

# FORMATION OF COMPETITIVE ADVANTAGES OF MACHINE-BUILDING ENTERPRISES ON THE BASIS OF THE BENCHMARKING CONCEPT

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## Abstract

The article substantiates the theoretical bases, methodological recommendations and practical proposals for the formation and evaluation of competitive advantages of machine-building enterprises using the concept of benchmarking. Proposals for the management of competitive advantages in two inextricably linked ways: improvement in market activity of the company and the direct or relative decrease in the results of the use of the main competitive advantages of the market rivals of this company.

**Key words:** benchmarking, principles, varieties, competitive advantages, industrial enterprises

## Introduction.

In conditions of increasing competition in the global and domestic markets of industrial products, the problem of creating and using competitive advantages is one of the most pressing, which draws the attention of a large number of scientists [1-24]. The solution of this problem urgently requires a comprehensive analysis of the problems associated with the formation of new and strengthening of existing competitive advantages, increasing the level of competitiveness of machine-building products. The competitiveness of the entire national economy depends on the level of competitiveness of mechanical engineering products, which is the basis of scientific and technological progress [1-3]. The problem of formation and objective assessment of the competitive advantages of the products of machine-building enterprises is key in a number of the main directions of strengthening the economic security of the state. The ability to offer a potential consumer what is needed, to ensure that the consumer prefers this product, by constantly improving its consumer properties to create new product modifications, anticipating future market opportunities in the industry - these tasks are extremely important and relevant today [4, 5]. The issues of formation and evaluation of competitive advantages of machine-building enterprises were studied in their works by domestic and foreign scientists, in particular: Azoev G.L. [1], Ivanov Yu.B. [3], Pererva P.G. [12, 14, 18, 22], Danilov I.P. [7], Ivanov I.N. [9], Ostrovskaya V.N. [23], Zhegus OV [10], Belokorovin E. [21], Erkov A. [13], Pilcher Terry [11], Kocziszky György [16, 24], Fatkhutdinov R.A. [17] and etc. Particular attention in these studies is paid to the factors of quality of a particular product, on the basis of which the indicators of its competitiveness are built and the competitive advantages of the enterprise in the target market are formed.

At the same time, foreign practice testifies to the presence among modern methods of increasing competitiveness of a rather effective management tool called benchmarking. Benchmarking the competitive advantages of the enterprise, as evidenced by previous studies by the authors [4, 6, 8, 15] first, allows to increase the level of competitiveness of the enterprise; secondly, it gives the opportunity to obtain an additional synergetic effect due to the joint action of various competitive advantages (both existing and acquired, through the benchmarking process). The theoretical importance of these tasks, their practical

significance for the effective operation of enterprises, organizations led to the choice of the topic of the article and outlined the range of issues addressed in it.

## 1. Prospects and difficulties of using the benchmarking concept in the activity of industrial enterprises

Management theory and practice offers a wide range of tools to increase competitiveness, which include strategic planning, balanced scorecard, overall quality management, business process reengineering, mission formation, outsourcing, consumer market segmentation, mergers and acquisitions, customer relationship management. planning, key competencies, 6-sigma, consumer preference management [1, 3, 5 14, 17, 18]. However, only a small part of them can provide the desired effect and meet the expectations of business leaders. At the same time, foreign practice shows that among the modern methods of increasing competitiveness is a very effective management tool called benchmarking [6, 7, 11, 21].

In Ukraine, this tool of economic analysis has not yet become widespread. The main reasons for this are insufficient theoretical development of the method, the lack of developed methodological tools and a mechanism for its adaptation to Ukrainian conditions. In our country, this concept is still cautious, fearing that the concept of benchmarking is covered by industrial intelligence.

The reasons that inhibit the widespread use of benchmarking are in both developed countries (Fig. 1) and in the post-Soviet countries (Fig. 2).

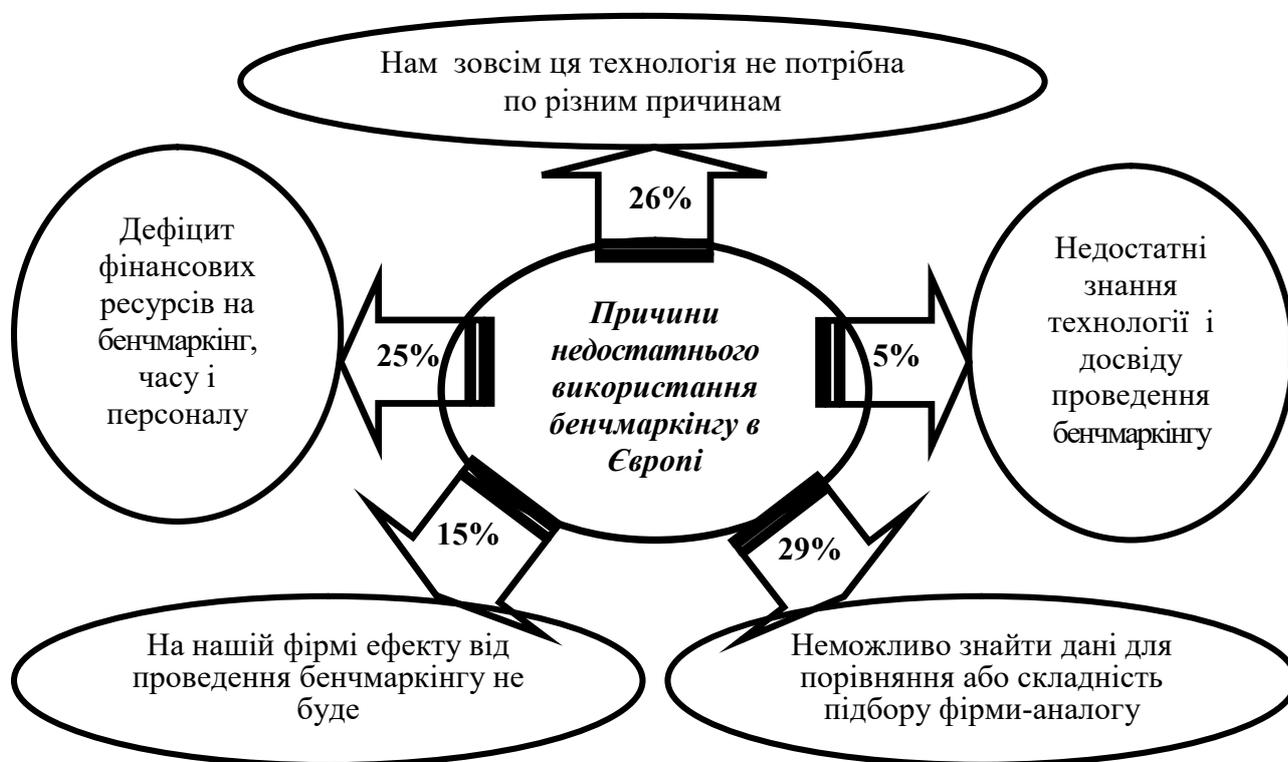


Figure 1. Reasons for underutilization of benchmarking in Europe according to Open University Business School

Source: built by the authors based on the papers [6, 7, 11, 21]

Researchers from the British University Open University Business School analyzed the use of benchmarking in European Union enterprises and concluded that the improper dissemination of the theory and practice of benchmarking in the European Community depends mainly on the theoretical and methodological provisions of this tool of economic analysis [21]. As follows from Fig. 1, that more than a third of enterprises where this technology is not accepted, do not use benchmarking due to the difficulty of finding data for comparison, the difficulty of selecting an analogue firm, not clear theoretical provisions of benchmarking, and this in turn lead to even more quarters of all retrograde enterprises a priori abandon benchmarking technologies.

Slightly other reasons for improper use of benchmarking in the industrial space of the CIS countries, including Ukraine. As follows from the data shown in Fig. 2, the reasons here are already superimposed on each other (the amount of interest for all enterprises exceeds 100%). Although to some extent the reasons for the underdevelopment of benchmarking as an effective technology to increase the competitiveness and efficiency of business in Ukraine and Europe correlate with each other (the difficulty of finding partners and data for comparison, lack of knowledge of technology and experience in benchmarking, etc.) It is noticeable that the use of benchmarking in the framework of marketing activities in Ukraine is associated with special, not typical for European companies difficulties. Among them is a small amount of information about benchmarking; secrecy of information at enterprises; focus on instant profit or survival [6, 7, 11]. For effective benchmarking in Ukraine, it is important to break the "syndrome of natural desire for secrecy", which has acquired pathological forms. In our opinion, there are two reasons for this syndrome: the closed economy and espionage of the Soviet era, as well as the legal defects of privatization. In our country, they try not to give information about their company not because it can cause harm, but just in case - just in case.

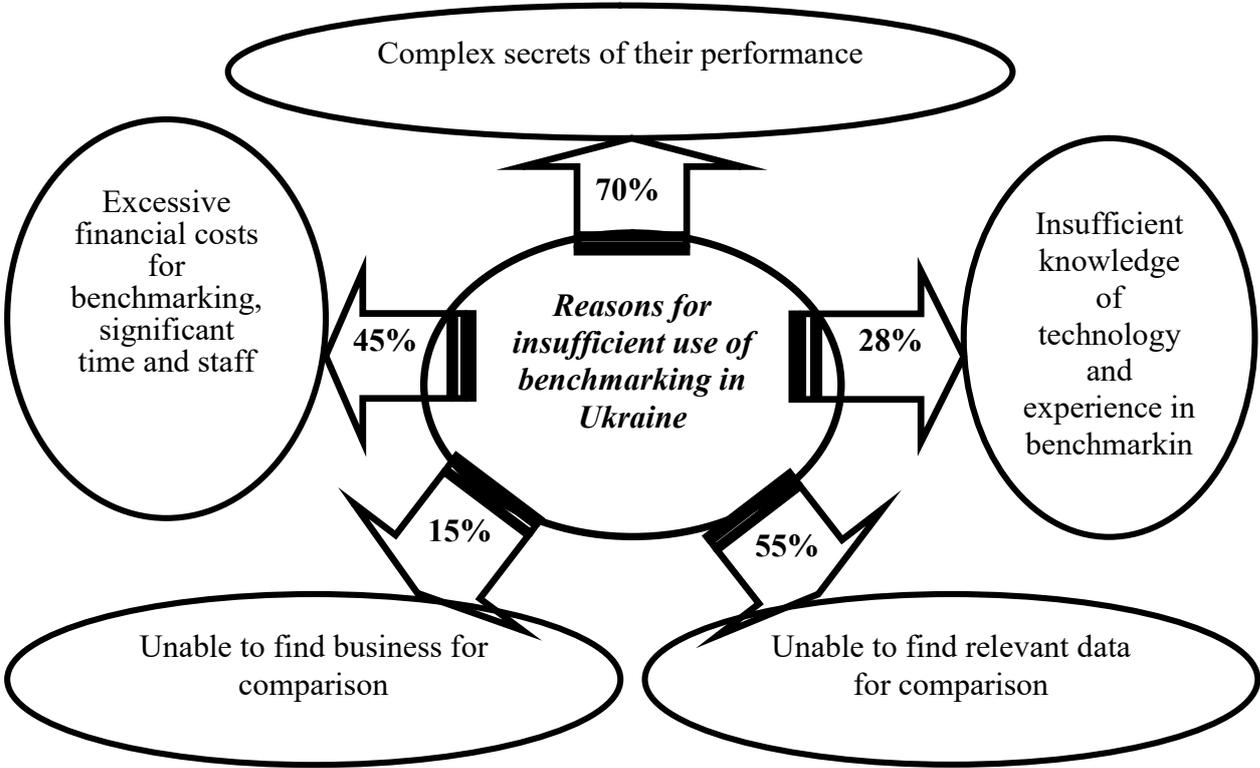


Figure 2. Reasons for insufficient use of benchmarking in Ukraine

Source: built by the authors based on the papers [6, 7, 11, 21]

On this basis, world business can be divided into two categories. The first - companies that profess the principle of secrecy in their work, carefully protect information about their company. The second category - the most open companies that believe that while they catch up, they will have time to come up with something new. The Japanese, for example, are convinced of the ancient wisdom, which in translation sounds like this: "He who learns, develops himself." It is in Japan that competitors share secrets, without considering it unusual. This situation has not yet reached not only domestic industrial enterprises, but also most companies in other countries [6, 7]. According to D. Belokorovin, the "secrecy complex" is something fantastically determined, some irrational element of activity. Arguments in his favor are always there, but they are never compared to the losses incurred by the firm, classifying itself unnecessarily [21].

## **2. Formation of tasks and principles of benchmarking in the concrete strategy of the industrial enterprise**

No matter what type of benchmarking a company chooses, its management and team of executives must clearly present the goals and objectives of the study. Below are a number of typical tasks of external competitive benchmarking. Some of them can be formulated at the stage of internal benchmarking, others are chosen at the stage of preparation for external research [2, 16, 19]. But some of the tasks of benchmarking can be finally clarified only in the process of its implementation.



**Figure 3. Tasks of competitive benchmarking to form competitive advantages and increase the competitiveness of the machine-building enterprise**

Source: built by the authors

There is no unity among researchers regarding the principles of benchmarking. The most common concepts in this regard, we present in table 3. Among the principles of benchmarking, the most recognized and well-known are the principles of Watson [16]. They are well reflected in the definitions of benchmarking. The principle of Watson's reciprocity is controversial, which is not relevant in all cases. It meets the requirements of associative and network types of benchmarking, but the essence of competitive

benchmarking directly contradicts this principle. In addition, this structure of principles, proposed in 1993, no longer sufficiently takes into account current trends in benchmarking.

Among the domestic developments in table 3 shows the principles of benchmarking Mikhailova EA [6, 7, 11, 21]. Even a cursory analysis of this structure of principles shows some of its limitations. Without denying the importance of business processes in general in the activities of industrial enterprises, we note that for benchmarking tasks, this principle can not be generalized, its relevance can be confirmed only for certain types of benchmarking. Taking into account the imperfections of the classical TQM model is not a fundamental aspect of benchmarking, which should be made as a separate principle of benchmarking. This principle would be appropriate for a particular quality management system or product certification. In the same context, some remarks can be made about the principle of "Concentration on Quality". Market laws do not always require better quality. The quality of the product should be as the consumer wants it to be - no more and no less. No one will pay for low quality, but no one will pay for excess quality. Note also that, in our opinion, the principle of "Benchmarking - the basis of survival" is formulated by this author unscientifically, its form borders on a certain commodity populism. Based on the generalization of the basic postulates and principles of modern management techniques, as well as critical analysis of theoretical and practical developments in the field of benchmarking methodology, we have formulated basic principles of benchmarking (primarily competitive) to improve the system of competitive advantage. table 1.

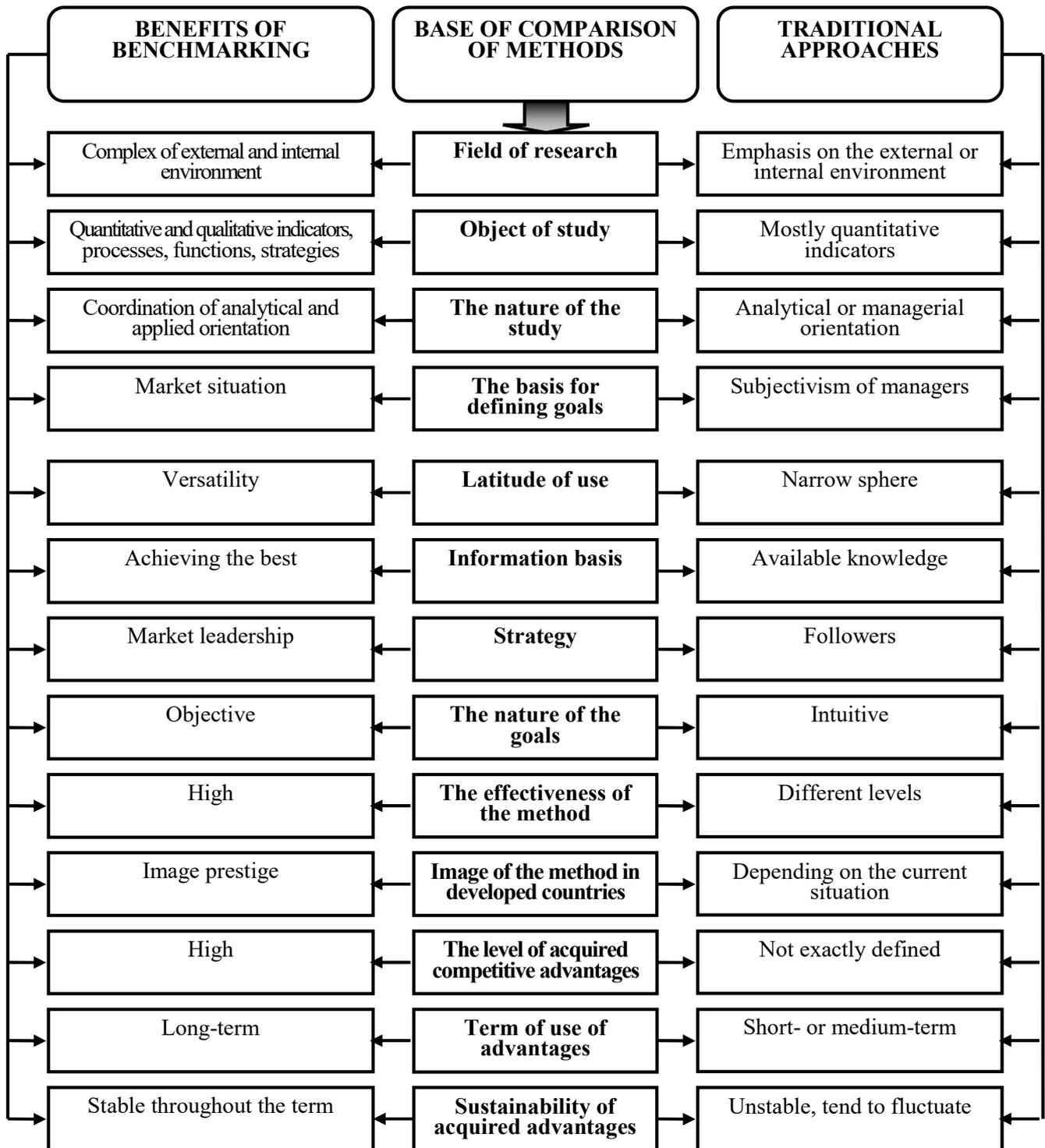
**Table 1. The proposed system of benchmarking principles**

<b>№</b>	<b>Principle</b>	<b>Essence</b>
1	Comparison	System parameters (including its goals) with aspects of the external environment, which is the most important element of competitive benchmarking at the stage of comparison with a competitor
2	Systematic	Provides for the improvement of enterprise management as a system of interdependent subsystems, elements, processes (system improvements)
3	Truths	Assumes decision-making on the basis of facts and data, the presence of the system of collection and analysis of information about its activities, which creates conditions for finding effective solutions and systematic implementation of changes in the framework of benchmarking programs
4	Measurability	Assumes the presence of a system for measuring the parameters under study, both quantitative and qualitative, which allows you to effectively implement the principle of comparison
5	Constant improvement	Part of the overall development strategy of the enterprise, which ensures the sustainability of the results of benchmarking projects to create competitive advantages and increase competitiveness
6	Synergism	Створює умови для збільшення ефективності діяльності підприємства при використанні переваг конкуруючих суб'єктів
7	Consumer orientation	Передбачає виявлення методів, технологій і факторів досягнення ефективності, оцінюваної з позицій споживача

The proposed system of principles forms the basis of the benchmarking methodology, which is used in all forms and varieties. In this system, some of the principles (synergy, continuous improvement) express a specific feature of some (primarily new) forms of benchmarking (eg, competitive benchmarking), which are based not only on the basic principles of benchmarking, but also on a number of useful provisions and ideas. can not be called quite inherent in the classic benchmarking.

### 3. Efficiency of benchmarking of competitive advantages and possible errors when using it

Studies of literature sources [1-24] and the practice of leading enterprises on the basis of benchmarking allowed to form a list of the main advantages of this method over traditional approaches (Fig. 4).



**Figure 4. Advantages of benchmarking over other management tools**

Source: built by the authors

In market conditions, fierce competition has become the norm, so companies and organizations engaged in the same field, produce the same type of goods and services, trying to bypass the competitor, looking for more and more new means of competition. Too often, competition goes beyond business ethics. "Legal" means was and remains the increase of competitive advantage [6, 7, 11, 21].

Benchmarking is an indispensable helper, which is able to significantly increase the growth rate of productivity and other economic indicators. Actually, everything depends on the direction in which the company decided to work. It is necessary to set a clear task: to determine the field of research and only then look for ways to solve it. It is not necessary to try to cover everything at once, the ordinary enterprise does not possess a huge stock of free financial resources, and consequently, will not be able to bypass even the nearest competitor on all indicators at once. The positive point is that the work started to stimulate or improve any competitive qualities will still cause positive changes in any area, which in turn will give impetus to action and strengthen faith in progress and other successes. The practice of companies confirms that the benchmarking process is an effective tool for improving key aspects of business. At the same time, the literature rightly draws attention to typical errors in benchmarking [2, 8, 14, 16].

The first mistake is that the benchmarking results of competing firms cannot be immediately applied to your organization. First of all, you need to explore ways to adapt the information collected to the activities of your company.

The second error is related to blind with blind copying of standards. The so-called "standard" may simply be unsuitable for customers, market or resources of the organization. When selecting "standards" should study the experience of those companies whose situation is most reminiscent of this organization.

The third mistake, which is quite common, is that in the process of benchmarking they try to evaluate the whole system, which is very long and expensive. It is better to choose one or more key processes that determine the competitive advantages of the company and carefully process them.

The fourth mistake is to choose to analyze issues that are not related to the strategy and goals of the business, or, worse, contradict other initiatives of the company.

The fifth mistake with choosing processes that are difficult to measure is another way to do a great but thankless job. One such process is, for example, corporate communications. In order for the benchmarking of internal public relations projects to be beneficial, it is necessary to single out a more specific part of this area of work that can be more or less accurately assessed. It is equally important to remember the interests of the consumer.

The sixth mistake is that when studying someone else's experience, some companies may be interested in reducing costs to the "reference" level, completely forgetting about the consequences for customers. Reducing costs at any cost often results in a deterioration in service, customers move to a competing organization, and the business begins to experience bad times.

In conclusion, we should also note that the order of benchmarking should not be violated when organizations begin to study other people's experience before they have fully analyzed their own work.

## **Conclusions**

Generalizing the above facts, we can make the following conclusions.

1. The article proves that benchmarking is not only an advanced technology of competitive analysis, it is a concept that provides for the development of the enterprise's desire for continuous improvement, and the process of improvement. It is a continuous search for new ideas, their adaptation and use in practice.

2. Benchmarking as a tool of competent enterprise development policy can dramatically affect the activities of the enterprise, its efficiency, master innovative business processes and create competitive advantages for the industrial enterprise.

3. Assessment and selection of potential competitive advantages of the enterprise and its products, in our opinion, it is advisable to carry out on the principles of benchmarking, which provides a process of continuous improvement of basic competitiveness even without setting the goal of identifying the most important and significant advantages. Benchmarking methodology, based on a comparative analysis of the competitiveness of the enterprise and its products, it seems to us, will provide the most objective information in the field as we are interested.

4. Even the best competitive indicators at the moment may not allow the company to achieve its commercial goals, if the commercial potential of these advantages will not be sufficient. In this regard, we propose in the formation of competitive advantages a mandatory procedure for assessing their commercial potential and proving its sufficiency to achieve the commercial objectives of the enterprise. This procedure is especially important for the B2B market, which is more objective in relation to the actual quality and market condition of goods.

5. Competitive advantage alone, even if it exists objectively, will not give the company the desired results without proper marketing support. In this regard, it is proposed to consider a mandatory structural element in the formation of competitive advantages measures to develop and implement an effective marketing program for market support of a particular competitive advantage.

6. Benchmarking has proven to be one of the most effective modern management tools and has become an integral part of strategic planning and increasing the competitiveness of the world's leading companies. Further research is needed on the application and implementation of benchmarking in industrial enterprises of Ukraine.

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