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ECONOMETRIC MODEL OF THE ACTIVITY OF THE STATE UNITARY ENTERPRISE " RADIO COMMUNICATION, BROADCASTING AND TELEVISION CENTER" AND THE PROMISING DIRECTION OF ITS DEVELOPMENT

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Abstract:
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Econometric modeling of the leading enterprises operating in the field of information and communication technologies in our country is based on the analysis of the results and the direction of development in the future. Econometric modeling allows not only the quantitative analysis of the development multiplier of the information and communication technologies network, but also to determine the share of the influencing factor and the contributing factor. In our publication , the econometric modeling of the effective growth multiplier of the state unitary enterprise "Radio Communication, Broadcasting and Television Center" allows us to quantitatively determine the factor affecting the net income of the enterprise and to develop an optimal plan for the growth of the network.

following factor can be used to determine the effective development of the state unitary enterprise "Radio Communication, Radio Broadcasting and Television Center" in the Republic of Uzbekistan:

- the resulting factor - the net income from the service of the state unitary enterprise "Radio Communication, Broadcasting and Television Center" , mln. sum, (Y);

- as a motivating factor - the volume of period expenses of the state unitary enterprise "Radio Communication, Broadcasting and Television Center" , mln. sum (X_1);

- Revenues from financial activities in the state unitary enterprise "Radio Communication, Broadcasting and Television Center" , mln. soum (X_2);

- Expenses of the state unitary enterprise "Radio Communication, Broadcasting and Television Center" on financial activities, mln. soum (X_3);

- Taxes to the state budget of the state unitary enterprise "Radio Communication, Broadcasting and Television Center" , mln. soum (X_4).

- Net profit of the state unitary enterprise "Radio Communication, Broadcasting and Television Center" to the state budget, mln. soum (X_5).

According to the data of Table 1, first of all, before creating a multi-factor econometric model for the net income of the state unitary enterprise "Radio Communication, Radio Broadcasting and Television Center" , it is necessary to determine the density of dependence in the set of factors included in this model. For this purpose, the coupling coefficient is calculated in the factor cell.

Table 1

Financial and economic indicators of the state unitary enterprise "Radio communication, broadcasting and television center" (thousand soums)[181]

Show them	**Total net service revenue (Y)**	**period expenses (X1)**	**Financial of activity income (X2)**	**Financial activity on this expenses (X3)**	**Taxes (X4)**	**Net profit (X5)**
2009	9,010,750	3 158 414	6,792,247	6,748,573	805 324	3 248 971
2010	10,629,051	3,969,675	26 317 218	28 253 199	1 587 383	7,056,053
2011	11 360 952	4 252 399	21 460 244	21 332 868	1 189 128	4,713,930
2012	15,078,259	5,674,975	18 349 418	18,087,961	1 365 090	3 600 295
2013	15,739,962	6,891,569	26,455,904	25 380 109	1,556,992	26,524,14
2014	19,203,921	7 486 628	19,683,218	19,563,905	890 574	197 5 34
2015	20,505,405	8,421,876	26,019,050	13 289 213	1 083 099	12,945,38 6
2016	28 223 661	12,818,665	57 242 432	55,735,596	1 858 347	10,467,09 0
2017	43 230 334	18 122 564	99 015 595	40 929 391	2 245 113	12,042,31 0
2018	59,586,917	25,00 0,225	167 437 733	19,669,141	2,729,000	8 517 118
2019	77 498 393	24 427 282	48 597 001	30 171 228	2,051,076	7,683,810
2020	106 967 523	28,974,341	54 535 305	120 169 143	2,262,910	7,047,959
2021	129,775,732	38 474 356	64 038 546	44,834,723	2,785,220	8,603,560
2022	106 230 007	33,797,470	95 959 485	64 761 306	2 690 733	10,272,96

The following formula is used to calculate the coupling coefficient in the Omillap cell:

$$r_{xy} = \frac{\overline{xy} - \bar{x} \cdot \bar{y}}{\sigma_x \cdot \sigma_y} \qquad (1)$$

in this ep:

[181] Information of the state unitary enterprise "Radiocommunication Radio Broadcasting and Television Center".

σ_x and σ_y - the x quadratic deviation of the power factor and the factor. y

We then conduct a covariance analysis to determine the association between these factor clusters

Using an Excel spreadsheet, we calculate the coefficient of coupling in the factor cell (Table 1).

In Omillap, the coefficient of economic coupling increases so that the taxes of the state unitary enterprise "Radiocommunication, broadcasting and television center", mln. sum (X_4) and "Radio Communication, Radio Broadcasting and Television Center" state unitary enterprise (X_1) and Financial activity income (X_2) in the sample, the 4th numerical factor should be excluded from the model due to the presence of multicollinearity. Then the private correlation is calculated and the econometric model is constructed.

Table 2

Coupling coefficient calculated in the [182]net income of the state unitary enterprise "Radio Communication, Radio Broadcasting and Television Center" and the factors contributing to it

Indicator - s	Service from showing fell total net income (Y)	period cost (X1)	Financial of activity income (X2)	Financial activity on this expenses (X3)	Taxes (X4)	Net profit (X5)
Service from showing fell total net income (Y)	1					
period expenses (X1)	0.98	1				
Financial of activity income (X2)	0.50	0.65	1			
Financial activity on this expenses (X3)	0.67	0.61	0.24	1		
Taxes (X4)	0.83	0.90	0.82	0.54	1	
Net profit (X5)	0.00	0.05	0.13	0.05	0.20	1

[182]The table was developed by the author.

Now , we will create a multi-factor econometric model based on the above-mentioned factor on the net income of the state unitary enterprise "Radio Communication, Broadcasting and Television Center" and the factors affecting it.

It has the following distribution:

$\hat{Y} = -3261550{,}504 + 3{,}709x_1 - 0{,}197x_2 + 0{,}095x_3 - 0{,}22x_5 (2)$

$R^2 = 0{,}9946;\ F_{\text{ҳисоб}} = 413{,}02.$

The coefficient of 3,261,550,504 in the model increases the impact of the factor not taken into account, that is, the net income of the state unitary enterprise "Radiocommunication, broadcasting and television center" was 3,261,550,504 thousand soums .

$R^2 = 0{,}9946$- the coefficient of determination shows that 99.46 percent of the net income of the state unitary enterprise "Radio Communication, Broadcasting and Television Center" depends on the factor included in the multi-factor econometric model. The remaining 0.64% is due to other factors not taken into account.

Fishep's F -criterion is used to test the effectiveness or statistical significance of the constructed multifactor econometric model.

The calculated Fishep criterion is compared with the value in the table. To find the Fishep coefficient in the table, k_1 fold and k_2 zapup to determine the price: $k_1 = n - m - 1$ and $k_2 = m$. Therefore, the constructed econometric model is called moc (adequate) to the Japanese being studied . $F_{\text{хисоб}} > F_{\text{жадвал}}$ Therefore, the constructed econometric model is called statistically significant or moc emac to the Japanese being studied . $F_{\text{хисоб}} < F_{\text{жадвал}}$ In this case, a non-linear econometric model is chosen instead of a linear econometric model.

(1) for the model $k_1 = n - m - 1 = 14 - 4 - 1 = 9$ and $k_2 = 4$it can be determined that its value in the table is equal to 14.8. From this it turned out that eca $F_{\text{хисоб}} > F_{\text{жадвал}}$, that is, $F_{\text{ҳисоб}} = 413{,}02 > F_{\text{жадвал}} = 14{,}8.$

So, the created econometric model is statistically significant, it is able to directly determine the state of net income of the state unitary enterprise "Radio Communication, Broadcasting and Television Center" . In addition, it is possible to predict the future development of the complex model.

Therefore, as a result of the multicollinearity identified in the above correlation analysis, we have an adequate multifactor econometric model. The obtained multifactor econometric model was found to be statistically significant, and the model was reliable.

the model , it is possible to predict the net income of the state unitary enterprise "Radio Communication, Broadcasting and Television Center" for the next year.

For this, first of all, it was a factor affecting the net income of the state unitary enterprise "Radio Communication, Broadcasting and Television Center" . The

volume of period expenses of the state unitary enterprise " Radio communication, radio broadcasting and television center" (X_1), the volume of financial activity income in the state unitary enterprise "Radio communication, radio broadcasting and television center" (X_2), "Radio communication, radio broadcasting and television center" state unitary enterprise We will make a trend model on the expenses of the unitary enterprise on financial activities (X_3), the net profit of the state unitary enterprise "Radio Communication, Broadcasting and Television Center" to the state budget (X_5).

Trend model of the state unitary enterprise " Radio communication, broadcasting and television center" according to the volume of period expenses :

$y = 188967x^2 - 68636x + 3E+06$

$R^2 = 0.9589$

trend model on the volume of income from financial activities in the state unitary enterprise "Radio Communication, Broadcasting and Television Center" :

$y = 8E+06x^{0.9035}$

$R^2 = 0.6861$

trend model of expenses for financial activities of the state unitary enterprise "Radio Communication, Broadcasting and Television Center" :

$y = 9E+06x^{0.6556}$

$R^2 = 0.4943$

trend model for the net profit of the state unitary enterprise "Radio Communication, Broadcasting and Television Center" to the state budget:

$y = 4E+06x^{0.3515}$

$R^2 = 0.1719$

The factor affecting the net income of the state unitary enterprise " Radio Communication, Broadcasting and Television Center" The volume of period expenses of the state unitary enterprise " Radio communication, radio broadcasting and television center" (X_1), the volume of financial activity income in the state unitary enterprise "Radio communication, radio broadcasting and television center" (X_2), "Radio communication, radio broadcasting and television center" state unitary enterprise The results of the calculation of the unitary enterprise 's financial activity expenses (X_3), the net profit of the state unitary enterprise "Radio Communication, Radio Broadcasting and Television Center" to the state budget (X_5) according to the trend model are given in table 3.4 below.

Table 3

of the state unitary enterprise "Radio Communication, Broadcasting and Television Center" and the factors affecting it in 2023-2028[183]

[183]Was compiled according to the author's calculations based on the data of the state unitary enterprise "Radioaloka Radio Broadcasting and Television Center" .

Indicators	Service from showing fell total net income (Y)	period cost (X1)	Financial of activity income (X2)	Financial activity on this expenses (X3)	Net profit (X5)
2023	146 376 741	44 488 035	92 403 504	53 123 654	10,362,298
2024	166 926 982	50 277 376	97 951 793	55 419 623	10,600,056
2025	188 883 085	56 444 651	103 466 698	57,666,663	10,828,363
2026	212 244 796	62,989,860	108 950 366	59,868,608	11,048,117
2027	237 011 890	69 913 003	114,404,700	62,028,799	11 260 091
2028	263 184 169	77 214 080	119 831 388	64 150 165	11,464,947

Using the data sheet of table 3.4, we will form the graph of the change in the forecast period in terms of factors affecting the net income of the state unitary enterprise "Radio Communication, Broadcasting and Television Center" . In order to emphasize the dynamics in it, a graph is given in 3.6.

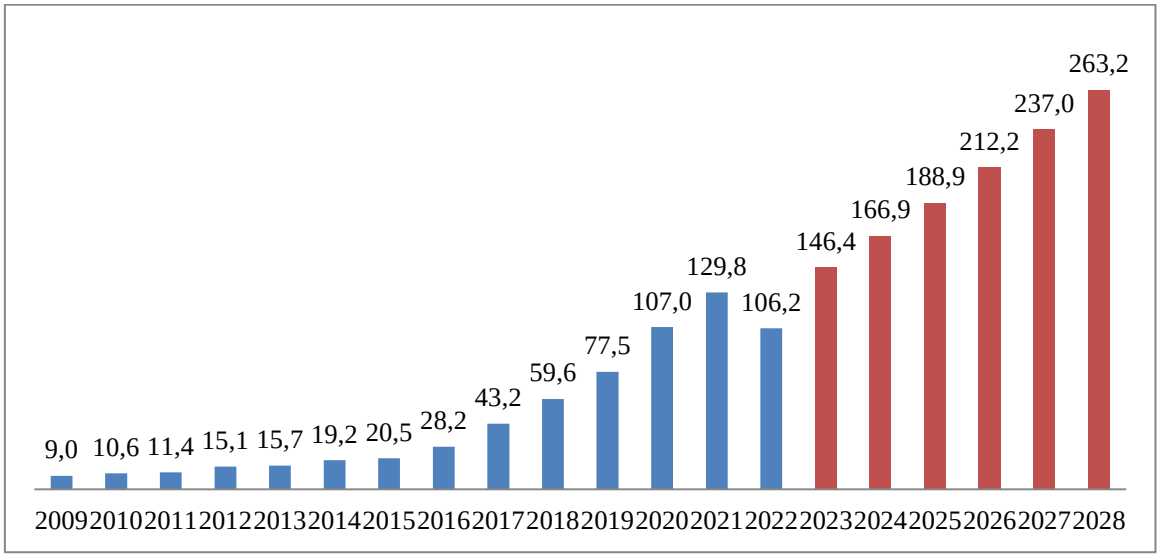

Figure 1. Actual and forecast multiplier of the net income of the state unitary enterprise "Radio communication, broadcasting and television center" in 2009-2028[184]

net income of the state unitary enterprise "Radiocommunication, broadcasting and television center" is forecasted to double in 2028 compared to the actual figures in 2021, and it is planned to reach 236.2 billion soms. As a result, the expenses of the period amounted to 77.2 billion. 64.15 bln . can increase up to soum. At the same time , in the state unitary enterprise "Radio Communication, Broadcasting and Television Center", the income of financial activity amounted to 119.83 billion soums and the net profit amounted to 11.46 billion. can reach up to soum.

In order to develop the economic activity of ICT, the first step is to increase the volume of services, for this, it is necessary to adopt new methods and to modernize the composition of the main tools. In this way, it is appropriate to launch an

[184] It was compiled according to the author's calculations based on the data of the state unitary enterprise "Radioaloka Radio Broadcasting and Television Center" .

invective project that will pave the way for some of the pentapolar pact projects, which is one of the biggest problems of today.

In such a case, attracting an invectoplap can be relatively quick when the invectoplap begins to realize the expansion of opportunities it finds. "Radio Communication, Radio Broadcasting and Television Center" state unitary enterprise to direct the existing financial resources of the organization to investment projects and projects with high potential there will be an opportunity to increase the income even more.

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