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# FINANCIAL PROVISION OF MARKETING ACTIVITIES OF MACHINE-BUILDING ENTERPRISES FOR STRENGTHENING COMPETITIVENESS IN THE CONTEXT OF A NEW REALITY

## ABSTRACT

The purpose of this article is to develop a methodological approach to evaluating all possible options for the financial provision of the marketing activities of modern machine-building enterprises under conditions of full-scale war. Thus, the new conditions of reality are characteristic specifically of Ukrainian machine-building enterprises, which become the key object of the study. As a result, within this article, the optimal forms of financial provision, both external and internal, were chosen based on evaluation results, which will allow not only to "survive" in the current conditions for Ukrainian machine-building enterprises but also to strengthen their competitiveness in the face of new challenges and threats. The identification of the most optimal forms of financial provision and the conduct of evaluations were made possible through the implementation of expert analysis, using the Delphi method. The central place in the methodology of the article is occupied by the method of hierarchical multicriteria evaluation. Its thorough substantiation has better reflected the main results of the research. The developed methodological approach is distinguished by its convenience and practical value in the conditions of the new reality, that is wartime. Another feature is the consideration of not only internal resources but also external ones. Ultimately, the proper and secure application of the defined forms of internal and external financial provision of marketing activities to change their own competitiveness was also substantiated. This, in turn, allowed forming the correct trajectory for how to evaluate one's own financial provision options for marketing activities and how to apply them to enhance one's competitiveness. The practical significance of the obtained results lies in substantiating recommendations for establishing the optimal form of financial provision of marketing activities for machine-building enterprises.

**Keywords:** financial provision, financial resources, machine-building enterprises, competitiveness, wartime, marketing activities, evaluation of optimal options

**JEL Classification:** C02, M31, B21

## INTRODUCTION

### *The essence and content of key concepts that constitute the conceptual and categorical apparatus of the conducted research*

Within the framework of this article, a significant number of concepts and terms will be used and applied. It is important to carefully justify the definitions and understanding of these concepts with the aim of enhancing the readability of this material. Hence, we note that in our understanding, marketing activity means a process in which the needs for goods and services, the state of demand, market situations, and existing and potential requirements of customers are taken into account. All this requires resources, including financial ones. Financial provision represents a certain form of external and/or internal source of financing, necessary to support various aspects of enterprise activity, including marketing. Like any other enterprise, machine-building enterprises actively conduct their own marketing activities with the aim of enhancing their competitiveness.

However, machine-building enterprises have their characteristic distinctions. Thus, machine-building enterprises are open socio-economic systems that conduct their activities in one of the industrial sectors whose main purpose is the production of means of production for other industries, transportation vehicles, as well as consumer goods and defence products. This is one of the most powerful sectors of industry, which has become particularly relevant in times of war. Competitiveness is defined as the ability of a machine-building enterprise to produce goods more efficiently than competitors in terms of price, quality, innovation, and customer service under any conditions, including wartime conditions in the country. The competitiveness of a machine-building enterprise depends on various factors and processes, one of which is successfully conducted marketing activity.

### ***The importance and relevance of financial provision for marketing activities to strengthen competitiveness***

Marketing activity is a long and extremely resource-intensive process. As a result, it requires various kinds of resource support from machine-building enterprises. Financial resources naturally occupy a central place in this support. It should be emphasized that effective financing of marketing activities allows machine-building enterprises to conduct their own market research, which in turn helps to understand consumer needs, adapt products to changing demands, and respond to competitor challenges. Ensuring sufficient resources for marketing activities contributes to the development of effective advertising campaigns, brand promotion, and increasing product awareness, which is key to increasing sales. However, not all machine-building enterprises always have a sufficient amount of this financial provision.

Ensuring sufficient financial resources for marketing helps companies build a strong brand and properly position their products in the market. This includes creating a unique selling proposition (USP) that distinguishes products from competitors and attracts consumer attention. Thus, competitiveness increases. Simply put, with available resources, there are competitive advantages. At the same time, it should be noted that financing marketing activities involves not only the use of exclusively internal resources but also the possibility of obtaining and using external resources, which will contribute to comprehensive and all-encompassing marketing activities.

### ***Challenges and new realities for modern machine-building enterprises in Ukraine***

In the context of COVID-19 and military actions, Ukraine remains one of the main drivers in industry due to its ability to produce and export a significant volume of various industrial goods. Military actions since the beginning of 2022 have demonstrated vulnerabilities at the national and global economic and financial security levels. Moreover, the Russian Federation, through large-scale missile attacks, has destroyed infrastructure to such an extent that most eastern machine-building enterprises in Ukraine will never recover. However, central-southern and western machine-building enterprises have stabilized, adapted, and are beginning to operate in a new reality. At the same time, significant attention is paid to Western markets, but this requires resources and strong competitive positions.

It should not be forgotten how significant a role machine-building plays as a sector of the defence complex in the new reality after the events of February 24, 2022. It provides the development and production of a wide range of defence equipment and technologies, including military vehicles, weapons, ammunition, radars, and other highly specialized systems. This sector supports the strategic defence capability of the country, providing the necessary technical means for the protection of national interests and sovereignty. Thus, this only confirms the relevance of choosing this industrial sector today.

It is appropriate to state that the results of years of research by international and Ukrainian institutions convincingly prove Ukraine's current orientation towards the development of industry, including the machine-building sector. However, at the same time, there is an ignorance of the best practices of leading countries, which pay maximum attention to investments in the development of high-tech industrial machine-building production, the creation of digital technologies, and the improvement of information infrastructure. This puts Ukrainian machine-building at a non-competitive level today. Thus, Ukraine records significantly lower rates of progress in the digitization of the economy, deepening the "technological gap" in most industrial sectors. Indeed, the results of most indexes place our country in the lower part of the rankings, significantly lagging not only behind leading countries but also neighbouring countries, despite having significantly higher human capital. However, with the full-scale invasion, this indicator has significantly decreased.

It should also not be forgotten about the marketing activities for machine-building enterprises. Due to high competition and the complexity of products in machine-building, effective marketing allows enterprises not only to attract new customers but also to retain existing ones, increase loyalty, and enhance brand reputation. Marketing also promotes increased awareness of innovations and product features, which is critically important for technically complex machines and equipment.

### ***Structure of the study in the article***

The research involves an initial structural sequence that will facilitate the maximization of the scientific-practical effect. For this purpose, an in-depth and critical review of the literature on the raised problematics in the article has been conducted. We will identify the key gaps in it and based on this determine our own goals and objectives. We will characterize the main methods that form the research methodology. We will present the main results and their discussion. In conclusion, conclusions will be provided that summarize the work.

## **LITERATURE REVIEW**

### ***Literature review of existing scientific-practical developments in the field of marketing activities of enterprises***

Scientific-practical literature does not cease attempts to solve the problems of developing marketing activities. In this, the greatest emphasis is placed on the formation and provision of marketing strategies. Increasingly, researchers (Petrova, 2022) even in wartime conditions are finding ways to solve this problem. We note at the same time a significant scientific-practical contribution of A. Kuznyetsova et al. (2023) who, along with colleagues, determined the key provisions on how to apply their own developments in marketing activities with the aim of entering foreign markets in the new reality of a full-scale invasion. Gao et al. (2023) identify that the adoption of these digital strategies significantly contributed to the resilience and financial stability of enterprises during such turbulent times. At the same time, the authors emphasize that such technologies will become a new form of how enterprises will increase their competitiveness.

Behera et al. (2020) in their article analyze the role of personalized digital marketing and its impact on the behaviour of consumers of industrial goods (including machine-building). The authors consider the use of artificial intelligence technologies and big data to create recommendation systems that help enterprises more accurately target the needs of their clients. This is really interesting but it is not possible to achieve without proper financial provision. Research by Dahmiri et al. (2024) focuses on studying the impact of market orientation on marketing effectiveness, particularly considering the moderating role of competitive advantage. Andriushchenko et al. (2019) analyze how companies can use their corporate competencies to minimize risks associated with their reputation. This research has direct application to financing strategies for marketing, as a strong reputation can enhance the effectiveness of marketing efforts and reduce the costs of attracting new clients. Domashenko et al. (2017) explore innovative marketing strategies that contribute to ecological safety at both regional and global levels, which is crucial for machine-building enterprises aiming to enhance their market competitiveness through sustainable practices. But at the same time, the authors clearly prove that machine-building is an industry that depends on marketing activity, and this activity, in turn, depends on financial provision. Voznyak et al. (2023) research the financial self-sufficiency of Ukrainian territorial communities and its interrelation with local economic development. This research focuses on modelling cause-and-effect relationships, which can be adapted for analyzing financial provision for enterprises. Rutkauskas and Ginevičius (2011) analyze integrated marketing risk and effectiveness management, emphasizing the importance of balancing risk-taking and confidence in their own financial capabilities. But there are a variety of opportunities, and not all are optimal. First, we believe that financial provision needs to be carefully assessed.

### ***Literature review of existing scientific-practical developments in the field of financial provision for machine-building enterprises to strengthen competitiveness***

Machine-building as a sector as a whole and individually taken enterprises have also been and will be the focus of researchers and practitioners. For example, the issue of ensuring economic security through the search for new financial sources of financing. Dovhan (2021) investigates in detail the various resources and technologies used to manage marketing at machine-building enterprises. In particular, emphasis is placed on attracting new financial resources, which is critical for optimizing marketing processes and safety. Competitiveness also remains the focus of researchers and practitioners. Latysheva et al. (2020) explore approaches to managing the sustainable development of machine-building enterprises, using the approach of the sustainable development space. Their research focuses on defining strategic directions to achieve competitiveness in crisis and non-crisis conditions. Today's realities are just the crisis conditions for machine-building enterprises in Ukraine. A vivid example of how differently the machine-building industry was perceived before the pandemic and the full-scale invasion is described by Hristov (2020). He meticulously details the financial provisioning challenges of that time, emphasizing that competitiveness depended on marketing activities. It can be argued that even under the conditions of today's new reality, this dependency has persisted.

## AIMS AND OBJECTIVES

### *The goal and objectives of the research*

The goal of the article is to develop a methodological approach to evaluating all possible options for financial provision for the marketing activities of modern machine-building enterprises in conditions of full-scale war. The new conditions of today's reality are inherent specifically to Ukrainian machine-building enterprises, which become the key object of research.

### *The scientific task of the research*

The scientific task of the article is to select the most optimal forms of financial provision, both external and internal, based on the results of the evaluation, which will allow not only to "survive" in today's conditions for Ukrainian machine-building enterprises but also to contribute to strengthening their competitiveness in the face of new challenges and threats. An important goal is also to justify the correct and safe application of the identified forms of internal and external financial provision for marketing activities to change their own competitiveness. The aim of the article is to propose and demonstrate the effectiveness of an approach to evaluating all possible options for financial provision for the marketing activities of enterprises in today's conditions, namely a full-scale war.

## METHODS

### *The essence and significance of the hierarchical multicriteria evaluation method*

The method of hierarchical multicriteria evaluation is a general method for solving a wide class of poorly structured decision-making tasks, which allows combining relatively simple mathematical apparatus with the experience and intuition of the decision-maker and involves the sequential execution of stages. The method of hierarchical multicriteria evaluation allows a clear ranking of available alternatives and choosing the most promising ones under conditions of uncertainty. Although the method does not completely eliminate the element of subjectivity in the decision-making process, it makes this process absolutely transparent. The Analytic Hierarchy Process is a mathematical tool oriented towards a complex approach to solving complex problems related to decision-making tasks. This method of hierarchical multicriteria evaluation does not provide the decision-maker with a clear, unambiguously correct answer, but allows them to independently find such an alternative that would correlate most closely with their own understanding of the essence of the problem and the best way to solve it. The method of hierarchical multicriteria evaluation was developed by American mathematician Saaty, (1990). Participants evaluate the elements of each level by pairwise comparison regarding their impact on the element of a higher level, using a scale from 1 to 9 to measure the relative importance of one element compared to another. These comparisons are then transformed into weight coefficients (priorities), which can be aggregated across the hierarchy to determine an option that best meets the main goal.

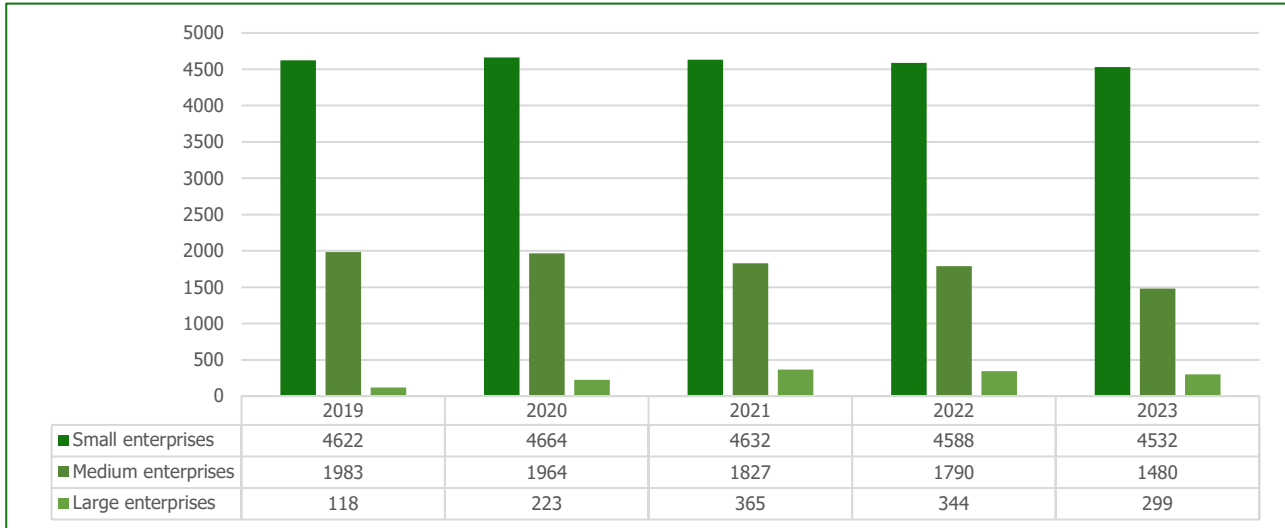
### *The essence and significance of the expert analysis method*

By its essence, the expert evaluation method is a type of survey where respondents are experts – specialists in a particular field of activity. The expert evaluation method is essentially a forecasting method, the fundamental criterion of which is achieving consensus among all members of the expert group. Organizationally, it looks like this. Experts knowledgeable in interrelated areas of activity provide detailed answers to the questionnaire related to the researched problem. The method of questionnaire (analytical expert evaluation) involves the expert providing written answers to the questionnaire questions. Within our research, a number of leading experts were involved, numbering 30 individuals. Among these individuals were both practical marketers, heads of several machine-building enterprises, academics from higher education institutions, and analysts of external and internal markets of industrial products. A questionnaire was conducted, and the Delphi method was applied. This method includes several rounds of anonymous polling, during which experts independently express their opinions, after which they are provided with generalized group responses and are offered to review their previous answers according to the provided information. Experts allowed to form the necessary list of forms of financial provision that will be compared and evaluated in terms of the most optimal today for the marketing activities of machine-building enterprises in Ukraine in the new reality, namely wartime. Naturally, financial provision must be compared by a number of criteria. These criteria for comparison were also selected by the respective experts. For this task, a mixed method of expert evaluation was applied, meaning experts individually assessed the situation. The results of the evaluation were brought to their attention. Experts, whose evaluations significantly differed from the main mass, were asked to argue their point of view.

## RESULTS

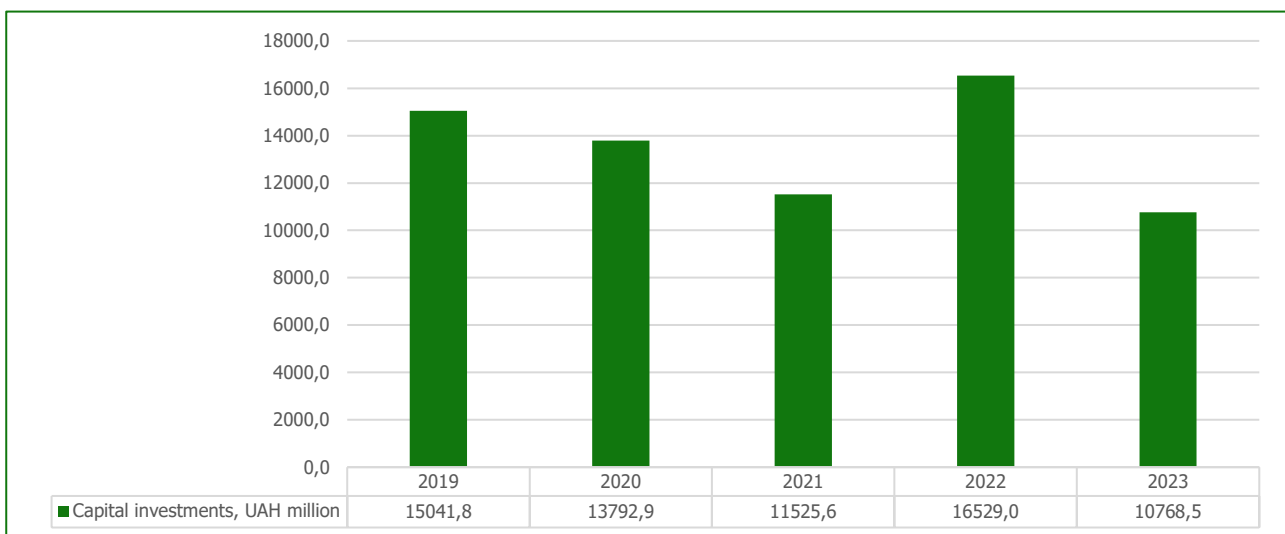
### *Analysis of the machine-building sector in Ukraine in the context of the new reality*

Overall, in 2019–2023, within the main types of economic activity, machine-building shows a certain stability in terms of the number of enterprises. Overall, there are clear trends towards a reduction in the number of large and medium-sized enterprises, which technically indicates the fact of the elimination of the manufacture of technically complex products in large volumes (Figure 1).



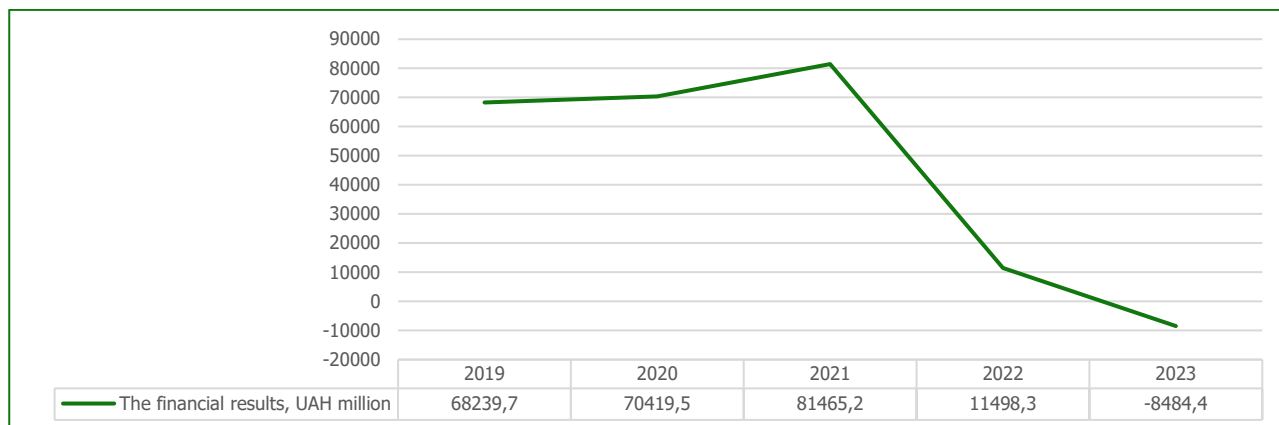
**Figure 1. Changes in the dynamics of the number of machine-building enterprises in Ukraine.** (Source: State Statistics Service of Ukraine, 2023)

Regarding capital investments, the highest outcomes correspond to the period before the COVID-19 pandemic and the full-scale invasion. This can be associated with an increase in business demand for automotive transport, which was supposed to improve logistical connections. At the same time, it is necessary to explain that such growth became possible due to the activation of foreign car manufacturers who invested in the large-scale assembly of their products in Ukraine in order to gain additional competitive advantages, based on reducing customs duties and entering a new regional market (Figure 2).



**Figure 2. Changes in the dynamics of capital investments in Ukrainian machine building.** (Source: State Statistics Service of Ukraine, 2023)

For Ukrainian enterprises, especially machine-building ones, own funds are the main source of capital investments. They are key for maintaining their own competitiveness and implementing marketing activities. Therefore, it is appropriate to characterize the final financial result of the activities of machine-building enterprises (Figure 3).



**Figure 3. Changes in the dynamics of the financial results of Ukrainian machine-building enterprises.** (Source: State Statistics Service of Ukraine, 2023)

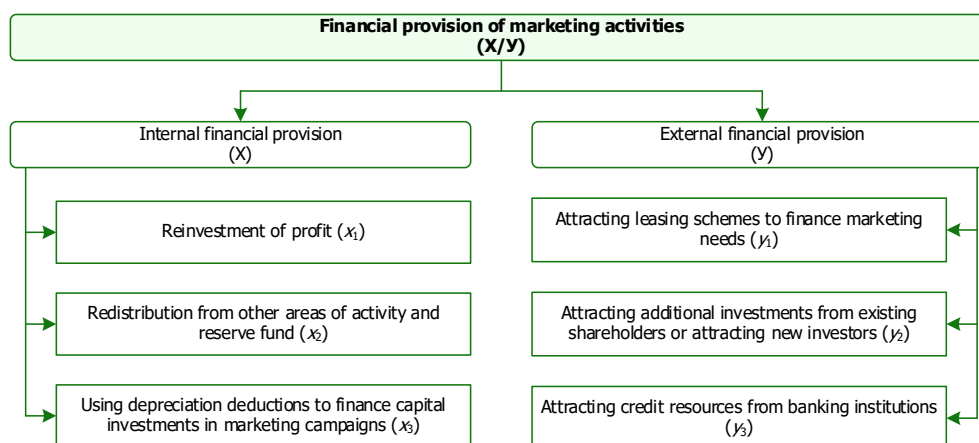
Besides the critically unsatisfactory level of net profit and a certain synchronicity in its change, which generally corresponds to the character of previously identified downward trends, it is necessary to consider a significant proportion of enterprises that were unprofitable. Therefore, without optimizing the choice of optimal financial provision, the financial problems of Ukrainian machine-building enterprises in the conditions of the new reality after the full-scale invasion will only continue to intensify.

#### List of involved Ukrainian machine-building enterprises

The possibilities and forms of financial provision for marketing activities vary for different machine-building enterprises in Ukraine. A particularly significant difference is felt when it comes to conditions of the new reality, specifically in times of war. Thus, we have selected a number of currently active Ukrainian machine-building enterprises and considered their list of possibilities in financial provision, both internal and external:

1. LLC "Techwagonmash". An enterprise specializing in the production and repair of railway rolling stock. The enterprise manufactures wagons, and their modernization, and provides technical maintenance services, ensuring the high quality and reliability of its products.
2. LLC "Southenergomash". Produces equipment for the energy sector. In particular, the company specializes in the production of components for thermal and nuclear power plants, including turbines, generators, and other important elements necessary for the energy infrastructure.
3. JSC "Uzhgorod Turbogaz". Specializes in the production of turbine installations and equipment for the gas industry. The enterprise offers a wide range of products, including turbines of various modifications used in the gas extraction and transportation industries, facilitating the efficient use of energy resources.

Based on a survey of their management, we were able to form an appropriate list of financial provisions for marketing activities as possible external and internal options (Figure 4).



**Figure 4. List of financial provision opportunities (internal and external) for selected Ukrainian machine-building enterprises.**

This list will serve as the basis for further evaluation. As seen in Figure 3, internal financial provision options we marked as "X" and external as "Y".

### Initial Stages of Evaluation

According to the method of hierarchical multicriteria evaluation, the set of defined financial provision options from Figure 4 should be compared based on surrogate criteria agreed upon with experts:

- K1. Adequacy of financial provision for marketing activities.
- K2. Volumes of financial provision for carrying out marketing activities.
- K3. Accessibility of financial provision for marketing activities.

Next, we will form what is called the initial model for determining the significance of various financial provision options for the above-mentioned Ukrainian machine-building enterprises. First among internal sources (Figure 5).

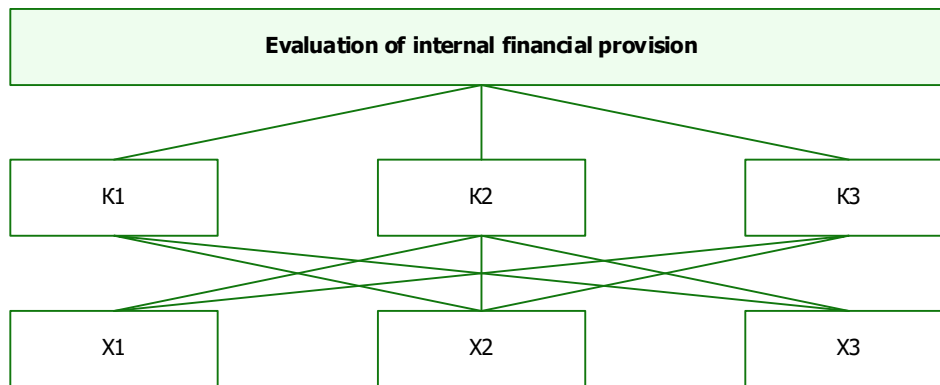


Figure 5. Initial Model for Determining the Significance of Financial Provision Options (X).

A similar case will be regarding external sources of financial provision for marketing activities (Figure 6).

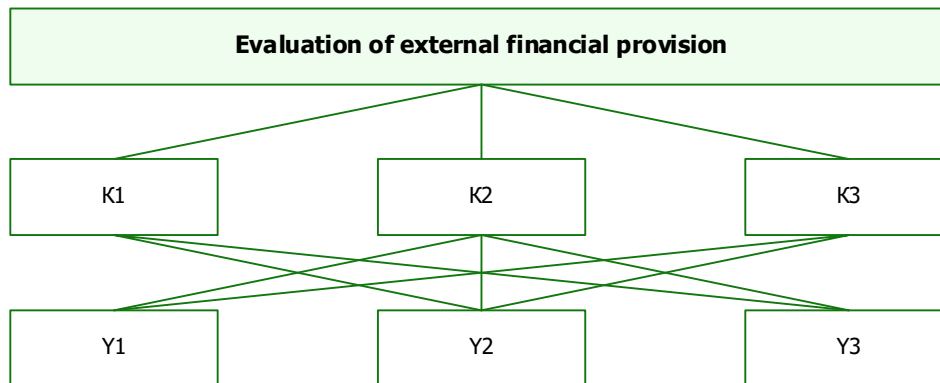


Figure 6. Initial Model for Determining the Significance of Financial Provision Options (Y).

The essence of the evaluation boils down to constructing the appropriate hierarchical model, determining eigenvectors and eigenvalues of square symmetric inverse matrices, and checking the consistency of results. The so-called comparison (1):

$$\frac{n*(n-1)}{2} \tag{1}$$

where,  $n$  – represents the number of types of financial provision for marketing activities. In our case, there are 3 positions each for both internal and external types.

Initially, the data from the comparisons of criteria were summarized, thus a pairwise comparison matrix was compiled in the context of internal forms of financial provision (2):

$$\begin{matrix} 1 & 4 & 1/2 \\ 1/4 & 1 & 1/6 \\ 2 & 6 & 1 \end{matrix} \quad (2)$$

Now the results of the comparisons of criteria considering the possibilities of external financial provision (3):

$$\begin{matrix} 1 & 3 & 4 \\ 1/3 & 1 & 3 \\ 1/4 & 1/3 & 1 \end{matrix} \quad (3)$$

As mentioned above, the evaluation is carried out on a nine-point scale, where 1 is equality in comparison and 9 is an absolute advantage of one over another. At the same time, the normalization of the main eigenvector of the matrix yields the vector of priorities.

All these steps lead to the finding of the components of the so-called priority eigenvector of financial provision, which is determined by formula (4):

$$u_i = \sqrt[n]{\prod_{j=1}^n a_{ij}}; i = 1 \dots n \quad (4)$$

where,  $a_{ij}$  - is the element  $i$  of row  $j$  of the column of the pairwise comparison matrix of criteria.

Thus, the calculation in the context of our criteria will be:  $u_1=1$ ;  $u_2=0.41$ ;  $u_3=2.47$ .

Next, the normalization of this vector is determined by formula (5):

$$w_i = \frac{u_i}{\sum_{i=1}^n u_i} \quad (5)$$

Thus, the calculation in the context of our criteria will be:  $w_1=0.6$ ;  $w_2=0.11$ ;  $w_3=0.64$ .

Multiply the pairwise comparison matrix on the right by the obtained evaluation of the vector to get a new vector of relative importance (6):

$$A * w_i = (0.79; 0.32; 1.9) \quad (6)$$

At the same time, the maximum eigenvalue of the matrix in the comparison of criteria importance will be: 3.1. It is known that the consistency of a square inverse symmetric matrix is equivalent to the requirement of its maximum eigenvalue  $\lambda_{max}$  equaling  $n$ , so we determine the consistency index (7):

$$\frac{\lambda_{max} - n}{n - 1} \quad (7)$$

According to the calculations conducted:  $\lambda_{max} = 3.1$ ; Consistency index = 0.02.

Further stages will then relate to the direct evaluation of types of financial provision for marketing activities (external/internal).

### ***The results of the assessment***

Since we have 3 types of financial provision, the matrix of comparisons will have 3 rows and 3 columns, respectively. At the same time, we have an additional condition in equality (8):

$$m \frac{n * (n - 1)}{2} \quad (8)$$

where  $m$  is the number of criteria  $K$  ( $K_1, K_2, K_3$ ).

As a result of the comparison, we get the following matrix for internal forms of financial provision according to the  $K_1$  criterion (9):

$$\begin{matrix} 1 & 5 & 3 \\ 1/5 & 1 & 1/3 \\ 1/3 & 3 & 1 \end{matrix} \quad (9)$$

As a result of the comparison, we get the following matrix for internal forms of financial provision according to the K2 criterion (10):

$$\begin{matrix} 1 & 3 & 1 \\ 1/3 & 1 & 1 \\ 1 & 1 & 1 \end{matrix} \quad (10)$$

As a result of the comparison, we get the following matrix for internal forms of financial provision according to the K3 criterion (11):

$$\begin{matrix} 1 & 1/3 & 1 \\ 3 & 1 & 1 \\ 1 & 1 & 1 \end{matrix} \quad (11)$$

As a result of the comparison, we get the following matrix for external forms of financial provision according to the K1 criterion (12):

$$\begin{matrix} 1 & 1/3 & 1 \\ 3 & 1 & 5 \\ 1 & 1/5 & 1 \end{matrix} \quad (12)$$

As a result of the comparison, we get the following matrix for external forms of financial provision according to the K2 criterion (13):

$$\begin{matrix} 1 & 5 & 7 \\ 1/5 & 1 & 5 \\ 1/7 & 1/5 & 1 \end{matrix} \quad (13)$$

As a result of the comparison, we get the following matrix for external forms of financial provision according to the K3 criterion (14):

$$\begin{matrix} 1 & 3 & 1 \\ 1/3 & 1 & 1 \\ 1/5 & 1 & 1 \end{matrix} \quad (14)$$

Next, similarly to comparing the criteria above in the text, we also determine the priority vectors using the formula (5). We will get a table for determining the priority vector for internal financial provision according to the selected criteria (Table 1).

**Table 1. Determination of the vector of priorities for internal financial provision of marketing activities for a selected group of machine-building enterprises in Ukraine.**

u <sub>ij</sub>	The vector of priorities		
	K1	K2	K3
x1	0.52	0.45	0.29
x2	0.15	0.29	0.21
x3	0.33	0.26	0.5
y1	0.28	0.26	0.49
y2	0.51	0.52	0.31
y3	0.21	0.22	0.2

Priorities for financial security, both internal and external, are obtained as a result of calculations according to formula (15):

$$U_j = \sum_{i=1}^n w_i u_{ij} \tag{15}$$

Substituting the corresponding values, we will get the final table in which we will see the priority of external and internal financial provision of the marketing activities of the machine-building enterprises of Ukraine (Table 2).

**Table 2. Matrix for determining the priority of financial provision for marketing activities for a selected group of machine-building enterprises in Ukraine.**

U <sub>j</sub>	X
U <sub>1</sub>	0,49
U <sub>2</sub>	0,32
U <sub>3</sub>	0,19
U <sub>j</sub>	Y
U <sub>1</sub>	0,28
U <sub>2</sub>	0,48
U <sub>3</sub>	0,24

The obtained results will allow you to see that the most important will be Reinvestment of profit (x1) and Attracting additional investments from existing shareholders or attracting new investors (y2). Reinvestment facilitates the sustainable expansion of operations and technological upgrades without increasing debt, while attracting more funds from shareholders or new investors provide necessary capital for larger projects and market expansion, potentially leading to increased competitiveness and revenue generation.

## DISCUSSION

### *Discussion of the potential of the defined methodology and comparisons in its application*

We did not create a new method or formulate a radically new methodology for modelling, evaluating, or analyzing. Instead, we combine existing methods and form our own methodology based on them. Consequently, it is logical to state that its application has already been successfully demonstrated in other works. However, it is important to emphasize and identify a number of differences compared to our direction of application. A vivid example is demonstrated by Azzam, et al. (2023), who along with colleagues in co-authorship used the hierarchical multicriteria evaluation method to choose the optimal form of trading and forming a marketing strategy. In contrast, we do not apply a strategic approach and are not aimed at forming a new marketing strategy within this article. However, we not only compare lists of strategies/financial provisions, etc. We have established clear criteria by which we choose the best option for financial provision, which was not done by the predecessors. This also pertains to the research of Khalina, et al. (2019), whose study was based on using the hierarchical multicriteria evaluation methodology to determine the optimal form of organizational support for machine-building enterprises. It was prudent for them to involve experts, but there were no mentions or options for improving the survey. We believe that without the Delphi method, conducting expert analysis is extremely ineffective, distinguishing our research.

Perhaps the closest to the ideal application and combination of the hierarchical multicriteria evaluation method and expert analysis was achieved by Sylkin et al. (2019) and Shtangret et al. (2018), who individually and even together in co-authorship successfully applied this methodology in the context of choosing the optimal crisis management strategy for financial security and determining optimal resource provision for financial security, respectively. This triumph showed how effective the research methodology we chose is. At the same time, we are not trying to replicate it. We believe that issues of financial security should not only rely on experts. However, considering the effectiveness in determining optimal resource provisioning, we have taken a trajectory in the context of the marketing activities of machine-building enterprises.

### *Discussion of results for the development of marketing activities and strengthening competitiveness in the industry*

There are differences in the context of developing marketing activities and strengthening the competitiveness of Ukrainian machine-building enterprises. For example, Sotnikov & Butenko (2020), who describe the importance of evaluating the provision of marketing strategies in determining the investment attractiveness and competitiveness of enterprises. Our research confirms these findings, demonstrating that in-depth analysis of financial provision can significantly enhance the effectiveness of marketing initiatives, especially under complex conditions. Li (2024) proposed that competitiveness in the

enterprise sector be maintained through marketing technologies while taking into account appropriate resource provisioning. However, these findings have a significant gap: they do not adequately address the assessment of these resources. It is believed that it is necessary first to evaluate the available financial resources and then propose various types of technologies and mechanisms for ensuring competitiveness.

## CONCLUSIONS

### *Summary of the conducted research and reflections on the conducted evaluation*

The trend analysis of the activities of machine-building enterprises in Ukraine in recent years, especially considering the period of full-scale invasion, has demonstrated the significant consequences of the new reality. Analytical materials from the State Statistics Service have allowed us to identify and more deeply understand the problems of Ukrainian machine-building enterprises, which form the basis of the modern national economy. The analysis of financial indicators also shows that most Ukrainian machine-building enterprises today lack the resources for competitive marketing activities. All this has formed the analytical basis for evaluating the optimal choice of forms of financial provision for marketing activities of machine-building enterprises to strengthen their competitiveness.

Overall, the conducted research is intended to demonstrate the importance of a consolidated methodological approach to financial provision for marketing activities within the hierarchy at the level of individual enterprises, specifically machine-building in their new reality: prolonged active combat, which significantly hinders changing competitiveness. A careful review of the defined list of forms of financial provision for marketing activities (both external and internal) followed by its optimization and determination of the priority of choice based on modelling, which involved evaluation, forms the basis for developing measures to strengthen their own competitiveness.

### *Practical significance of the obtained results*

The practical significance of the obtained results lies in substantiating recommendations regarding establishing the optimal form of financial provision for the marketing activities of machine-building enterprises. The theoretical conclusions and scientific-methodological approach proposed in the article can be used in the marketing activities of machine-building enterprises in Ukraine under both today's martial law and post-war recovery in the future. The management of machine-building enterprises has the opportunity to adjust and change the list of financial provisions depending on internal processes and changes in the external environment. We believe that modern financial provisions for marketing activities of machine-building enterprises in Ukraine should be formed through the reinvestment of profits and the attraction of additional investments from existing shareholders or the attraction of new investors. The peculiarity of profit reinvestment is that instead of paying dividends to shareholders or owners, the company's profit is used for reinvestment in the enterprise itself.

### *Limitations and prospects for further research*

The study has limitations and a number of discussion flaws that should be noted within the further reproduction of the proposed methodological approach by readers. Expert analysis requires the selection of the most professional and skilled specialists, which is not always available. In addition, practical application was carried out within only a few selected machine-building enterprises in Ukraine, which are currently operating under wartime conditions. Thus, the list of forms of financial provision presented in the article is not "universal" and may differ at the moment of reproduction of the methodological approach by other researchers or practitioners.

Prospects could include studying the role of digitalization and innovative technologies in optimizing costs and attracting investments, as well as researching the impact of political instability (which exists in wartime conditions) and legislative changes on access to financial resources to maintain their competitive market positions.

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## ADDITIONAL INFORMATION

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### AUTHOR CONTRIBUTIONS

*All authors have contributed equally.*

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## CONFLICT OF INTEREST

The Authors declare that there is no conflict of interest.

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## **ФІНАНСОВЕ ЗАБЕЗПЕЧЕННЯ МАРКЕТИНГОВОЇ ДІЯЛЬНОСТІ ПІДПРИЄМСТВ МАШИНОБУДУВАННЯ З МЕТОЮ ЗМІЦНЕННЯ КОНКУРЕНТОСПРОМОЖНОСТІ В УМОВАХ НОВОЇ РЕАЛЬНОСТІ**

Метою дослідження є розроблення методичного підходу до оцінювання всіх можливих варіантів фінансового забезпечення маркетингової діяльності сучасних підприємств машинобудування в умовах повномасштабної війни. Нові умови реальності сьогодення притаманні саме українським підприємствам машинобудування, що й стають ключовим об'єктом дослідження. У статті обрано оптимальні за результатами оцінювання форми фінансового забезпечення, і зовнішнього, і внутрішнього, що не лише дозволить «вижити» в умовах сьогодення українським підприємствам машинобудування, а й сприятиме зміцненню їхньої конкурентоспроможності в умовах нових викликів і загроз. Виділення найбільш оптимальних форм фінансового забезпечення й проведення оцінювання стало можливим через здійснення експертного аналізу, який проводили із застосуванням методу Дельфі. Центральне місце в методології дослідження посідає метод ієрархічної мультикритеріальної оцінки. Його ретельне обґрунтування дозволило краще відобразити основні результати дослідження. Розроблений методичний підхід вирізняється своєю зручністю й практичною цінністю в умовах нової реальності, тобто воєнного часу. Ще однією особливістю є врахування не лише внутрішніх ресурсів, а й зовнішніх. Також було обґрунтовано правильне безпекове застосування визначених форм внутрішнього й зовнішнього фінансового забезпечення маркетингової діяльності для зміцнення власної конкурентоспроможності. Це в свою чергу дозволило сформувати правильну траєкторію оцінювання власних варіантів фінансового забезпечення маркетингової діяльності й застосування їх для підвищення власної конкурентоспроможності. Практичне значення отриманих результатів полягає в обґрунтуванні рекомендацій щодо встановлення оптимальної форми фінансового забезпечення маркетингової діяльності підприємств машинобудування.

**Ключові слова:** фінансове забезпечення, фінансові ресурси, підприємства машинобудування, конкурентоспроможність, воєнний стан, маркетингова діяльність, оцінювання оптимальних варіантів

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