Competitive Advantage in Global Market: Theoretical Assumptions and Assessment Options

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Abstract

The articles analyzed the possibilities of forming a competitive advantage and are given the methodologies for competitiveness assessment, which can be used. Conducted analysis of theoretical aspects of the competitiveness evaluation, assessed the opportunities of application research methods of competitiveness and competitive advantage. As economic entities are operating in the global market, so there is not enough good quality products that meet consumers' needs. It is essential that the products which they produce and their management would be not only in accordance with the company, but also would serve for the interests of customers and society as a whole, to avoid internal and external problems interfering with social life, or would be in contrary to accepted norms and healthy life. Gaining competitive advantage in the global market it is not sufficient to get a competitive advantage, it requires a detailed knowledge of their audiences and their needs in the dynamics. It was found that it is appropriate to extend the concept of competitive advantage, including linking and the relative, absolute and effective operational strengths. Literature studies in the comparative and absolute advantage theory can be applied to different levels of economic systems, both single entity and the industry, both at regional or national level. The study found that in the assessment of an industry's competitiveness, it is possible to use only part of the methodology and indicators, and all the benefits of the evaluation methodology cannot take advantage of the lack of data. Our research and, evaluation of other researchers experience suggests that in the recent economic literature is proposed to assess the economic competitiveness in the overall chain: the producer-processor-reproducer-dealer-customer.

Keywords: competitive advantage, competitiveness, competition policy, research methodology of competitiveness, evaluation criteria.

1. Introduction

Lithuania's access to the European Union (EU) has set the need for increasing the country's economic competitiveness. Lithuanian products increasingly compete with imported products and their equivalents and substitutes in internal and foreign markets, and only competitive economic entities, i.e., those who produce and present sufficient quantity of high quality products at affordable prices for consumers, can provide competitive products.

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Recently, there are broad discussions on increasing competition and the country's economic ability or inability to withstand competition in the domestic and foreign markets. Competitiveness of economic entities, companies is associated with their ability to respond promptly and adequately to sudden changes in the market and maintain their position on it. Often, however, there is disagreement as to what particular action should be taken by any individual economic entity in the market competition, which evaluation criteria should be used to determine whether the entity is competitive or uncompetitive and what recommendations should be made to improve the situation.

The production competitiveness of economic entities in the market is determined by the external and internal economic, technological, social and other factors as a whole. On the other hand, it is not enough just to identify the key determinants of competitiveness, it is also necessary to select proper data, metrics and evaluation methods to carry out a coherent and multi-faceted economic assessment of competitiveness by providing a recommendation on how to increase it. Very often, competitive incentive measures are applied in response to changes which have already taken place, so they often come too late and require certain organizational changes in the branch. It is necessary for each business entity which is seeking to develop a successful business and secure development, for a production manufacturer not only to identify the determinants of competitiveness, but also to obtain profit from economical activities, and to consider the support of state for the development of operations in the future, too.

The main premise is that primarily the fit between the business environment and business processes is needed, then both continuous improvement and the proper fit between business process tasks and information systems must exist (Trkman 2010). Organizations have found it necessary to develop ways of managing business rule churn due to new or changed rules from government legislation, business competition, regulatory agencies, industry norms and others; adding to these challenges include increased web-based and global competition making it essential for firms to continuously monitor and rapidly respond as competitive threats emerge (Nelson et al. 2010). The amount of heterogeneous data that is available to organizations nowadays has made information management a seriously complicated task, yet crucial since this data can be a valuable asset for business intelligence, the rate of growth in the amount of information available nowadays within a corporate environment poses major difficulties as well as challenges in decision making (Mikroyannidis, Theodoulidis 2010). Business intelligence consists of a collection of techniques and tools, aiming at providing businesses with the necessary support for decision making (Mikroyannidis, Theodoulidis 2010).

The aim of the article is to analyze the building of competitive advantage in the global market and to provide usable competitive assessment methodologies. Objectives of the study: to analyze the research on the issues of competition, competitive   advantage   and   competitiveness,   and competitiveness evaluation features; following a competitive evaluation of the theoretical aspects of the analysis to assess opportunities for applying the competitiveness research methodologies.
The research object is competitive advantage of a business entity.
Research methods: systematic, comparative, logical, documents (international organization reports, legislation), and analysis of scientific literature.

2. Concept of competitiveness in the world's literature

The triad of economic concepts – competition, competitive advantage and competitiveness – reveals the essence of the current market economy and builds economy as a system that promotes optimal distribution of economic resources and their effective use, and directs it's functioning to economic growth and consumer welfare. It can be argued that those elements of the triad became some of the main economic drivers of the market.

It is increasingly difficult to compete when development of economic activities and implementation of new technologies takes part along with development of the global market, new forms of competition, and new ways of acquiring competitive advantage emerge, which of course, are more complex.

Today's organizations face new, more demanding business environment, which is often described as unstable, volatile, hostile, and on these grounds unpredictable or even chaotic. New technological and market opportunities arise from the development of science, technology and international markets, i.e. the processes outside of a particular organization. In such a situation the importance of the organization's ability to gain and maintain competitive advantage in the long term is highlighted and the aspiration to acquire competitive advantage and maintain is not possible without adequate environmental strategy (Korsakienė, Grybaitė 2012).

As shown by theoretical considerations (Durand, Giorno 1987; Balassa 1965), and empirical material of various researchers (Porter 1990; Rugman, Cruz 1993; Pitel 1999; Boyle 2002; Pouliquen 2001), the comparative advantage theory can be applied to different levels of economic systems, both single business entities and the industry, both at regional or national level. Competitive advantage is a much broader concept that includes comparative and absolute advantage. Absolute advantage, the ability to supply the market with products at a lower cost than other economic entities, is not sufficient to describe the competitive advantage. Competitive advantage is ensured by interaction of these two forms of advantages. In the conditions of modern market it is not enough to produce a cheaper product, you must be able to deliver better quality, more diverse products, and do so faster than competitors bring their product on the market, i.e. to create a comparative competitive advantage while at the same time creating conditions for long-term competitive advantage, which in turn ensures the long term survival of the economic entity in the market, and fixed income. Another group of authors (Pitts, Lagnevik 1998; Havrila, Gumawardana 2003) refers competitive advantage to the entity's ability to operate more profitably in domestic and/or foreign markets, compared with competitors.

M. Porter encourages players to seek advantage in the market, choosing a product differentiation or lower cost, allowing them to get a higher profit on the market (Портер 2000). Special attention is paid to the formation of strategic competitive advantages. M. Friedman sees the competitive market as impersonal. The business entity in free market is not opponent for another business entity (especially if the products are homogeneous), i.e., none of the participants can dictate the terms which others should follow, or set a maximum comparative advantage with market participants (Friedman 1998). Comparing M. Porter's and M. Friedman's descriptions of competitiveness and competitive advantage, it should be noted that a problem of definitions arises. In the research (Porter 1990; Rugman 1993; Pitts 1998; Friedman 1998; Boyle 2002), competitiveness is understood in two ways – as an advantage of certain indicators, and as existing benefits of legislation, political, economic, social and other factors. In this way a new approach is formed which involves not the competitive struggle itself, but the ability of market participants to participate successfully in that struggle, i.e., competitiveness. According to M. Friedman, the definition of competitiveness is abstract (Friedman 1998). It is not related with specific events occurring in a particular place on a particular time, but leads to the summarisation of individual events and the situation, highlighting their common features. For this reason, the term "competitiveness" not only has no single definition, but theoretical and practical authors, studying the phenomenon of competitiveness, use it to define different states of players in the market conditions, to describe them according the same market players.

According to Bradley (1996), Hardwick (1990), Pitts (1998), Vollrath (1991), Aakers (1989), Ferguson (1994), the concept of competitiveness in economic terms is integral part of the historical, political, cultural and geographical context of globalization.

Summarizing statements of the authors we can conclude that competitiveness is the business entity's ability to operate with a competitive advantage. Since the concepts in the basic triad (competition – competitive advantage – competitiveness) are interdependent, their relationship can be shown in the following diagram (Fig. 1).
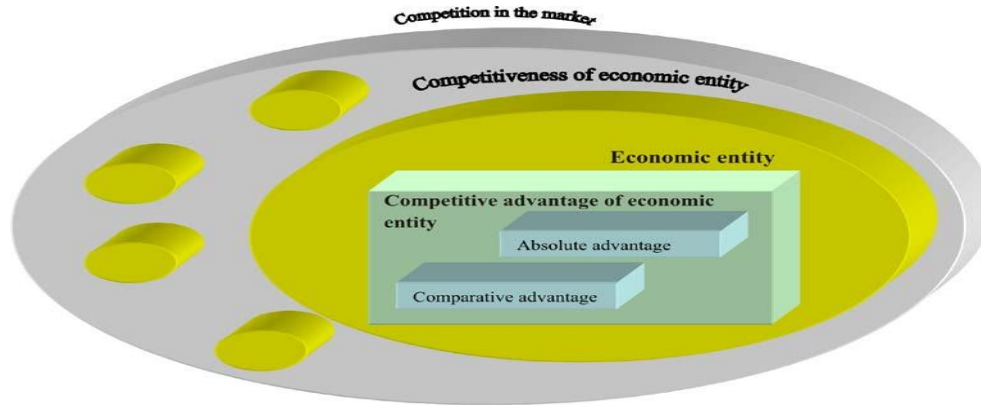

Fig. 1. Relation between the concepts of competition, competitive advantage and competitiveness (Source: compiled by authors)

In different stages of the development of economic thought, the concept of competitiveness was based on various points of view. The representatives of the classic school A. Smith and D. Ricardo stated in their theories that the absolute (the country providing products to the world at the lowest cost gains a competitive advantage) and relative advantage (market forces directing resources to where they are used most effectively) constitute the basis of competitiveness.

Theoretical studies mainly deal with the following sources of competitive advantage: manufacture of products of superior quality, costs lower than those of competitors, more favourable geographical position, generating higher value to consumers. Therefore, in order to assess the competitive potential of an economic entity on the market, it is appropriate to supplement the concept of competitive advantage with the concept of effective activities (Fig. 2), which will cover the production efficiency, innovation and mutual compatibility of operations, efficient business management, entrepreneurship of the entity, etc.

These elements of effective activities' advantages become very significant criteria of competitive advantage assessment, helping to identify the competitive advantage accurately and clearly. There are conflicting findings in the scientific literature dealing with competitiveness issues in relation to the competitiveness description. Contradictions arise for four reasons. Firstly, factors determining competition between economic entities and competitiveness between states are not identical. P. Krugman argues that "the parties can be satisfied or dissatisfied with their economic situation, because their reasonably defined final outcome is missing" (1994), in contrast to them other authors (Thurow, 1987) maintain that the higher standard of living among the country's population is the most important result and the factor determining competitiveness.
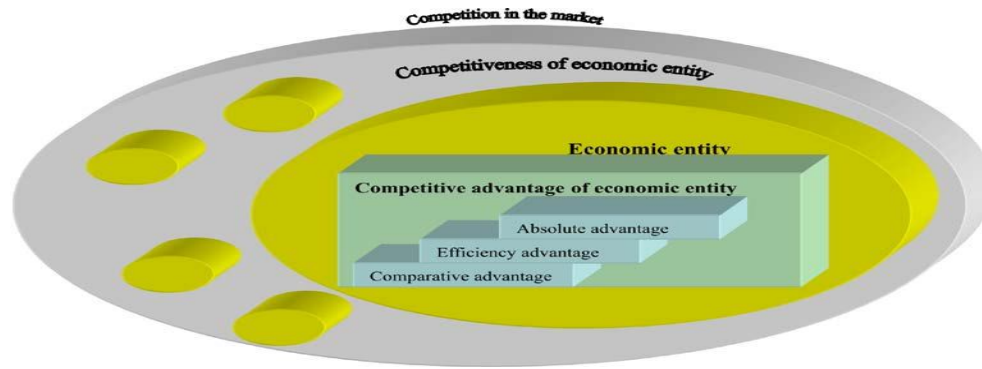
Fig. 2. Competition, competitive advantage (cost advantage), competitiveness interface (Source: compiled by authors)

Secondly, Krugman's (1994) view that a single industry or country with high economic growth rate does not reduce the economic level other industries, or states. However, this can be true only during the short period, because in the long term potential losses may incur due to, for example, imported products in demand. Economic growth in the open market depends on two factors: the growth in global demand and manufacturers' ability, in getting a competitive advantage, to compete with other countries (Thirwall 1972).

Thirdly, competitiveness of the country or a block of countries is determined by the countries or groups of countries. All economic entities seek benefit, but their interests are often not identical. Therefore, competitiveness determinants can only describe business features of a single economic entity, part of the industry players etc. Fourthly, highlighting competitiveness factors and identification of their effects can be considered as a political aspect (legal system, level of state support).The evaluation of economic literature by various authors (Pitel, Lindroos 1999; Porter 1990; Trabold 1995; Heis 1992; Schumpeter 1965), dealing with competitiveness and the factors shaping it, leads to the assumption that competitive advantage and competitiveness is built by these factors (Table 1).

Table 1. Factors of competitiveness (Source: compiled by authors)

Group of factors	Factors
General factors	Geopolitical situation of the country; Legislation system of the country; Economic situation of the country; Economic and social policy; Demographic situation of the country; Natural-ecological situation of the country
Main characteristics of the market economy	Regional disparities; Cost of production; State financial support; Market capacity and consumer solvency; Tax system
Factors of operational infrastucture	Form of ownership; Qualification of staff; Entity's economic capacity; Industrial structures and infrastructure re-engineering; Scientific research

After the analysis of the principles determining competitiveness factors and their impact made by different authors, it can be maintained that the main emphasis is given to economic factors. Trabold (1995) believes that competitiveness can be formed on the basis of these factors: the ability to sell, the ability to attract, the ability to adapt, the ability to earn. In this way, the ability to earn is treated as the main indicator of competitiveness associated with the production of GDP per capita. However, according to Garelli (1997), GDP is not a perfect indicator of competitiveness of the country because part of the income comes from nonrenewable natural resources, household value added and so on, therefore the GDP ratio comparison would be more targeted taking into account the purchasing power of different countries.

3. Theoretical models of competitiveness assessment and their applications

Scientific literature analyzing the competitiveness theory presents several general competitiveness evaluation models. The scientific literature (Porter 1990; Rugman, D'Cruz, 1993; D'Aven, 1994; Weston, Chung, 1990; Balassa 1965; Vollrath 1991) presents a variety of methods used in competitiveness analysis, but they are often seen as separate methods of assessing competitiveness of the country, products and so on.

The evaluation of the country's economy, its individual industries, product, business entity, environment of competitiveness is mainly done by international organizations, independent groups of experts or institutes, studying and determining countries of the world according to their rankings and the achieved competitive position on the market, as well as national experts whose goal is to determine their country's economic competitiveness of businesses and further development trends. Table 2 shows most common competitiveness assessment methodologies. In order to evaluate the applicability of competitiveness models for competitiveness assessment, we will look at these models by evaluating their strengths and weaknesses, and the possibilities of application.

Table 2. Comparison of competitiveness assessment methodologies (Source: compiled by authors)

Method	Substance matter of technique	Applied indicators
1	2	3
M. Porter's methodology (Портер, 2000).	Competitive advantages of the economic entity depend on profitability, which depends on five factors.	1) internal factors: demand conditions, related sectors, entity's strategy, structure and competition; 2) external factors: the Government, international activities.
World Bank's methodology (The Competitiveness of European industry,1999)	In this methodology, the data base consists of 49 indicators, which help to assess the country's economic situation and opportunities For development of competitive business	1) general economic development indicators (GNP, annual growth of GNP, standard deviation of income distribution); 2) dynamics of indicators of macroeconomic and international economic relations (investment, productivity, export structure); 3) dynamics of financial indicators (foreign debt; effect of prices on the growth of GNP; securities); 4) infrastructure indicators (telecommunications, roads, electricity), and investment climate indicators; indicators of human resources and intellectual capital development (education, life expectancy, patents).
Methodology of the European Committee (The Competitiveness of European industry, 1999)	In today's quickly changing conditions of the global economy, one of the most important factors influencing competitiveness is the ability to adapt to rapidly evolving technology and to respond quickly to changes.	1) annual changes of production volumes and labour productivity (as a ratio between the value added and the annual number of employees); 2) annual change in employment levels; 3) average annual changes in the growth of production, export and import (when export growth rates are higher than the rate of growth of production and export volumes growing faster than imports, it is concluded that the country's competitiveness on international markets increases or a steady rate is maintained);
Methodology of the European Committee (The Competitiveness of European industry 1999)		4) specialization and concentration ratios: concentration ratios, Herfindahl index, part of a standard deviation (a measure of sectoral dispersion) coefficients of specialization: Ballassa index, geographical specialization index, dissimilarity index (sum of absolute differences), Gini coefficient.
Methodology of the New Zealand's Ministry of Research, Science and Technology (The World Competitiveness Yearbook, 1996)	The country's economic sectors are divided into four groups according to the technique and technology level, i.e. high, medium-high, medium-low and low technology.	export/import ratio, import penetration and openness to foreign competition; indicators of export specialization, internal sector trade indicator.
Local resource cost methodology (Lietuvos pramonės konkurencingumo įvertinimas, 2000)	Evaluated competitiveness of national economy, sector or product group in the short and medium term. Production is considered competitive if the DRC ratio is less than 1. If the DRC is equal to 1 or greater than 1, products are not competitive.	DRC (output competitive if DRC> 1). DRC – local resource cost rate.
Methodology of the Lithuanian Institute of Economic (Lietuvos pramonės konkurencingumo įvertinimas, 2000)	Competitiveness is based on the evaluation of Lithuania's foreign trade and industrial performance indicators and their comparison with the corresponding EU-15 countries' indicators.	1) demonstrated comparative advantage; analyzed competitive advantage; share of the Lithuanian export in the EU's exports; share of the EU imports in the Lithuanian exports, total share Lithuanian of exports ; share of goods exported to the EU compared to the scope of total Lithuanian exports to the EU; net income from the exports of Lithuanian goods; 2) labour productivity (by output of products), labour productivity (by value added), labour productivity growth rates; industrial production volume growth rates, employee number growth rates; 3) quality of products, technologies, level of consumer service, innovation, marketing, workforce skills; 4) research and development, manpower resources, qualitative level of access to financial resources, operational infrastructure level.

In summary, it can be concluded that all given methodologies for competitiveness assessment can be used to evaluate the competitiveness of industries, but also their capabilities in specific sectors of economy are limited due to the lack of information for the calculation of most indicators.

To assess the country's competitiveness, it is necessary to analyse competition between countries. However, firstly, we have to determine which economic sector may have a competitive advantage and a major effect on the country's competitiveness. According to the analyzed authors, it can be concluded that competitiveness is determined by the manufacturing entities' structure, behaviour on the market and adaptation to changing competitive environment conditions. Therefore, it can be assumed that it is very important to select indicators, properly reflecting the opportunities of competitive advantage.

4. Specifics of the application of indicators for the evaluation of competitiveness

The analysis of the presented competitiveness measurement and application methods was performed in scientific research dealing with separate industries or groups of producers in those industries, or their developed products.

While analyzing economic problems of competitiveness, it is necessary to assess the factors that have a decisive influence on the choice, evaluation and measurement of the level of competitiveness, and its opportunities. After the evaluation of the importance of various sectors of economy, we can distinguish the most important criteria for selecting indicators to measure competitiveness:

1. Assimilation of Lithuanian products in new positions on the EU and world's markets;
2. Need for the State aid;
3. Relationship of product supply and demand;
4. Price dynamics of products and tangible means necessary for the production;
5. Need for investment.

The analysis of indicators suggests that it would be appropriate to assess competitiveness according to these indicators:

1. Intensive competition index (S), which allows to compare export competitiveness of two countries industries on the third market.
2. Index of international competitiveness in the branch (RW), shoewing the distribution of imports and exports in economy.
3. Revealed comparative advantage (RCA), which determines whether economy of any country has the potential in comparison with other branches of the national economy attempting to establish itself on the international market.
4. M. Porter's "diamond" model and OPERA and SWOT analysis methods can be used to solve the issues at the theoretical level, and to find the best solutions.
5. The branch's manufacturing concentration ratio (CR) and Herfindahl index (H), which allow to identify and determine the concentration level and intensity of competition in the branch.
6. Sales growth rate index (UAT), which determines the evolution of the in the product market growth rates over the years and shows the interval in which the values of indicators determining the intensity of competition, and establishing the current market sales growth, can be shared.
7. Market profitability index (RR), which shows how much the product demand exceeds the supply and vice versa. It can be used for planning production volumes and the need for investment to increase competitiveness.
8. Lerner index of monopoly power (L) that shows the extent to which the product seller can influence the product price, i.e. the extent to which the business entity is dependent in the competitive environment and how it affects the profit.

9. Indicators based on the correlation-regression analysis. This method is used to determine which factors have the greatest impact on economic increasing the competitiveness and must be analyzed in more detail. One of them, the correlation coefficient, indicates the strength of relationship between selected variables (Boguslauskas 1999).

It is appropriate to use all the listed competitiveness indicators for assessing the competitiveness in terms of economy, at the level of economic entities involved, and at the level of manufactured products. However, there is a lack of information to calculate all indicators of the system, lack of reliability of such information and it limits practical possibilities of the assessment of competitiveness of the Lithuanian economy.

After the analysis and evaluation of the indicators on competitiveness assessment it was concluded that the best approach for evaluation of economic competitiveness is to use these indicators: a) productivity, structure of an economic entity, production volume, product quality, price level, production cost indicators; b) internal market receptivity and capacity indicators, export changes, labour productivity indicators; c) indicators of the state help level and support of the EU.

5. Conclusions

1. The scientific and practical literature that describes the analysis of the competitiveness mainly discusses competitiveness assessment methodologies and models such as M. Porter's "diamond" model, the World Bank's methodology, the methodology of the European Committee, the methodology of the New Zealand's Ministry of Research, Science and Technology, Local resource cost method, methodology of the Lithuanian Institute of Economy. The study found that only some of the methodologies and indicators can be used for the assessment of competitiveness of industry, and all benefits of the evaluation methodology ca not be used due to the lack of data. Our research and the assessment of other researchers' experience suggest that the recent economic literature proposes to assess the economic competitiveness in the overall chain: the producer-processor-reproducer-dealer-customer. In Lithuania, this chain is fragmented, i.e. has no vertical cooperative links, while the competitive struggle between the certain business entities takes place inside each level, primarily, it is necessary to identify the causes of this process and to determine the effects of each business entity involved in the competition.

2. The research of scientific literature leads to the conclusion that the comparative and absolute advantage theory can be applied to different levels of economic systems, for both individual entity and the industry, both at the regional or national level. It should be complemented by the competitive advantage concept, including the comparative and absolute effective activity advantages. The competitive advantage ensures only the interaction of those advantages. Effective performance advantages include the production efficiency, innovation, mutual compatibility of operational.

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