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ENTERPRISE ENVIRONMENT ANALYSIS – METHODS IN USE AND DEVELOPMENT TRENDS

The purpose of the article is to describe the methods of analysis of enterprise environment and to determine future trends in analysis development. The environment analysis is presented in detail along with the major analytical methods in use. The focus is on the macro environment (economic, political and legal, social and cultural, technological, international factors) and the competitive environment (which is the source of data that enable to determine the opportunities and threats for enterprises in a given sector). The article contains a synthetic presentation of selected methods of analysis of the close and distant environment. In this aspect, it contains a description of non-scenario methods (trend extrapolation, strategic gap analysis, expert opinions – Delphi method) and scenario-based methods (scenarios of possible events, simulation scenarios, environment condition scenarios, environmental processes scenarios), Porter's five forces analysis, sector economic profile, score evaluation of sector attractiveness, strategic groups mapping, clusters analysis, experience curve analysis and sector globalisation capability analysis. Additionally, goals for improvement of enterprise environment analysis methods are set. Particular emphasis in this regard is put on the aspects related with enterprise environment scanning, integration of existing methods (integration at the level of macro environment and competitive environment analysis methods), introduction of new methods and integration of enterprise environment analysis with management instruments, such as strategic management accounting focused on enterprise environment. The purpose of the article determined the selection of research methods. The following methods have been used: critical review of Polish and international literature, deductive reasoning and analysis.

Keywords: analysis of distant and competitive environment, enterprise environment scanning, strategic management accounting focused on enterprise environment

1. INTRODUCTION

All enterprises that desire to survive on a given market must continually adjust to the conditions and requirements of the changing and dynamic environment³ and meet the constantly growing expectations of customers. These goals can only be fulfilled when the enterprise undergoes continuous changes that not only affect its existence on the market, but also enforce actions that facilitate introducing new products, improving quality of service, consulting and post-purchase support as well as improving the flexibility of the

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³P. T. Ward, R. Duray, *Manufacturing strategy in context: environment, competitive strategy and manufacturing strategy*, "Journal of Operations Management", Vol. 18, 2000, p. 124.

organisational structures. Choosing a right strategy of action and the methods of its implementation is essential for the company to succeed, increasing its corporate value.

Proper identification and formulation of strategy, as well as implementation and strategic control are the most important elements of strategic enterprise management. It is impossible to determine the actions that enable reaching the set strategic goals without conducting an in-depth strategic analysis.

Enterprise environment analysis is certainly of key importance in this field and this article presents the methods used in for the purposes of the analysis and future development trends. The article refers to the following research methods: critical review of Polish and international literature, deductive reasoning and analysis.

2. STRATEGIC ANALYSIS VERSUS COMPANY ENVIRONMENT ANALYSIS

Defining the strategic analysis and determining its scope is a hard task. Some researchers treat it as a set of activities that provide a diagnosis of the enterprise and its environment and enable to develop and implement a strategic plan⁴. It must be mentioned that most often it is done with the assumption of business risk minimising. The data derived from strategic analysis enable development and implementation of the strategy of action (identification and formulation of strategy, implementation and strategic control).

Strategic analysis provides a comprehensive (overall) view of the enterprise along with its environment. It allows to identify the weak and strong points of the business entity and indicate possible opportunities and threats that may occur in its environment. In order to acquire these data, enterprise environment analysis and internal environment analysis must be performed⁵.

The analysis of enterprise environment should refer to the macro environment and the competitive environment (industry, sector). The macro environment is often referred to as the distant environment encompassing:⁶

- 1) economic,
- 2) political and legal,
- 3) social and cultural,
- 4) technological,
- 5) international fields.

Enterprises must take into account the economic conditions for running business in a given country. While developing the strategy, it is important to envisage future trends in GDP, rate of unemployment, currency exchange rates, inflation rate, interest rates, salary increase/decrease dynamics, industrial production and retail indexes, tax rates (corporate income tax, personal income tax, value added tax, excise tax), tax-like burdens (social security charges) and many other economic parameters. Variability in materials prices and other production-related factors must also be considered.

The data derived from the economic environment should generally determine the future trends (framework) of business activity. Owners of enterprises as well as managers

⁴ G. Gierszewska, M. Romanowska, *Analiza strategiczna przedsiębiorstwa*, PWN, Warszawa 2002, p. 17.

⁵ A. T. Joseph, *Formulation on Manufacturing Strategy*, "The International Journal of Advanced Manufacturing Technology", Vol. 15, 1999, pp. 522-523.

⁶ R. Krupski, *Analiza otoczenia*, [in:] *Zarządzanie strategiczne. Koncepcje – metody*, edited by R. Krupski, Wydawnictwo Akademii Ekonomicznej we Wrocławiu, 2003, p. 114.

employed must pay particular attention to these parameters, as in many cases they have direct effect on profitability of business (business model).

The political and legal conditions are also very important. In this context, stability of the economic law, tax regulations, labour law, civil law, financial, administrative, criminal and fiscal laws largely affects decisions determining the future of the enterprise. It is also worth noting whether a given country belongs to any international organisations (e.g. European Union). In many cases, such organisations compel unification of certain legal and political regulations. What should not be underestimated is the fact that state interference in certain areas of economy may depend on the economic views of the ruling party or coalition.

The social and cultural environment is quite often neglected, or even marginalised while developing the strategy of business entities. Demographic changes within the societies are not taken into account very often (ageing society generates demand for quite different products in comparison with societies with dynamic population growth). Education and mobility of potential customers, as well as their capability to adapt to certain fashion trends are also ignored.

The technological environment is related with all aspects of technological development reflected in the changes in the methods of production. The Internet has gained a very significant role in this area. It has enabled rapid flow of information and reaching potential customers using new distribution channels. The latest technological solutions facilitate choosing the most appropriate method of production and optimising the use of production factors. Enterprises that implement innovative technologies may be more competitive and, certainly, be managed more effectively.

The international environment may pose both opportunities and threats for business, noticeable in certain international conditions (factors) that have positive or negative effect on the demand for particular products. For instance, international organisations may impose sanctions on certain countries, which is favourable for enterprises that are not restricted on the market in any way.

In the strategic analysis it is not enough to identify the macro environment. The research of the competitive environment is also required. The data concerning the competitive environment may be used to identify the opportunities and threats for enterprises in a given sector. The sector is defined as a part of the industry which encompasses enterprises supplying products of similar purpose and selling them on the same geographical market⁷. Additionally, managers should perform a relevant in-depth analysis of suppliers and customers as well as current and possible (future) competitors and certain trends in occurrence of substitute products.

In order to perform a thorough analysis of the sector, strategic segmentation should be made. It means that uniform products and markets characterised by the same combination of key success factors and requiring particular competitive skills and assets must be distinguished in the enterprise activity⁸.

Most frequently used criteria, on the basis of which such segments can be distinguished, are branch and geographic variables. In certain situations, other determinants are considered, among others: type of customer, utility function, type of distribution network, type of production technology in use, competitors as well as direct and indirect costs (cost

⁷ M. E. Porter, *Strategia konkurencji. Metody analizy sektorów i konkurentów* [*Competitive Strategy: Techniques for Analyzing Industries and Competitors*], PWE, Warszawa 2000, p. 23.

⁸ G. Gierszewska, M. Romanowska, *Analiza...*, op. cit., p. 96.

structure related with production, relation of costs and the object of calculation – the product)⁹.

Some authors claim that complete description of a segment requires identification of the following dimensions¹⁰:

- 1) groups of customers buying the product,
- 2) functions offered by the product to the customers,
- 3) forms in which the product can be expressed.

A three dimensional view of the segment enables direct specification. However, it is worth pointing out that a given dimension of the strategic segment should be detailed. Customers may be identified more precisely and properly grouped. The functions offered by the product (to the customer) can be treated in a similar way, so as the forms in which it is expressed.

3. SELECTED METHODS OF ANALYSIS OF ENTERPRISE ENVIRONMENT

In the theory and practice there is a variety of methods used in analysing the enterprise environment. The distant environment can be analysed using non-scenario techniques (multiple possibilities) or scenario-based techniques¹¹.

In case of non-scenario methods, only one possibility of action is assumed (development strategy), encompassing major threats posed by the environment and very often neglecting the opportunities that may occur. This method of analysis is based on the conclusions resulting from the changes that have already occurred within the environment (*ex post*), or have been identified as possible in future (*ex ante*).

What is characteristic for the scenario approach is that there are numerous variants of possible actions (development strategies) that depend on the future condition of the macro environment. The major problem related with this method of analysis is predicting the future condition of the distant environment. It is not easy to do, since it requires making certain assumptions concerning the future. Most often it is done on the basis of previous observations of the macro environment.

Each method of macro environment analysis, both non-scenario and scenario-based, is closely related with methods of implementation. Table 1 contains a brief description of each method.

Table 1. Macro environment analysis - methods

Non-scenario macro environment analysis		Scenario-based macro environment analysis	
Method	Method application	Method	Method application
Trends extrapolation	Having the knowledge concerning the past and the present course of changes within the macro environment, their future course is planned, assuming that the current trend is maintained.	Scenarios of possible events	The method is based on creating a set of actions possible to be taken in future and very important for the enterprise. This approach also defines the causes of the future events, trends, effect strength and adjustment capabilities of a given business entity.

⁹ Strategor, *Zarządzanie firmą. Strategie, struktury, decyzje, tożsamość*, PWN, Warszawa 1999, pp. 113-115.

¹⁰ D. F. Abell, *Dualizm w zarządzaniu. Dziś i jutro firmy [Managing with dual strategies: Mastering the present, preempting the future]*, Poltext, Warszawa 2000, p. 63.

¹¹ H. Kozarowicz, *Czynnik czasu w analizie strategicznej*, [w:] *Zarządzanie strategiczne...*, op. cit., pp. 114-118.

Non-scenario macro environment analysis		Scenario-based macro environment analysis	
Method	Method application	Method	Method application
Strategic gap analysis	The method analyses the convergence of the existing strategy along with the procedures of action followed by the enterprise and the future changes within distant environment. In case of failure to adjust, certain discrepancies occur, that may be described as the strategic gap. The type of the gap is essential (conformity gap, surplus gap, deficiency gap).	Simulation scenarios	This method enables anticipating evaluation of possible strategic decisions of the enterprise depending on the impact of the environment (impact of specific factors). It enables to evaluate the consequences of particular strategic decisions and the capability of the organisation to adjust to different possibilities in the distant environment.
Expert opinions – Delphi method	Potentially possible future changes within the distant environment are determined on the basis of the knowledge and experience of experts.	Environment condition scenarios	It is a quality-based method that provides the evaluation of potential impact of particular changes occurring in the distant environment on the organisation. It enables estimating the possibility of occurrence of these changes in future (optimistic, pessimistic, unexpected with low possibility, most likely scenarios).
		Environmental processes scenarios	In this method, processes that occur in the macro environment and affect business entities are significant. These processes include key processes (strong impact on the organisation and most likely to occur in future) and processes of discrete changes (with strong impact on the organisation and little possibility of occurrence). Knowing these processes and relations between them, as well as the occurring trends allow to envisage the future behaviour of the macro environment. It is very important in development of business strategies.

Source: individual work on the basis of: G. Gierszewska, M. Romanowska, *Analiza strategiczna przedsiębiorstwa*, PWN, Warszawa 2002, pp. 49-91; B. Olszewska, *Analiza strategiczna otoczenia*, [in:] *Zarządzanie strategiczne*, edited by S. Kielczewski, Wydawnictwo Akademii Ekonomicznej we Wrocławiu, 2000, pp. 92-103.

There are advantages and drawbacks of all presented methods. In many cases they will be applied with certain assumptions. Certainly, it is noticeable that they conform to the goals to be fulfilled in the analysis of the macro environment.

The analysis of the competitive environment is also performed using various methods. Specific sectors can be analysed on the basis of the distinguished strategic segments. The methods used in the competitive environment analysis are described in Table 2.

Table 2. Sector environment analysis - methods

Method	Method application
Porter's five forces analysis	<p>This method analyses five factors that have effect on decisions made by investors. They are:</p> <ul style="list-style-type: none"> • bargaining power of suppliers and buyers, • threat of new entrants and substitutes, • competitive rivalry within the sector. <p>The method enables determining the scale of competition and profitability within a given sector.</p>
Sector economic profile	<p>This method describes and quantifies the characteristic features of the sector. The factors taken into account include:</p> <ul style="list-style-type: none"> • market size, • scope of competition, • market growth rate, • number of competitors and their relative market participation, • number of buyers, • degree and possibilities of forward and backward integration, • scale of entry and exit barriers, • degree of differentiation of competitors' products, • occurrence of the scale and learning effect, • capital requirements, • sector profitability. <p>Sector economic profile enables comparing various sectors with each other.</p>
Score evaluation of sector attractiveness	<p>This method provides a precise sector assessment tool and enables comparing sectors due to application of multiple-criteria and weighted scoring. It is possible due to:</p> <ul style="list-style-type: none"> • identification of major features determining the sector value, • adopting certain assessment criteria, • attributing particular values to proper features, • specifying total score for particular sectors.
Strategic groups mapping	<p>This method provides a graphic representation of the competitive situation within the sector. The mapping encompasses strategic groups containing enterprises competing with use of similar methods (techniques). The data provided by the map of strategic groups determine the decision whether to change a given strategic group or sector.</p>
Clusters analysis	<p>This method is used in determining mutual geographic relations between manufacturers of final products and:</p> <ul style="list-style-type: none"> • specialised suppliers, • service units, • financing institutions, • enterprises operating in related sectors, • closest competitors, • closest clients, • branch institutions, • governmental and non-governmental organisations, • producers of complementary goods.

Method	Method application
Experience curve analysis	Is constructed on the basis of the accumulated production size and the unit cost of production for products supplied by enterprises within the sector. This curve facilitates determining the position of the enterprise within the sector and the feasible cost strategy. Entry barriers of a given sector can also be specified.
Sector globalisation capability analysis	This method enables determining the capability to develop global competition within sectors. According to M. Porter, the factors favourable for globalisation include: <ul style="list-style-type: none"> • occurring of comparative costs or benefits in certain countries, • production scale, logistics, marketing and supply economy, • experience in a global scale, • product differentiation in terms of benefit for the country of origin, • technique exclusivity in terms of high expenditures on technologies, • mobility of production.

Source: individual work on the basis of: G. Gierszewska, M. Romanowska, *Analiza strategiczna przedsiębiorstwa*, PWN, Warszawa 2002, pp. 92-160; M. E. Porter, *Strategia konkurencji. Metody analizy sektorów i konkurentów [Competitive Strategy: Techniques for Analyzing Industries and Competitors]*, PWE, Warszawa 2000, pp. 272-275; L. Berliński, I. Penc-Pietrzak, *Inżynieria projektowania strategii przedsiębiorstwa. Konstrukcja i technologia*, Difin, Warszawa 2004, pp. 202-219.

Differentiation of the presented methods facilitate comprehensive analysis of the competitive environment. It is also noticeable that individual methods are associated with fulfilment of particular goals related with that analysis. Additionally, the methods that can be applied facilitate continuous monitoring of everything that happens in the competitive environment of the enterprise. The emphasis on accuracy of individual analytical methods, with consideration of the structure and dynamics, is crucial in this field of analysis.

4. DEVELOPMENT TRENDS IN ENTERPRISE ENVIRONMENT ANALYSIS

The close and distant environment is undergoing continuous changes, which results in occurrence of certain processes in the field of analysis of these environments. The analysis itself is certainly developing in various directions¹². The following areas of development can be distinguished:

- 1) Environment analysis as the element of enterprise environment scanning,
- 2) Integration of existing methods of enterprise environment analysis,
- 3) Introduction of new methods of enterprise environment analysis,
- 4) Integration of environment analysis with other instruments, e.g. strategic management accounting with focus on enterprise environment.

Enterprise environment scanning may be defined in various ways. In theory and in practice it is described as acquiring and using data concerning events, trends and relations between them in the external environment of the enterprise, which is useful in planning future moves (actions) of the enterprise¹³. The wide definition of scanning allows to reach beyond data acquisition in a certain way, and also concerns data analysis and its use in

¹² A.U. Khan, N.M. Alam, S. Alam, *A critical analysis of internal and external environment of Apple Inc.*, International Journal of Economics, Commerce and Management, Vol. III, Issue 6, 2015, pp. 955-967.

¹³ Ch. W. Choo, *The Art of Scanning the Environment*, „Bulletin of the American Society for Information Science”, 1999, pp. 21-24.

management¹⁴. The described process is related with the macro environment and the competitive environment. Modern analysis of enterprise environment may certainly be considered a part of scanning in a multi-aspect view.

It is possible to integrate the environment analysis methods. Distinguishing the following fields of integration may be useful:

- 1) Integration of methods used only in macro environment analysis,
- 2) Integration of methods used only in competitive environment analysis,
- 3) Integration of methods used in macro environment and competitive environment analysis.

Irrespective of the field of matching, integrated methods should always provide multi-dimensional and detailed information concerning the trends and relations occurring within the enterprise environment. In some cases, that environment undergoes dynamic and turbulent changes, which requires searching for new (yet unknown) methods in the literature and economic practice.

Recent time has brought emergence of concepts of integrating the enterprise environment analysis with other management instruments. One of the most interesting proposals is the idea of using strategic management accounting in identifying opportunities and threats in the external environment of the enterprise¹⁵. In this case, environment analysis can be integrated with properly focused strategic management accounting (particularly in the field of application of strategic management accounting instruments).

5. CONCLUSION

Turbulent environment affects business and the scope of strategic analyses. Environment analysis is particularly important in this context. Analysing the close and distant environment allows to indicate the possibilities of adjustment to external conditions that undergo continuous and dynamic changes. The described analysis must be performed with the use of certain methods that should particularly concern the macro environment and the competitive environment.

Besides this the possible trends of improvement should refer to enterprise environment scanning as well as internal integration processes between various methods of environment analysis and external integration processes with management instruments such as strategic management accounting.

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¹⁴ M. Wierziński, *Rachunkowość zarządcza w identyfikacji szans i zagrożeń w otoczeniu zewnętrznym dla modelu biznesowego przedsiębiorstwa*, „Prace Naukowe Uniwersytetu Ekonomicznego we Wrocławiu, nr 424 (2016), p. 217.

¹⁵ M. Wierziński, *Rachunkowość...*, *ibidem*, pp. 212-229.

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ANALIZA OTOCZENIA PRZEDSIĘBIORSTWA – STOSOWANE METODY I KIERUNKI ROZWOJU

Celem artykułu było przedstawienie metod analizy otoczenia przedsiębiorstwa oraz określenie przyszłych kierunków rozwoju tej analizy. Przedstawiono w sposób szczegółowy analizę otoczenia i jej główne metody. Skoncentrowano się na makrootoczeniu (otoczenie: ekonomiczne, polityczno-prawne, socjo-kulturowe, technologiczne, międzynarodowe) oraz otoczeniu konkurencyjnym (dzięki informacjom pochodzącym z tego otoczenia można określić szanse i zagrożenia płynące dla przedsiębiorstw w danym sektorze). W sposób syntetyczny zaprezentowano wybrane metody analizy otoczenia bliższego i dalszego. Opisano w tym zakresie metody bezscenariuszowe (ekstrapolacji trendów, analizę luki strategicznej, opinie ekspertów – metodę delficką, i scenariuszowe (scenariusze możliwych zdarzeń, scenariusze symulacyjne, scenariusze stanów otoczenia, scenariusze procesów w otoczeniu), analizę „5 sił Portera”, profil ekonomiczny sektora, punktową ocenę atrakcyjności sektora, mapę grup strategicznych, analizę gron, analizę krzywej doświadczeń oraz analizę potencjału globalizacyjnego sektora. Wskazano również kierunki doskonalenia metod analizy otoczenia przedsiębiorstwa. Szczególną uwagę w tym zakresie zwrócono na aspekty związane ze skanowaniem otoczenia przedsiębiorstwa, integrację istniejących metod (integracja na poziomie metod analizy makrootoczenia, integracja na poziomie metod analizy otoczenia konkurencyjnego, integracja na poziomie metod analizy makrootoczenia i otoczenia konkurencyjnego), wprowadzenie nowych metod oraz integrację analizy otoczenia przedsiębiorstwa z instrumentami zarządczymi takimi jak np. strategiczna rachunkowość zarządcza ukierunkowana na otoczenie przedsiębiorstwa. Przyjęty cel artykułu zdeterminował wybór metod badawczych. Wykorzystano w tym zakresie metody: krytycznego przeglądu literatury polskiej i zagranicznej, wnioskowania dedukcyjnego i analizy.

Słowa kluczowe: analiza otoczenia dalszego i konkurencyjnego, skanowanie otoczenia przedsiębiorstwa, strategiczna rachunkowość zarządcza zorientowana na otoczenie przedsiębiorstwa

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