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Management Theory and Studies for Rural Business and Infrastructure Development
eISSN 2345-0355. 2023. Vol. 45. No. 3: 258-266
Article DOI: https://doi.org/10.15544/mts.2023.26

STRATEGIC MANAGEMENT OF THE INVESTMENT SUPPORT OF THE ACTIVITY OF ENTERPRISES IN THE CONDITIONS OF THE GLOBAL CHALLENGES

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Received 05 07 2023; Accepted 25 07 2023

Abstract
Globalization challenges to the development of economic systems increasingly actualize the issue of strategic management of attracting investment resources to enterprises, including the energy sector, which determines the relevance of this study. The purpose of the study is to improve and adopt the economic value added (EVA) approach as a direction of strategic management of investment support for the enterprise's activities, based on the creation of the enterprise's added value. It is proposed to calculate the EVA as the difference between the net operating profit after taxation and the alternative cost of investment capital, and to calculate operating taxes in the calculations using the cash method. It is substantiated that in order to activate the attraction of investment resources, it is necessary to simultaneously carry out measures to increase the value of the EVA indicator in accordance with the concept of economic added value and to provide stimulation of the introduction of innovations at electric power enterprises.

Keywords: *strategic management, investment support, enterprise, competitiveness, global challenges*.
JEL Codes: *D20, D24, F20.*

Introduction

Modern globalization challenges are increasingly focusing attention on the management of investment support for the activities of enterprises on their increased value, which increases the confidence of investors in the strategies implementation of the enterprise development and the creation of the added business value. This task is especially relevant for the enterprises that for certain reasons cannot generate sufficient economic profit. Such enterprises, for example, can include energy generation enterprises, since tariffs for the electricity sale are set by the relevant state authorities. To increase the interest of investors, the enterprises are forced to regulate costs and economic value of the enterprise to ensure at least a minimum profitability level. This and other leads to the need to create the added value of the enterprise, which is directed for the strategic management of investment support of the enterprises. In the conditions of globalization challenges, which lead to the intensified competition in the markets, the increase in the riskiness of the investment activity prompts the need to create the added value, which acts as a tool for the cost and capital management.

The purpose of the study is to improve and adopt the EVA (economic value added) approach as a direction of the strategic management of investment support of the enterprise, based on the creation of the added value of the enterprise.

Literature review

Current globalization challenges determine the need for the strategic management of investment support for the enterprises' activities. Many scientists devoted their research to the issues of investment support for the enterprises, formation of the investment strategies, problems and prospects of investment attraction, etc.

The authors of article Kartbayev T. et al. (2022) describe the model of the developed decision-making support system during the evaluation procedure of the investment projects in the field of the enterprise digitalization, taking into account the multifactorial nature of the task. Within the scope of the article Hou L. (2021), the scientist study and analyze the existing methods of assessing the investments quality. According to the authors Salman R. et al. (2020), there are significant concerns about new foreign capital investments that will subsequently contribute to the decline of the sectors of the micro, small and medium enterprise in Indonesia. The results of research by scientists Chen P. S. et al. (2018) prove that the implementation of IT investments in many companies is not completely successful in achieving the expected goal and, unfortunately, leads to significant losses.

In the article Špička J. (2018) it is noted that European public investment subsidies target small companies to increase their competitiveness and viability in the market. Within the framework of the article Smoliy L. et al. (2017), the scientists modeled optimal decision-making in the process of investing technical support of agricultural enterprises in the conditions of their limited access to the investment resources. In the article Vukicevic J. et al. (2021), the authors examine the determinants of direct investment in Great Britain by the technology-intensive Chinese state-owned enterprises. The purpose of article Cherep A. et al. (2021) is to study the problem of increasing the investment activity, determining the impact of the investment activity on the development of the innovative activity of industrial enterprises.

Supporting the results of the research Tarasenko O. (2022), Dubyna M. (2022), Vovk O. (2021), it should be noted the relevance of the study of the peculiarities of the transformation of regional models of the financial behavior of households, as well as the conducted economic and mathematical modeling of the impact of modernization on increasing the competitiveness of the enterprise. Of practical importance are the studies Arefieva O. (2021), Grosu V. (2021), Zhavoronok A. (2022), in which the regulatory policy was analyzed and the system of economic security was investigated in the conditions of the transformation of the authorities, as well as the model of financial management in Romania was investigated.

However, despite available numerous publications in the investment support for the activities of modern enterprises, the issue of the strategic management of investment support for the activities of enterprises in the context of global challenges requires further study and analysis.

Methodical approach

One of the approaches to creating the value of enterprises thanks to the improvement of the cost structure is the EVA (economic value added) conceptual approach, which is essentially not new and was created as a concept to increase the motivation of managers to the create added value of the enterprises. That is, using the EVA concept makes it possible to move from a profit management strategy to a value management strategy. The use of this is optimal for electric power enterprises, since profitability or loss may not always reflect the success or decline of the enterprise and become a methodical approach for strategic management of investment support for enterprise activities.

However, it should be note d that the use

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eISSN 2345-0355. 2023. Vol. 45. No. 3: 258-266
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of the EVA concept requires significant adaptation, since the calculation of this indicator differs from the calculation of accounting profit indicators, includes the cost of the equity capital and requires consistency when determining the taxation calculations. This specificity requires further scientific-methodological and applied research for the application of the EVA concept, since the calculation of this indicator takes into account the cost of the equity capital, specific features of depreciation of fixed assets, research and development costs, etc. That is, the financial indicators presented in the reporting of the enterprise's activities are obtained using the accrual method, and the cash method must be used to determine the economic added value.

The essence of the definition of the EVA indicator is that the equity should give the opportunity to earn approximately the same rate as similar investments in the capital market.

EVA is calculated using the following formula:

$$EVA = NORAT - WACC \cdot CE, \quad (1)$$

where *NOPAT* – Net Operating Profit After Taxes;

WACC – Weighted Average Cost of Capital;

CE (Capital Employed) – that is, it is the amount of invested capital.

The presented formula for calculating the economic added value is the difference between the net operating profit of the enterprise and the average cost of the investment capital.

At the same time, two opposite approaches are used to calculate the net operating profit after tax (*NOPAT*) "bottom-up" and "top-down".

The formula for calculating the *NOPAT* indicator using the bottom-up approach is as follows:

$$NOPAT = O_p + I_o + I_{lifo} + I_r - C_t, \quad (2)$$

where O_p – operating profit after depreciation deductions;

I_o – estimated interest expenses from operating leases;

I_{lifo} – increase in the LIFO reserve;

I_r – increasing the provision for doubtful debts;

C_t – operating taxes, which are not determined by tax reporting, but are calculated by the cash method.

Another top-down approach involves applying the following formula:

$$NOPAT = S + I_{lifo} + O_i - C_s - S_g - D - C_t, \quad (3)$$

where S – sales volume (enterprise sales revenue);

I_{lifo} – increase in the LIFO reserve;

O_i – other income of the enterprise;

C_s – cost of sold products;

S_g – commercial, general economic and administrative expenses at the enterprise;

D – depreciation;

C_t – operational taxes, which are not determined by tax reporting, but are calculated by the cash method.

When calculating depreciation (D), assume that even though depreciation is not a cash expense of the business, it is considered an expense in its essence and is, therefore, taken into account when calculating the *NOPAT* value. Depreciation of the fixed assets is the equivalent of depreciation deductions in the company's financial statements.

In the calculations of the *NOPAT* indicator, such an indicator as *cash-operating taxes* (C_t) is not presented in the company's financial statements and requires clarification when determining it. To calculate C_t, the authors propose to define it as the amount of the corporate income tax expenses and take into account the following assumptions:

- firstly, take into account changes in declared taxes, which represent tax liabilities and/or assets of the enterprise;
- secondly, tax benefits from tax deductions, which allows you to take into account the effect of financing with promissory notes and bonds;
- thirdly, consideration of non-operating taxes.

Such calculations will make it possible to more adequately and fully take into account the operational taxes, which are not determined by tax reporting, but are calculated by the cash method.

The calculation of the *EVA* indicator also takes into account (see Formula 1) such as the *WACC indicator*. The Weighted Average Cost of Capital (*WACC*) can be represented as the cost of the equity capital of the enterprise multiplied by the share of the equity capital, adding to this the cost of the debt capital multiplied by the share of the debt capital. Thus, we get the following calculation formula:

$$WACC = K_s \cdot W_s s + K_d \cdot W_d \cdot (1 - T), \quad (4)$$

where s_{i0} – taxonomic distance between the standardized value of the evaluation indicator y_{ij}, and values of the generated reference vector y_{0j}.

The determination of the average value of the estimated indicator estimation of the financial security in the conditions of the global digitalization from its reference vector:

$$Z(s_{io}) = \overline{so} = \frac{1}{m} \sum_{i=1}^{m} s_{io} \quad (5)$$

where K_s – equity cost in % of the total capital cost;

W_s – equity share in % to the total capital cost;

K_d – loan capital share in % to the total sharet;

W_d – loan capital sahre in % to the total capital share;

T – income tax rate (%).

In these calculations, the share of equity and debt capital is determined based on market valuations of the enterprise's capital and is defined as the ratio of the amount of the equity (debt) capital to the total amount of capital that the enterprise has.

The calculation of the weighted average cost of capital is determined taking into account the financial leverage of the enterprise. In the event that the enterprise does not have loan financing, and the financial leverage under such conditions is zero, then the *WACC* is reduced in the calculations to the determination of the value of the enterprise's equity capital. In that case, if the financial leverage is different from zero, then the calculation is carried out not only of the value of the company's equity, but also of the loan.

Calculation of the *EVA* indicator makes it possible to act as a toolkit for strategic management of the investment support for enterprise activities.

Results

To test the proposed methodical approach, two energy-generating enterprises located on the territory of Ukraine in the city of Zaporizhzhia, PJSC "DTEK Dniproenergo" and in the Lviv region, PJSC “DTEK Zakhidenergo” were selected. The controlling stake in both enterprises belongs to the private company DTEK. In total, two enterprises provide 25% of the electricity production on the territory of Ukraine (before the start of hostilities), namely DTEK Dniproenergo PJSC accounts for 16% (installed capacity of 8185 MW, 25 power units), DTEK Zakhidenergo PJSC - 9% (installed capacity of 4607.5 MW, 22 power units) from the total capacity of power plants of Ukraine.

The relevance of the strategic management of investment support for the enterprise activities is determined by the need to modernize enterprises by increasing their safety level, which requires the implementation of measures to reconstruct power units, reduce the cost of electricity, and improve the environmental friendliness of the electricity production.

PJSC “DTEK Dniproenergo” and PJSC “DTEK Zakhidenergo” operate at a loss, despite the increase in the share of electricity sales on the market, which is due to the loss of part of the capacities of the energy complex of Ukraine as a result of military operations on its territory. Thus, the financial indicators of PJSC “DTEK Dniproenergo” showed that the company was operating at a loss in 2020. The loss in the company's activities amounted to USD 86,078.2 thousand, and in the following year the loss had a tendency to decrease, which amounted to 13%. 2022 was marked by a significant decrease in profit, namely by

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USD 24,182.9 thousand. In 2022, the volume of production and sale of products amounted to USD 160,029 thousand, which is 53.09% more than in the same period of the previous year. Military actions on the territory of Ukraine negatively affected the general economic condition of PJSC "DTEK Zakhidenergo", in 2022 the profit per share decreased by USD 1.64 thousand, and the market value of the property in 2022 was USD 2 105.87 thousand.

The increase in the value of the company's property occurred due to the modernization of equipment with the investment funds involved, which allowed PJSC "DTEK Zakhidenergo" to increase the electricity production by 930,421 thousand kWh in 2022. In Fig. 1, the main results of the economic activity of PJSC "DTEK Zakhidenergo" in 2020-2022 are presented.

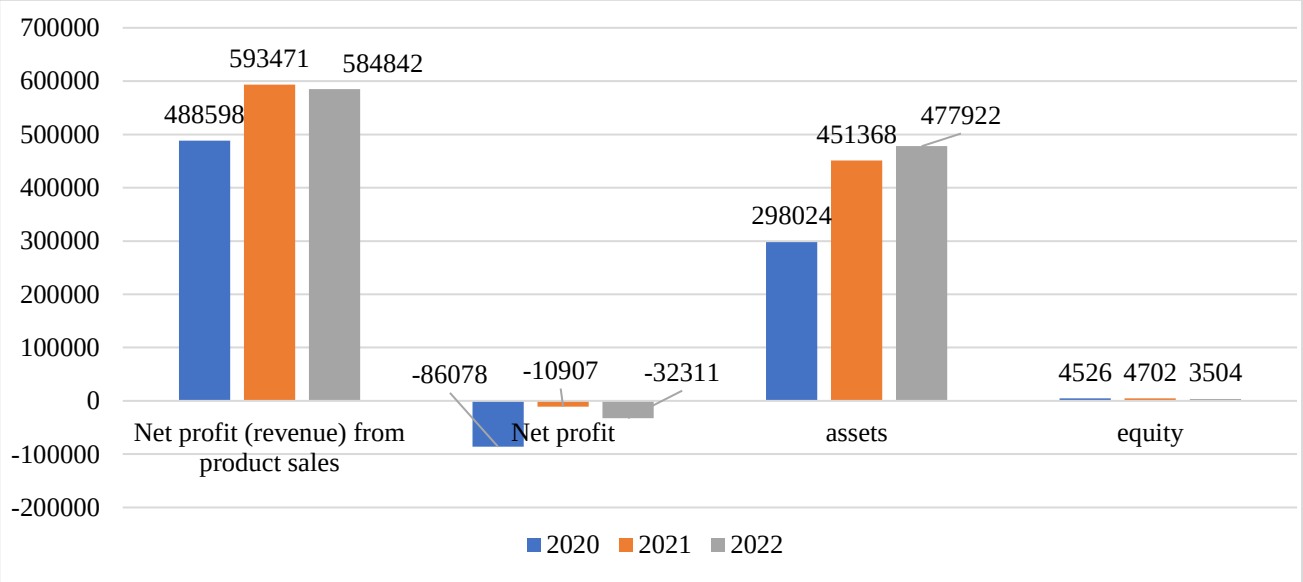

Figure 1. Main performance indicators of PJSC "DTEK Zakhidenergo" in 2020-2022, thousand USD

**Source: systematized by the authors on the basis of the enterprise reporting data.*

Since two enterprises were chosen to test the proposed methodical approach, we will analyze the indicators of the financial activity of PJSC DTEK "Dniproenergo". During the analyzed period from 2020-2022, the company improved its financial and economic results and even made a profit. Thus, in 2022, the company increased its profit level by 42% compared to the previous year due to an increase in the electricity sales in the amount of USD 132,659.6 thousand.

For the development of PJSC DTEK "Dniproenergo", it is important to switch from the tariff system and the existing formula for calculating the cost of electricity "Costs plus" to a more optimal method of return on the invested capital according to the RAB formula, which will make it possible to reduce the electricity cost. In Fig. 2, the main performance indicators of PJSC "DTEK Dniproenergo" are presented.

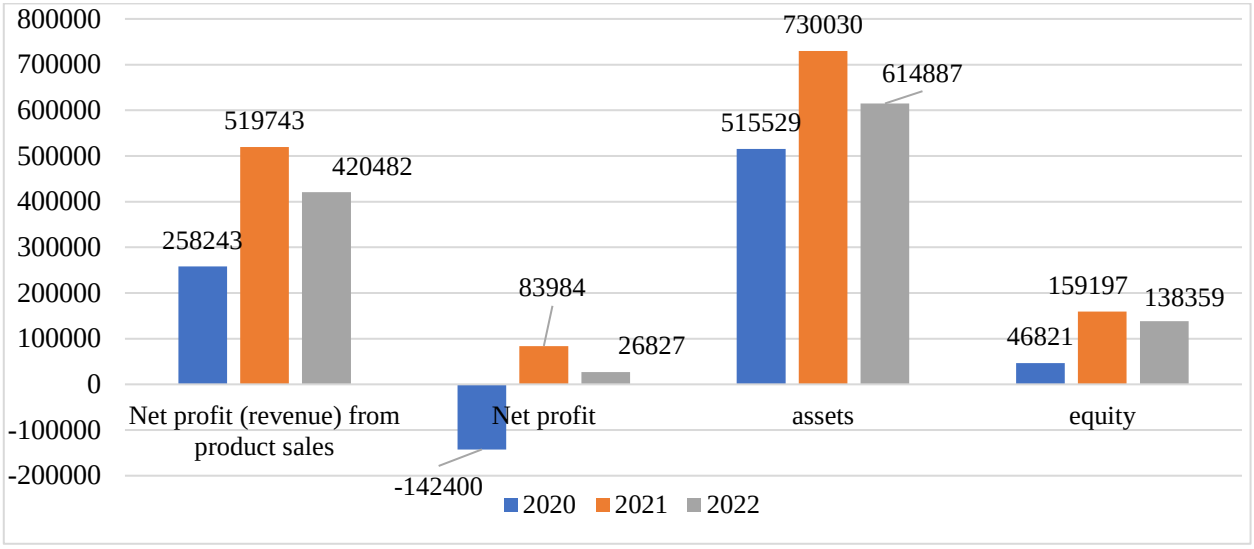

Figure 2. Main performance indicators of PJSC "DTEK Dniproenergo" in 2020-2022, thousand USD

**Source: systematized by the authors on the basis of the enterprise reporting data.*

The presented main indicators of PJSC "DTEK Zakhidenergo" and PJSC "DTEK Dniproenergo" make it possible to perform calculations according to the proposed methodology for determining the EVA indicator.

For PJSC "DTEK Zahidenergo", the calculations are as follows:

WACC2020 = -0,09808 · (10%) + 1,1019 · (21%) · (1-0,25) = 0,183 (18,36%);

WACC2021 = -0,0573 · (10%) + 1,1057 · (21%) · (1 - 0,25) = 0,16841 (16,85%);

WACC2022 = -0,0789 · (10%) + 1,10778 · (21%) · (1 - 0,25) = 0,34105 (34,11%);

EVA2020 = -90256 · (1 - 0,25) - (0,183 · 298024) = -122231;

EVA2021 = -16516 - (1 - 0,25) - (0,16841 · 451368) = -63627;

EVA2022 = -43605 · (1 - 0,25) - (0,34105 · 477922) = -188316.

In a similar way, calculations of the economic added value (EVA) indicator are carried out for PJSC "DTEK Dniproenergo":

WACC2020=-0,09808 · (10%) + 0,90917 · (21%) · (1 - 0,25) = 0,1522 (15,22%);

WACC2021 =0,2180 · (10%) + 0,7819 · (21%) · (1 - 0,25) = 0,14494 (14,49%);

WACC2022 =0,225 · (10%) + 0,7749 · (21%) · (1 - 0,25) = 0,1445 (14,45%);

EVA2020 =-151424 · (1 - 0,25) - (0,1522 ·515529) = -192031;

EVA2021 =75279· (1 - 0,25) - (0,1449 · 730030) = -49321;

EVA2022 =32693 · (1 - 0,25) - (0,1445 · 614887) = -64331.

The results of EVA calculations using the proposed method for the selected electric power enterprises are presented in Table 1.

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Article DOI: https://doi.org/10.15544/mts.2023.26

Table 1. Results of calculations of the Economic Value Added (EVA) PJSC "DTEK Zakhidenergo" and PJSC "DTEK Dniproenergo"

Indicator	PJSC "DTEK Zakhidenergo"			PJSC "DTEK Dniproenergo"		
	2020	2021	2022	2020	2021	2022
Earnings before interest and tax (EBIT), USD thousand	-90 256	-16 516	-33 761	-151 424	75 279	32 693
Net income (revenue) from product sales, USD thousand	488 598	593 471	584 842	258 243	519 743	420 481
Equity capital + Payable loan capital (amount of interest obligations in loan capital) = CE, USD thousand	4 526	4 702	3 504	46 821	159 197	138 359
Weighted average cost of capital (WACC), %	0,183	0,168	0,34105	0,1522	0,14494	0,1445
EVA, USD thousand	-122 231	-63 627	-188 316	-192 031	- 49 321	- 64 331

**Source: compiled by the authors based on the proposed methodical approach.*

In 2022, compared to 2021, PJSC "DTEK Zakhidenergo" worsened its indicators of economic added value by (-140,900 USD), PJSC "DTEK Dniproenergo" decreased the indicator of economic added value in 2022 compared to 2021 (-27,576,000 USD).

The calculations of the EVA indicator make it possible to state that since the indicator value of the economic added value is negative for both enterprises, despite the fact that PJSC "DTEK Dniproenergo" demonstrated profit during the studied period, their strategies for attracting investment resources are unsatisfactory, the activity of the enterprises is not efficient.

Such conclusions follow from the fact that the value of the EVA indicator for the entire studied period is negative, even if the value of the EVA indicator were equal to zero, it could be interpreted as certain achievements of the enterprise in relation to the investment policy.

In the direction of the strategic management of investment support for the activities of enterprises in conditions of global challenges, in order to increase the value of the EVA indicator, it is necessary to direct efforts to modernize the company's fixed assets, taking into account innovative trends in this field, considering the fact that the investigated enterprises are energy-generating enterprises, it is important to ensure the achievement of the quality standards in accordance with European standards in the continuity, safety and environmental friendliness of the production and provision of the electricity to consumers.

It is also important to introduce innovative technologies to increase the efficiency of generating enterprises by increasing the level of technical conditions and manufacturability of the electricity production, increasing the percentage of loading of generating capacities of the energy enterprises and ensuring a clear rhythm of the electricity supply, which is due to the specific features that are associated with the impossible storage and long-term storage of electricity. Taking into account global challenges, the growth of the raw material crisis, reformation of supply sources and partners, it is important to ensure the diversification of sources of supply of primary energy resources, to ensure the reliability of payment insurance and the risks of contracts for the supply and sale of the electricity. Increasing the efficiency of the operation of the energy-generating enterprises by improving the quality of interaction with the system operator of the electricity market and consumers in accordance with the rules and requirements of the electricity market in the country. It is also important to use the mechanism of public-private partnership for the strategic management of investment support for the activities of enterprises and the increase of their economic added value. This mechanism will provide an opportunity:

- firstly, to reduce the costs of the operational activity and have a positive impact

on the enterprise profitability;

- secondly, to increase the management efficiency of the investment projects due to the alliance of public-private partnership, using the experience of private partners in the implementation of the investment projects;

- thirdly, to increase motivation when implementing investment projects and attracting investment resources;

- fourthly, to speed up the implementation of investment measures and modernization.

Conclusions

The scientific novelty of this study is the substantiation of the principles of adoption of the EVA concept as a direction of the strategic management of investment support of enterprises in the conditions of global challenges, using a systemic approach, taking into account the cost of the equity capital, features of depreciation of the fixed assets and taxation.

Therefore, the obtained calculation results and negative values of the EVA indicators for PJSC "DTEK Dniproenergo" and PJSC "DTEK Zakhidenergo" indicate a low level of the development and unsatisfactory business attractiveness for potential investors. The obtained results of the calculations prove the need to direct the strategic management of investment support for the activities of enterprises in the conditions of global challenges to increase their economic added value.

The strategic management of investment support of enterprises in the conditions of global challenges and increasing the investment potential of enterprises requires the implementation of measures aimed at: the modernization of fixed assets in accordance with the European standards; innovative renewal of generating capacities of the electricity generation enterprises; ensuring diversification of supplies of the primary energy sources; improving the quality and density of the interaction with market operators and electricity consumers; implementation of the public-private partnership mechanism.

For the enterprises, increasing their economic added value will contribute to the activation of the attraction of investment resources, and general national support in the direction of stimulating investment in scientific developments and the introduction of the innovations to increase the efficiency of the operation of electric power enterprises and development of energy in general, which requires further scientific exploration, is also important.

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Management Theory and Studies for Rural Business and Infrastructure Development
eISSN 2345-0355. 2023. Vol. 45. No. 3: 258-266
Article DOI: https://doi.org/10.15544/mts.2023.26

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