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IMPLEMENTATION OF MODERN METHODS OF CREATIVE THINKING TO INCREASE THE COMPETITIVE ADVANTAGES OF THE ENTERPRISE IN THE FIELD OF METALWORKING EQUIPMENT

ВПРОВАДЖЕННЯ СУЧАСНИХ МЕТОДІВ КРЕАТИВНОГО МИСЛЕННЯ ДЛЯ ПІДВИЩЕННЯ КОНКУРЕНТНИХ ПЕРЕВАГ ПІДПРИЄМСТВА В ГАЛУЗІ МЕТАЛООБРОБНОГО ОБЛАДНАННЯ

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Впровадження сучасних методів креативного
мислення для підвищення конкурентних переваг
підприємства в галузі металообробного облад-
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The article analyzes the methods of benchmarking and PEST-analysis, which are used to increase the competitiveness of enterprises. Enterprises must constantly analyze and optimize production processes according to the most relevant methods, considering the constant development of the industry and changes in the world market, to improve their competitive advantages. The research methodology is based on system and activity approaches and consists in the description and analysis of the latest technologies and strategies that can help enterprises engaged in the production of metalworking equipment to increase their competitiveness in the market. In the field of metalworking equipment, where there are many enterprises, the competition is particularly fierce. Therefore, enterprises must find new methods and strategies to increase competitiveness and increase their positions on the market. Modern methods of increasing competitive advantages, such as the use of the latest production technologies, improving product quality, increasing the efficiency of management and marketing, can become decisive in ensuring the success and stable development of enterprises in this field. Recommendations are formulated for increasing the competitiveness of enterprises in the field of metalworking equipment using methods benchmarking and PEST analysis. Tools for increasing the competitiveness of enterprises in the field of metalworking equipment have been researched and implemented to increase their efficiency, improve the quality of their products, and increase their market share. Benchmarking in Ukraine has great prospects, because at the current stage of development of the world economy, it is one of the most effective tools that helps to overcome the lag competitors based on comparison and analysis of one's activities. Using the direct ranking method, the criteria are allocated according to their importance to the company.

Keywords: competitiveness, metalworking enterprise, competitive advantages, methods of increasing competition.

У статті проведено аналіз методів бенчмаркінгу та PEST-аналізу, які використовуються для підвищення конкурентоспроможності підприємств. Методологія дослідження базується на системному та діяльнісному підході і полягає в описі та аналізі новітніх технологій та стратегій, які можуть допомогти підприємствам, що займаються виробництвом металообробного обладнання, підвищити свою конкурентоспроможність на ринку. Сформульовано рекомендації щодо підвищення конкурентоспроможності підприємств в галузі металообробного обладнання за допомогою методів бенчмаркінгу та PEST-аналізу. Досліджено та впроваджено інструменти підвищення конкурентоспроможності підприємствам в галузі металообробного обладнання з метою збільшення своєї ефективності, підвищення якості своєї продукції та збільшення ринкової частки. Бенчмаркінг в Україні має великі перспективи, оскільки на сучасному етапі розвитку світової економіки – це один із найефективніших інструментів, що допомагає подолати відставання від конкурентів на основі порівняння та аналізу своєї діяльності. Бенчмаркінг є ефективним методом підвищення конкурентоспроможності підприємства. В статті розглянуто, що цей метод дозволяє підприємству вивчати та аналізувати досвід та успішні практики конкурентів, що дає змогу ідентифікувати сильні та слабкі сторони власної діяльності та розробити стратегії для покращення показників роботи. Бенчмаркінг може використовуватися для покращення як виробничих, так і менеджерських процесів підприємства. Доведено, що при використанні бенчмаркінгу підприємство досягає важливої конкурентної переваги, зменшує витрати та підвищує якість продукції або послуг. За допомогою методу прямого ранжування критерії розподіляються відповідно до їх значення для компанії. Метод ранжування – це спосіб порівняння вмісту будь-якого критерію з вихідними даними. Також одним з методів підвищення конкурентоспроможності підприємства може бути PEST-аналіз, оскільки він

дозволяє зрозуміти зовнішнє середовище, в якому діє підприємство, і вплив його факторів на діяльність компанії. PEST-аналіз є інструментом зовнішнього аналізу, який дозволяє виявити та оцінити вплив політичних, економічних, соціальних та технологічних факторів на діяльність підприємства. Врахування цих факторів допомагає підприємству розуміти зовнішнє середовище та прогнозувати можливі наслідки прийнятих рішень. Крім того, PEST-аналіз може допомогти виявити можливості та загрози, що стоять перед підприємством в контексті зовнішнього середовища.

Ключові слова: конкурентоспроможність, металообробне підприємство, конкурентні переваги, методи підвищення конкуренції.

Statement of the problem

In the industrial complex of Ukraine, in the conditions of today's realities, an important problem of increasing the competitiveness of enterprises appears as a necessary condition for their functioning. Against the background of many various scientific approaches to the study of modern competitive concepts for increasing the competitiveness of enterprises, it is especially important to systematize recommendations for increasing competitiveness and to highlight effective methods of improving the business of enterprises in the field of metalworking equipment to meet the needs of consumers and increase competitiveness.

The issue of enterprise competitiveness and competitive advantages is considered in the works of many foreign and domestic authors: D. Ricardo, R. Donovan, M. Porter, K. McConnell, H. Azojev, A. Vojchak, I. Ansoffa, A. Smith, J. Schumpeter, R. Fathutdinov and others. Despite the considerable number of publications on the structuring of modern methods of increasing the company's competitive advantages, the industry of metalworking equipment requires considerable attention. Enterprises must constantly analyze and optimize production processes according to the most relevant methods, considering the constant development of the industry and changes in the world market, to improve their competitive advantages.

The purpose of the research

The purpose of the article is to identify and analyze modern methods of increasing the competitive advantages of enterprises in the field of metalworking equipment, to determine those methods that are most effective in this field, as well as to analyze the advantages and disadvantages of each method.

Presentation of the main research material

In today's world, the activity of any enterprise relates to growing competition in the market. To ensure successful operations and increase profitability, enterprises need to have competitive advantages over their competitors. In the field of metalworking equipment, where there are many enterprises, the competition is particularly fierce. Therefore, enterprises must find new methods and strategies to increase competitiveness and increase their positions on the market. Modern methods of increasing competitive advantages, such as the use of the latest production technologies, improvement of product quality, and improvement of management and marketing efficiency, can become decisive in ensuring the success and stable development of enterprises in this field.

The industry of metalworking equipment in Ukraine is one of the most developed and important for the country's economy. This industry is involved in the production of metalworking equipment such as machine tools, presses, rolling mills, water-abrasive machines, etc. There are many enterprises in Ukraine that specialize in the production of metalworking equipment, and many of them have well-known brands on the international market.

The search for mechanisms to increase the competitiveness of domestic enterprises requires new methods subject to new economic conditions of operation. It is the competitive advantages, formed as a systemic characteristic of the activity of a modern enterprise, that can serve as the foundation of strong competitive positions of the enterprise and determine the nature of its development strategy [1, p.65-70].

Competitive advantages are those factors that allow an enterprise to differ from its competitors and provide it with an advantage in the market. These advantages can be of different nature, for example, a more efficient production process, innovative developments, higher product quality, lower price, better service, etc. On the other hand, competitiveness is the result of competition in the market, which is determined by the conditions of competition, market demand, production efficiency and other factors. Competitiveness can be measured by various indicators, for example, market share, sales volume, profit, etc.

Key strategies that can help a metalworking enterprise increase its competitiveness include the following: 1) cost reduction: the enterprise can reduce the costs of materials, labor and other resources through effective production planning, process optimization and the use of the latest technologies; 2) improvement of product quality: the enterprise must ensure high quality of its products, which may include improvement of production technologies and product quality control; 3) diversification: the company can expand its range of products, develop new products and services, which will allow to attract new customers and increase the volume of sales; 4) development of a marketing strategy: the enterprise must create an effective marketing strategy that will allow attracting new customers and keeping old ones, making its products more attractive to consumers; 5) investing in research and development: the company must invest in research and development to improve technology and produce new products and services.

An important condition for increasing production efficiency and increasing the competitiveness of enterprises is the activation of innovative activities, which should be aimed at developing competitive advantages [2, p.22-30].

The most typical reasons for innovation that can give competitive advantages to a certain enterprise are: changes in legislation or government policy; emergence of new technologies; new customer requests; emergence of a new industry segment; change in the cost of production; emergence of new production components [3, p. 24-30].

In addition, it is important not only to identify potential competitive advantages, but also to explore how they can be used to achieve higher competitiveness. This may require market analysis, the study of consumer needs

and trends, analysis of competitors and their strategies, as well as the development of effective strategic solutions. Benchmarking is an effective method of increasing the competitiveness of an enterprise. This method allows the enterprise to study and analyze the experience and successful practices of competitors, which makes it possible to identify the strengths and weaknesses of one's own activities and develop strategies to improve performance. Benchmarking can be used to improve both production and managerial processes of the enterprise. The use of benchmarking allows the enterprise to achieve an important competitive advantage, reduce costs and improve the quality of products or services.

Foreign researcher R. Donovan notes that benchmarking is a clearly structured, dynamic, strategic/tactical decision-making process, the purpose of which is to improve the company's performance, considering the results of competitors and existing results [4, p. 196].

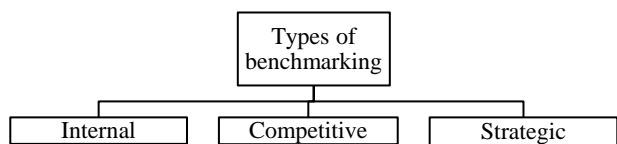


Fig. 1 Generally recognized types of benchmarking

When applying this method, the company analyzes the processes used by well-known competitors or industry leaders to find ways to improve its own processes and strategies. Generally recognized types of benchmarking are shown in fig. 1:

Internal benchmarking consists in comparing the processes, strategies, and performance indicators of the company's own areas with each other. Competitive benchmarking typically involves comparing the performance and strategies of competitors to identify and resolve problems within one's own enterprise. Strategic benchmarking involves comparing strategies and processes with established industry leaders to improve efficiency and competitiveness.

The largest companies in the international arena that develop benchmarking strategies are "Wall-March Stores" (USA), "General Motors" (USA), "British Petroleum" (Great Britain), "Daimler Chrysler" (Germany), "Royal Dutch Shell" (Great Britain), "General Electric" (USA), "Toyota Motor" Japan [5, p.99-103].

Let's consider in more detail the use of competitive benchmarking for enterprises in the field of metalworking equipment.

Based on the foreign and domestic experience of organizing and conducting benchmarking, the following phases of benchmarking can be defined to achieve the desired result:

planning: at this stage, the scope and objectives of benchmarking are selected, resources are identified and priorities are determined for the improvement of the enterprise;

data collection: at this stage, the company and data for comparison are selected, and the methodology for analysis is determined;

analysis: it is carried out on the basis of the evaluation of the level of own efficiency and that of the company being compared, the analysis of the reasons for the gap in the level of efficiency and the search for ways to improve the development of the level of efficiency;

implementation: work is being carried out to implement the results of the analysis in the practical activities of the enterprise, attention is focused on the development of strategies and tactics to neutralize the weaknesses of the enterprise identified during benchmarking;

control and evaluation: this stage consists in monitoring the results of the implementation of benchmarking measures and their impact on the main processes by calculating the relevant performance indicators [6].

The ranking of the enterprise in the field of metalworking equipment can be carried out based on the following criteria (Table 1):

Table 1. Ranking of enterprises in the field of metalworking equipment for the method of competitive benchmarking

Criterion	Reason for implementation	Result
Technologies	Technologies used in the production of metalworking equipment can be very complex and high-tech	Businesses can study the technologies used by their competitors to understand what opportunities exist to improve their own technologies and processes
Prices	The cost of metalworking equipment can be high, so product prices can be a competitive factor	Comparing the prices of competitors' products can help a company set optimal prices for its products
Quality	Product quality can be one of the main factors of competitive advantage	Businesses can research the quality of their competitors' products and compare them with their own products to improve the quality of their products
Innovative potential	Innovation can help businesses bring new products and services to market that can provide a competitive advantage	Businesses can research the innovative products and services of their competitors to implement them in their operations
Leadership	The effectiveness of management can significantly affect the performance of the enterprise	Benchmarking can help identify best management practices and implement them in your own organization
Strategies management	For example, some businesses focus on developing new technologies, while other businesses focus on reducing costs	Benchmarking can help identify effective strategies used by competitors and find the most optimal option for your own enterprise
Resource management	Effective management of resources, including finances, personnel, and materials, is an important aspect of enterprise management	Competitive benchmarking can help identify and implement industry best practices

Source: created by the author.

Advantages of competitive benchmarking include:

1. Allows the enterprise to obtain objective information about its competitive advantages and disadvantages, which helps to improve business efficiency.
2. Helps increase market awareness and identify opportunities to improve a product or service, thereby increasing competitiveness.
3. Enables the enterprise to focus on key processes and functions that affect business performance, reduce costs, and improve product quality.
4. Helps the enterprise adapt to changes in the market and respond to new trends.
5. Allows you to identify the shortcomings and weaknesses of the company's products or services in comparison with competitors, which will improve the quality of products or services.
6. Allows the enterprise to determine its place in the market and compare its strategy with competitors.

Although competitive benchmarking is an important management tool, it also has its drawbacks:

1. Can be limited if companies do not have enough interaction with their competitors, which can lead to incomplete information about how competitors work and, accordingly, biased results.
2. May led to copying competitors' strategies, which can undermine business uniqueness, if a company simply copies its competitors, it will not be able to maintain its competitive advantage.
3. May is not sufficient if the market is changing rapidly, so companies may need other tools to adapt to rapid changes in the market.
4. Competitive benchmarking can be an expensive process, especially if a company collects data from many sources or hires outside consultants.

In global economic science, the analysis of the main factors of the external macro-environment by the PEST-analysis method is defined as a marketing tool designed to identify: - political (P – political), - economic (E – economic), - social (S – social), - technological (T – technological) aspects of the external environment that affect the enterprise's activities. Based on the received information, the company can develop a strategy that will allow it to effectively use the opportunities provided by the external environment and avert threats that may arise [7, p.142-146].

The most significant factors of the macro-environment, which determine the activity of enterprises in the field of metalworking equipment for 2022-2023, can be distinguished as follows: political, economic, social and technological.

The first stage of the PEST analysis is the selection of factors of the macro environment of enterprises in the field of metalworking equipment in each of the four groups of analysis:

political factors: shutdown and destruction of enterprise assets in connection with the military conflict in Ukraine, limitation of opportunities due to the blockade of ports, anti-crisis and stimulating programs of the Government (including business support programs);

economic factors: fluctuations in the exchange rate of the national currency and restrictions on cross-border currency payments, the introduction of a new wartime economic policy, the abolition of a large part of customs duties and VAT;

social factors: the departure of a large number of the population abroad, a reduction in the demand of the population (which finds itself in occupation, in the zone of active military operations or is forced to leave Ukraine), a change in the labor force balance by region;

technological factors: penetration of digitization processes, diversification of enterprises, formation of a smart specialization strategy at the state level.

The next stage of carrying out this method is a qualitative assessment that reflects opportunities (+) or threats (-) for enterprises in the context of each factor of the external environment and a quantitative assessment on a scale from 1 to 5 (from the least impact or its absence to a serious threat), which reflects the degree of influence of each factor on the activities of enterprises. Based on these evaluations, it is possible to determine the ranking of factors (from 0 to 3, where 0 is not at all important, 3 is very important) and their impact on the field of metalworking equipment. The results of the macro-environment assessment are shown in Table 2.

Table 2. PEST-analysis of the activities of enterprises in the field of metalworking equipment in Ukraine for the period 2022-2023.

Macroevironmental factors	The state of the factor and the nature of the impact	Degree of influence	Importance to the industry		Impact assessment
			3	4	
1	2	3	4	5	
Political	Analysis				
Stoppage and destruction of assets of enterprises in connection with the military conflict in Ukraine	-, threat of preservation or destruction of enterprises	5	3		-15
Limitation of opportunities due to port blocking	-, logistic changes at enterprises	3	1		-3
Anti-crisis and government stimulus programs (including business support programs)	+, successful adaptation to functioning in conditions of restrictions	5	3		+15
Economical	Analysis				
Fluctuations in the exchange rate of the national currency and restrictions on cross-border currency payments	-, decrease in financial indicators of enterprises	3	2		-6

Continuation of the table. 1

1	2	3	4	5
Introduction of a new wartime economic policy	+, business recovery	5	3	+15
Abolition of a significant part of duties and VAT	+, expansion of the list of critical import goods	4	2	+8
Social		Analysis		
Departure of many the population abroad	-, unnatural population migration	3	1	-3
Reduction in the demand of the population (which finds itself under occupation, in a zone of active military operations, or is forced to leave Ukraine)	-, reduction of economic activity of the population	3	2	-6
Changes in the labor force balance by region	-, decrease in the number of able-bodied people at enterprises	2	1	-2
Technological		Analysis		
Penetration of digitization processes	+, implementation of software solutions for automation of production processes, use of modern machine learning technologies	5	2	+10
Diversification of enterprises	+, maintaining stability and increasing the level of competitiveness in the market	5	3	+15
Development of a smart-specialization strategy at the state level	+, expanding opportunities for innovation	5	3	+15
Generally				+43

Source: created by the author

Due to difficult market conditions, military conflict and economic crises, enterprises in the field of metalworking equipment need to look for new ways of development and increasing competitiveness. It is important not only to adapt to changes in the market, but also to actively develop and implement new ideas and technologies. The involvement of modern methods of benchmarking and PEST analysis can help enterprises in the field of metalworking equipment to increase their competitiveness and gain a foothold in the market.

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