

# FORECASTING ENVIRONMENT AND ITS FACTORS WHEN ASSESSING THE COMPETITIVE MARKET DEMAND

Vaida Pilinkiene

*Kaunas University of Technology, Lithuania, vaida.pilinkiene@ktu.lt*

## Abstract

The article presents the analysis of various opinions on the conception of forecasting environment. Great variety of conceptions of forecasting environment determines different interpretations of these concepts. The analysis of conceptions and methods of forecasting showed that forecasting environment as the object of the study is not investigated enough. While debating with different authors it is found that it is not always possible to ascertain where one or another plane of forecasting environment begins as they are organically intertwined and complement each other. The investigations showed that the analysis of forecasting environment is performed on different levels accentuating unequal number of elements, which form the environment and suggesting different names and content for them. It is suggested to define forecasting environment in the context of an assessment of competitive market demand as a whole of available internal and external factors of the market, which determine foresight of the market demand and its assessment in the competitive market.

*Keywords:* forecasting environment, competitive market demand.

## Introduction

Due to the changing business conditions and intensifying competition the demand for forecasting information connected with general market demand has especially increased. Little experience of market demand forecasting in the dynamic competitive market determines inaccurate results of investigations of market demand and invalid decisions in the companies' performance. The complex assessment of forecasting environment including the influence of the factors of external environment, consumers' demand and the tendencies of the market expansion can understate an indefiniteness of the decisions. Under the conditions of intensive competition the analysis of forecasting environment and its factors to assess the competitive market demand becomes especially relevant for industrial enterprises, which aim to forecast the perspectives and tendencies of the market development and to survive in the conditions of dynamic market. An assessment of the competitive market demand is influenced not only by decently chosen forecasting method but also the fact that the market demand is determined by the factor which reflects the characteristics of the structure of economic market and macroenvironment. The methods presented in academic economic models and utilitarian works are mostly oriented towards practical investigations of the market demand or founded on the forecasting system's development at the company's level. While forecasting the market demand only on the ground of mathematical-statistical forecasting methods the influence of the factors of macroenvironment and industrial market environment on the competitive market demand is not often assessed.

Increasing competition, the consumers' freedom to make one's selection, homogeneity of goods determined the scientific studies of forecasting environment in the context of competitive market. Various aspects of forecasting environment and its factors are examined by Cox (1989), Valentine, Dauten (1993), Waddell, Sohal (1994), Shim, Siegel, Liew (1994), Clar (2003), Oner, Saritas (2005), Pilinkiene (2008a); the influence of macroenvironment on the market demand was analyzed by Karsten (1990), Bails, Peppers (1993), Granger (1996), Lydeka (2003), Kozlinskis, Guseva (2006); the influence of the factors of industrial market environment and the impact of the characteristics of the market's structure on the market demand were studied with the reference to Porter's (1980) model of five competitive agencies, which later was developed by such scientists as Grant (1991), Kumar, Subramanian, Strandholm (2001), Hines (2006).

Therefore, *the aim of the article* is to analyse the forecasting environment and its factors when assessing the competitive market demand. The *research methods* used in the article are as follows: systemic, comparative and logical analysis.

## The conception and levels of forecasting environment

In a general sense forecasting environment is defined as the whole of the factors determining the assessment and foresight of an economic index or the tendencies of its alternation (Bolt, 1994, Hines, 2006). The analysis of scientific works showed that the authors mostly agree with such treatment of forecasting

environment but the analysis of environment itself is performed on different planes, accentuating unequal number of elements, which form the environment and giving them different names and content.

Some authors (Grant, 1991, Pride, Ferrel, 1993, Clar, 2003) divide forecasting environment up into internal and external. In the literature an internal environment is almost unanimously treated as all available recourses of the companies (human, financial, material) and the results of the performance obtained from production, realization, financial and other operations. Internal or microeconomic environment is a personified phenomenon, that is to say microeconomic environment of each participant of economy is different and depends on (Lydeka, 2003):

- Strategic purposes of the business;
- The potential of businessman and his team;
- The chosen sphere of work;
- The chosen form of business organization and administrative system;
- Capability to adapt to macroenvironment.

Whereas, the treatments of the components of external forecasting environment suggested in economic literature are different. According to Wilson (1998) it seems to be purposefully to mark the two planes of external forecasting environment:

1. Macroenvironment, i.e. the factors, which influence all economic subjects performing in the market. Macroenvironment includes economic, political-juridical, social-cultural, technological-scientific, natural factors;
2. Industrial market's environment, i.e. the factors, which are typical for a particular market or a branch of economy, where the company performs. Industrial market's environment usually includes rivals, suppliers, consumers.

Macroenvironment is not obviously the mechanical summation of microenvironments of the subjects of economy. It is emphasized in economic literature that the participants of economy do not control the macroenvironment directly but they determine variability of its parameters. The modern macroenvironment influences the particular operations of the subjects of economy and the results of economical performance, also the market demand, and, on the contrary, the present activity of the subjects of economy can affect the formation of future macroenvironment.

Grant (1991) suggests dividing external forecasting environment into social and practical ones. In this case the names of the components of external environment are different, though their content is almost identical comparing with the planes of external environment presented by Wilson (1998).

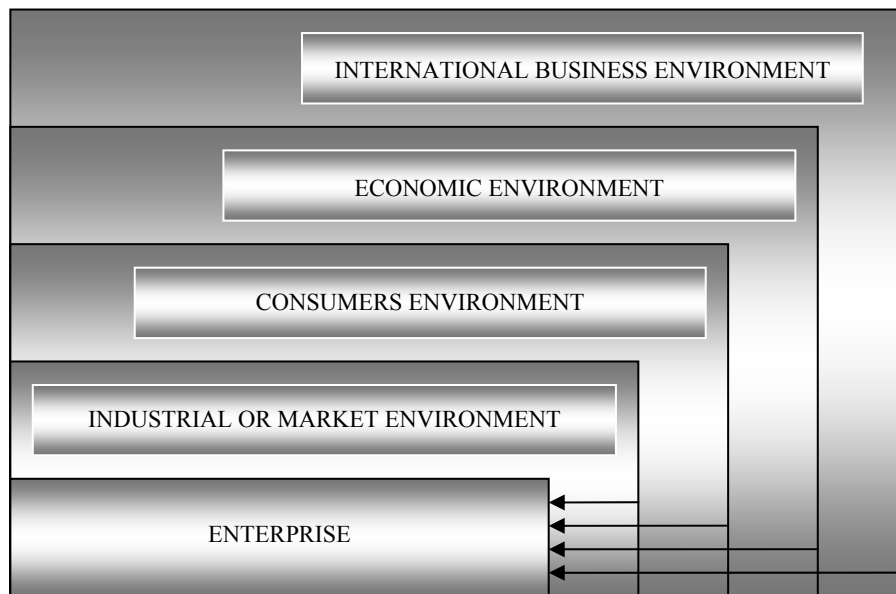
Oner, Saritas (2005) suggests modifying such treatment of external forecasting environment including an additional plane of an environment of the company's performance, which consists of the factors directly connected with the components of industrial market's environment accentuated by Wilson, i.e. with consumers, suppliers, rivals. Besides, it is suggested to analyze additionally the impact of employees and creditors as the factors of internal environment on forecasting environment.

Pride, Ferrel (1993) present quite original interpretation of forecasting environment. They divide the environment into four types: distal, common, competitive and practical. The authors define the distal environment as that part of the factors, which have little impact on the demand being forecasted, whereas, the common environment includes the political, economic, social, juridical factors which are traditionally attached to macroenvironment. The disadvantage of this attitude is that it often seems to be unclear what elements and factors concretely form the distal environment.

Bolt (1994) suggests analyzing forecasting environment in detail. According to this author forecasting environment should include five levels (figure 1) emphasizing the total impact of their interaction on the company. Bolt (1994) maintains that international, economic, and consumers' environments are named as the whole of the factors having the secondary impact on the market demand forecasting in the competitive market. Whereas, industrial or market environment is interpreted as the plane of forecasting environment of primary impact. Such conception really capacitates to disassociate from unimportant factors of forecasting environment and to make forecasting easier though at the same time stimulates looking for the mechanism which would enable to select the most important factors of demand.

It should be noted that it is not always possible to ascertain where one or another plane of forecasting environment begins: they are organically intertwined and complement each other. Some authors (Neall, Haslam, 1994) suggest analyzing forecasting environment in a broad and narrow sense without dividing them into separate planes. In the first case it is supposed that the whole external world, except the factors of demand, which are determined by companies' performance influence the competitive market demand. It is

necessary to point out that from the viewpoint of forecasting such a broad analysis of forecasting environment might be unproductive.



**Figure 1.** Forecasting environment according to Bolt (1994)

To analyze an external forecasting environment on it is supposed to be purposefully to follow the planes of forecasting environment, which were accentuated by Wilson (1998) as their content includes the elements of forecasting environment suggested by other authors and at the same time they research an external forecasting environment rather thoroughly.

### **The factors of forecasting environment**

While analyzing forecasting environment it is important to assess the complex impact of the factors of macroenvironment and industrial market on the market demand and their variability rate in the competitive market (Pilinkiene, 2008b). The recommended attitude is that one when the treatment of forecasting environment allows to disassociate from such factors of demand, which:

- Do not influence competitive market demand or their influence is so insignificant that it may not be regarded;
- Are not connected with strategic aims of business.

Scientific literature (Cox, 1989, Valentine, Dauten, 1993, Waddell, Sohal, 1994, Shim, Siegel, Liew, 1994, Pilinkiene, 2008a) contains the opinion that the analysis of forecasting environment to assess the competitive market demand must include the following spheres of the study:

1. The analysis of the present market demand and its structure;
2. The analysis of the structure of the market;
3. The analysis of the rate of the market development

The analysis of the present market demand and its structure aims to find out the gap between the demand and supply in the market when ascertaining the most profitable directions of the industry, defining the present and potential segments of the market. Kozlinskis, Guseva (2006) maintain that when analyzing the market demand it is possible to find so-called breaches, which appeared due to difficulties in employment of goods, the problems, connected with realization or formation of the stock. The shortage of the systems of realization of the produce or their insufficient closeness in separate markets, the lack of goods in the market or the deficit of certain characteristics of their quality determine the present market demand and the tendencies of its structure's alternation.

The analysis of the present market demand requires identification and research of the general factors of the demand. From the viewpoint of the modern microeconomics (Jackson, 1999, Mansfield, 2000, Kozlinskis, Guseva, 2006) the competitive market demand is influenced by following factors of demand:

- Price of goods;
- Customers' incoming and their variation;
- Prices of refreshed goods and substitutive goods;
- Consumers' requirements, taste and preference;
- Supply of goods;
- Qualitative characteristics of goods.

The accentuated factors affect the market demand differently subject to the type of the good, the structure of the market, elasticity of the demand in regard to the prices/incoming and others. It is necessary to point out that the assessment of the market demand performed with the reference to the analysis of the mentioned factors only might ignore the influence of many quantitative or external factors.

In order to perform the detailed analysis of the competitive market demand it is supposed to be purposefully to research the greater number of the factors of demand classifying them into more common groups according to the following criterions (Karsten, 1990, Bails, Peppers, 1993, Bolt, 1994):

- The nature (economical, social, cultural, juridical, demographic, technological, natural and others);
- The extent of control (controlled and uncontrolled);
- The extent of the impact (direct and indirect);
- The circuit of action (internal, external).

The study shows that such classification is quite logical and includes all the groups of the factors of demand. However an inevitable problem takes place that is how to select exactly the most important factors for the particular market demand in the competitive market or how to disassociate from unimportant factors.

The performed academic researches connected with the analysis of the structure of the market showed that scientific literature presents an ambivalent opinion: one group of scientists (Pride, Ferrel, 1993, Waddell, Sohal, 1994) give voice for the research on the extent of the market attractiveness and the most important factors of competition conditioning the alternation of the rate of profit, whereas the others (Cox, 1989, Karsten, 1990, Waldman, Jensen, 1998) suggest to estimate the extent of the market concentration.

When analyzing the market attractiveness it is important to assess such factors of the market forecasting environment as rivals, suppliers, consumers. Hanke (1992) points the amount of investments, the extent of involution of production management, expenses for formation the network of realization as additional factors having influence on the market attractiveness.

According to some scientists (Cox, 1989, Peppers, 1993, Bolt, 1994, Kirsten, 2000) the analysis of the rate of the market development is considered to be one of the most important directions of the research on forecasting environment. The rates of the market - as the branch of the industry or economy- development are traditionally studied using the model of the market's existence cycle. According to this model the branch or the market during the process of its existence has four stages: establishment, development, maturity and decline (Pride, Ferrel, 1993), and in the opinion of other authors (Cox, 1989, Bolt, 1994) there are six stages of the branch development (table 1). Every stage has its special characteristics, duration and the means of analysis.

The studies show that the main criterion of identification of the stage of the branch existence cycle is the dynamics of the demand for the branch products and the rate of profit. The increased rate of profit and the rate of development of the demand point to the stage of the branch development, and the rates of the mentioned indexes development dropped off to the mean importance inside the branch signal entering the stage of maturity.

According to Wilson (1998) from the viewpoint of forecasting the branch existence cycle can be analyzed from the two aspects, i.e. accentuating the internal and external factors of demand before and after the branch existence cycle or the development of its separate stages. In the first case such identification of the factors of demand makes forecasting of the branch demand easier and facilitates the companies' decisions on the strategic actions to form the competitive advantage in the market. In the second case determination of the factors of demand is interpreted in retrospect and the aim of this process – with the reference to the determined factors of demand and the extent of their alternation - is to get the more exact forecasts in that branch or in the market.

**Table 1.** The stages of the branch existence cycle and their characteristics

According to Pride, Ferrel (1993)	Establishment	Development		Maturity		Decline
According to Bolt (1994), Cox (1989)		The development of the branch	The "exploitation" of the branch	Maturity	The saturation of the branch	
Characteristics of the stages of the branch existence cycle	1. Active publicity; 2. Growing expenses for investigations, projects and publicity; 3. Realization of goods on easy terms for certain consumers; 4. The company's endeavour to get the dominant position in the branch.	1. Increasing number of consumers; 2. Increasing expenses for publicity; 3. Cutting the prices because of the economies of the extent; 4. Elaboration of innovations; 5. Increasing profit; 6. Increasing demand.	1. Fixing the number of customers; 2. Decreasing expenses for publicity; 3. Product differentiation; 4. Decreasing costs because of the economies of the extent; 5. The profit amounts its maximum; 6. Stabilization of the demand.	1. Competition grounded on cutting prices but not innovations; 2. The decline of production due to penetration of other branches or markets; 3. The exit from the branch; 4. Decreasing profit; 5. Recession in demand.		

The analysis of the literature shows that despite the wide spectrum of the researches the environment as the object of the study of forecasting is not investigated enough, there is the lack of the more strict methods of classification of the factors of forecasting environment which could accentuate the interaction between the object of forecasting and the factors having influence on it.

### Conclusions

1. The analysis of conceptions and methods of forecasting showed that forecasting environment as the object of the study is not investigated enough. The analysis of forecasting environment is performed on different levels accentuating unequal number of elements, which form the environment and suggesting different names and content for them.
2. In order to find the stricter methods of classification of the factors of forecasting environment it is suggested to perform the analysis of forecasting environment accentuating the planes of macroenvironment and industrial market's environment.
3. With the reference to the performed academic studies of forecasting environment and its factors it is suggested to define forecasting environment in the context of an assessment of competitive market demand as a whole of available internal and external factors and characteristics of the market, which determine foresight of the market demand and its assessment in the competitive market.

### References

1. Bails, D.G., Peppers, L.C. (1993). *Business Fluctuations*. London: Prentice Hall International.
2. Bolt, G. (1994). *Sales Forecasting*. London: Kogan Page.
3. Clar, G.N. (2003). Forecasting Options for the Future: to Gain Foresight to Select and Shape them. *Journal of Forecasting*, 22(2), 83-91.
4. Cox, W.E. (1989). *Industrial Marketing Research*, 3<sup>rd</sup> ed. Toronto: John Wiley and Sons.
5. Grant, R.M. (1991). The Resource-Based Theory of Competitive Advantage. *California Management Review*, Spring, 119-135.
6. Hines, A. (2006). Strategic Foresight: the State of the Art. *The Futurist*, 40(5), 18-21.

7. Jackson, J. (1999). *Microeconomics*, 5 ed. Sydney: McGraw-Hill.
8. Lydeka, Z. (2003). Ekonominės sistemos pagrindinės sąvokos ir požūriai. *Organizacijų vadyba: sisteminiai tyrimai*, 25, 167-179.
9. Karsten, S.G. (1990). *Business Forecasting and Economic Cycles*. Lanham: University Press of America.
10. Kozlinskis, V., Guseva, K. (2006). Evaluation of Some Business Macro Environment Forecasting Methods. *Journal of Business Economics and Management*, 7(3): 111–117.
11. Kumar, K., Subramanian, R. and Strandholm, K. (2001). Competitive Strategy, Environmental Scanning and Performance: a Context Specific Analysis of their Relationship. *International Journal of Commerce and Management*, 11(1), 1-33.
12. Mansfield, E. (2000). *Microeconomics: Theory, Applications*, 10 ed. New York: W. W. Norton.
13. Neall, A., Haslam, C. (1994). *Economics in a Business Context*. London: Chapman & Hall.
14. Oner, A.M. and Saritas, O. (2005). A Systems Approach to Policy Analysis and Development Planning. *Technological Forecasting and Social Change*, 72(7), 886-911.
15. Pilinkienė, V. (2008a). Competitive Market Demand: the Conception and Types in the Context of Forecasting. *Economics and Management - 2008: 13-osios tarptautinės mokslinės konferencijos pranešimų medžiaga*.
16. Pilinkienė, V. (2008). 'Market Demand Forecasting Models and their Elements in the Context of Competitive Market', *Inžinerinė Ekonomika-Engineering Economics*(5), pp. 24-31.
17. Porter, M.E. (1980). *Competitive Strategy*. New York: Free Press.
18. Pride, W.M., Ferrel, O.C. (1993). *Marketing Concepts & Strategies*. London: Houghton Mifflin Company.
19. Shim, J.K., Siegel, J.G., Liew, C.J. (1994). *Strategic Business Forecasting*. Chicago: Probus Publishing Company.
20. Waddell, D., Sohal, A.S. (1994). Forecasting: the Key to Managerial Decision Making. *Management Decision*, Vol. 32, No. 1, pp. 41-49.
21. Waldman, D.E., Jensen, E.J. (1998). *Industrial Organization*. New York: Addison Wesley Longman, Inc.
22. Wilson, H.J. (1998). *Business Forecasting*. Boston: McGraw-Hill.
23. Valentine, M.L., Dauten, C.A. (1993). *Business Cycles and Forecasting*. Cincinnati: South – Western Publishing Co.