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PERCEPTION OF COMPETITIVENESS IN THE CONTEXT OF SUSTAINABLE DEVELOPMENT: FACETS OF "SUSTAINABLE COMPETITIVENESS"

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Abstract. European Council agreed to the European Commission's proposal to launch a new strategy for jobs and growth – the new European Union strategy for smart, sustainable and inclusive growth – "Europe 2020". This will lead to a new concept of the competitiveness and deeper relationship between sustainable development and competitiveness. The aim of this article is to set out the future research area of competitiveness theory taking into account the development of competitiveness concept and existing research tendencies. On the one hand, for developing the new concept of competitiveness, it is necessary to critically analyse existing studies on competitiveness. Researchers, examining the problems of competitiveness, differently approach the concept of competitiveness, suggesting different definitions, classification, factors, models of competitiveness, and evaluation criteria. Despite all the discussions on competitiveness however, no clear definition or model of competitiveness has yet been developed. On the other hand, globalization, economic dynamism and social progress, sustainability and competitiveness go hand-in-hand. Competitiveness should be underpinned by a broad vision for the economy and society. There is a need of research initiatives to develop the new concept of "Sustainable competitiveness" in the context of globalisation, with much of the research focusing on how sustainable development and competitiveness interact. Such additional research will lead to new theoretical models describing the relationships between international globalization, economic growth, sustainable development, wellbeing and competitiveness.

Keywords: competitiveness, national competitiveness, competitiveness models, factors, indicators, benchmarking, sustainable development, sustainable competitiveness, economic growth.

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1. Introduction

The Lisbon Strategy, launched in 2000, was based on an acknowledgement of the European Union's need to increase its productivity and competitiveness. The financial and economic crisis that started in 2008 resulted in a significant loss in jobs and potential output. European Council agreed to the European Commission's proposal to launch a new strategy for jobs and growth – "Europe 2020", which will focus on the key areas where action is needed to boost Europe's potential for sustainable growth and competitiveness.

Political topicalities raise a need for development of a new concept of the competitiveness and revealing relationships between sustainable development and competitiveness. The aim of this article is to set out the future research area of competitiveness theory taking into account the development of competitiveness concept and existing research tendencies.

It is generally recognized that continued competitiveness and economic growth are essential factors for supporting living standards and wellbeing. Strong international competitiveness creates the resources that enable material improvements in living standards and resources for investments that promote both individual wellbeing and national competitiveness (Discussion Paper on Wellbeing and Competitiveness 2008: 3). Competitive regions and cities are places where both companies and people want to invest and to locate in (Kitson *et al.* 2004: 997).

Competitiveness research and studies look at all the elements that can explain the competitiveness success and try to identify the drivers of competitiveness. Despite there is a whole strand of scientific literature on competitiveness, alas, unanimous agreement about definition or model of competitiveness has not been reached.

For developing the concept of competitiveness it is necessary to undergo critical analysis of existing studies on national competitiveness.

First, this article looks at the different definitions, outlines the most recent concepts of competitiveness, and provides the suggested classification of competitiveness research areas.

Second, the article provides an overview of some of the models most frequently used for competitiveness, especially national competitiveness, analysis (Porter's Diamond model, the Double–Diamond model, the Generalized Double-Diamond (GDD) model, the Nine–Factor model, TOWS Matrix, Competitiveness Pyramid, *etc.*) and international assessments of competitiveness (World Economic Forum, IMD World Competitiveness Centre, Robert Huggins Associates, *etc.*).

Generally, the analysis of the different theoretical views and research in the scientific and legal literature on the topic of competitiveness is followed by the summary of the conclusions. This article outlines the new approach to competitiveness theory and reveals relationships between competitiveness and other research areas.

In this sense, the findings of this article may contribute for development of further research of competitiveness.

2. Theory: definitions and concept of competitiveness

Theoretical explanations of economic competitiveness vary. Some researchers believe that the concept of competitiveness applies most appropriately to firms and products. Others identify the national competitiveness as an important determinant of firms'overall competitiveness or analyse it from the sectoral perspective. International researches highlight that cities drive economic growth and enhance national competitiveness.

In the literature the word "competitiveness" conveys a different meaning when applied to an individual firm or an individual sector or economic activity within a country or region.

For a firm, competitiveness is the ability to produce the right goods and services of the right quality, at the right price, at the right time. It means meeting customers' needs more efficiently and more effectively than other firms do (Edmonds 2000: 20). Generally, competitiveness is the ability of an organization to compete successfully with its commercial rivals (Law 2009).

Firms compete in the market just as industries in different countries compete in the world market, but, given the nature of international exchanges, the notion of competing countries does not make sense (Krugman 1994).

Feurer and Chaharbaghi (1994) have proposed a holistic definition of competitiveness, taking into account the sustainability: "Competitiveness is relative and not absolute. It depends on shareholder and customer values, financial strength which determines the ability to act and react within the competitive environment and the potential of people and technology in implementing the necessary strategic changes. Competitiveness can only be sustained if an appropriate balance is maintained between these factors which can be of a conflicting nature".

For an industrial sector, the main competitiveness criterion is maintaining and improving its position in the global market.

Competitiveness – the ability to compete in markets for goods or services. This is based on a combination of price and quality. With equal quality and an established reputation, suppliers are competitive only if their prices are as low as those of rivals (Black *et al*. 2009).

Snieška and Bruneckienė (2009: 46) have defined a regional competitiveness as an ability to use factors of competitiveness in order to make a competitive position and maintain it among other regions.

Traditionally, the international competitiveness of countries was explained by international trade theories derived from the work of Adam Smith. However, global economy is too complex to be explained by traditional theories.

The The Organisation for Economic Co-operation and Development (OECD) suggested that competitiveness be understood as: "The ability of companies, industries, regions, nations or supranational regions to generate, while being and remaining exposed to international competition, relatively high factor income and factor employment levels on a sustainable basis" (Hatzichronoglou 1996: 20). According to the OECD, competitiveness is the ability of a country to produce goods and services, under free and equal market conditions, that pass the test of the international market and at the same time ensure long-term growth of living standards (Economic Policy Reforms 2010: Going for Growth. 2010).

The World Economic Forum (WEF) defines competitiveness as "The set of institutions, policies, and factors that determine the level of productivity of a country. The level of productivity, in turn, sets the sustainable level of prosperity that can be earned by an economy" (Schwab 2009a: 4). In other words, more-competitive economies tend to be able to produce higher levels of income for their citizens. The productivity level also determines the rates of return obtained by investments in an economy. Because the rates of return are the fundamental drivers of the growth rates of the economy, a more-competitive economy is one that is likely to grow faster in the medium to long run.

The concept of competitiveness thus involves static and dynamic components: although the productivity of a country clearly determines its ability to sustain its level of income, it is also one of the central determinants of the returns to investment, which is one of the key factors explaining an economy's growth potential.

Two types of definitions of competitiveness are currently used in the International Institute for Management Development's (IMD) World Competitiveness Yearbook: a condensed definition and an academic definition (Garelli 2005). The first IMD's definition of competitiveness is "How nations and enterprises manage the totality of their competencies to achieve prosperity or profit". The second definition is "Competitiveness of Nations is a field of Economic theory, which analyses the fact and policies that shape the ability of a nation to create and maintain an environment that sustains more value creation for its enterprises and more prosperity for its people".

Competitiveness is not just about growth or economic performance but should take into consideration the "soft factors" of competitiveness, such as the environment, quality of life, technology, knowledge, etc.

The National Competitiveness Council (NCC) in Ireland generally understands competitiveness as the ability of enterprises to successfully sell goods and services on international markets. Competitiveness is a crucial determinant of national economic survival and future prosperity (Our Cities: Drivers of National Competitiveness 2009).

A definition of national competitiveness according to the National Competitiveness Council (Annual Competitiveness Report 2004: 3) – "Competitiveness is the ability to achieve success in markets leading to better standards of living for all. It stems from a number of factors, notably firm level competitiveness and a supportive business environment that encourages innovation and investment, which combined lead to strong productivity growth, real income gains and sustainable development".

This definition brings together a number of issues. First, the definition draws attention to the view that in the long-run, competitiveness is essentially about growth in productivity. Productivity is a measure of the efficiency with which goods and services are produced and is the key long-term determinant of every nation's living standards. Second, the definition draws attention to the importance of costs and the ability of firms to compete in international markets. Finally, the definition emphasises that promoting competitiveness should not be an agenda that divides business and wider society. Economic dynamism and social progress must go hand-in-hand.

National competitiveness in the Annual Competitiveness Report (2006: 8) is defined as all those factors that impact on the ability of firms in a country to compete in international markets, in a way that provides people with the opportunity to improve their quality of life.

Economic growth is nothing other than the sum of the growth created in all areas of the country. The potential for growth across the country can be boosted by increasing local and regional competitiveness and creating a better climate for entrepreneurship, innovation and investment.

Competitiveness refers to the overall economic performance of a nation measured in terms of its ability to provide its citizens with growing living standards on a sustainable basis and broad access for jobs to those willing to work. Competitiveness is understood to mean a sustained rise in the standards of living of a nation or region and as low level of involuntary unemployment as possible.

Meanwhile, competitiveness is often measured in a narrower sense by comparing relative inflation rates and the falling demand for export or in a narrower sense by comparing relative inflation rates (Law 2009). International competitiveness is the ability of an economy to supply increasing aggregate demand and maintain exports. A loss of competitiveness is usually signaled by increasing import and falling exports (Black *et al.* 2009).

In order to proceed with a study on competitiveness, first, it is necessary to clearly define the concept of competitiveness, second, it is important to identify issues which are keys to underpinning national competitiveness, and rebalancing economic activity to support sustainable, export-led growth.

To generalize, competitiveness is both a test of the economy and a chance to further enhance economic performance.

3. Overview of the existing studies on competitiveness

3.1. From firm level competitiveness to national or international competitiveness

The literature analysis lets us conclude that there is a disagreement not only about competitiveness definition, but also about its measurement, as well as the interpretation of whatever results would emerge from measurements.

Economists have long tried to understand what determines the wealth of nations. However, there is no one generally accepted theory of national competitiveness but just different concepts behind this policy, starting with a look at firm level competitiveness to national or international (global) competitiveness.

The existing studies on competitiveness centre on the different categories of analysis: Competitiveness of companies (Firm level competitiveness), Sectors competitiveness, Regional competitiveness (Area, Place, Locality, Territorial, City, Urban competitiveness), National competitiveness (County competitiveness), Bloc competitiveness (Regional competitiveness), International competitiveness (Global competitiveness, External competitiveness) (Fig. 1).

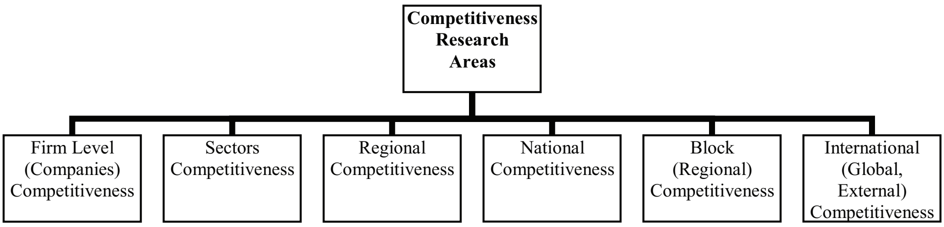

Fig. 1. Classification of competitiveness research areas. Source: *authors*

Other researchers provide different classification of the existing studies. Cho (1998), Ambastha and Momaya (2005) have identified three categories according to differences in unit entity: firm (organization) competitiveness, industry competitiveness and competitiveness of nations.

In order to explain how competitiveness on the firm level can be achieved, business theory provides two basic concepts: the market-based-view and the resource-based view (Berger 2008: 94).

According to Grant (1991b: 133), the key to a resource-based approach to strategy formulation is the understanding of the relationships between resources, capabilities, competitive advantage, and profitability – in particular, an understanding of the mechanisms through which competitive advantage can be sustained over time.

Competitive advantage in any world-class company is created from market impact, lean operations and balanced culture (Smith 1995: 42).

Four competitive paradigms have been identified by Pace and Stephan (1996: 8): 1) Craftsmanship; 2) Productivity; 3) Quality; 4) Immediacy.

Carneiro (2000) has examined the knowledge management influence on competitiveness. The competitiveness relations with management systems were also analysed by Mikulis and Ruževičius (2009: 26). Haake (2002: 731) proposed to relate national business systems to industrial competitiveness. Itagaki (2009: 451) has analysed the competitiveness of Japanese multinational enterprises.

Other researches specialize in different industry sectors or one of them, because an assessment of external competitiveness requires sectors to be examined individually. For example, Sabonienė (2009: 49) has analysed the export competitiveness. Rybakovas (2009) tried to find the most competitive sector of Lithuanian manufacturing industry.

Ginevičius and Krivka (2009) have developed the model of the multi-criteria evaluation of the competitive environment in the oligopolic market, which was applied for the comparative analysis of three Lithuanian oligopolic markets: cellphone connection service market, beer market and Internet connection service market.

The term of "Regional competitiveness" has two meanings.

First, the term "regional" means the area (city, urban) in the same country or a composite part of a larger economic social space, which differs from other surrounding territories in economic, social, demographic, cultural, natural, and infrastructure systems connected by material and informational relations. A number of researchers are trying to create the models of regional competitiveness (Brooksband, Pickernell 1999; Huggins 2003; Berger, Bristow 2009; Bruneckienė, Cinčikaitė 2009; Bristow 2010; *etc*.).

Huggins (2003) has introduced "*Three-factor model"* for measuring local and regional competitiveness and has constructed the *UK Index of Competitiveness.*

Berger and Bristow (2009) have focused on examining the ability to predict and rank regional economic performance. They have identified the problems of the selection of indicators and the method of aggregation into one single value (the weighting of the indicators).

Aiming to measure the regional competitiveness in Lithuania, Snieška and Bruneckienė (2009: 48) have formed two models which supplement each other: "*Rindex*" and "*Regional Diamond*".

Studies of city competitiveness propose a wide variety of factors which impact upon the performance of cities within the global economy.

Second, the term "regional" can mean bloc competitiveness (*for example*, EU–15, EU–27, Asia, Baltic States (Lithuania, Latvia, Estonia), the so–called BRIC (Brazil, Russia, India and China) countries, the Triad (EU, US and Japan), *etc.*). The unified social, economic and technological space in the Baltic region as a research area is described by Melnikas (2008). Rojaka (2009) has looked at the progress of the three Baltic countries to evaluate their competitiveness perspective before and after the global crisis.

Usually governments seek to promote the international (global, external) competitiveness of the regions, reducing disparities between the levels of development of the various regions.

Pedersen (2008) has introduced the concept of institutional competitiveness to show how the concept of international competition has been reformulated as part of a political project for initiating economic globalization. According to Pedersen (2008), firstly, nations compete by reforming the institutional (legal, political, economic and cultural) context for firms in an attempt to produce comparative advantages; e.g. by creating conditions for internal and external flexibility of working conditions. Secondly, nations compete by deliberately creating institutional complementarities, e.g. by coordinating a number of policy areas, societal players and levels of government into governance systems equipped for mutual and ongoing learning and experimentation.

Snieška (2008: 29) and others research the international competitiveness of nations and companies. Mutsune and College (2010: 53) present a Total Factor Productivity based model that measures the state of United States ability to compete in the international marketplace.

The main evaluation problems that arise at the theoretical, or methodological, level are: the absence of a definite, clear, and solid concept of competitiveness; and the limitations caused by various evaluation methods. Practical problems are associated with limited resources, and the quality of (as well as the access to) relevant information, used in the process of competitiveness evaluation (Navickas, Malakauskaitė 2010).

Existing studies on competitiveness can be divided into the categories according to differences in unit entity. Clear categorization of the competitiveness research could help to make a systematic view of competitiveness.

3.2. National competitiveness

A great number of economists develop national competitiveness theory nowadays. The models of competitiveness are based on the selection and grouping the different factors of competitiveness into a general system.

A wide range of complex competitiveness determinants could be found. In order to determine the level of competitiveness of region or country, a great number of various and often incompatible criteria should be considered.

Porter's (1998) theory, introduced in his book "The competitive advantage of nations", is generally accepted and commonly referred to as *Porter's Diamond model*, as it comprises four key elements that lead to national competitiveness (Fig. 2). The interlinked advanced factors of competitive advantage of countries or regions in Porter's Diamond framework are: 1) Firm strategy, structure and rivalry; 2) Demand conditions; 3) Related supporting industries; 4) Factor conditions. Although not illustrated in the formal model, Porter also acknowledges the role that governmental forces and luck can play in national competitive advantage.

The Diamond model is one of the few models in international business research that illustrates what comprises national competitiveness within a given industry. A lot of studies have evaluated the concept of national competitiveness based on the Porter's model (Grant 1991a; Bosch, Prooijen 1992; Krugman 1994; Weihrich 1999; Snowdon, Stonehouse 2006; Berger 2008; *etc.*) or have tested it (Sledge 2005). Some of them have criticized it or tried to improve it (Grant 1991a; Bosch, Prooijen 1992; Rugman, D'Cruz 1998; Davies, Ellis 2000; Moon *et al.* 1998; etc.).

For example, Bosch and Prooijen (1992: 176) have criticized the lack of attention given to the role of national culture in Diamond model. European management has to cope with different national environments based on different national cultures. These different national environments give rise to differences in competitive advantages between European countries.

According to Grant (1991a: 548), at the empirical level, the theory is applied selectively and qualitatively and without resort to rigorous testing of its predictive validity.

Krugman (1994) was uncomfortable with the Porter's (1990) idea that nations, like corporations, compete with each other.

Rugman and D'Cruz (1998) incorporated the international context in Porter's model by introducing *the Double-Diamond model*. This was made by combining the domestic diamond with that of a relevant economy, leading to a Double-Diamond. This model itself has some limitations, as it can lead to multiple, not only double diamonds if more than one economy is relevant for the analysis.

Therefore, Moon *et al.* (1998) introduced *the Generalized Double-Diamond (GDD) model*. This expanded and adjusted competitive advantage model has three major advantages compared with Porter's original model (Moon *et al.* 1998: 148). Firstly, it incorporates multinational firms, secondly, it is easier to operationalize and thirdly, government activities are seen as an endogenous variable. Still, drawing cluster and industry boundaries for the comparison remains a difficult task and the linkages are also not so easy to assess.

Some limitations like the focus on the national rather than international context and the non-incorporation of multinational firms have been addressed by models like the Double-Diamond and the Generalized Double-Diamond model (Berger 2008: 107).

Cho and Moon (2000) proposed the integrated model of competitiveness "*The Nine-Factor model"*, which encompasses both physical and human factors. These nine factors are classified into four categories – subject, environment, resources and mechanism – by the roles they play to increase the level of competitiveness (Fig. 3). Three aspects are taken into consideration. The first comprises four physical factors – the basic factors that determine a nation's competitiveness: endowed resources, business environment, related and supporting industries, and domestic demand.

The second, human factors are the subjects that mobilize the above mentioned four physical factors, thereby creating and maximizing competitiveness. In developing countries the key engine for economic growth has been the group of people with generally high level of education, motivation and dedication. These people are grouped into four categories: workers who carry out basic economic activities, politicians and bureaucrats who formulate and implement economic plans, entrepreneurs who make bold investments, and professional management and engineers who constantly challenge new technologies. The third are external factors. Chance events strengthen a nation's competitiveness only when the human factors are ready to take advantage of such chances.

There is a similarity between "Porter's Diamond model" (Fig. 2) and "The Nine-Factor model" (Fig. 3): four of the nine factors are identical (endowed resources, related and supporting industries, domestic demand, and chance events), while one factor is similar in nature – strategy, structure and firm rivalry versus business environment. The difference, however, is that the latter emphasizes human factors by separating workers from endowed resources (Cho 1998).

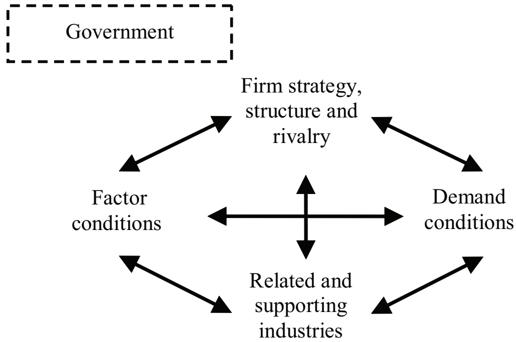

Fig. 2. Porter's Diamond model for the Competitive Advantage of Nations (Porter 1998)

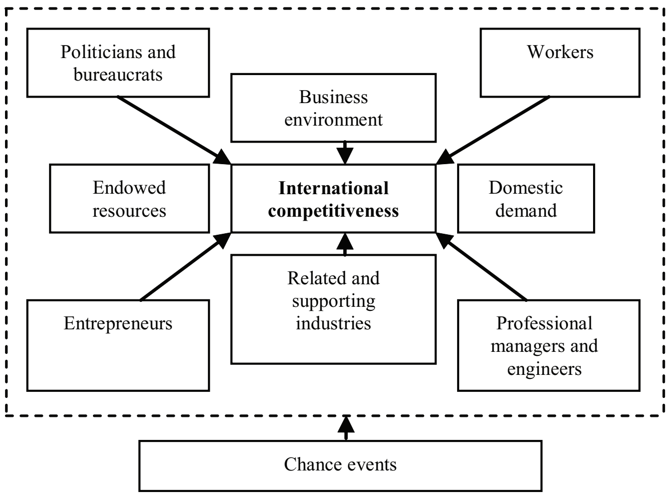

Fig. 3. The Nine-Factor model of international competitiveness (Cho 1998)

Cho and Moon (2000) introduced the evolution of Competitiveness Theory from Adam Smith to Michael Porter.

Weihrich (1999) used the *TOWS* (Threats, Opportunities, Weaknesses, Strengths) *Matrix* – an alternative to Porter's model – for analysing the competitive advantages and disadvantages of Germany. Weihrich concluded that although Porter's model provides a useful framework for analysing the environment, especially the economic one, it does not require government policy makers to develop responsible alternative strategies that create and maintain a competitive advantage for their nations.

A different analysis can be accomplished by using concepts from strategic management – namely, the TOWS Matrix. This approach does not contract but, rather, supplements

Porter's analysis. The TOWS Matrix approach is less deterministic than Porter's model. It provides a framework for developing alternative national strategies by analysing a nation's strengths and weaknesses and integrating them with global opportunities and threats.

Sledge (2005) summarized that Porter's model depicting the competitive advantage of nations is illustrated quite well by the global automotive industry. Certain aspects of the data do not accord to the model precisely, but the model does identify the key elements of national competitive advantage which lead to global competitiveness among leading automotive manufacturers around the world.

Other researchers examine the relationship between different areas or components and competitiveness.

Freeman (2004) made a critical review of the developments in the theory of international trade and showed how competitiveness cannot be explained by wage rates, prices and currency rates. Freeman (2004) analyses how technological infrastructure differs between countries and how such differences are reflected in international competitiveness.

Mutsune (2008: 2) examines the relationship between trade performance and international competitiveness. Factors that determine competitiveness can be categorized as macro-level and micro-level parameters.

Gerasymchuk and Sakalosh (2007) reveal economy competitiveness and knowledge-based economy questions and the basis of information and communication technologies influence on this.

The knowledge infrastructure has been considered as a main drive to competitiveness by Raval *et al.* (2009: 37).

Other researchers try to estimate impact of foreign direct investment on growth of economy (Tvaronavičienė, Kalašinskaitė 2010; Tvaronavičienė, Grybaitė 2007).

According to Rutkauskas (2008: 89), country (region) competitiveness measure is assumed as *three-dimensional indicator*, which depends on the fields of activity, dominating in the country, international economic relations and legal, financial, ecological, natural resources and geographical location, environment competitiveness.

The National Competitiveness Council (NCC) in Ireland uses a *Competitiveness Pyramid* to outline the framework within which it assesses national competitiveness (Fig. 4). At the top of the pyramid there is sustainable growth in living standards – the fruit of past competitiveness success.

Below this there are essential conditions for achieving competitiveness, including business performance (such as trade and investment), productivity, prices and costs and labour supply. These can be seen as the metrics of current competitiveness. Lastly, there are the policy inputs covering three pillars of future competitiveness, namely the business environment (taxation, regulation, finance and social capital), physical infrastructure and knowledge infrastructure. These are addressed in turn.

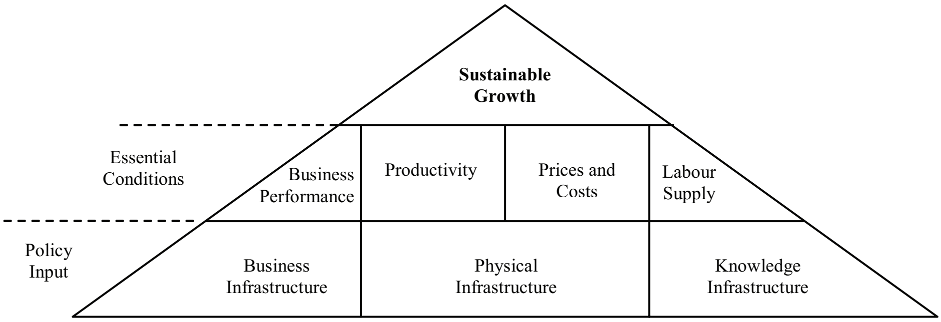

Fig. 4. The National Competitiveness Council (NCC) Competitiveness Pyramid. Source: *Annual Competitiveness Report* (2009: 20)

The National Competitiveness Council (NCC 2009) analyses Ireland's competitiveness performance using 150 competitiveness indicators. These range from measures of the successes of past competitiveness, such as economic growth and quality of life, to the policy inputs that will drive future competitiveness, such as the education system and public spending on infrastructure.

Department of Statistics to the Government of the Republic of Lithuania (Statistics Lithuania) provides 28 success indicators of country's economic competitiveness.

To generalize, the concept of competitiveness and competitiveness models are still far from creating a consensus. According to Lodge (2009: 461), the ability of a nation to compete effectively in the world economy depends to a great extent on its prevailing ideology.

3.3. International assessments of competitiveness: the screening of competitiveness factors and indicators

International assessments of competitiveness and benchmarking allow cross-country comparisons on a regional and global scale and help to establish priorities and policies or are used to promote investment in a country, state or region. A comparison with other regions shows the remaining potential for productivity growth and helps to identify areas of the economy that are lagging behind. International benchmarking stimulates debate on international progress across a range of competitiveness indicators, and on the challenges that the economy faces in sustaining this success into the future.

Berger (2008: 93) argues that national competitiveness can have a meaning if it is seen as a relative concept as a basis for comparisons, i.e. benchmarking of nations.

Countries' ranking depends on evaluation technology the most (Tvaronavičienė *et al.* 2008). There are many competitiveness reports around.

For the past three decades, the World Economic Forum's (WEF) annual *Global Competitiveness Reports (GCR)* have examined many factors enabling national economies to achieve sustained economic growth and long-term prosperity. Since 2005, the World Economic Forum has based its competitiveness analysis on the Global Competitiveness Index (GCI), a highly comprehensive index, which captures the microeconomic and macroeconomic foundations of national competitiveness (Schwab 2009a: 3).

The Global Competitiveness Index (2009–2010), covering 133 countries from all of the world's regions, demonstrates the extent to which national competitiveness is a complex phenomenon, which can be improved only through an array of reforms in different areas that affect the longer-term productivity of a country (Schwab 2009b: 41). The GCI captures this open-ended dimension by providing a weighted average of many different components, each of which reflects one aspect of the complex concept that is called competitiveness. All these components are grouped into 12 pillars of competitiveness. Although the 12 pillars of competitiveness are described separately (such an analysis gets closer to the actual areas in which a particular country needs to improve), this should not obscure the fact that they are not independent: not only are they related to each other, but they tend to reinforce each other. The pillars are organized into three sub-indexes, each critical to a particular stage of development: the basic requirements sub-index groups are those pillars most critical for countries in the factor-driven stage, the efficiency enhancers sub-index includes those pillars critical for counties in the efficiency-driven stage, and the innovation and sophistication factors sub-index includes the pillars critical to countries in the innovation-driven stage (Fig. 5). The actual construction of the Index involves the aggregation of the 12 pillars into a single index.

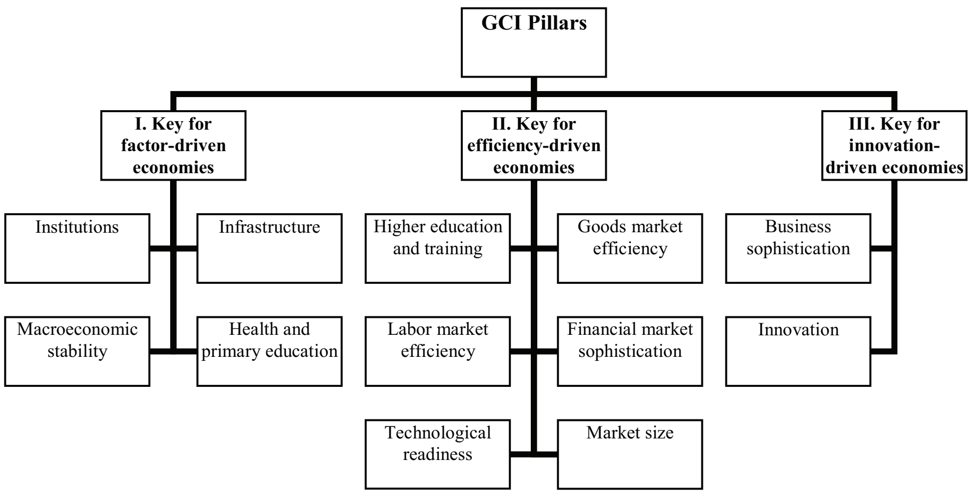

Fig. 5. The 12 pillars of competitiveness (Schwab 2009a)

The World Competitiveness Centre of The Institute for Management Development (IMD), based in Switzerland, publishes the annual *IMD World Competitiveness Yearbook* (WCY), which provides extensive coverage of 59 economies. The yearbook benchmarks the performance of the countries based on 329 criteria measuring different facets of competitiveness (Garelli 2009).

The methodology that supports the World Competitiveness Yearbook is based on four pillars of competitiveness indicators, each of which is divided into five sub-categories. This gives twenty components, each of which is given an equal weighting of 5 percent, when calculating an overall competitiveness ranking (Fig. 6). The indicators assessed in this report are based on "hard" data from international and national statistics, which represents 2/3 in the overall ranking, and opinion (survey) data (1/3).

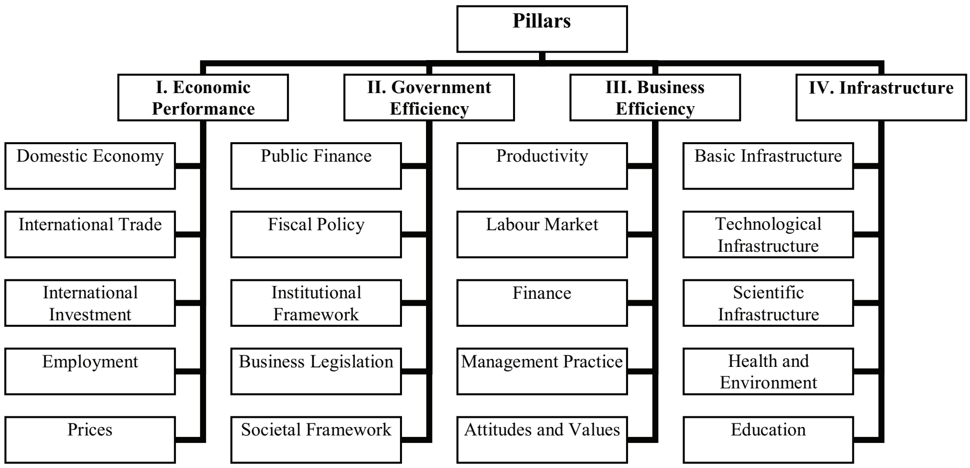

Fig. 6. Four pillars of competitiveness (Garelli 2009)

There are two differences between WEF and IMD reports. First, WEF covers more economies (133) (2009–2010) than IMD (59 economies) (2009). Second, the using of the "soft" and "hard" data is different – WEF puts more emphasis on survey data compared to the IMD with the more focus on "hard" statistics from international, national and regional organizations.

The Organisation for Economic Co-operation and Development (OECD) provides the internationally comparable indicators, which enable countries to assess their economic performance and structural policies in a wide range of areas.

Robert Huggins Associates has produced a national and regional index of competitiveness – the *European Competitiveness Index (ECI)*, as well as national index of the 25 European Union member states plus Switzerland and Norway. The European Competitiveness Index (2006–2007) benchmarks 118 regions (which includes small states such as Latvia, Cyprus, and Malta) and was composited from the regional data from three of the variable groupings: 1) Creativity; 2) Economic Performance; 3) Infrastructure and Accessibility (Huggins, Davies 2006: 3) (Fig. 7).

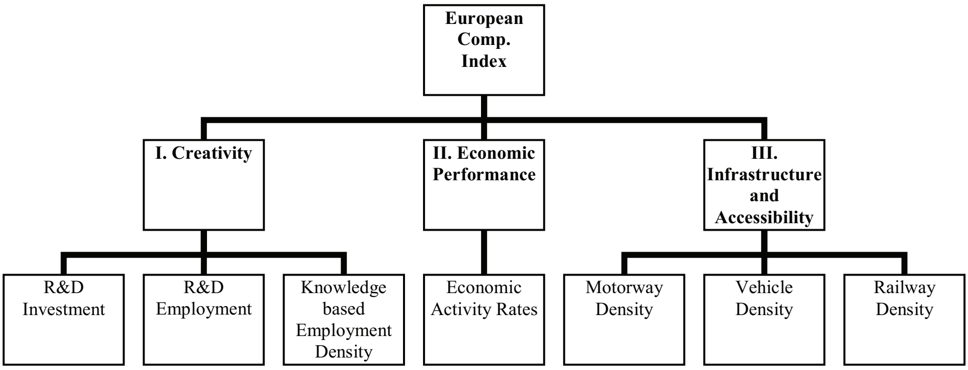

Fig. 7. The composite European Competitiveness Index. Source: *Robert Huggins Associates* (Huggins, Davies 2006)

The Competitiveness Council in Belgium assumes a horizontal role in ensuring an integrated approach to the enhancement of competitiveness and growth in Europe.

Within the Lisbon Strategy, the Statistical Office of the European Communities (Eurostat 2010) provides an assessment of the progress made towards the Lisbon objectives through a set of 79 structural indicators. A short list of 14 of these indicators was used every year to assess each EU Member State in the Commission's Annual Progress Reports for Growth and Jobs.

European Competitiveness Report (2009) reviews the EU's overall competitiveness performance as well as the external and internal aspects of competitiveness.

Despite the usefulness of international benchmarking, it is important to draw attention to some limitations of competitiveness benchmarking.

Firstly, with the rise in globalisation, cities across the world are becoming less concerned with national rankings of competitiveness and are focusing instead on improving their positions in a global league table of cities. Cities are increasingly seen as the drivers of national competitiveness of economic and social development. Cities play an increasingly crucial role in enhancing competitiveness in modern knowledge-based economies. As people become more mobile and firms more selective about where they locate, competitive cities have emerged as magnets for talent and investment (Our Cities: Drivers of National Competitiveness 2009: 3).

The Robert Huggins Associates have published a separate list of those regions that have the greatest potential to improve their competitiveness in the future.

Secondly, quantitative evaluation of competitiveness allows us to determine the changes, but certain competitiveness issues can be difficult to quantify (e.g. the quality of education and national levels of creativity and innovation) or there is the added challenge of securing timely and internationally comparable data for those dimensions of competitiveness which are quantifiable (Annual Competitiveness Report 2006: 14).

The different approaches to countries' development assessment might affect their comparison results (Tvaronavičienė *et al.* 2009).

Thirdly, it is difficult to evaluate the different historical contexts, economic and political performance, social goals of various countries, and their differing physical geographies and resource endowments.

The analogical question, if the systems of sustainable development indicators provided by the institutions are applicable for practical analytical purposes, is being raised (Grybaitė, Tvaronavičienė 2008) as well as the search for a set of sustainable development indicators (Lapinskienė, Tvaronavičienė 2009).

Cho and Moon (2005: 3) opinion is that the existing reports are mainly designed for developed counties. When comparing national competitiveness, nations should be grouped with regard to similarities in terms of economic scale and structure.

On the other side, competitiveness plays a key role in both developed and developing countries.

According to Petit (2006: 593), countries have to draw on their own specific characteristics to adapt to the challenges of internationalisation and the new competitive state of affairs.

Huge differences exist in competitiveness structure of each country, because it is impossible for a country to be competitive in all or most of the fields (Rutkauskas 2008: 91). Besides, countries with quite different levels of factors can obtain the same value of general competitiveness index (Rutkauskas 2008: 93). Every country has to establish its own competitiveness level and find its own opportunities to win its share in the global market (Lapinskienė, Tvaronavičienė 2009: 210).

Nerveless the fact, that the appropriate general evaluation method has not been developed yet, high-ranking countries can be used as models of "best practices" to be followed by the others.

4. Towards a new approach to competitiveness: "Sustainable competitiveness"

The Lisbon Strategy, launched in 2000, was based on an acknowledgement of the European Union's need to increase its productivity and competitiveness, while enhancing social cohesion, in the face of global competition, technological change and an ageing population.

The financial and economic crisis that started in 2008 resulted in a significant loss in jobs and potential output.

The European Commission (EC) proposed the new European Union strategy for smart, sustainable and inclusive growth – "Europe 2020". EC identifies three key drivers for growth, to be implemented through concrete actions at EU and national levels: smart growth (fostering knowledge, innovation, education and digital society), sustainable growth (making the production more resource efficient while boosting the competitiveness) and inclusive growth (raising participation in the labour market, the acquisition of skills and the fight against poverty) (Europe 2020. A Strategy for Smart, Sustainable and Inclusive Growth 2010).

Sustainable growth means decoupling economic growth from use of resources, building a resource–efficient, sustainable and competitive economy, a fair distribution of the cost and benefits and exploiting Europe's leadership in the race to develop new processes and technologies, including green technologies.

Inclusive growth means building a cohesive society in which people are empowered to anticipate and manage change, thus to actively participate in society and economy.

Member States should decouple economic growth from resource use, turning environmental challenges into growth opportunities and making efficient use of their natural resources.

The definition of competitiveness as well as the definition of development sustainability requires adequate interpretation and quantitative assessment (Rutkauskas 2008).

Porter and Linde (1995: 133) pointed out what there is a need of thinking about the relationship between competitiveness and the environment. An underlying logic links the environment, resource productivity, innovation and competitiveness.

According to Wade-Benzoni (1999), maintaining the long-term viability of the earth's ecosystems by using the earth's resources sustainably helps ensure that economic opportunities are kept open for the future generations.

Wysokińska (2003: 14) has observed a strong correlation between the sustainable competitiveness of the economy and the growing productivity of its different sectors on the global market.

Grundey (2008) has applied sustainability principles in the economy among the three levels of economy (macro, mezzo and micro).

The link between pollution abatement and indicators of competitiveness has been reviewed by Pasurka (2008: 207).

According to Rutkauskas (2008), success in risk management is supposed to be factor of the highest importance to tackle sustainability at country's competitiveness development.

The essence of environmental sustainability is a stable relationship between human activities and the natural world, one that does not diminish the prospects for future generations to enjoy a quality of life at least as good as our own.

The importance to control balance between economic development, social development, and environmental development was mentioned by Grybaitė and Tvaronavičienė (2008). Lapinskienė and Paleckis (2009) have also initiated to establish the relationship between the sustainable development and the economic growth.

There have been an increasing number of studies and reports on competitiveness over the last years, but as yet relatively few of them have looked at competitiveness from the standpoint of globalization and sustainable development.

Keršienė (2009: 819) has tried to investigate the factors of SME's competitiveness sustainability under the circumstances of globalization and trade liberalization.

It is generally recognized that, with the globalization of the economy, competitiveness has become one of the prime concerns of governments and firms.

According to Fougner (2008: 309), the discourse on economic globalization contributed to transform the meaning of national competitiveness. The reason for this is that a globalist conception of the world economy as characterised by a high degree of mobility on the part of firms and production factors made it problematic to talk about national firms competing with foreign ones for shares of international product and service markets.

The increased global mobility of the factors of production across regions heightens the significance of benchmarking and understanding the competitiveness of regions within this global context (Huggins, Izushi 2009: 289).

In recent years, the importance of achieving sustainability to ensure long-term competitiveness at city level has been recognised, both nationally and internationally. Cities are increasingly seen as the drivers of national competitiveness of economic and social development.

Berger (2008: 91) argues that national competitiveness should be seen as a relative rather than an absolute concept that allows for a benchmarking of nations.

Gains in national competitiveness of one nation must not be at the cost of other nations. If two nations grow at fast rates, with one growing still faster than the other, the one with the higher rate of growth could be seen as being more competitive (ability to earn) even that in absolute terms both nations would be better off. Indeed, there would be a "relative loser" and a "relative winner" but no absolute winner or loser (Berger 2008: 108).

Some nations support competitiveness more than others by creating an environment that facilitates the competitiveness of enterprises and encourages long–term sustainability.

The National Competitiveness Council (NCC) analyses the literature on wellbeing from the perspective of national competitiveness. In the National Competitiveness Council's view, the competitiveness remains a foundation for national economic and social progress. The competitiveness agenda is not one that divides business and wider society. The key objective of competitiveness is to support a high quality of life, which is broader than material living standards. The overarching goal of national competitiveness is to improve living standards and quality of life by enhancing the ability of the enterprise base in a county to trade in international markets.

Economic growth should benefit everyone and nobody should be left behind. It is important to identify the most powerful factors both to the economic growth and the living standards (Balkytė, Valentinavičius 2006).

Economic growth and social progress are inextricably linked. Continued competitiveness and economic growth are essential to supporting living standards and wellbeing. Strong international competitiveness creates the resources that enable material improvements in living standards and resources for investments in health, education, transport infrastructure and other areas that promote both individual wellbeing and national competitiveness (Discussion Paper on Wellbeing and Competitiveness 2008).

Countries which are highly ranked regarding competitiveness are even highly ranked regarding living standards (Schuller, Lidbom 2009: 939).

An environment that supports high levels of wellbeing is becoming an important driver of competitiveness as country's endeavours to attract and develop world-class companies and workers. The relationship between competitiveness and wellbeing is becoming stronger and mutually supportive.

Generally, globalization, economic dynamism and social progress, sustainability and competitiveness go hand-in-hand. The different sets of competitive advantages interact and reinforce each other.

In this context, it should be pointed out that there is a need of research initiatives to develop further the concept of "Sustainable competitiveness" and the new theoretical models, with much focus on how international globalization, economic growth, sustainable development, wellbeing and competitiveness interact.

5. Conclusions

The findings of this article point us towards the conclusion, that despite all the discussions on competitiveness however, no clear definition, model of competitiveness or international assessments method have yet been developed.

The research and studies on competitiveness centre on the different categories of analysis. Clear categorization of the competitiveness research areas should be generally adopted. The suggested classification of the existing studies on competitiveness and research areas consists of six categories:

1) Competitiveness of companies (firm level competitiveness),
2) Sectors competitiveness (industry competitiveness),
3) Regional competitiveness (area, place, locality, territorial, city, urban competitiveness),
4) National competitiveness (country competitiveness),
5) Bloc competitiveness (regional competitiveness),
6) International competitiveness (global, external competitiveness).

Despite the usefulness of international benchmarking, it is important to draw attention to some limitations of competitiveness benchmarking. The different approaches to competitiveness might affect the different comparison results.

First, cities across the world are becoming less concerned with national rankings in response to economic globalization. Second, certain competitiveness issues can be difficult to quantify. Third, it is difficult to evaluate the different historical context, economic, political performance, social goals, different geographies, etc.

Otherwise, it is important not only to state the fact about the achievements in the context of competitiveness, but the most important "puzzler" is to find out the factors, which create the complex competitive advantage of the country or region in the future. Generally, globalization, economic dynamism and social progress, sustainability and competitiveness go hand-in-hand. Competitiveness should be underpinned by a broad vision for the economy and society. Economic growth should benefit everyone and nobody should be left behind.

Additionally, the agreement to launch the new European Union strategy for smart, sustainable and inclusive growth – "Europe 2020" creates a need of research initiatives to develop the new concept of competitiveness, with much of the research focusing on how sustainable development and competitiveness interact.

Such additional research will lead to new theoretical models describing the relationships between international globalization, economic growth, sustainable development, wellbeing and competitiveness, allowing us to define the "Sustainable competitiveness".

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KONKURENCINGUMO SUVOKIMAS DARNAUS VYSTYMOSI KONTEKSTE: "DARNAUS KONKURENCINGUMO" ASPEKTAI

A. Balkytė, M. Tvaronavičienė

Santrauka

Europos Vadovų Taryba pritarė Europos Komisijos pasiūlytai ekonomikos augimo ir darbo vietų kūrimo strategijai – "Europa 2020" – naujai Europos Sąjungos strategijai dėl pažangaus, tvaraus ir integruoto augimo. Tai sudaro prielaidas naujai konkurencingumo sampratai ir gilesniam darnaus vystymosi ir konkurencingumo sąryšiui.

Šio straipsnio tikslas yra nustatyti tolesnių konkurencingumo teorijos tyrimų sritį, atsižvelgiant į konkurencingumo koncepcijos plėtrą ir egzistuojančias mokslinių tyrimų tendencijas.

Iš vienos pusės, siekiant plėtoti konkurencingumo teoriją, būtina kritiškai įvertinti egzistuojančias konkurencingumo studijas. Mokslininkai, nagrinėdami konkurencingumo problematiką, pateikia įvairias konkurencingumo koncepcijas, siūlydami skirtingus apibrėžimus, klasifikaciją, veiksnius, konkurencingumo modelius ir vertinimo kriterijus. Nepaisant plačių diskusijų, kol kas nėra susitarta dėl aiškaus konkurencingumo apibrėžimo ar visuotinai pripažįstamo modelio.

Iš kitos pusės, globalizacija, ekonomikos dinamiškumas ir socialinė pažanga, darnus vystymasis ir konkurencingumas yra tarpusavyje glaudžiai susiję. Plati ekonomikos ir visuomenės vizija turėtų būti konkurencingumo pagrindas. Egzistuojantis mokslinių tyrimų poreikis veda link naujos „darnaus konkurencingumo" koncepcijos kūrimo iniciatyvų, įvertinant globalizaciją ir daugiau dėmesio skiriant darnaus vystymosi bei konkurencingumo tarpusavio ryšiams. Tokie tolesni tyrimai padėtų atrasti naujus teorinius modelius, charakterizuojančius tarptautinės globalizacijos, ekonomikos augimo, darnaus vystymosi, gerovės kūrimo ir konkurencingumo sąryšį.

Reikšminiai žodžiai: konkurencingumas, nacionalinis konkurencingumas, konkurencingumo modeliai, veiksniai, rodikliai, lyginamoji analizė, darnus vystymasis, darnus konkurencingumas, ekonomikos augimas.

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