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Application of management matrix models for strategic planning of enterprise activities

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Abstract. The importance of strategic planning enterprise activity is substantiated in the article. Detailed analysis of the management classic matrix models strategic planning, namely the Boston Consulting Group (BCG) method, the McKinsey method, and the Arthur D. Little method. Allowed to form a system basic models of strategic analysis. Which, unlike the existing ones, is built on the systematization of well-known matrix models of "packet management" in terms of tools, level of universalism and level of application. The article proposes an advanced strategic planning process for an enterprise with the application and combination of different types, methods, matrices and models, which includes three consecutive stages of analysis and planning. The authors of the article have also formulated and summarized the characteristics of matrices that are widely used in life and, above all, in the analysis of management activities. These are the change-resistance matrix and the Control Grid. The authors prove the importance and relevance of applying matrix methods in conjunction with the Blue Ocean strategy. The main instrument of the Blue Ocean Strategy is the Strategic Canvas - to diagnose and build such a strategy. In order to build an "outline strategy" for a company, it is necessary to identify the key characteristics of the products - theirs and their competitors. Analyzing a "strategic outline" allows the company to determine how well its market strategy is similar to that of its competitors. The creation of the "blue oceans" not only contributes to the strong growth and increase profits of enterprises, this strategic step has a serious positive effect on the consolidation of the existing brand the company in creating customers.

Keywords. strategic planning, management matrix models, competitive advantages

1. Introduction

The pace of change in economic conditions in today's world is so high that planning an enterprise is the only way to predict, operate and successfully work in the future of any enterprise. With a modern and realistic strategic plan for development, the company is able to make the right management decisions. Ukraine, having at the time of the collapse of the Soviet

Union the best economic potential and significant competitive advantages among the republics of the former USSR, has not only improved its position for more than twenty years, but on the contrary, in many socioeconomic terms it has come closer to the third world countries. Currently, by many international rankings, Ukraine's economy is far from leading in some indicators. The impetus for the rapid development of the domestic economy is also the need to pay off external debt from 2020. At the same time, the current economic situation of Ukraine complicates this task very much. Today, private companies are overwhelmingly operating on the principle of "spend less - get more", which does not always bring the desired result and often in the end results in the decline of the enterprise. All of the above emphasizes the relevance, timeliness and importance of strategic planning both at the state level and at the privately owned enterprise.

A very large number of scholars, both contemporary and foreign, have been engaged in the research of matrix models of strategic planning. The most famous, who have paid a lot of attention to this problem are AE Voronkova, Yu. B. Ivanov, AN Tishchenko, Yu. V. Trifanov, VS Efremov and others.

Identify, analyze and systematize modern matrix models of strategic planning, determine the most optimal models of planning and management for domestic enterprises.

2. Concept and Hypothesis Development

Planning is a critical aspect of business practice and management. An enterprise that is able to plan its activities or not see it as a necessity in the end becomes the object of planning and a means of achieving other people's goals. In fact, this happens even when the company has planned activities, but in this case, it can in one way or another control the market forces and, depending on the situation in the framework of a certain scheme to carry out countermeasures, undoubtedly capable of influencing the current situation. On the other hand, the company "drifts" under the influence of competitive forces operating in the industry (sector of activity), sooner or later pushed out of their positions. This statement does not in any way mean that planning is the solution to all problems that arise, but it is safe to say that a serious approach to planning provides the basis for a sustainable and efficient operation of the enterprise [1].

However, the review of the current situation in the economy showed a rather cool attitude of enterprises to strategic planning. This attitude is caused by a misunderstanding the importance of strategic planning, its essence and goals, as well as an inadequate assessment of economic realities. Therefore, it can be argued that most effective enterprises do not have effective and complete management. Strategic planning aims at describing an enterprise in an uncertain environment. Most often, modern executives confuse strategic planning with traditional, which is designed for full certainty. The strategic planning philosophy can be formulated as follows: "not circumstances control man, but man manages circumstances."

Comparison of different points of view on strategic management, developed in the enterprises is connected with the understanding of their own goals, a clear vision of the prospects for further development and ways to achieve these goals. This concept is the essence of strategic planning, establishing a system of current planning, which is a necessary condition for the rhythmic work of the company.

Thus, building an effective business system, resistant to all kinds of global financial cataclysms, is connected, first of all, with the establishment of a management system. One of the most important aspects of such activity is strategic analysis and development of enterprise development strategy. Until recently, the problem of strategic planning aroused only academic interest, and today it has become a matter of survival for businesses. However, the lack

systematization of existing theoretical developments, as well as practical recommendations for their implementation, has led to the fact that national leaders are moving more and more intuitively in their research [2].

Among the many methods of strategic analysis, the most famous are the Boston Consulting Group (BCG) method, the McKinsey method, and the Arthur D. Little method. These methods have a basic principle of formation, namely the "batch management method". A careful analysis of existing strategic planning methods allows us to identify in them certain tools, universalism of application, and the same levels of application. All this allows them to be systematized and presented in the following way (Fig. 1).

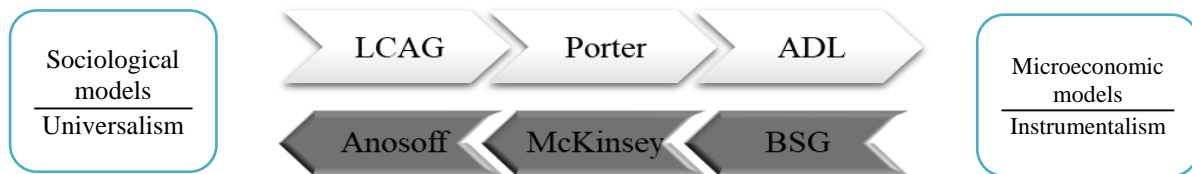


Figure 1. System of basic models of strategic analysis

The BCG method refers to the category of quantitative methods: each parameter of the matrix is determined on the basis of one indicator, valid for all cases. The BCG matrix is based on two assumptions:

1. A business that has a significant market share acquires a competitive strategic advantage over production costs as a result of the experience effect. It follows that the largest competitor has the highest return on sales at market prices and the maximum cash flows for him.
2. A presence in a growing market means an increased need for financial resources for its development, that is, upgrading and expanding production, intensive advertising, etc. If the growth rate of the market is small, such as a mature market, then the product does not require significant financing.

In the McKinsey method, competitiveness is assessed on the basis of the criteria chosen for each activity. These criteria are directly related to the goals set by the management of the enterprise. This method is relativistic in nature because it does not provide universal criteria for all cases.

The McKinsey matrix was called the "business screen". It consists of nine squares, the analysis in this matrix is performed by the following parameters:

- attractiveness of strategic economic zones;
- position in competition [3, p. 211].

The indicator "attractiveness of strategic economic zones" is not directly affected by the enterprise, which is in contrast to the indicators "position in competition", which are completely dependent on the results of the enterprise.

If a static (fixed) indicator, whether market share or profitability, is used in the BCG matrix on the abscissa, then the dynamic indicator, not profitability, but its change is used in the McKinsey matrix [3, page 217].

Unlike the BCG matrix, the new matrix can be applied in all phases of the demand and technology cycles and under a variety of competitive conditions.

The Arthur D. Little method is an intermediate option that combines the characteristics of quantitative and qualitative methods.

The ADL / LC model provides management with an original strategic analysis and planning methodology, giving them, as far as possible, a powerful portfolio strategy analysis tool to

identify reasonable diversification of cross-industry activity that could be used at both corporate and individual business levels [4].

According to the concept of the life cycle of the industry, which is adhered to by ADL experts, in its development goes through four stages: birth, growth (or development), maturity, aging. The basic theoretical position of the ADL / LC model is that in a particular type of business any organization may be at one of the specified stages of the life cycle, and therefore, it must be analyzed accordingly at this stage. In addition to the subsequent changes in the life cycle stages, the competitive position of the enterprise in relation to the activities of other enterprises may also change. An enterprise's business type can replace one of five competitive positions: dominant, strong, favorable, strong, or weak. Each type of activity of the enterprise is analyzed separately in order to determine the stage development of the respective industry and its competitive position within it, to obtain a more accurate result of the analysis.

There is a conventional process for strategic planning of the enterprise. The authors, at some points, do not agree with him. We offer an advanced process strategic planning of the enterprise with the application and combination different types of methods, matrices and models.

In the first stage, an initial analysis of the enterprise is carried out. It is best implemented with 3 matrices: SWOT, MCC and the vector economic development of the enterprise. The MCC matrix provides an analysis compliance with the goals of the enterprise and its core capabilities. The matrix of the vector economic development the enterprise is a table, which presents the numerical data the main indicators of the enterprise. Using this matrix, you can get information for other matrices, and you can draw some conclusions from this data already at this stage.

The second step in applying matrix methods is to analyze the market and industry, that is, external factors of the enterprise. The markets in which the enterprise operates as well as the industry a whole are analyzed. The core in the Market subgroup is the BCG matrix, which examines the dependence of growth and market share, and the GE matrix, which analyzes the comparative attractiveness of the market and competitiveness in the industry and has two varieties: Deia variant and Monienson variant. The "Branch" subgroup contains matrices that have an industry environment, and patterns of industry development. The basis in this subgroup is the Shell / DPM matrix, which investigates the dependence of industry attractiveness and competitiveness [5].

The next stages of strategic planning are differentiation analysis and quality analysis. Today, in view of the new challenges of the modern digital economy and the vector development of the domestic economy, it is an extremely important stage. Differentiation and quality act in this case as appropriate, through which the desired result can be obtained [6]. The differentiation group contains 3 matrices:

- a matrix of "Improvement of competitive position", which allows to clearly identify patterns and dependencies of differentiation from market coverage;
- the matrix "Differentiation - relative cost effectiveness", allows to identify the dependence of relative cost effectiveness in this market on differentiation;
- the matrix "Productivity-innovation / differentiation" shows the relationship between the productivity of a given business unit and the introduction of innovation [7].

The object of study the group "Quality analysis" - the identification factors and patterns that affect the quality of products. The group may include 2 matrices:

- the Pricing Strategy Matrix positions products based on quality and price;
- the matrix "quality - resource intensity" determines the ratio quality of the manufactured product and the resources spent on it [7].

The management analysis and marketing strategy analysis groups are not included in the step-by-step matrix method of strategic planning for the enterprise. These groups are separate from the overall strategic planning. The matrices that make up the group's data can be applied at all stages of the planning strategy and address functional planning issues. The Management Analysis group consists of two subgroups. The first sub-group "Management" - considers the management of the company as a whole, the processes that affect the management, management of the company. The staff subgroup examines the processes that take place between co-workers, the impact of various factors on staff performance [7].

The proposed strategic planning scheme in each group of matrices interact with each other, but it is not necessary to rely on the result or the conclusion of only one matrix - the conclusions drawn from each matrix in the group should be taken into account. After the analysis in the first group, the analysis in the next. Analysis in the "Management" and "Marketing Strategy" groups is carried out at all stages of analysis in strategic planning.

The following is a brief description of matrices that are widely used in life and, above all, in the analysis of management activities. One such matrix is the change-resistance matrix. Represented graphically in fig. 2.

Manifestation of change	«Supporter»	«Enemy»	Open
	«Passive supporter»	«Dangerous element»	Hiding

Figure 2. Change-Resistance Matrix

Making strategic changes in the organization is a very difficult task. The difficulties of its decision are first and foremost due to the fact that any change meets the resistance, which can sometimes be so strong that it cannot always be overcome by those who make the change.

Attitudes to change can be seen as possible combinations of two factors:

- acceptance or rejection of the change;
- an open or hidden demonstration of a change attitude.

The next matrix is the Management Grid Blake and Moughton have built a grid that includes five basic leadership styles. As shown in Fig. 3, the vertical axis of this scheme divides the "care of the person" on a scale from 1 to 9. The horizontal axis divides the "care of the production" also on the scale from 1 to 9 [8].

The degree of consideration of	High	<u>Office in the spirit of a country club</u> A meticulous attention to meeting people's needs leads to a friendly atmosphere and a work rhythm in the organization. 1,9	<u>Group management</u> Production successes are driven by dedicated people; interdependence through a common bet on organizational goals has the effect of creating relationships based on trust and respect 9,9
		<u>Organizational management</u> Can achieve good management organization by balancing the need for productive results and maintaining a satisfactory level of moral sentiment 5,5	

Low	1,1	9,1
	<u>Integrated management</u> Minimal efforts to achieve the required production results are sufficient to maintain membership in the organization	<u>Power-subordination</u> Production efficiency depends on the creation of production conditions where human aspects are minimally present
	Low	High
The degree of consideration of people's interests		

Figure 3. Management Grid Matrix

The creators of the matrix assumed that the most effective leadership style - the optimal style - is the behavior of the leader in position 9.9.

Matrix methods play a very important role in strategic planning and marketing. The matrix method is very convenient and this explains its prevalence. However, the use of only matrix methods is not sufficient, since matrices allow you to explore strategic planning and marketing on separate sides and do not show a complete picture, but in combination with other methods, the matrix approach allows you to clearly see patterns in the processes occurring in the enterprise and make the right conclusions.

It is desirable to use matrix methods in conjunction with the Blue Ocean strategy. The main instrument of the Blue Ocean Strategy is the Strategic Canvas - to diagnose and build such a strategy. In order to build an "outline strategy" for a company, it is necessary to identify the key characteristics of the products - theirs and their competitors. The company also analyzes the level of supply received by the consumer for each of the factors. A high figure means a large investment in the development of a particular factor area. Analyzing a "strategic outline" allows the company to determine how well its market strategy is similar to that of its competitors.

The company's ability to continue profitable growth depends largely on whether the company can stay on the cutting edge, creating ever-new "blue oceans." It is unlikely that any enterprise will be able to permanently maintain its perfection, it is almost impossible for a long time to remain a leader in the opening of the "blue oceans". It should be noted that companies with well-known names, as a rule, appeared to be more ways to change themselves, constantly creating a new market space. To date, businesses can achieve this by applying modern strategic practices.

Creating the "blue oceans" does not boil down to technological innovation. Although at times, advanced technology was used, more often than not it was the defining feature of the "blue ocean". This was true even when researchers in the field of advanced technology, such as computer science, came into view. The main defining feature of the "blue oceans" is likely to be value innovation - an innovation that is valued by buyers.

The creation of the "blue oceans" not only contributes to the strong growth and increase of profits of enterprises, this strategic step has a serious positive effect on the consolidation of the existing brand of the company in creating customers.

The Theory and Practice of Forecasting and Planning have changed dramatically over the last twenty years. Planned economy period has changed with the breaking of traditional forecasting and planning systems, in fact abandoning them. In the face of increasing competition, it is important for businesses to occupy the right niche without losing themselves in competition.

3. Conclusion and Suggestion

Matrix valuation methods are required when selecting an enterprise strategy and strategic decision making, and allow to secure a competitive position of the enterprise in the domestic and foreign markets. Matrix models can be applied to all types of strategies and at any stage of strategic planning. In formulating an enterprise strategy, each aspect of its activity must be analyzed separately. Conducting such an analysis and developing the most optimal strategy based on it will enable the company to react promptly and qualitatively to changes in the external environment and maintain competitive positions.

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