7% (5.4%), electricity, steam and air conditioning – 9.7% (13.5%), water supply, sewerage, waste collection and disposal – 1% (in 2022 decline by 5.3%). Meanwhile, the growth of consumer goods production slowed to 7.3% in 2023 (20.7% in 2022). The construction sector grew by 6.4% at the end of the year, which is almost the same as last year – 6.6%.

The volume of market services increased by 13.7% in 2023, compared with 16.3% in 2022. Growth is observed in all sectors. Communications and information services showed the highest growth rates – an increase of 24.6%, education – 22.8%, financial services – 20.6%, real estate services – 13.3%, accommodation and catering – 12.6%, healthcare – 11.6%, trade – 10.2%. Retail trade increased by 9.1%. The volume of services provided in the field of transport increased by 8%. At the end of the year, the growth rate of passenger turnover slowed to 4.2%, compared with 6.9% in 2022. At the same time, the dynamics of cargo turnover accelerated to 1.8% (0.9% in 2022).

Foreign trade continued to grow at double-digit rates. Thus, in 2023, the foreign trade turnover increased by 23.9% and amounted to $62.6 billion. Exports increased by 23.8% to $24.4 billion, imports by 24% to $38.1 billion. The increase in exports was due to an increase in gold supplies abroad by almost 2 times, machinery and transport equipment by 34%, services by 16%, food by 9%, and finished goods by 8%.

At the same time, in 2024, Uzbekistan increased imports of machinery and transport equipment by 54%, fuel and energy products by 47%, finished goods by 12%, and chemical products by 11%

Social criteria can include: the stability of the existing social structure of rural societies, ensuring the voluntary abandonment of land plots, the possibility for each adult villager to receive a plot to create their own farm, receive a stable income from their land plot (share), and the ability to freely manipulate their land ownership.

Environmental criteria are determined by the preservation of the natural fertility of the soil, its optimal structure, and their improvement. Agriculture plays an important role in maintaining soil fertility and protecting land from erosion and other negative natural and man-made phenomena. The village performs important demographic functions, including expanded reproduction of a physically and spiritually healthy generation and compensation for the narrowed reproduction of the population in cities. It is designed to preserve the specific rural way of life, national spiritual mentality, moral principles, customs, rituals, folk traditions. These non-food aspects have characteristics of public goods. Based on the economic assessment of the effectiveness of land tenure and land use, it is necessary to give preference to a set of indicators characterizing the level of profitability and marketability of agricultural production.

These indicators include: revenue from the sale of agricultural products per hectare of agricultural land or arable land; the share of marketable products in the structure of gross agricultural output per hectare of agricultural land or arable land; profit from the sale of agricultural products per hectare of agricultural land or arable land. Based on the above, we propose to supplement the existing system of indicators with one more, namely, the level of socialization of the earth. The level of land socialization is an indicator characterizing the share of the rental income of the landowner in the total income of the tenant, expressed as a percentage per hectare of leased land. By contrasting small-scale peasant farming with large-scale capitalist farming, they argued about large-scale and small-scale agriculture, i.e., using only a quantitative comparison. At the same time, in the essence of the problem being treated, it was necessary to contrast not quantity with another quantity, but various qualities with each other. The issue, in essence, was not about the struggle between large-scale and small-scale forms of production in agriculture, but, on the one hand, about the comparative survival and sustainability of capitalist agriculture based on wage labor and family peasant labor farming, which was qualitatively different from the first one both in its structure and even in the basic understanding of the profitability of economic undertakings, on the other hand.

Increasing the efficiency of agricultural enterprises requires system connectivity, process optimization, and the introduction of new technologies and effects. Introduction of modern technologies.

Digitalization of processes Precision farming Optimization of resource use.

Effective land management: Crop rotation, Rational use of water, Reduction of costs for fertilizers and plant protection products, Staff development, staff training, Management development, logistics and supply chains improvement.

Creation or participation in cooperatives for sharing equipment, storage facilities, and marketing. Diversification of activities

Development of processing, Attracting investments and government support.

Table 2.

Main indicators of development of the agricultural sector of the Republic of Uzbekistan

Years	Volume and growth rate of agricultural, forestry and fisheries production			Share of agricultural production in the agricultural sector*, %	Share of agricultural products in the volume of production of the agricultural sector, %	Share of economic entities in the total volume of agricultural production, %		
	In 2020 prices, trillion amount	At current prices, trillion. amount	Growth rate, %			On the farms	In dehkan (personal assistant) farms	In organizations engaged in agricultural activities
A	1	2	3	4	5	6	7	8
2010	168.3	32.7	106.0	57.9	94.2	36.3	61.6	2.1
2011	178.9	48.1	106.3	57.7	94.2	34.7	63.0	2.3
2012	191.2	58.5	106.9	57.8	95.2	33.0	64.6	2.4
2013	203.6	69.4	106.5	57.7	95.7	32.1	65.5	2.4
2014	216.0	85.1	106.1	57.7	96.1	30.1	67.5	2.4
2015	229.2	103.3	106.1	57.7	96.4	30.7	66.9	2.4
2016	243.2	119.7	106.1	57.8	96.6	29.7	68.0	2.3
2017	246.1	154.4	101.2	57.8	96.0	29.3	68.4	2.3
2018	246.9	195.1	100.3	57.7	96.1	26.0	71.2	2.8
2019	254.5	224.3	103.1	57.8	96.4	27.9	68.3	3.8
2020	261.9	261.9	102.9	57.8	95.6	28.2	67.4	4.4
2021	272.4	317.8	104.0	57.7	95.2	29.3	65.5	5.2
2022	282.2	362.9	103.6	57.5	95.1	31.4	61.7	6.9
2023	293.7	426.0	104.1	57.5	95.2	30.2	62.3	7.5

Source: Author's calculations based on data from the Statistical Agency under the President of the Republic of Uzbekistan.

The use of government programs of subsidies, grants and preferential loans. Environmental sustainability, Conservation of biodiversity, etc. Marketing and sales of products. Search for new sales methods.

The State, expressing the interests of society in various spheres of production, develops and implements appropriate economic, social, environmental and other policies. At the same time, the financial and budgetary system is used as a means of interaction between the object and the subject of state regulation of socio-economic processes, which includes relations on the formation and use of budgets at various levels.

In agriculture, due to the impact of rental factors and the relatively low elasticity of demand for basic agricultural products, the possibilities of free pricing are limited, and therefore the role of government regulation is more significant than in other industries. The state policy at the present stage is focused on stabilizing and increasing the volume of food production to ensure domestic and foreign markets. To do this, the state needs to create conditions for agricultural producers in which they can increase the efficiency of both simple and extended reproduction while simultaneously ensuring the preservation of the natural environment and securing the population in traditional places of residence.

Table 3

Volume and dynamics of agricultural, forestry and fishery production (agriculture) in Uzbekistan

Years	The added value created in the agricultural sector is billion, amount		Agricultural output, billion soums		Volume of agricultural production, billion soums	
	At current prices	**At 2020 prices**	**At current prices**	**At 2020 prices**	**At current prices**	**Share of agricultural sector in production output, %**
A	**1**	**2**	**3**	**4**	**5**	**6**
2010	21251.3	96867.1	32746.5	168252.0	30856.7	94.2
2011	30658.6	102776.0	48068.3	178851.9	45285.9	94.2
2012	36954.7	109970.3	58549.3	191192.7	55750.0	95.2
2013	42636.8	117008.4	69391.3	203620.2	66435.3	95.7
2014	53613.2	124028.9	85101.7	216041.1	81794.3	96.1
2015	64680.3	131594.7	103302.0	229219.6	99604.6	96.4
2016	74779.0	139753.5	119726.7	243202.0	115599.2	96.6
2017	90983.9	141430.6	154369.4	246120.4	148199.3	96.0
2018	113327.4	141854.9	195095.6	246858.7	187425.6	96.1
2019	129885.0	146252.4	224265.9	254511.4	216283.1	96.4
2020	150493.7	150493.7	261892.2	261892.2	250250.6	95.6
2021	181787.7	156513.4	317027.6	272367.9	303415.5	95.2
2022	208452.9	162147.9	362898.0	282173.1	345191.7	95.1

Source: Author's calculation based on data from the Agency on Statistics under the President of the Republic of Uzbekistan.

However, at present, the amount of money allocated by the state to agriculture is limited by the budget's capabilities and the commitments made by the republic to the world community to reduce government subsidies. Therefore, the issue of effective use of all instruments of state economic regulation of agriculture in the Republic of Uzbekistan is becoming particularly relevant. Government regulation is understood as a set of measures and actions applied by the government to correct existing basic economic relations and processes in various sectors of the economy.

Regulation of financial and credit relations in the agricultural sector is part of the general regulation that takes into account the specifics of the industry's functioning and its relationship with various business entities: suppliers, buyers,

as well as with tax, credit and insurance systems.

It should be noted that the rate of change in the yield of certain crops, which is considered an important indicator of quality, has had a downward trend in subsequent years. In particular, in 2023, with an increase in the yield of ereals and legumes by only 5.7 percent compared to 2015, savzavotniki fell by 15 percent, potato by 6.6 percent, nutribop polizniki by 6.7 percent (Table 4). This necessitates the creation of varieties that are suitable for current conditions.

State regulation affects the issues of financial and credit relations of the agricultural sector of Uzbekistan and forms a certain hierarchical system, including the division of decision-making powers between the legislative and executive authorities. Of the complex of methods of regulating agro-industrial production, which are at the disposal of government bodies, the main ones are administrative, economic and informational, which together form a mechanism of state influence, which involves the use of the following tools. The policy of state regulation and support of agriculture in Uzbekistan is reflected in legislative acts and state targeted programs that determine the main directions of development of this sector of the economy, social protection of the population, the order and timing of the planned measures, as well as the resources necessary for this. Currently, government support for the financial support of the agro-industrial complex is carried out through direct and indirect methods. Direct budget financing consists in allocating funds from budgets of all levels to finance agribusiness activities, indirect regulation of the industry is carried out through preferential taxation, price regulation, provision of deferrals on payments to the budget, etc. Until 2011, direct budget financing was carried out from the republican budget, the largest share of which was occupied by the target budget support fund producers of agricultural products, food and agricultural science (about 50-55%);

Table 4.Agricultural production in the Republic of Uzbekistan

volume and dynamics

No.	Types of products	Unit of measurement	2010.	2015.	2020.	2022.
1.	Grain-all *)	thousand tons	7465.6	8097.1	7234.4	7194.8
2.	sj: a) wheat	thousand tons	6745.0	6964.7	6157.8	5984.8
3.	b) corn for grain	thousand tons	231.7	439.6	475.3	590.0
4.	c) rice	thousand tons	249.8	425.7	293.5	334.2
5.	Cotton raw material	thousand tons	3404.0	3361.3	3064.0	3372.9**
6.	Potato	thousand tons	1694.8	2586.8	3143.8	3285.6
7.	Savzavot	thousand tons	6262.4	9390.0	10431.4	10850.2
8.	Watermelon as food	thousand tons	1182.4	1853.6	2134.4	2285.3
9.	Fruits and berries	thousand tons	1676.3	2467.9	2812.6	2852.6
10.	Grape	thousand tons	979.3	1518.2	1606.9	1695.3
11.	Meat (live weight)	thousand tons	1461.4	2033.4	2519.6	2635.1
12.	Milk	thousand tons	6169.0	9027.8	10976.9	11274.2
13.	Egg	million grain	3061.2	5535.4	7781.2	7788.4

Source: Author's calculation based on data from the Agency on Statistics under the President of the Republic of Uzbekistan.

The National Development Fund, as well as local budgets, which accounted for about 30%. The Government of the Republic of Uzbekistan annually clarifies the amount of financing on the basis of legislative acts. These acts may provide for both separate measures to achieve the projected indicators of the development of the agro-industrial complex, and their complex. The first ones include laws, decrees, and resolutions that reflect certain areas of financial and credit policy in the agricultural sector. An analysis of the amount of budget financing by producer groups with different cadastral estimates showed that enterprises operating on the best lands receive more funds per hectare of farmland. It has been found that as the cadastral valuation increases, the amount of subsidies allocated per unit of land area increases at a much slower rate than the level of gross output and revenue from sales. The amount of targeted budget financing per ruble of revenue from products sold and gross output is decreasing as the cadastral valuation increases. Thus, the conducted research allows us to conclude that organizations with a low land valuation provide little return on invested budget funds. Enterprises operating with a higher return (having a higher level of profitability) receive less funds from the budget.

In addition, practical data indicate that those business entities that sell more products per hectare of agricultural land receive fewer compensation payments from the budget. At the same time, they have a higher level of profitability. The analysis shows that, despite the constant budgetary financing of agricultural production, the financial condition of producers.

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