# BENCHMARKING AS A TOOL FOR MANAGING INDUSTRIAL ENTERPRISES

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Abstract. The theoretical bases of benchmarking are investigated in the article. Its main characteristics and components, as well as methods of application and types, in particular, internal, competitive, joint, process and strategic, are determined. A detailed analysis of each type and examples of practical application in the marketing activities of industrial enterprises, taking into account foreign experience. Emphasis is placed on the main problems of benchmarking in the marketing activities of domestic industrial enterprises and suggested ways to eliminate them.

**Keywords:** benchmarking, industrial enterprise, efficiency of marketing activity, types of benchmarking, marketing activity, management.

#### Introduction

In today's economic environment of unstable external environment, in conditions of constant global competition, only those industrial enterprises that are able to constantly improve their characteristics and optimize all their internal capabilities have the ability to create and maintain competitive advantages. The ambiguous aspect of this problem has led to the emergence of new forms, methods and appropriate tools to achieve and form a competitive advantage of the enterprise. One of the most effective tools that allows the company to continuously increase productivity, improve the quality of its results, outperform competitors, is benchmarking technology. In practice, benchmarking is used as a kind of lever that can break the inefficient structure of the enterprise, the way of carrying out production activities, while focusing on the best results and experience of other enterprises. Unfortunately, the use of benchmarking in industrial enterprises of Ukraine is quite limited. Therefore, the problem of introducing the basic elements of benchmarking in the activities of industrial enterprises and determining its impact on the effectiveness of marketing activities, using foreign experience, is quite relevant today.

At the present stage of development of the market economy of Ukraine for most industrial enterprises the formation of an effective economic strategy for development and operation becomes a priority. To do this, it is necessary not only to create the necessary methodological tools for quantitative and qualitative assessment of the proposed economic strategy, but also to develop an appropriate mechanism for its implementation. In particular, it is worth focusing on benchmarking as one of the main tools. Therefore, the main task of the study is to determine the main features of benchmarking in the management of marketing activities of domestic

industrial enterprises, to analyze barriers to its use, as well as to develop practical recommendations for its implementation in practice.

## Theoretical aspects of benchmarking

As practical experience shows, classical marketing, which is based on known components: Product, Price, Place, Promotion, is far from exhaustive, as it does not reflect the relationship of the processes of interaction of all actors in the market system. Recently, other areas of marketing activities (marketing interaction, strategic orientation of marketing, etc.) have appeared and began to be put into practice, one of the most effective and popular was and remains benchmarking, which appeared in the early 70's (from English benchmark - bench (level, height) and mark (mark)).

The application of benchmarking consists of four consecutive actions: understanding the details of their own business processes, analyzing the business processes of other companies, comparing the results of their processes with the results of the analyzed companies and the implementation of the necessary changes to reduce the gap.

There are currently a large number of definitions benchmarking, which necessitates their analysis. The most common is to define a concept that belongs to Robert Kemp: "Benchmarking is a search and the company's application of a practice that is a reference for this industry and its result is improvement activities". Another, no less well-known, is the definition given by Michael Spendolini: "Benchmarking is a continuous systematic process of evaluating the products, services and production processes of organizations that are recognized as representing "best practice" in order to improve their own organization".

Well-known specialist in the field of strategic practice Gregory R. Reiter believes that "benchmarking is an activity by which a firm studies the "best" products and the marketing process that used by direct competitors and firms operating in other similar industries to identify possible ways for the firm to improve her own methods."

As for modern domestic sources, then the opinions of their authors on the concept of benchmarking somewhat diverge. Yes, some support the point view, according to which benchmarking is a product of the evolutionary development of the concept of competitiveness, which involves the development of improvement programs product quality. Others argue that benchmarking is an alternative method of strategic planning and analysis not from what has been achieved, but from to the achievements of competitors, ie the reference point in the development of strategic plans is not their own achievements, and the best practice of competitors. At the same time there is an opinion that benchmarking can be considered as research of technologies, technological processes and methods of organizing the production and sale of products at the best companies of partners and competitors in order to increase the efficiency of their own enterprise. We propose to consider benchmarking as a special tool to study the experience of the best market players, which has a positive effect on efficiency marketing activities of their own enterprise, for conditions for qualitative analysis and correct application of the obtained results [2].

In our opinion, the goals of benchmarking of the enterprise are the following provisions (fig. 1.1.) [1].

There are principles of implementation of the concept of benchmarking in the management of enterprises presented in fig. 1.2. Adherence to the principles of benchmarking is the basis for creating an effective and efficient economic strategy of the enterprise and provides a certain stage of implementation.

- 1. Information accessibility for the implementation of benchmarking and its use as a separate method of management requires access to information about the work of other entities, certain aspects of their activities. It is especially difficult to find data on certain areas of work of the analogue company, which should include innovative developments, customer base.
- 2. Information openness this principle is very similar in content to the principle of information accessibility, but its observance is directly related to ensuring intellectual property rights, openness of data collection on the work of the business entity, which may occur through inquiries, meetings, involvement on a paid basis of specialists of the analogous enterprise. In this case, the whole process of data accumulation must be completely transparent.

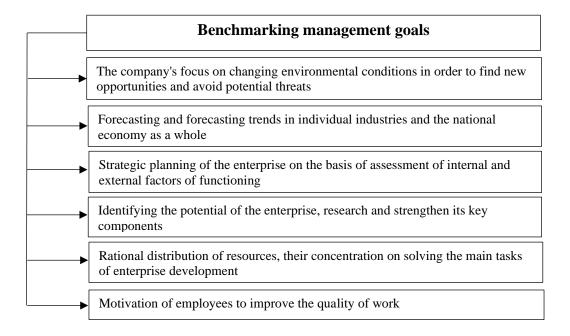


Figure 1.1. Benchmarking management goals

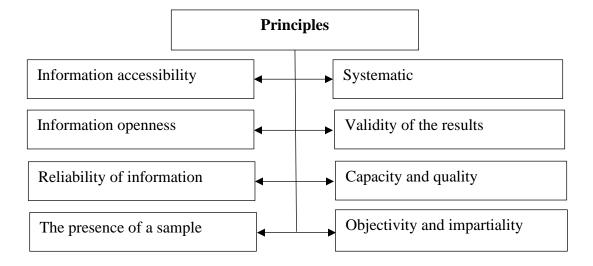


Figure 1.2. Principles of benchmarking

- 3. Reliability of information the essence of this principle of benchmarking is to ensure the effectiveness of this method only on the basis of having reliable information. The veracity of the data is the basic guarantee of the rational use of benchmarking as a way to improve the quality of management in the enterprise.
- 4. The presence of a sample one of the fundamental principles of benchmarking management is the existence of an analogue enterprise, which also carries out very similar economic activities in relation to the basic business entity, the work of which needs to be improved. It is quite difficult to find such an entity if the scope of its operation is significant and a large number of similar enterprises operate in it. For innovative enterprises that are actively developing, introducing modern technologies both in the management system and in the system of production of goods and provision of services, the use of benchmarking can be complicated, because such an entity and may be an analogous enterprise. In this case, this method is possible if necessary use only to borrow the experience of organizing individual processes in the enterprise, given the more positive and successful experience of other competitors.
- 5. Systematic the essence of this principle is to use a comprehensive approach to the use of benchmarking as a method of management, which is to identify weaknesses in order to find measures to address them. The principle of systematization is realized through four basic components:
- systematic analysis of the enterprise, identification of problems and bottlenecks in its development;
- research of the market in which the enterprise operates, identification of leaders and the most developed business entities in this niche;
- search for an analogue of a set of criteria that must be developed by the company to select the best model of operation;
- search and systematization of information about the enterprise-analogue, separation of those methods that may be useful to the entity, a detailed description of the mechanisms for their implementation.

In fact, the principle of systematicity should be used at all stages of the application of benchmarking, as each of them must end with grouping and systematization of the received information for the better understanding of the general condition and making effective decisions.

6. Validity of the results - the essence of this principle is to determine those quantitative and qualitative indicators, the change of which should occur as a result introduction of new, borrowed, directions of increase of efficiency of management.

This approach makes it possible to assess the correctness of the use of benchmarking, the effectiveness of the use of the experience of other entities and in general to assert the achievement of this goal.

7. Capacity and quality - the essence of this principle is the need to ensure the appropriate level of quality of benchmarking. It is clear that the use of such a method is associated with the need for a thorough economic analysis of individual economic systems. Among them, among other subjects management, it is advisable to include certain sectors and areas of the national economy, analysis of which is also an important component of effective use of benchmarking. Exactly therefore, to carry out such a study, employees of the enterprise may not have the appropriate qualifications of employees. Sometimes it is advisable in this case to involve external consultants to conduct relevant research and develop recommendations for the

customer. The use of financial advisors has a significant amount advantages, which include experience and speed of obtaining the necessary data.

8. Objectivity and impartiality - this principle should be considered in two aspects. First of all, objectivity is required by the research process itself, which should be based on the analysis of reliable information, the correct assessment of competitors. On the other hand, objectivity also consists in correctly determining the state work of own divisions. It is possible that some of them may work better than their counterparts, and their mechanism of operation should not be drastic changes. Also in this case, the subjective attitude should be minimized to the work of individual employees, the effectiveness of their work. In this case, the involvement of external experts is also appropriate.

Note that the process of implementing benchmarking as a separate method of improving the efficiency of enterprise management is complex and multi-stage. This, in turn, and determines the presence of a significant number of principles, compliance with which affects the correct use of the mechanism of such a method and the quality of the results obtained. Accordingly, taking this into account, we determine what are the general advantages and disadvantages of using benchmarking by different companies.

## Types of benchmarking

The advantage of benchmarking is its ability to enrich the researcher with ideas, especially when companies from other industries are considered the best. The problem with the use of benchmarking is the threat of limiting the researcher's ideas to the established limits of success in the industry, ie benchmarking is effective if you focus on the strategy of imitation, rather than on the strategy of leadership in competition.

Based on the definitions of benchmarking and from our generalizations, we can say that there are several types of benchmarking activities, which differ in the complexity of the tasks (simple and complex), the direction (internal and external), the level at which benchmarking (strategic and operational).

In our opinion, it is necessary to distinguish between types of benchmarking by object and subject, which are selected for comparison. In Table 1.1 we provide generalized information about the types of benchmarking depending on the object selected for comparison, and in tab. 1.2 – types of benchmarking by subject of comparison.

Type of benchmarking	Definition and characteristics	Conditions under which it is used	Benefits	Difficulties in use
Internal	Comparison of the nature, quality and methods of work of related units within one enterprise. An attempt to find within the company a similar, most successful action.	After studying the Benchmarking process. Before conducting external (industry, intersectoral, international) benchmarking.	Relative openness and availability of information.	Existence of clear leaders and / or outsiders among the structural units of the enterprise, secrets or other obstacles to the exchange of information with other enterprises in the industry. Lack of experience in benchmarking. Limited resources and time.

Table 1.1 Characteristics of types of benchmarking by the object selected for comparison

	External benchmarking					
Competitive	Comparison of the nature, quality and methods of work and implementation of certain activities of the enterprise with its competitors in the market.	Decreased or low level of relative efficiency in key industries or activities compared to 3 other companies in the same sector (industry). The need to find ways to close the gap in efficiency	It can be carried out both in cooperation and exchange of information with a direct competitor, and without him	It is difficult to obtain the reliable information needed for analysis		
Joint (associative)	Several organizations what is or is not competitors, enter into an agreement on information exchange in within a closed group (benchmarking alliance)	Joining forces several companies for exchange information when potential partners (pre-selected) have high enough standards	Enables explore the best practices	Provides information only for team members who do not necessarily use best practice		
Sectoral	Comparison of the nature, quality and methods of work and conduct of certain activities of the enterprise with enterprises that belong to the same industry, but are not direct competitors	Joining forces of several companies to exchange ideas and information in order to form options for joint solutions	Forming a network or bank of "best practices"	The benchmark practice that has developed in the industry can to be transformed into an inviolable standard, which limits the search for new approaches to improving the activities of enterprises		
Intersectoral	Comparison of the nature, quality and methods of work and implementation of certain activities of the enterprise with enterprises that belong to different industries and are not direct competitors	Study of the best practices of world leaders in various branches of economy and adaptation of their experience to activity of own enterprise.	Study of the best practices of world leaders in various branches of economy and adaptation of their experience to activity of own enterprise.	Study of the best practices of world leaders in various branches of economy and adaptation of their experience to activity of own enterprise.		
International	Identification and analysis of reference practices around the world due to the fact that there may not be enough benchmarking partners in the middle of the country.	Used when best practices are implemented abroad and / or the number of companies operating in the field within the country is insufficient to obtain reliable information.	Globalization processes and the development of information technologies increase the opportunities of international projects.	It may take more time and resources to ensure and implement, and its results require detailed analysis in the light of national, cultural and religious differences.		

There are many types of benchmarking that can be used by businesses. But before starting a comparative analysis, it is necessary to determine which type of benchmarking is rational to

use in this case, because each type requires a certain level of financial costs and must be economically justified and, accordingly, effective.

The choice of a particular type of benchmarking by the company is determined by the following conditions:

- the nature of the tasks to be solved and the aspects of the problem under consideration;
- available resources and time for benchmarking;
- experience of benchmarking;
- sufficiency of resources for the implementation of measures to implement the economic strategy [3].

First-time benchmarking companies often choose internal benchmarking to gain and gain experience. After mastering the practice of conducting internal benchmarking, companies move to external, functional or process and strategic benchmarking.

Table 1.2 Characteristics of types of benchmarking by the object selected for comparison

Type of benchmarking	Definition and characteristics	Conditions under which it is used	Benefits	Difficulties in use
Performance	The results of	The need to compare	Formation of a base for	Not all
results	activities are compared (most often those that can be expressed in quantitative terms)	data for a certain period (price and cost; time of processing the customer's order; delivery time; delivery costs; the level of profitability of certain activities)	comparison	indicators of enterprise activity can be quantified
Functional	1. The process of comparing the characteristics of certain functions performed at different enterprises of a similar profile.  2. Search for reference practices in different sectors or areas of activity, which helps to improve similar functions or processes	The need to improve activities, goods or services for which there are no analogues (competitors) in the market	Innovation is often transferred from one industry to another, which leads to a significant increase in the efficiency of the enterprise	There are various difficulties (unavailability of information, resistance of competitors, etc.) 3 benchmarking in their industry. Inefficiency (extremely low efficiency) of activity or impossibility of further development, which requires radical changes in business, introduction of innovations

Strategic	A systematic	Aimed at the long term	Answers the question of	Large
	process aimed at	and manifested in the	what strategic changes	expenditure of
	evaluating alter-	development of a new	are needed implement to	time and
	natives,	product or service. The	improve the company's	resources. The
	implementing	need to replace the	market position and	result of the
	strategies and	existing strategy, which	increase its market share	implementation
	improving	has become ineffective in	compared to the	can be seen only
	performance	certain circum-stances:	reference company.	after a long
	through the	the emergence of	Contains prospects of the	period
	study of	fundamentally new	highest level: key	1
	successful	technologies, changing	competencies,	
	strategies of	working conditions in the	development of new	
	partner	market, radical changes	goods and services,	
	companies	in customer	changes in the balance of	
	_	requirements, etc.	operations; increasing	
		_	resistance to changing	
			conditions	
Process	The study of the	Emphasizes the	Requires creativity.	Deficiencies in
	practice of	improvement of specific	_	individual
	building	processes and operations,		elements or in
	business	often helps to increase		the whole
	processes, as a	short-term profitability.		production
	rule, in	The use of bench-		process (sales,
	organizations	marking methodology in		logistics, etc.),
	that are not	projects to improve		which do not
	direct	business processes of the		allow to achieve
	competitors of	enterprise will have the		high production
	the enterprise,	best result.		efficiency. The
	but have similar			need for rapid
	basic business			improvements
	processes.			in key business
				processes

There is no "best" kind of benchmarking. Each of the different types (internal, external competitive, external industry, external cross-industry, and combined external and internal) has its own advantages and disadvantages that need to be taken into account.

Regardless of which type of benchmarking a company chooses, its management and implementation team must clearly understand the research objectives. Above was a number of typical benchmarking goals. Some of them can be formulated even at the stage of internal benchmarking, others are chosen at the stage of preparation for conducting external research. But some of the goals of benchmarking can be finally clarified only in the process of its implementation. It should be borne in mind that the organization has the right to limit itself to conducting only internal or only external benchmarking, or to outline the conduct of benchmarking studies of both types. Either way, the goals of benchmarking should be determined by the implementation team or other responsible persons before the start of the study and can subsequently be refined during its conduct.

The main reason for such infrequent use of benchmarking is that most domestic companies go through a period of formation. Its implementation depends on how structured an enterprise is, how standardized its own business processes are, and the pace of market development stimulates it to benchmarking. When a certain level of development of the enterprise is reached, it is faced with the question of studying and using the best experience gained in this field. And benchmarking is a saving of time and resources.

So, first of all, before you start studying competitors, you need to clearly define your own goals and understanding of what we are researching and what our indicators are. After analyzing the collected information, it is necessary to develop a plan of change and only then benchmarking will bring the desired result.

## Problems of implementation of benchmarking in management of industrial enterprises and their solutions.

Industrial enterprises of Ukraine, implementing benchmarking in marketing activities, often face a number of problems and barriers, which, in turn, often stand in the way of successful use of this tool and the effective functioning of the enterprise as a whole. Thus, we propose to consider these problems with an emphasis on their economic essence and ways to eliminate them [3].

Problems of benchmarking implementation:

- 1. Benchmarking a check of marketing activities (such a check can give useful calculations of the financial activities of the enterprise, the effective interpretation of which can determine what place it occupies among other enterprises in the industry).
- 2. Existing and approved "baseline" parameters can be used without change (it is necessary to find such partners for benchmarking, and explore what is achievable and whether the company can achieve a similar level of operation; as a result a change in basic parameters, such as, for example, the price of the product).
- 3. Inconsistency (implementation of benchmarking as a process that contradicts the strategy of the enterprise or hinders its other initiatives; it is necessary to control and direct the process of implementation of benchmarking at the level of strategy.
- 4. Insufficient partner research (it is very important not to waste company time or benchmarking partner time; information or answers to questions arising in the process of mutual activity should be known before the implementation of benchmarking to achieve effective results.
- 5. Lack of a basis for benchmarking (search for partners and information about them started before the analysis of own process of activity; benchmarking assumes that the process of activity of the enterprise and its parameters are precisely known and by the end of research.
- 6. Benchmarking a comprehensive tool (benchmarking of the entire system a costly, lengthy and inefficient process, so it should be implemented only in part of this system (for example, in marketing activities).

Currently, there are few professionals who have sufficient experience to implement a benchmarking project. There are also some restrictions on access to information, without which benchmarking is impossible. The main disadvantage that distinguishes benchmarking from other methods is that benchmarking, as a method, is relatively young. However, the advantages of benchmarking and the positive effect of its implementation compensate for possible shortcomings and problems.

Guided by the generalization of known approaches to benchmarking analysis, the following sequence of benchmarking in marketing activities at an industrial enterprise is proposed:

- definition of the object of analysis;
- assessment of the company's own activities;
- selection of benchmarking partners;
- collection of information;
- comparison of own activity with activity of the partner enterprise;

- information analysis;
- development of a plan for the implementation of the experience gained;
- implementation of the obtained results in the practice of marketing activities;
- control over the benchmarking process.

#### **Conclusions**

Thus, benchmarking is a special tool to study the experience of the best market players, which has a positive effect on the effectiveness of marketing activities of their own company, provided a qualitative analysis and proper application of the results. The culture of entrepreneurial activity will be focused on such values as the ability to increase their own potential, which, in turn, serves as an impetus for enterprise development. The use of benchmarking in the practice of domestic industrial enterprises is quite limited, so it is necessary to develop a methodological framework for its implementation. As a result, enterprises of mechanical engineering, electric power, coal, aviation industry - enterprises with a high share of science-intensive products will receive the following benefits: the ability to adjust the parameters of the enterprise in accordance with market requirements; the ability to systematically identify and eliminate inconsistencies that are barriers to enterprise development; adaptation of high-tech innovations; borrowing the best methods of further development; motivation of employees; gaining an advantage in competition; achieving an increase in the degree of satisfaction of end users.

### References

- 1. APQC Process Classification Framework. available at: <a href="http://www.apqc.org">http://www.apqc.org</a> . Official site of the Gromadsky organization "American Center for Productivity and Yakosti".
- 2. Camp R.C. (2006) Benchmarking: The Search for Industry Best Practices That Lead to Superior Performance. New York: Productivity Press. 79 p.
- 3. Dubodulova A. V. (2013) Features and technology of internal benchmarking at industrial enterprises. No. 2. pp. 64-73. available at: <a href="http://nbuv.gov.ua/UJRN/Mimi">http://nbuv.gov.ua/UJRN/Mimi</a> 2013\_2\_7
- 4. Dubodulova A. V. (2010) Classification of types and spheres of benchmarking in the management system of an enterprise. Marketing and management innovation. No. 1. pp. 102-106. available at: <a href="http://nbuv.gov.ua/UJRN/Mimi">http://nbuv.gov.ua/UJRN/Mimi</a> 2010 1 14
- 5. Dvirko, Yu. V. (2012) Methodical principles of benchmarking management of trade enterprises of consumer cooperation. Business Inform. № 10, pp. 150-154.
- 6. Ganushchak T. V. (2014) Benchmarking in the management of financial security of the enterprise. Science and Economics. pp. 97-102. available at: <a href="http://nbuv.gov.ua/UJRN/Nie\_2014\_3\_15">http://nbuv.gov.ua/UJRN/Nie\_2014\_3\_15</a>
- 7. Grozny I. C. 92015) Necessity of testing benchmarking in the process of managing an enterprise. Economics and Management. No. 2. pp. 49 53. available at: <a href="http://nbuv.gov.ua/UJRN/econupr 2015 2 9">http://nbuv.gov.ua/UJRN/econupr 2015 2 9</a>
- 8. Kharchenko T. B. (2016) Providing benchmarking yak to the instrument of managing yakstyu. Molodiy vchenii. No. 6. pp. 128-131. available at: <a href="http://nbuv.gov.ua/UJRN/molv\_2016\_6\_34">http://nbuv.gov.ua/UJRN/molv\_2016\_6\_34</a>
- 9. Khristenko O. V. (2018) Stasis of benchmarking in the management system of the enterprise. Financial space. No. 1. pp. 153-160. available at: <a href="http://nbuv.gov.ua/UJRN/Fin\_pr\_2018\_1\_20">http://nbuv.gov.ua/UJRN/Fin\_pr\_2018\_1\_20</a>
- 10. Kovalchuk, S.V. (2010) Benchmarking as a universal tool for evaluating the strategic activities of the enterprise. Marketing in Ukraine. № 3, pp. 20-31.

- 11. Kramarchuk S.P. (2019) Methodical approach to the formation of competitive enterprises at ambush benchmarking. Management and entrepreneurship in Ukraine: the stages of formation and problems of development. Vol. 1, numb. 1. pp. 24-30. available at: <a href="http://nbuv.gov.ua/UJRN/meu\_2019\_1\_1\_6">http://nbuv.gov.ua/UJRN/meu\_2019\_1\_1\_6</a>
- 12. Professional Development: Benchmarking. (2006) Houston: American Productivity and Quality Center, 8 p.
- 13. Pylypchuk, V.P. Szymanska, A.A. (2015) Benchmarking as a tool to increase the efficiency of marketing activities of an industrial enterprise. Young Scientist. № 9 (2), pp. 13-17.
- 14. Shabaga T. M. (2015) Special features of storing benchmarking programs at foreign and foreign enterprises. Business Navigator. No. 1. pp. 119-121. available at: <a href="http://nbuv.gov.ua/UJRN/bnav\_2015\_1\_23">http://nbuv.gov.ua/UJRN/bnav\_2015\_1\_23</a>
- 15. Shevchenko O. M. (2014) Economic day of benchmarking and its role in the innovation development of the enterprise. Business Inform. No. 4. pp. 64-68. available at: <a href="http://nbuv.gov.ua/UJRN/binf\_2014\_4\_11">http://nbuv.gov.ua/UJRN/binf\_2014\_4\_11</a>
- 16. Spendolini M. J. (2003) The Benchmarketing Book. 2nd edition.
- 17. Vargatyuk, M. (2019) Scientific and conceptual principles of benchmarking in enterprise management. Problems and prospects of economics and management. № 2, pp. 67-73. available at: <a href="http://nbuv.gov.ua/UJRN/ppeu">http://nbuv.gov.ua/UJRN/ppeu</a> 2019 2 9
- 18. Vaziri K. (1992) Using competitive benchmarking to set goals. Quality Progress. pp. 81-85.
- 19. Watson G.H. (1992) The Benchmarking Workbook: Adapting Best Practices for Performance Improvement. New York: Productivity Press, 122 p.
- 20. Yarmak M.R. (2017) Development of tools for managing the competitiveness of industry based on benchmarks based on benchmarks based on benchmarks. Series: Economics and Management. VIP. 23 (2). pp. 18-23. available at: <a href="http://nbuv.gov.ua/UJRN/Nvmgu\_eim\_2017\_23(2)\_6">http://nbuv.gov.ua/UJRN/Nvmgu\_eim\_2017\_23(2)\_6</a>