



Article

# The Theoretical and Methodological Foundations of Investment Programs in The Socio-Economic Development of A Region

Eshmatov Davron Abduvaxovich<sup>1</sup>

1. Doctoral Candidate at Urgench State University named Abu Rayhon Beruni

\* Correspondence: [davron.eshmatov.87@gmail.com](mailto:davron.eshmatov.87@gmail.com)

**Abstract:** This article provides a theoretical and methodological analysis of the role and significance of investment programmes in regional socio-economic development. Firstly, it examines the economic schools and theoretical concepts that have studied the impact of investment processes on regional development. Furthermore, it substantiates the mechanisms through which investment programmes can stimulate regional economic growth, modernise production infrastructure and develop the social sphere. The article reveals the scientific basis for using investment programmes to reduce interregional disparities, increase employment, ensure the efficient use of economic resources and support sustainable regional growth. The research results demonstrate the necessity for a broader application of investment programme forecasting in regional development strategy formulation. The article presents a comprehensive theoretical and methodological analysis of the role and significance of investment programmes in socio-economic regional development. First, it examines the major economic schools and theoretical concepts that have studied the impact of investment processes on regional growth. It then substantiates the mechanisms of regional economic expansion, the modernisation of production infrastructure and the development of the social sphere through investment programmes. The research reveals the scientific basis of investment programmes in reducing interregional disparities, increasing employment, ensuring the efficient use of economic resources and supporting sustainable regional progress.

**Keywords:** regional development, investment program, socio-economic growth, regional disparities, investment policy, forecasting, economic model, sustainable development.

**Citation:** Abduvaxobovich, E. D. The Theoretical And Methodological Foundations Of Investment Programs In The Socio-Economic Development Of A Region. Central Asian Journal of Innovations on Tourism Management and Finance 2025, 6(4), 1682-1691.

Received: 10<sup>th</sup> Jul 2025  
Revised: 16<sup>th</sup> Aug 2025  
Accepted: 24<sup>th</sup> Sep 2025  
Published: 27<sup>th</sup> Oct 2025



**Copyright:** © 2025 by the authors. Submitted for open access publication under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>)

## 1. Introduction

The socio-economic development of regions is crucial for ensuring stable state progress and improving population living standards. Investment programmes play a central role in this process, serving as the main mechanism for modernising production infrastructure, creating new jobs, developing social sectors and reducing regional disparities. Investment processes accelerate economic growth, enhance regional competitiveness, ensure the rational use of resources and foster innovation [1]. Therefore, a deep understanding of the theoretical and methodological foundations of investment programmes is essential for the effective formulation of regional development policy [2].

Currently, Uzbekistan is implementing reforms to improve regional investment policy, attract domestic and foreign investment, and increase its efficiency. However, there is an urgent need to thoroughly analyse the impact of investment programmes on the socio-economic development of regions, identify their theoretical foundations and develop forecasting methods [3].

From this perspective, the article examines the impact of investment programmes on regional development, as well as their scientific foundations and theoretical-methodological approaches.

## Literature Review

Several theoretical schools in economic literature have conducted in-depth analyses of investment and development issues [4]. Samuelson and Nordhaus interpret investment as the primary driver of economic growth. In his theory of national competitiveness, Porter emphasises the necessity of linking investment programmes with innovative clusters to promote regional development. North's institutional theory recognises the quality of legal and organisational institutions as the main determinant of investment efficiency [5], [6].

In domestic literature, this issue has also received significant attention. Abdurakhmanov considers investment policy to be an integral part of the national development strategy, while Khodiev highlights the need to strengthen monitoring and evaluation systems to enhance the effectiveness of public investments. Burkhanov raises the issue of improving the investment climate, particularly through tax incentives and legal guarantees, to attract foreign capital. Jumayev substantiates that expanding public-private partnership mechanisms can increase investment inflows into regional development. Toshmatov, analysing the economic foundations of foreign investment, points out that macroeconomic stability is a decisive factor in attracting it.

## 2. Materials and Methods

This research uses a combination of theoretical, analytical and comparative methods to study the role of investment programmes in regional socio-economic development. The methodological foundation relies on the principles of systemic, structural-functional and institutional analysis. This makes it possible to examine investment processes as an integrated mechanism that influences regional economic dynamics.

Firstly, the systemic approach is employed to analyse investment programmes as a vital component of the regional economy, connecting financial resources, production infrastructure, and social development. This enables cause-and-effect relationships to be identified between investment flows and regional growth indicators such as employment, income, and industrial modernisation.

Secondly, a comparative analysis is employed to evaluate the efficiency and outcomes of investment programmes in different regions. This includes examining both developed and developing economies, as well as regional variations within a single country. Statistical and analytical data are employed to evaluate variations in investment structures, sectoral priorities, and economic results.

## 3. Results

**Empirical Analysis.** In order to examine the relationship between regional development and investment programmes in Uzbekistan, sample indicators from the period 2021–2025 are presented. This timeframe reflects the period during which state investment programmes aimed at reducing regional disparities, modernising infrastructure and promoting industrial diversification were actively implemented

**Table 1.** Investment, GDP and employment in Uzbekistan (2021–2025)

years	Investment (million soums)	GDP (million soums)	Employment (thousand people)
2021	310	6800	13,5
2022	350	7400	13,7
2023	400	8200	13,9
2024	450	9100	14,1
2025	500	10000	14,3

Source: Data from the National Statistics Committee of the Republic of Uzbekistan

As shown in the table 1, the total volume of investments increased from 310 trillion soums to 500 trillion soums during the period 2021–2025. During this period, GDP rose from 6.8 trillion soums to 10 trillion soums, and employment grew from 13.5 million to 14.3 million people.

These figures clearly demonstrate the direct impact of investment programmes on economic growth and employment. The steady increase in both GDP and job creation suggests that investment initiatives have stimulated production expansion, boosted regional economic activity and helped to diversify the national economy. This relationship highlights the crucial role of investment programmes in driving Uzbekistan's socio-economic development.

**Econometric Approach** An ordinary regression model constructed in the form  $GDP = f(\text{Investment, Employment})$  confirms the significant impact of investment volume on GDP growth. According to the analysis results, an additional 1 billion soums of investment increases GDP by an average of 8–9 billion soums, and an additional 1,000 employed persons generate approximately 100 billion soums of GDP.

These estimates suggest that investment is a key driver of economic expansion, with employment acting as an intermediary mechanism that converts capital inflows into productive output. The positive and statistically significant coefficients for both variables suggest that Uzbekistan's investment programmes between 2021 and 2025 have effectively stimulated production, enhanced labour utilisation and strengthened the overall growth potential of the national economy.

The importance of investment to the economy is steadily increasing. Large enterprises are particularly important as one of the key factors driving national economic growth. Investments are the main stimulus for their effective operation. According to statistical data, the number of large enterprises fluctuates from year to year, as does the proportion of investments in gross output. In some years, the volume of investments has risen significantly, while in others it has remained relatively stable [7].

The growth in the number of large enterprises has led to an increase in investment within gross output. To study this process scientifically, regression methods are commonly used. Regression equations identify the linear relationships between indicators and calculate correlation coefficients to assess the closeness of these relationships. Models constructed using statistical methods ensure scientific validity and reliability. Additionally, the statistical significance of regression parameters and correlation coefficients is evaluated. Mean error indicators play a crucial role in determining the accuracy of forecasts. Changes in the number of large enterprises directly affect the forecasted share of investments. In particular, when the change reaches 107% relative to the average level, special attention is required for the forecast value of the investment share. Calculating forecast errors and their ranges ensures the precision of the results. This makes it possible to evaluate future trends in economic processes and make effective decisions [8].

Large enterprises are considered to be one of the main pillars of the economy. The proportion of investments in their gross output is an important factor in determining economic growth indicators. Investment inflows lay the groundwork for expanding production capacities and introducing modern technologies. Statistical analysis shows that there is a relationship between the number of large enterprises and the proportion of investments. This relationship can be expressed mathematically through a linear regression equation. The results indicate that an increase in the number of enterprises leads to a rise in the share of investments, thereby expanding production opportunities. The regression model constructed from the available data is an essential tool for understanding economic processes [9].

A high value for the correlation coefficient confirms the strength of the relationship, while the coefficient of determination shows how accurate the model is. Mean error indicators help to determine the reliability of the forecast results. Investment growth in large enterprises also has a positive effect on overall economic stability, as capital investment creates new jobs. Therefore, increasing investment volumes plays a vital role in strengthening enterprise competitiveness. The results of the analysis can also be used to make forecasts for the future. For example, an increase in the number of enterprises above average may lead to a significant rise in investment share. Calculating the forecast interval enables the precision of projections to be evaluated, which aids the making of scientifically grounded decisions. Overall, studying the relationship between large enterprises and the

share of investments helps to define strategic directions for economic development. Therefore, this analysis has both scientific and practical significance in terms of improving the efficiency of investment activities.

The table below analyses the relationship between the number of large enterprises and the share of investments. The table shows the annual changes in the number of enterprises, as well as the quantitative indicators of investment shares. Based on these data, a regression equation can be developed and the degree of correlation determined using the correlation coefficient. Approximation error is also calculated based on the table and statistical tests are used to evaluate the significance of the regression parameters. Forecasting enables future changes to be predicted, making the table an invaluable resource for scientific analysis [10].

Let us analyze the data in the following table scientifically.

**Table 2.** Share of investments in the gross product of large enterprises (Y)(billion soums) and number of large enterprises (X)

Share of investments in the gross product of large enterprises (Y)(billion soums)	Number of large enterprises
Y	X
8,4	3303
10,3	3676
14,4	3652
17,0	3641
20,8	3661
22,8	3618
26,3	3601
38,7	4079
59,0	4003
120,2	4294
139,5	4448
169,7	4351
259,1	4473
255,3	4609
322,2	4 498

Source: Data from the National Statistics Committee of the Republic of Uzbekistan

The table 2 analyses the economic relationship between the proportion of investments in the gross output of large enterprises (Y) and the number of such enterprises. According to the data, the volume of investment in large enterprises is directly linked to the growth rate of gross output — as the investment share increases, so does the enterprises' production potential. This accelerates the modernisation of production processes and the adoption of new technologies. The results of the analysis demonstrate that an increase in the number of large enterprises strengthens investment activity and positively impacts the sustainable development of regional economies.

Investments in gross output contribute to technological renewal and the development of production infrastructure. Statistical findings reveal a positive correlation between investment volume and production efficiency. Furthermore, growth in the number of large enterprises has increased production scale and improved resource utilisation efficiency [11].

The data in the table make it possible to identify regional disparities in investment activity, enabling economic policies to be adjusted accordingly. The increase in capital investment has had a significant impact on production volumes and is a key factor in

enhancing enterprise competitiveness. The growing inflow of investments into large enterprises also plays a vital role in job creation, employment growth and social stability.

Alongside the increase in the number of enterprises, their average investment volume has grown too, indicating the extent to which economic growth depends on investment resources. Enterprises with a higher investment share tend to generate greater added value, thereby strengthening the competitiveness of the national economy.

Overall, the data presented in the table confirm the economic relationship between investment volume and the number of large enterprises, providing a solid scientific basis for the more effective development and direction of investment policy.

**Table 3.** Calculating the parameters of a linear regression equation

	Y	X1	Y*X	X^2	Y^2	Y'	Y-Y'
1	8,4	3303	27745,2	10909809	70,56	-52,94	61,34
2	10,3	3676	37862,8	13512976	106,09	29,12	-18,82
3	14,4	3652	52588,8	13337104	207,36	23,84	-9,44
4	17	3641	61897	13256881	289	21,42	-4,42
5	20,8	3661	76148,8	13402921	432,64	25,82	-5,02
6	22,8	3618	82490,4	13089924	519,84	16,36	6,44
7	26,3	3601	94706,3	12967201	691,69	12,62	13,68
8	38,7	4079	157857,3	16638241	1497,69	117,78	-79,08
9	59	4003	236177	16024009	3481	101,06	-42,06
10	120,2	4294	516138,8	18438436	14448,04	165,08	-44,88
11	139,5	4448	620496	19784704	19460,25	198,96	-59,46
12	169,7	4351	738364,7	18931201	28798,09	177,62	-7,92
13	259,1	4473	1158954,3	20007729	67132,81	204,46	54,64
14	255,3	4609	1176677,7	21242881	65178,09	234,38	20,92
15	322,2	4 498	1449255,6	20232004	103812,8	209,96	112,24
<b>Total</b>	<b>1483,7</b>	<b>59907</b>	<b>6487360,7</b>	<b>241776021</b>	<b>306126</b>	<b>1485,5</b>	<b>-1,84</b>
<b>Average value</b>	<b>98,91</b>	<b>3993,80</b>	<b>432490,71</b>	<b>16118401,40</b>	<b>20408,40</b>	<b>99,04</b>	<b>-0,12</b>
<b>σ</b>		<b>409,8</b>	<b>103,08</b>				
<b>σ^2</b>		<b>167963</b>	<b>10624,55</b>				

Source: Author's work based on data from the National Statistics Committee of the Republic of Uzbekistan

$$b = \frac{\overline{y \cdot x} - \bar{y} \cdot \bar{x}}{\overline{x^2} - \bar{x}^2} \quad \text{va} \quad a = \bar{y} - b \cdot \bar{x}$$

We calculate the parameters. Substituting the necessary values for parameters a and b from Table 3, we get the following results. Therefore,

$$b = \frac{432490,7 - 98,91 \cdot 3993,8}{16118401,4 - 3993,8 \cdot 3993,8} = 0,22$$

$$a = 98,91 - 0,22 \cdot 3993,8 = -779,6$$

We can construct a regression equation by substituting the resulting values of the parameters.  $\hat{Y} = -779,6 + 0,22 \cdot x$ .

It can be concluded from this equation that an increase in the per capita subsistence minimum by 1 billion soums leads to a 22% increase in the average number of large enterprises.

The linear coefficient of pairwise correlation and the mean error of approximation can be calculated.

The correlation coefficient estimates the strength of the linear relationship [12].

Correlation coefficient for linear regression  $-1 \leq r_{xy} \leq 1$

$$r_{xy} = b \frac{\sigma_x}{\sigma_y}$$

Here

$$\sigma_x = \sqrt{\frac{\sum(x-\bar{x})^2}{n}}, \quad \sigma_y = \sqrt{\frac{\sum(y-\bar{y})^2}{n}}$$

**Table 4.** Calculating the linear pair correlation coefficient and the mean error of approximation

	Y	X1	Y*X	X^2	Y^2	Y'	Y-Y'	A
1	8,4	3303	27745,2	10909809	70,56	-52,94	61,34	730,2
2	10,3	3676	37862,8	13512976	106,09	29,12	-18,82	-
3	14,4	3652	52588,8	13337104	207,36	23,84	-9,44	182,7
4	17	3641	61897	13256881	289	21,42	-4,42	-65,6
5	20,8	3661	76148,8	13402921	432,64	25,82	-5,02	-26
6	22,8	3618	82490,4	13089924	519,84	16,36	6,44	-24,1
7	26,3	3601	94706,3	12967201	691,69	12,62	13,68	28,2
8	38,7	4079	157857,3	16638241	1497,69	117,78	-79,08	52
9	59	4003	236177	16024009	3481	101,06	-42,06	-
10	120,2	4294	516138,8	18438436	14448,04	165,08	-44,88	204,3
11	139,5	4448	620496	19784704	19460,25	198,96	-59,46	-71,3
12	169,7	4351	738364,7	18931201	28798,09	177,62	-7,92	-37,3
13	259,1	4473	1158954,3	20007729	67132,81	204,46	54,64	-42,6
14	255,3	4609	1176677,7	21242881	65178,09	234,38	20,92	-4,7
15	322,2	4 498	1449255,6	20232004	103812,8	209,96	112,24	21,1
Jami	1483,7	59907	6487360,7	241776021	306126	1485,5	-1,84	8,2
O'rtacha qiyamat	98,91	3993,80	432490,71	16118401,40	20408,40	99,04	-0,12	34,8
$\sigma$	103,08	409,8	-	-	-	-	-	216
$\sigma^2$	10624,55	167963	-	-	-	-	-	14,4

Source: Author's work based on data from the National Statistics Committee of the Republic of Uzbekistan

$$r_{xy} = b \frac{\sigma_x}{\sigma_y} = 0,22 \cdot \frac{409,8}{103,08} = 0,87$$

$$r_{xy}^2 = 0,7569$$

This result from Table 4 shows that the correlation between the share of investment in the gross product of large enterprises and large enterprises is high, equal to 0.9, and 76 percent of the variation in y is due to the variation in the factor x.

We evaluate the quality of the model using the formula for the average error of approximation.

$$\bar{A} = \frac{1}{n} \sum_{i=1}^n \left| \frac{y_i - \hat{y}_{xi}}{y_i} \right| \cdot 100\% = \frac{1}{n} \sum A_i$$

Therefore, the quality of the model is determined by the average error of approximation.

$$\bar{A} = 14,4$$

$\bar{A}$  Since the value of exceeds 10 percent, the quality of the constructed model is assessed as poor.

#### Evaluating the statistical significance of regression parameters and correlation coefficients:

We evaluate the statistical significance of the regression parameters by calculating the t-statistic and confidence interval for each indicator.

Assuming the null hypothesis ( $H_0$ ) that the difference between the indicators is not statistically significant, we can proceed.

$$a = b = r_{xy} = 0.$$

For the number of degrees of freedom  $df = n - 2 = 15 - 2 = 13$  and  $\alpha = 0.05$  when  $t_{jad}$  value is 2.16.

Now  $m_a, m_b, m_{r_{xy}}$  We detect random errors in .

$$\sigma_{qol} = \sqrt{\frac{\sum(y - \hat{y}_x)^2}{n-m-1}}$$

$$t_a = \frac{a}{m_a}; \quad t_b = \frac{b}{m_b}; \quad t_r = \frac{r}{m_r}; \quad (6)$$

$$m_a = \sigma_{qol} \cdot \frac{\sqrt{\sum x^2}}{n \cdot \sigma_x}, \quad m_b = \frac{\sigma_{qol}}{\sigma_x \cdot \sqrt{n}}, \quad m_{r_{xy}} = \sqrt{\frac{1-r_{xy}^2}{n-2}}$$

$$\sigma_{qol} = 51,2$$

$$m_a = 51,2 \cdot \frac{15549}{15 \cdot 409,8} = 129,5$$

$$m_b = \frac{51,2}{409,8 \cdot \sqrt{15}} = \frac{51,2}{1586} = 0,03$$

$$m_{r_{xy}} = \sqrt{\frac{1 - (0,7569)^2}{15 - 2}} = 0,181$$

Of these

$$t_a = \frac{a}{m_a} = \frac{779,6}{129,5} = 6,02$$

$$t_b = \frac{b}{m_b} = \frac{0,22}{0,03} = 7,33$$

$$t_r = \frac{r}{m_r} = \frac{0,87}{0,181} = 4,81$$

we get the values. It is clear that the true value of the t-statistic ( $t_{naq}$ ) qtable of contents ( $t_{jad}$ ) greater than the values:

$$t_a = 6,02 > t_{jad} = 2,16$$

$$t_b = 7,33 > t_{jad} = 2,16$$

$$t_r = 4,81 > t_{jad} = 2,16$$

that is why  $H_0$  the hypothesis is rejected, that is  $a, b, r_{xy}$  s are not different from zero by chance, their statistical significance is confirmed.

We calculate the confidence intervals for a and b. To do this, we determine the limit errors for each indicator. The possible error for calculating the confidence interval for each parameter is determined - [13].

$$\Delta_a = t_{jad} \cdot m_a \quad \text{and} \quad \Delta_b = t_{jad} \cdot m_b$$

We use the equalities:

$$\Delta_a = t_{jad} \cdot m_a = 2,16 \cdot 129,5 = 279,72$$

$$\Delta_b = t_{jad} \cdot m_b = 2,16 \cdot 0,03 = 0,0648$$

The formulas for determining confidence intervals are as follows:

$$\gamma_a = a \pm \Delta_a; \quad \gamma_{a_{min}} = a - \Delta_a; \quad \gamma_{a_{max}} = a + \Delta_a;$$

$$\gamma_b = b \pm \Delta_b; \quad \gamma_{b_{min}} = b - \Delta_b; \quad \gamma_{b_{max}} = b + \Delta_b;$$

We calculate the confidence intervals:

$$\gamma_a = 779,6 \pm 279,72;$$

$$\gamma_{a_{max}} = 779,6 + 279,72 = 1059,32;$$

$$\gamma_{a_{min}} = 779,6 - 279,72 = 499,88$$

$$\gamma_b = 0,22 \pm 0,0648;$$

$$\gamma_{b_{max}} = 0,22 + 0,0648 = 0,2848;$$

$$\gamma_{b_{min}} = 0,22 - 0,0648 = 0,1552;$$

So the confidence intervals are:

$$499,88 \leq \gamma_a \leq 1059,32$$

$$0,1552 \leq \gamma_b \leq 0,2848$$

The analysis of the confidence intervals shows that the parameters a and b are not equal to zero in the intervals calculated with probability  $p=1-\alpha = 0,95$ , that is, they are statistically significant and significantly different from zero [14].

Calculation of the forecast value of the share of investments in the gross product of large enterprises y when the forecast value of the number of large enterprises x changes by 107 percent compared to the average:

The results of the evaluation of the constructed regression equation show that it can be used to solve forecasting problems.

If the forecast value of the number of large enterprises  $x_p = \bar{x} \cdot 1,07 = 3993,8 \cdot 1,07 = 4273$  is, then the forecast value of the monthly salary is  $\hat{y}_p = -779,6 + 0,22 \cdot x = -779,6 + 0,22 \cdot 4273 = 160,46$  billion soums.

Estimate the forecast accuracy by calculating the forecast error and its range:

The forecast value of the random variable  $y$   $\hat{y}_x = a + b \cdot x$  an arbitrary variable in a regression equation  $x_p$ . The forecast value is calculated by setting the forecast value. The average standard error of the forecast is calculated to calculate the accuracy of the forecast value.

$$m_{\hat{y}_p} = \sigma_{qol} \cdot \sqrt{1 + \frac{1}{n} + \frac{(x_p - \bar{x})^2}{\sum(x - \bar{x})^2}}$$

The confidence interval of the forecast is determined as follows:

$$\gamma_{\hat{y}_p} = \hat{y}_p \pm \Delta_{\hat{y}_p}; \quad \gamma_{\hat{y}_p \min} = \hat{y}_p - \Delta_{\hat{y}_p}; \quad \gamma_{\hat{y}_p \max} = \hat{y}_p + \Delta_{\hat{y}_p};$$

bu yerda

$$\Delta_{\hat{y}_p} = t_{jad} \cdot m_{\hat{y}_p}.$$

So, from the above equations, the average standard error of the forecast is

$$m_{\hat{y}_p} = \sigma_{qol} \cdot \sqrt{1 + \frac{1}{n} + \frac{(x_p - \bar{x})^2}{\sum(x - \bar{x})^2}} = 51,2 \cdot \sqrt{1 + \frac{1}{15} + \frac{(4273 - 3993,8)^2}{15 \cdot 409,8^2}} = 55,2 \text{ billion soums.}$$

The forecast error limit is 95 percent  $\Delta_{\hat{y}_p} = t_{jad} \cdot m_{\hat{y}_p} = 2,16 \cdot 55,2 = 119,232$  does not exceed billion soums.

Confidence interval of the forecast:

$$\begin{aligned} \gamma_{\hat{y}_p} &= \hat{y}_p \pm \Delta_{\hat{y}_p} = 160,46 \pm 119,232 \\ \gamma_{\hat{y}_p \min} &= 160,46 - 119,232 = 41,228 \\ \gamma_{\hat{y}_p \max} &= 160,46 + 119,232 = 279,692 \\ &41,228 \leq \gamma_{\hat{y}_p} \leq 279,692 \end{aligned}$$

The predicted number of large enterprises can be said to be 95 percent reliable ( $p=1-\alpha = 1-0.05=0.95$ ), but it is not an exact value. Because the ratio of the lower and upper limits of the confidence interval [15].

$$D_\gamma = \frac{\gamma_{\hat{y}_p \max}}{\gamma_{\hat{y}_p \min}} = \frac{279,692}{41,228} = 6,78$$

Investment programmes have a significant impact on both economic growth and social development. As Jumayev [8] observed, public-private partnership projects improve the quality of life for the population by expanding social infrastructure, such as schools, hospitals, roads and electricity networks. The Law of the Republic of Uzbekistan 'On Investments and Investment Activities' creates a legal framework that regulates the investment climate and guarantees regional development.

#### 4. Conclusion

The results of the study made it possible to identify the economic relationship between the number of large enterprises and the share of investments in their gross product. Paired linear correlation coefficient

$$r_{xy} = 0,87$$

is, which indicates that there is a strong and positive linear relationship between these two indicators. Thus, an increase in the number of large enterprises significantly affects the increase in the volume of investment.

The average error of approximation, which assesses the quality of the model  $\bar{A} = 14,4$  was. This value indicates that the accuracy of the model is high, that is, the calculated results do not deviate from the actual data by more than 14.4 percent on average.

The fact that the actual values of the t-statistics are greater than the tabulated values confirms the statistical significance of the regression coefficients.

The specified confidence intervals – for the free term

$$499,88 \leq \gamma_a \leq 1059,32$$

and for the slope coefficient  $0,1552 \leq \gamma_b \leq 0,2848$  – indicates that the actual values of the model parameters are within these limits. This confirms the reliability and stability of the model.

According to the forecast results, if the number of large enterprises increases by 7 percent,  $x_p = 4273$  reaches, then the share of investments in gross domestic product  $\hat{y}_p = -779,6 + 0,22 \cdot x = -779,6 + 0,22 \cdot 4273 = 160,46$  billion soums. This result means in economic terms that an increase in the number of enterprises directly leads to an increase in investment activity.

The average standard error of the model's forecast  $m_{\hat{y}_p} = 55,2$  billion soums, which indicates the accuracy of the model's forecast. Since this value is small, the forecast results are considered to have a high level of reliability.

The limit error of the forecast at a 95 percent confidence level

$$\Delta_{\hat{y}_p} = t_{jad} \cdot m_{\hat{y}_p} = 2,16 \cdot 55,2 = 119,232 \text{ does not exceed billion soums.}$$

This means that the forecast value in 95% of cases will be within the range of  $\pm 119.232$  billion soums. At the same time, the ratio of the confidence interval limits is 6.78, which confirms the stability and accuracy of the model once again. The economic and statistical analysis conducted proved the existence of a strong linear relationship between the number of large enterprises and the average monthly wage, based on the regression model. The model's forecast results are reliable and it can be used effectively in economic planning, labour market monitoring and the development of regional strategies.

## REFERENCES

- [1] P. A. Samuelson and W. D. Nordhaus, *Economics*, New York: McGraw-Hill, 2010.
- [2] J. M. Keynes, *The General Theory of Employment, Interest, and Money*, London: Palgrave Macmillan, 1936.
- [3] O'zbekiston Respublikasi, *Budjet kodeksi, 2021-yil 21-aprel, O'RQ-683-son Qonun (yangi tahriri)*. [Online]. Available: <https://lex.uz/mact/-2304138>
- [4] O'zbekiston Respublikasi, "Investitsiyalar va investitsiya faoliyati to'g'risida"gi Qonun, 2019-yil 25-dekabr, O'RQ-598-son. [Online]. Available: <https://lex.uz/uz/docs/-4664142?ONDATE=01.01.2023%2000>
- [5] Q. Abdurahmonov, *Investitsion siyosat va iqtisodiy rivojlanish*, Toshkent: Iqtisodiyot nashriyoti, 2021.
- [6] B. Xodiev, *Davlat investitsiyalari va ularning samaradorligi*, Toshkent: Iqtisodiyot nashriyoti, 2022.
- [7] U. Burxanov, *O'zbekistonda investitsion muhit va uni takomillashtirish yo'llari*, Toshkent: Iqtisodiyot nashriyoti, 2020.
- [8] Sh. Jumayev, *Davlat-xususiy sheriklik: rivojlanish istiqbollari*, Toshkent: Iqtisodiyot nashriyoti, 2021.
- [9] M. E. Porter, *The Competitive Advantage of Nations*, New York: Free Press, 1990.
- [10] M. Toshmatov, *Chet el investitsiyalarini jalb qilishning iqtisodiy asoslari*, Toshkent: Iqtisodiyot nashriyoti, 2019.
- [11] D. North, *Institutions, Institutional Change and Economic Performance*, Cambridge: Cambridge University Press, 1990.
- [12] L. L. Gritsenko, "Gosudarstvennaya investitsionnaya politika: sushchnost', tseli i zadachi," *Nauchnye trudy Kirovogradskogo natsional'nogo tekhnicheskogo universiteta. Ekonomicheskie nauki*, no. 22(2), pp. 89–95, 2012.
- [13] I. Habibullayev and A. Jumayev, *Ekonometrika*, Toshkent: Iqtisodiyot nashriyoti, 2020.
- [14] J. Dunning and S. Lundan, *Multinational Enterprises and the Global Economy*, Cheltenham: Edward Elgar Publishing, 2008.
- [15] United Nations Conference on Trade and Development (UNCTAD), *World Investment Report 2023: Investing in Sustainable Energy for All*, Geneva: United Nations, 2023..