

УПРАВЛІННЯ ПІДПРИЄМСТВОМ

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MANAGEMENT OF THE POTENTIAL OF AN ENTERPRISE ON THE BASIS OF GRAPH-ANALYTICAL MODELS

УПРАВЛІННЯ ПОТЕНЦІАЛОМ ПІДПРИЄМСТВА НА ЗАСАДАХ ПОБУДОВИ ГРАФОАНАЛІТИЧНИХ МОДЕЛЕЙ

Urgency of the research. The effectiveness of management decisions concerning the development of the potential of enterprises depends on the results of the assessment and positioning of its separate components.

Target setting. Graph-analytical modeling of the enterprise's potential is its illustrative tool which improves the effectiveness of its implementation.

Actual scientific researches and issues analysis. Some aspects of management of the potential are analyzed by Beltukov E. A., Voynarenko M. P., Oleksyuk O. I., Otenko I. P., Popov E. V., Repina I. M., Savina H. H., Cherep A. V., Sharko M. V., Fedonin O. S. et al.

Uninvestigated parts of general matters defining. The questions of structuring, graph-analytical modeling, assessment and the effectiveness of management of the potential of an enterprise still remain unsettled.

The research objective. The aim of the article is to ground the principles of building graph-analytical models of the potential of an enterprise.

The statement of basic materials. It is stated that the results of evaluation of aggregate value and separate components of the potential of an enterprise, market opportunities, uncertainties and threats are the basis for strategic plans of the development of an enterprise.

It is proved that graph-analytical assessment methods demonstrate the results of research and provide information not only about the size of potential, but also about the "problem" elements.

The shortcomings of existing methods of assessment of the potential of an enterprise are defined (square of the potential, the radar method, ect.)

The feasibility of modeling and assessment of the potential of an enterprise for five elements - 'vectors of development' – informational, labor, financial, industrial and market potentials is grounded.

Attention is paid to the advantages of building the graph-analytical model – 'star of the potential of an enterprise'

Conclusions. The importance of clarifying approaches to the interpretation and assessment of potential is related to the necessity of specifying the initial conditions to justify decisions on management of the potential and is a precondition for development prospects.

Keywords: potential of an enterprise, structure, elements, positioning, modeling, abilities, opportunities, management of the potential of an enterprise.

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Актуальність теми дослідження. Ефективність управлінських рішень щодо розвитку потенціалу підприємств залежить від результатів оцінювання та позиціонування його окремих складових.

Постановка проблеми. Графоаналітичне моделювання потенціалу підприємства є інструментом його унаочнення і сприяє підвищенню ефективності реалізації потенціалу.

Аналіз останніх досліджень і публікацій. Окремі аспекти управління потенціалом досліджують Бельтюков Є. А., Войнаренко М. П., Олексюк О. І., Отенко І. П., Попов Е. В., Рєпіна І. М., Савіна Г. Г., Череп А. В., Шарко М. В., Федонін О. С. та ін.

Виділення недосліджених частин загальної проблеми. Конкретизація питань структуризації, графоаналітичного моделювання, оцінювання та ефективності управління потенціалом підприємства, залишаються невирішеними.

Постановка завдання. Стаття присвячена обґрунтуванню засад побудови графоаналітичних моделей потенціалу підприємства.

Виклад основного матеріалу. Автором констатовано, що результати оцінювання сукупної величини і окремих складових потенціалу підприємства, ринкових можливостей, невизначеностей та заєроз є підґрунтям для стратегічних планів його розвитку.

Доведено, що графоаналітичні методи оцінювання наочно демонструють результати дослідження і дозволяють отримувати інформацію не лише щодо розмірів потенціалу, але й щодо «проблемних» його елементів.

Встановлені недоліки існуючих методів оцінювання потенціалу підприємства (квадрат потенціалу, метод радару, тощо).

Обґрунтовано доцільність моделювання і оцінювання потенціалу підприємства за п'ятьма елементами – «векторами розвитку»: інформаційний, трудовий, фінансовий, виробничий та ринковий потенціал. Звернуто увагу на переваги побудови графоаналітичної моделі – «зірки потенціалу підприємства».

Висновки. Важливість уточнення підходів до інтерпретації та оцінювання потенціалу пов'язана із необхідністю конкретизації вихідних умов для обґрунтування рішень щодо управління потенціалом та є передумовою забезпечення перспектив розвитку.

Ключові слова: потенціал підприємства; структура; елементи; позиціонування; моделювання; здатності; можливості; управління потенціалом підприємства.

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Urgency of the research. The effectiveness of management decisions concerning the formation and development of the potential of enterprises depends on accuracy of the results of the assessment and positioning of its separate components. Modern dynamic processes of the environment, the need for appropriate internal changes of enterprises require the improvement of the approaches for the identification and use of possibilities of enterprises.

Target setting. Graph-analytical modeling of the enterprise's potential is its illustrative tool which provides the ability not only to specify the elements and to determine their value and balance but also to optimize management decisions on the development and improvement of the effectiveness of implementation of the potential

Actual scientific researches and issue analysis. Different approaches and indicators of presentation and structuring of the potential of an enterprise are used in theory and practice: natural, cost, absolute and relative. However, the opinions on the number and nature of elements and indicators that should be used in assessment, vary. The most controversial questions are: how the assessment should be conducted – using the system of indicators or one total (integral) indicator; what elements should be defined in the process of economic assessment of the potential of an enterprise using natural, cost, absolute or relative indicators.

Different aspects of this issue are analyzed by Beltukov E. A., Voynarenko M. P., Oleksyuk O. I., Otenko I. P., Popov E. V., Repina I. M., Savina H. H., Cherep A. V., Sharko M. V., Fedonin O. S. et al.

At the same time the questions of structuring, graph-analytical modeling, economic assessment and implementation of the effectiveness of management of the potential of an enterprise still remain unsettled.

The research objective. The aim of the article is to specify and complement the existing scientific approaches to structuring and positioning of the elements of the potential of an enterprise; to ground the principles of increasing the effectiveness of management decisions by building graph-analytical models of the potential of an enterprise.

The statement of basic materials. The results of evaluation of aggregate value and separate components of the potential of an enterprise, market opportunities, uncertainties and threats are the basis for management decisions on industrial and economic activity and strategic plans of the development of an enterprise. Voynarenko M. P. emphasizes the necessity of considering the potential opportunities of an enterprise as an inner source of the development of innovative activity [1, p. 127]. On the other hand, «...learning new knowledge, gaining new understanding, learning new skills and behaviors...» are defined by Sharko M. V. as the factors of the development of the potential of an enterprise. [2, p. 33].

The building of graph-analytical models of the potential can be regarded as an illustrative element of the assessment of the potential of an enterprise. The graph-analytical methods of assessment of the potential of an enterprise (square of the potential, the radar method) illustrate the research results and provide information not only about the size of potential, but also about the "problem" elements. However, the assessment of the potential of an enterprise is advisable to conduct using the system of different indicators as the necessity of increasing the number of factors that interdepend and should be taken into consideration makes the building of such models more complicated.

The graph-analytical method of assessment of the potential of an enterprise was firstly suggested by I. M. Repina in 1998, it was named 'square of the potential' [3, p. 262–271]. This method makes it possible to define quantitative and qualitative relationships between separate elements of the potential systematically, level of development and competitiveness of the potential and on this basis to substantiate and implement timely management decisions to improve the efficiency of enterprise. The method has several theoretical aspects that should be taken into consideration while grounding the management decisions.

In the most general form a graphical model of the potential, designed for diagnosing capabilities of the enterprise, has the form of sphere and can predict the influence and thus to appraise for many components - factors.

Such form represents all directions of an enterprise's activity thus revealing the dialectic of formation of its potential. However, it's hard to use the spherical form of assessment of the potential of

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an enterprise in practice. It's difficult and, sometimes, impossible to calculate all possible consequences of activity.

Therefore Repina I. M. suggested simplification of the graphical model to the form of rhombus to simplify the analysis. The author does not exclude the possibility of interpretation into some different shape depending on the choice of quantity of the directions of diagnostics of the potential capabilities of an enterprise. It was proposed to conduct the assessment using the comprehensive comparative method of rating estimation using the metrics in the following functional blocks.

It was proposed to analyze the following items for the first block – 'Production, distribution and marketing of products': 1) the amount, structure and rate of production; 2) production funds; 3) park of equipment existing and the level of its use; 4) location of an enterprise and infrastructure; 5) ecology of production; 6) condition of sale.

For the second block – 'Structure and management': 1) organization and management structure; 2) quantitative and qualitative cast of workers; 3) management level; 4) firm culture.

The third block – 'Marketing' suggests the analysis of: 1) market, product and distribution channels; 2) innovation; 3) communication links; 4) marketing plans and programs.

The last block – 'Finances' requires the analysis of the financial condition of enterprise using the coefficients of profitability, efficiency, business activity, market stability, liquidity, etc.

The following requirements to the indicators were settled: the most complete coverage of all sides of production and economic, financial and other types of enterprise activity, ease of obtaining of indicators, lack of duplication

According to the method, the comparison of enterprises for each indicator on the above four functional blocks with a conditional enterprise of reference or a real enterprise, which has best market results is the basis for the calculation of the final rating. Thus it was suggested that not the experts' subjective opinion, inherent in most other methods of evaluation is the basis for the rating of the state and level of the potential of an enterprise, but the results, achieved in real competition.

The idea of implementing this method of illustration of the results of assessment is positive in general, however, to our opinion, it has several disadvantages.

Among them:

1. Concerning the object of assessment:

1) the functional blocks defined for the assessment of the potential of an enterprise (the first one - production, distribution and marketing of products and the fourth – finances) mostly characterize the effectiveness of the other two blocks. Moreover, the dual characteristics of financial capacity which is, to our mind, very important is not taken into consideration not only as a resulting value but also as a prerequisite of formation of other elements of the potential;

2) the graph-analytical model 'square of the potential' doesn't take into consideration the assessment of employment potential, which is the basis of formation, usage and development of the potential in general. It is understood that its impact is not specified in the effectiveness of other functional blocks;

3) the model doesn't provide the assessment of the information potential of an enterprise, which is inadmissible at the modern period of development of society. Nowadays it's not enough to regard information as a specific resource and estimate the enterprise's procurement of information. Not only should the proficiency of information be estimated but the ability to use this information;

4) the model has several disadvantages estimating the block 'marketing'. The method provides the assessment of a part of enterprise's efforts concerning market activity. Thus, a number of key elements regarding the market positioning of the enterprise remain unaccounted, among them: business activity, methods of work with responsive group of consumers etc. We believe that the overall market potential of an enterprise should be estimated in this context;

5) it's inappropriate to combine in one unit the diverse types of activities "production, distribution and marketing of products" and, accordingly, - aspects of forming of potential. It is necessary to select and evaluate the potential element of an enterprise, formed at the production level, which accumulates the interaction of elements of resource potential - production potential. It is the basis for market

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potential (which determines the distribution and sales) and an important element of the cumulative potential of an enterprise (at the institutional level of assessment).

2. There are several shortcomings in the methodology of evaluation. We believe that ‘comparing an enterprise for each indicator of the four selected functional blocks with conditional or reference enterprise with a real company that has the best results in the market’ is inappropriate for estimating the potential of an enterprise and defining the areas of its development. It’s almost impossible to obtain reliable information about the real potential of the competitor. Being the influence of subjectivism very strong makes defining ‘reference’ rates even more complicated. Therefore, in terms of management decisions regarding the formation and development of the potential, the assessment of implementation of the potential in dynamics can be regarded more important and objective. The management decisions concerning realization of positive opportunities, avoidance of negative ones, reduction of the uncertainties and threats could be grounded on the basis of such assessment. In terms of state, resources and resource characteristics of an enterprise can be assessed, however, it’s essentially impossible to assess the state, the development of the whole or total economic potential of an enterprise. It should be assessed in terms of realization (the actions, realization of the opportunities)

3. There are also several disadvantages in the methodology of assessment. Thus, to our mind, not only the weight of individual indicators in the context of assessment of individual ‘functional units of an enterprise’, but also the weight of individual ‘vectors of development’ of the potential – the constituents of the potential should be taken into consideration.

4. There are serious drawbacks in the interpretation of results of assessment of potential of an enterprise:

1) the division and classification of the potential of an enterprise only for three categories: small, medium and large is insufficient. More clear and reasonable size identification, consideration of life cycle of enterprise is needed;

2) rankings of ‘balance’ of the vectors of potential and determination of ‘the extent of pain’ of individual vectors should be implemented.

Shortcomings mentioned above are typical for building a "radar" for assessing the potential of the company.

Thus, we suggest conducting the assessment of the potential of an enterprise on the integrated approach. Such assessment is to determine elements of the potential (fig. 1) with further calculation, which allows to assess the state and the development of the potential of an enterprise for five elements – ‘vectors of development’: 1) information potential; 2) labor potential; 3) finance potential; 4) industrial potential; 5) market potential. Thereby, the graph-analytical model is transforming into the ‘star’ of the potential of an enterprise. (Fig. 1).

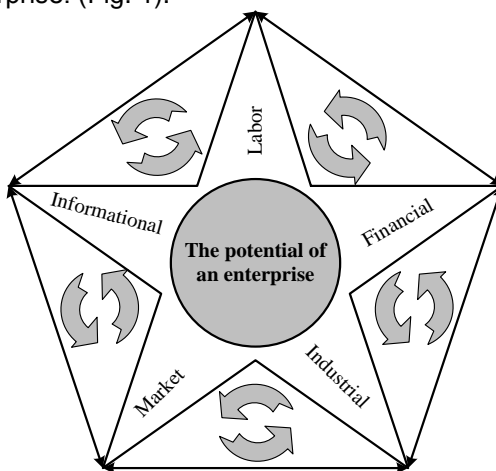


Fig. 1. Graph-analytical model of assessment of the potential of an enterprise ‘The star of the potential of an enterprise’

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The model of assessment suggested involves the research for the key indicators characterizing structural elements of the potential concerning the weight of individual components, which are ranked on the basis of the dynamic of development (by years). Such model has advantages as 1) the assessment is conducted on the basis of the reliable data of enterprise's activity (clarification, specification and changes of data can be made if necessary), 2) the impact of individual elements of the potential on the cumulative result is taken into consideration, 3) the tendencies of formation and realization of the potential are analyzed, on the basis of which the management decisions concerning the improvement of the processes in the future and grounding of the strategic decisions can be grounded.

The choice of the optimum method of assessment of the potential of an enterprise is complicated by the diversity of the method existed [4, p. 127]. there is no, and there could be no one united approach as the specific, scope of activities, fields of activity, enterprises' size are quite diverse. Thus, the approach for assessment of the potential of an enterprise should be individualized, most appropriate for a particular company. Methods of assessment of potential of an enterprise need further deep understanding and development.

On assessing the value of generated potential, identifying hidden reserves, identifying strengths and weaknesses in the enterprise, it is expedient to align internal and external features, existing and potential ability of the enterprise on implementation of the opportunities, to optimize resource potential and its components in line with the business strategy and other requirements. Thus, the potential of an enterprise should be a permanent object of management on the enterprise. This includes meaningful impact on the enterprise in order to increase the effectiveness of its activity.

Conclusions. Thus, the importance of clarifying the approaches to interpretation and assessment of the potential is related to the necessity of specification of the initial conditions for grounding decisions concerning management of the potential and is a prerequisite for improving its effectiveness and providing development prospects.

References

1. Voynarenko M. P., Dzhedzhula V. V., Yepifanova I. Y. (2016). Modelyuvannya protsesu pryinyattya rishennya shchodo dzherel finansuvannya innovatsiynoyi diyalnosti [Modeling of the decision making process regarding sources of funding for innovation activities] Ekonomical journal – XXI. - 2016. - # 7-8 (160). – pp. 126-128. - [Elektronic resource]. – Retrieved from : <http://soskin.info/ea/2016/160-7-8/201630.html> [in Ukrainian].
2. Sharko, M. V., Panchenko Y.V. (2014). Formirovanie politiki narashchivaiya intelektualnogo potentsiala [Formation of a policy of building intellectual potential] // Aktualni problemy ekonomiky [Actual problems of economy]. - 2014. - # 6. - pp. 30-41. Retrieved from : http://nbuv.gov.ua/UJRN/ape_2014_6_5 [in Russian].
3. Ryepina, I. (1998). M. Pidpryemnytskyi potentsial: metodologiya otsinky ta upravlinnya [Entrepreneurial potential: assessment and management methodology] Buletin of Ukrainian Academy of management under President of Ukraine– 1998. – # 2. – pp. 262–271 [in Ukrainian].
4. Gonchar, O.I. Management potential of the company with regard flock business life Scientific bulletin of Polissya of Chernihiv National University of technology Ed. 3(7), pp. 190-196, Dec. 2016. ISSN 2410-9576. Available at :http://journals.urau.ua/nvp_chntu/article/view/85151/80789. Data dostupu: 14 Jan. 2017 [in Ukrainian].

Література

1. Войнаренко, М. П. Моделирование процесса принятия решения щодо джерел фінансування інноваційної діяльності [Електронний ресурс] / М. П. Войнаренко, В. В. Дзеджула, І. Ю. Єпіфанова // Економічний часопис – XXI. - 2016. - № 7-8 (160). – С. 126-128. - Режим доступу: <http://soskin.info/ea/2016/160-7-8/201630.html>.
2. Шарко, М. В. Формирование политики наращивания интеллектуального потенциала / М. В. Шарко, Ю. В. Панченко // Актуальні проблеми економіки. - 2014. - № 6. - С. 30-41.
3. Рєпіна, І. М. Підприємницький потенціал: методологія оцінки та управління / І. М. Рєпіна // Вісн. Укр. акад. держ. управ. при Президентові України. – 1998. – № 2. – С. 262–271.
4. Gonchar O. I. Management potential of the company with regard flock business life / O. I. Gonchar // Науковий вісник Полісся. - 2016. - Вип. 3. - С. 190-196.

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