CENTRAL ASIAN JOURNAL OF INNOVATIONS ON TOURISM MANAGEMENT AND FINANCE

https://cajitmf.casjournal.org/index.php/CAJITMF

Volume: 07 Issue: 01 | January 2026 ISSN: 2660-454X

Article

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

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Abstract: This paper contains a theoretical and methodological analysis of the place and role in regional socio-economic policy of investment programmes. Firstly, I review the economic schools and theoretical considerations which have approached investment processes focusing on regional development. It also adds to our understanding of how investment programmes influence regional economic growth, and are modernising production infrastructure and organisa tionofthe social sphere. This article presents the scientific grounds of investment programs for interregional differences, employment promotion and to secure effective development of economic potential activities in regional space. The findings of the study indicate that there is a greater need for a wider dissemination on an investment programme forecasting in formulating policies concerning regional development. The article theoretically-methodologically substantiates the essence and importance of investment programmes in socio-economic regional development. For this purpose the first step is a review of the principal economic schools and theoretical groups that have analysed the effect that investment processes have on regional growth. The latter is then confirmed by the regional economic growth, production infrastructure modernization and social sphere development mechanism of the programme-oriented financing. The studies show the underlying rationale for investment programmes aimed at reducing interregional disparities, increasing employment and achieving more efficient use of economic resources, as well as promoting sustainable regional growth.

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 2026, 7(1), 270-279

Received: 25th Oct 2025
Revised: 17th Nov 2025
Accepted: 27th Nov 2025
Published: 15th Dec 2025

1. Introduction

Pre_requisites for state building are the social-economic development of territories, as only then it is possible to ensure stable development of the state and have better living conditions for people. Investment programmes are the focus of this process, being the principal instrument for modernising production infrastructure, job creation, developing social areas and reducing regional disparities [1]. Expansion of investment will stimulate economic development, promote regional competitiveness and resource optimization, as well as lead to innovation. Hence, comprehension of the theoretical and methodological underpinnings of investment programs is indispensable to better inform regional policy making [2].

Currently, Uzbekistan is reforming and securing the regional investment policy to attract home and foreign investments in terms of its efficiency. However, it is highly

important to substantiate the influence of these investments on the socio-economic development of regions, to determine their theoretical bases and to develop methods for forecasting [3].

From this paradigmatic standpoint, the article analyzes the role of investment programs on regional development as well as it scientific bases and theoretical-methodological approaches.

Literature Review

A number of schools in economic literature studied the investment and development problems deeply [4]. Samuelson and Nordhaus define investment as the key factor of economic growth. Porter, in his national competitiveness framework, stresses that investment programmes must be connected to innovative clusters in order to develop specific countries. North's institutional theory considers the good quality of legal and organizational institutions as a primary cause of investment efficiency [5].

This problem has also attached great importance at home. Abdurakhmanov views the investment policy as an integral part of the national development strategy, and Khodiev stresses that monitoring and evaluation systems need to be improved so that public investments become more effective [6]. Burkhanov broaches the question of investment climate improvement, including through tax breaks and legal guarantees to foreign capital. [7] Jumayev claims that increasing the use of a public–private partnership model can grow investment flows in regional development. Toshmatov, studying the economic basis of foreign investments, emphasizes that macroeconomic stability is a key element in its attraction.

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 and Discussion

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 [8]. 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

Table 1

As shown in the table, 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 [9].

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(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 [10]. 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.

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.

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.

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.

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

Table(2) The table shows the economic relationship between the rate of investment in gross output to large enterprises (Y) and the number of such large enterprise. The data is reflecting that investment in larger enterprises is directly proportional the rate of growth of gross output – higher share of investment, higher production potential. This will speed up the modernisation of manufacturing and take-up of new technologies. The analytical

data indicate that the increase in the number of major enterprises stimulates investment activity and creates a favourable environment for sustainable development of regional economies.

Gross output investment is related to technology renewal and production infrastructure development. Statistical results show that there is a positive relation between the investment amount and output efficiency. "We have also expanded the large coal enterprises chain, the production scale has been increased and we upgraded resource utilisation ratio." [11]

The table figures can be compared to detect country-level differences in investment, so that economic policies can adapt accordingly. The growth of capital investment has played a leading role in the production scales and is an important factor to upgrade enterprises' competition ability. The investible funds that continue to flow into big enterprises are also a major driver of job creation, employment expansion and social stability.

The average investment scale of these enterprises has also been rising with the increase of their number, which shows that economic growth is to a certain degree determined by the amount of capital resources. Enterprises with larger investment ratio have more added value, which contribute to the enhancement of national economic competitiveness.

In general, the material a presented in Table 1 confirms an economic dependency of input amount on large enterprise number and it can be considered as official authoritative evidence for scientifically-based more appropriate 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
Total	1483,7	59907	6487360,7	241776021	306126	1485,5	-1,84
Average value	98,91	3993,80	432490,71	16118401,40	20408,40	99,04	-0,12
σ		409,8	103,08				
σ^2		167963	10624,55				

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,

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

$$a = 98{,}91 - 0{,}22 * 3993.8 = -779{,}6$$

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 $-1 \le r_{xy} \le 1$

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

Here

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

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

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.

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

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 .

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

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

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

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

$$\text{m}_\text{a} = 51{,}2 \cdot \frac{15549}{15 \cdot 409{,}8} = 129{,}5$$

$$\text{m}_\text{b} = \frac{51{,}2}{409{,}8 \cdot \sqrt{15}} = \frac{51{,}2}{1586} = 0.03$$

$$\text{m}_{\text{r}_{\text{xy}}} = \sqrt{\frac{1-(0{,}7569)^2}{15-2}} = 0{,}181$$

Of these

$$t_a = \frac{a}{\text{m}_\text{a}} = \frac{779{,}6}{129{,}5} = 6{,}02$$

$$t_b = \frac{b}{\text{m}_\text{b}} = \frac{0{,}22}{0{,}03} = 7{,}33$$

$$t_r = \frac{\text{r}}{\text{m}_\text{r}} = \frac{0{,}87}{0{,}181} = 4{,}81$$

we get the values. It is clear that the true value of the t-statistic (t_{haq}) 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:

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

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:

$$499{,}88 \le \gamma_a \le 1059{,}32$$
$$0{,}1552 \le \gamma_b \le 0{,}2848$$

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-α = 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:

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

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$$\Delta_{\hat{y}_p} = t_{jad} \cdot \mathrm{m}_{\hat{y}_p}.$$

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

$$m_{\hat{y}_p} = \sigma_{qol} \cdot \sqrt{1 + \frac{1}{n} + \frac{(x_p - \bar{x})^2}{\sum(x-\bar{x})^2}} = 51{,}2 \cdot \sqrt{1 + \frac{1}{15} + \frac{(4273-3993{,}8)^2}{15 \cdot 409.8^2}} = 55{,}2$$ 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:

$$\gamma_{\hat{y}_p} = \hat{y}_p \pm \Delta_{\hat{y}_p} = 160{,}46 \pm 119{,}232$$

$$\gamma_{\hat{y}_{p\,min}} = 160{,}46 - 119{,}232 = 41{,}228$$

$$\gamma_{\hat{y}_{p\,max}} = 160{,}46 + 119{,}232 = 279{,}692$$

$$41{,}228 \le \gamma_{\hat{y}_p} \le 279{,}692$$

The predicted number of large enterprises can be said to be 95 percent reliable (p=1-α = 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

$$499{,}88 \le \gamma_a \le 1059{,}32$$

and for the slope coefficient $0{,}1552 \le \gamma_b \le 0{,}2848$ — 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 $\Delta_{\hat{y}_p} = t_{jad} \cdot m_{\hat{y}_p} = 2{,}16 \cdot 55{,}2 = 119{,}232$ does not exceed billion soums. This means that the forecast value in 95% of cases will be within the range of ±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.

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