



ASSESSMENT OF PROSPECTS FOR EFFECTIVE USE OF CURRENT ASSETS IN OIL AND GAS INDUSTRY ENTERPRISES AND IDENTIFICATION OF ALTERNATIVE SCENARIOS

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Astract: This article examines the issues of effective use of current assets and increasing profit per asset in manufacturing enterprises. The growth of current assets in relation to the volume of liabilities ensures the speed of the production process, the continuity of product supply and the efficiency of the enterprise.

Key words: current asset, financial result, oil and gas, analysis, multifactor analysis, econometric model, alternative scenario, profit, volume, prospective assessment, efficiency.

Introduction. In the multi-factor analysis of the processes of socio-economic development, or in the analysis and evaluation of the level of efficiency of enterprises operating in the oil and gas industry based on the effective use of current assets in the activities of enterprises within the economic system, obtained separately or by using multi-variant research methods, based on multi-factor linkage in additive or multiplicative form analyzes are carried out on dynamic models in the form of a function of production or economic growth. Determined multi-factor dynamic models help to determine the target forecast indicators in the form of the results of various scenarios for the short and medium term based on the determination of the management directions of the factors affecting the amount of profit (loss) achieved by the enterprise at the micro level and to determine the measures necessary to ensure these indicators.

Methods. This study on the use of flexible pricing strategies in the vegetable B2C market examines the pricing requirements of B2C entities in the vegetable trade. A value proposition created for customers has been implemented in vegetable procurement. Based on the results of the research, appropriate conclusions and suggestions were developed.

Results. The following conclusions were summarized based on multi-factor modeling of the process representing the dependence of influencing factors representing the state and movement of current assets on the final financial result (profit) in the enterprises of the joint-stock company "Uzneftgaz":

1. The trend model representing the impact of current assets on the final financial result of operating enterprises can be determined in the form of a non-linear model based on multi-factor econometric analysis.
2. Extraction of exogenous factors in the multi-factor econometric model based on the mathematical expectations of the analysis using analytical methods, in particular the SWOT-analysis method, strengthens the logical structure of the factor analysis. A certain amount of change (increase or decrease) in the indicators of this exogenous factor leads to a significant change in the endogenous variable.
3. As a result factor, the volume of profit (loss) and the influence of factors representing the state and amount of current assets affecting its change, the factor in the trend model, which reflects the influence of the factor indicators, was chosen in the form of a non-linear model due to the non-homogeneous indicators.

Based on the above conclusions and (3.2) - connections, in order to quantitatively increase the profit (loss) of the enterprises within the company under the influence of the amount of current assets and their components, it is appropriate to organize activities in the following directions:

- it is necessary to optimize the structure of existing assets in system enterprises, i.e. the ratio of long-term and current assets;

- due to the fact that the amount of current assets of enterprises in the analyzed period is more than the amount necessary for the implementation of necessary turnovers, it is advisable to increase the efficiency of assets by directing excess current assets to investment or financial activities;

- although the increase in the share of receivables in current assets according to the model seems to lead to a positive result, directing excess assets to long-term assets or covering liabilities without increasing receivables will bring the volume of current assets to an optimal state in the activities of system enterprises and thereby further improve the state of the final financial results of enterprises allows.

Using the results of the above analyzes and the recommendations based on them will expand the possibility of stabilizing the efficiency level of the enterprises within the company in terms of quantity and quality in the future.

Analyses. Based on the above theoretical and methodological approaches, a multi-factor analysis was carried out, representing the effect of factor indicators reflecting the quantitative and qualitative characteristics of the current assets at the disposal of these enterprises on the resulting efficiency indicators of the enterprises of the joint-stock company "Uzneftgaz" system, which were selected as the object of research.

Determining the level of importance of factors is the main task in the implementation of multi-factor analysis, and the specification stage of modeling, that is, the stage of extracting factor indicators participating in the model, is one of the main stages in the formation of multi-factor dynamic models. The content of the studied process, to be more precise, it is required to form the influencing factors that have a high influence on the change of the result index using accurate analysis methods. Many analysis methods can be used in this process, including dozens of analysis methods such as SWOT-analysis, PEST or PESTLE-analysis. However, all of these methods of analysis should go to a specific mathematical expectation of the factor indicators related to the process being studied as a result of the analysis, and the influencing factors should be distinguished depending on the quantitative level of this mathematical expectation.

In the course of our research, we chose the SWOT-analysis method in order to determine the financial result (net profit) of enterprises in the JSC "Uzneftgaz" system during the analysis period as an endogenous factor and the main exogenous factors depending on its change under the influence of current assets. As we know, SWOT-analysis allows to evaluate the situation of the research object in these four aspects based on the four main aspects of the research object - STRENGTHS, WEAKNESSES, OPPORTUNITIES and THREATS.

Using the SWOT-analysis method, endogenous and 4 influencing factors in the form of mathematical expectations representing the impact of current assets on the financial result in the enterprises of the JSC "Uzneftgaz" system were selected (Table 1).

Table 1

Factor indicators representing the effect of current assets on the volume of net profit of enterprises in the JSC "Uzneftgaz" system and its change

Endogenous factors	Exogenous factors
Net profit volume of enterprises in "Uzneftgaz" JSC system, million soms Ysf	X1 – value of current assets, mln. soum
	X2 is the share of current assets in total assets, percentage
	X3 is the share of receivables in current assets, percentage
	X ₄ – жорий активлар таркибидаги ўз маблағлари улуши, фоиз X4 – share of own funds in current assets, percentage

In order to isolate the exogenous factors that represent the influence of current assets on the selected result factor (net profit), factors that can affect the change of the result factor are placed in each part of the SWOT analysis matrix, and the influence of each factor on the endogenous factor is determined based on the conclusions of experts on a scale of 0-5 determined. The results of the analysis conducted separately for each endogenous factor were separated in order of the level of influence of exogenous factors for the resulting factor.

Based on the results of the SWOT-analysis carried out in order to isolate exogenous factors for the size of the net profit of the enterprises in the JSC "Ozneftgaz" system and the factors representing the influence of current assets on its change, the indicators of the factor affecting the change of the endogenous factor were isolated.

Selected influencing factors were examined for their degree of association with the outcome factor based on several tests and criteria (correlation coefficient, Granger causality test, extended Dickey-Fuller test and Phillips-Perron test).

The sum of the effects of the influencing factors reflecting the quantitative and qualitative features of the separated current assets has a share of more than 50% in the total influence of the factors affecting the change in the financial result (profit) of the system enterprises, and these factors are of significant importance in the formation of the net profit volume under the influence of current assets.

Table 2

Indicators of net profit (loss) of enterprises in JSC "Uzneftgaz" system and factors influencing its change

Years	Net profit (loss), mln. soum (Y)	Value of current assets, mln. soum (X1)	Share of current assets in total assets, percentage (X2)	Share of receivables in current assets, percentage (X3)	Share of own funds in current assets, percentage (X4)
2015	10778,8	5977271,8	38,5	92,4	58,3
2016	38600,0	7357604,6	43,7	65,3	53,0
2017	348821,8	6294647,1	17,6	92,3	88,9
2018	127716,9	9228758,7	23,4	78,8	77,3
2019	460111,3	19395991,9	28,7	86,7	60,9
2020	3424982,2	13504947,7	20,7	65,6	44,1
2021	3954765,1	15684286,1	18,9	72,3	41,7
2022	4163765,4	20548735,6	19,8	76,1	38,7

The indicators of the net profit (loss) of enterprises in the system of JSC "Uzneftgaz" and the factors affecting its change for the period of 2015-2022 presented in Table 2 were extracted from the financial reports of JSC "Uzneftgaz" for the specified period, and the indicators of the resulting and influencing factors was formed. Correlation tests of the factor indicators included in the multifactor model based on the extracted factors, as well as the quality of the constructed models and the predictive indicators were determined in the sequence in the table (Table 2).

Due to the fact that the unit of measurement of the resulting and influencing factor indicators separated in the above table is not the same, that is, the factor indicators are not homogeneous, we can determine the main trend model in the form of a linear logarithmic connection. For this, all factor indicators are brought to natural logarithmic indicators.

A multi-factor econometric model of changes in the volume of net profit (loss) received by system enterprises under the influence of current assets and the factors affecting it was created using the identified data. According to him, representing this process

$$\text{LnY} = -0,008 \cdot \text{LnX}_1 - 6,314 \cdot \text{LnX}_2 + 1,743 \cdot \text{LnX}_3 - 5,602 \cdot \text{LnX}_4 + 48,481 \quad (3.1)$$

a dynamic multifactorial model in linear logarithmic form was constructed.

If the formed linear logarithmic model is changed to a non-linear model, a non-linear multiplicative dynamic model representing the amount of net profit (loss) received by system enterprises based on the change in current assets indicators is derived.:

$$Y = \frac{x_3^{1,743} \cdot e^{48,481}}{x_1^{0,008} \cdot x_2^{6,314} \cdot x_4^{5,602}} \quad (3.2)$$

The number of influencing factors obtained for factor analysis and the width of the time series representing the change of factor indicators during the period of time in the formation of a multi-factor econometric model according to the method of implementation of the learned factor analysis determines the

width of the multi-variant forecast indicators determined by the formed multi-factor model. Due to the fact that the time series of factor indicators for enterprises in the JSC "Uzneftgaz" system is shorter, that is, it covers an 8-year period, the degree of deviation from the reality of the forecasts determined for the last 2 years increases in the forecast indicators for the medium term (5 years) using the multi-factor model. At the same time, the high frequency of fluctuations in the time series of the indicators of the selected influencing factor indicates that the degree of deviation from the actual values increases when the forecasting period is carried out for the medium or long term.

Taking into account the above points, the short-term, i.e. 3-year determination of the resulting factor forecast indicators for the enterprises of the JSC "Uzneftgaz" system, formed under the influence of changes in current assets, ensures that the forecast indicators determined on the basis of the model are close to the real indicators.

Based on the multi-factor trend models determined using the software package, a list of prospective indicators of changes in the net profit (loss) of enterprises in the "Uzneftgaz" JSC system in 2023-2025 and the most convenient models for their calculation was presented.

In the forecast indicators determined on the basis of pairwise and multi-factor dynamic econometric models, it can be seen that in 2023-2025, some influencing factor indicators of the joint-stock company "Uzbekneftgaz" will decrease, while the main result indicator will show a stable increase.

Using the model in practice without evaluating the importance of the econometric model and the quality of its parameters determined on the basis of the above calculations will lead to the occurrence of large errors. Taking this into account, we evaluate the model of changes in the volume of net profit (loss) obtained by system enterprises based on the use of quantitative and qualitative indicators of current assets, its importance and the quality of model parameters.

The parameters identified during the regression analysis using the Eviews10 software package and the importance of the model were evaluated by the main evaluation indicators calculated by the program.

Table 3

Characteristics of connection of selected factors and main indicators of the quality of the constructed factor model by the size of the net profit (loss) obtained by the enterprises of the joint-stock company "Uzneftgaz"

Dependent Variable: the volume of net profit (loss) received by the enterprises of the joint-stock company "Uzneftgaz", LnY

Method: Least Squares

Date: 05/02/24 Time: 20:09

Sample: 2015 2022

Included observations: 8

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Current asset value, LnX1	-0.0008068	0.012000	0.672317	0.5495
Share of current assets in total assets, LnX2	-6.313519	2.641336	2.390275	0.0967
Share of receivables in current assets, LnX3	1.743032	6.484954	0.268781	0.8055
Share of own funds in current assets, LnX4	-5.601910	3.504025	1.598707	0.2082
The general effect of random factors, e	48.48134	13.94970	3.475439	0.0402
R-squared	0.919730	Mean dependent var		12.86125
Adjusted R-squared	0.812704	S.D. dependent var		2.241705
S.E. of regression	0.970158	Akaike info criterion		3.046455
Sum squared resid	2.823618	Schwarz criterion		3.096106

Log likelihood	-7.185819	Hannan-Quinn criter.	2.711579
F-statistic	8.593514	Durbin-Watson stat	2.060391
Prob(F-statistic)	0.054117		

The analysis carried out on the basis of the software package shows that the multiple correlation of the resulting factor with influencing factors is equal to $r=0.9590$, and the determination coefficient is equal to $R^2=0.9197$. This shows that the influencing factors and the resulting factor have a correlation of the necessary density, and the residuals, as the difference between the calculated indicators and the real indicators, are also densely connected.

Using the values of the indicators shown in the table, the importance and quality of the parameters of the constructed econometric model are evaluated. Fisher's criterion value for the endogenous factor in the identified model is 8.5935, and its significance is 0.0541. It can be seen that the constructed trend model can be applied in practice in terms of importance.

Model quality was evaluated using the Akaike information criterion (3.046), Schwartz criterion (3.096) and Hannan-Quinn criterion (2.711) using the software package. The value of these criteria also shows that the trend model can be used in practice.

The Darbin-Watson (DW) criterion, which allows determining the presence of autocorrelation or multicollinearity in the constructed econometric model, is equal to 2.06, and taking into account that the optimal limit is around 2.0, it can be seen that the level of autocorrelation in the model is almost non-existent.

Using the EViews10 software package, we form the trend of changes in the size of the net profit (loss) of the enterprises of the joint-stock company "Uzneftgaz" system, which is the main base indicator, within ± 2 statistical error limits, and evaluate the indicators that represent the importance of this trend. (1-figure).

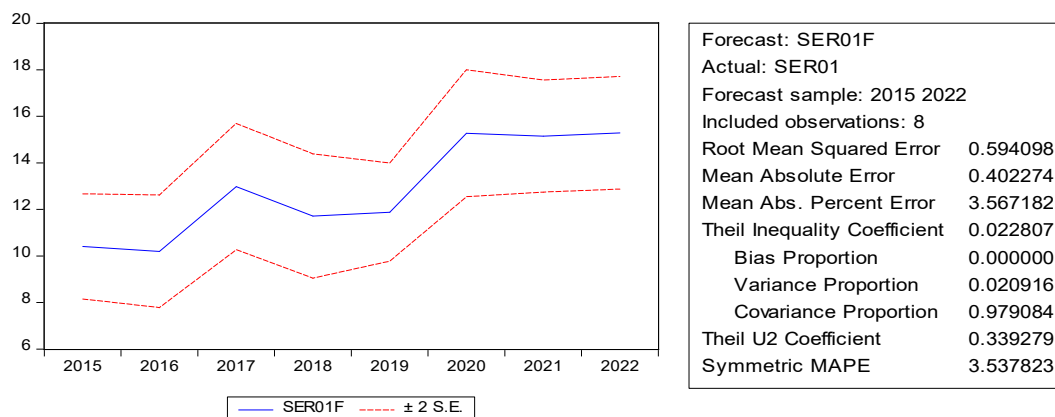
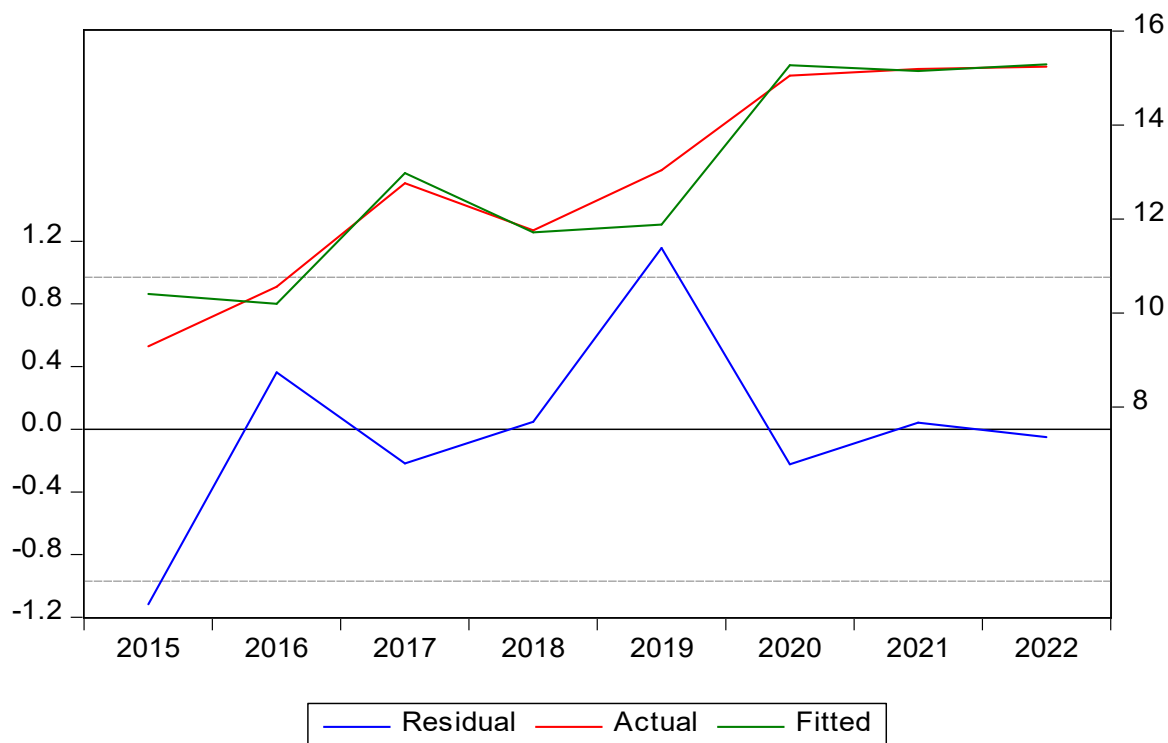


Figure 1. Changes in the volume of net profit (loss) received by the enterprises of the joint-stock company "Uzneftgaz" system in 2015-2022, the change of net profit within ± 2 statistical error limits

The indicators presented in Figure 1 reflect the relevance and adequacy of the constructed model. In particular, the Teil inequality coefficient is 0.0228, the Teil U2 coefficient is 0.3393, the bias ratio is 0, the variance ratio is 0.021, the covariance ratio is 0.9791, and the symmetric MAPE is 3.54, which indicates that the constructed model is in the required range. In particular, considering that the limit for symmetric MAPE is up to 10, it can be seen that the degree of approximation error is smaller than the specified limit, that is, MAPE: 3.54.

In addition to the above, based on the use of indicators reflecting the quantity and quality of current assets, which are considered the most important in the development of system enterprises, it is appropriate to use the graph of residual, actual and structured model values in evaluating the model of changes in the volume of net profit (loss) received by system enterprises under the influence of factors (1 - picture).



2- fig. Graph of residual, actual and constructed model values of net profit (loss) received by enterprises of joint-stock company "Uzneftgaz"

In the graph given in Figure 2, it can be seen that although the degree of fluctuation between the residual indicators calculated on the basis of the residual model and the actual values is high, the degree of difference between the actual indicators and the indicators calculated on the basis of the constructed model is insignificant..

Discussion

On the basis of the above analytical data and the assessment of the values of the indicators, the following trend model, which takes into account the volume of net profit (loss) received by the enterprises and the influence of factors on it, based on the use of the current assets quantity and quality indicators, which are considered the most important in the development of the enterprises of the joint-stock company "Uzneftgaz", is the financial stability of the company in the future period. can be used in the process of developing scenarios for improving the amount of current assets and its structural structure.

The model and forecast indicators developed on the basis of the Eviews 10 program serve as a basis for the formation of alternative scenarios in the direction of developing strategies for the development of a joint-stock company based on the optimal formation of current assets in the short and medium term. Based on the results of verification based on the established criteria of forecasting, it was found that if the indicators of the resulting factor used by the enterprise in this developed model and the indicators of the factor affecting its development are used in the formation of development programs.

This developed model and the calculations based on it will bear fruit in the development of their activities as a scenario aimed at developing the activities of enterprises in the future. However, in addition to the resulting factor and the factors that influence it in the activity of system enterprises taken as the object of research, we have the opportunity to check other influencing factors based on the cognitive approach by performing a correlation-regression analysis, and by using multi-variant scenarios in the effective development of enterprise activity. Choosing management decisions that result is also effective.

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