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The Specifics of Measurement the Urban Competitiveness at the National and International Level

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The article involves analysis of urban competitiveness from the national and international perspective. The analysis is focused on possibilities of application of different methods, widely used for the assessment of both the company's, national and regional competitiveness, as well as on identification of advantages and disadvantages of such methods. The article also involves introduction of methodological guidelines on the assessment of urban competitiveness from the national and international perspective, based on results of theoretical and empirical analysis. The empirical study is based on analysis of the sample of Kaunas, the second largest city of Lithuania. From the national perspective the assessment of Kaunas city competitiveness is based on comparing it with other major cities of Lithuania – the country's capital Vilnius and Klaipeda, by employing statistical data of 2007-2010. The availability of official data at the regional level revealed that the assessment of international competitiveness of the cities, located in regions which, based on the territorial statistics units nomenclature, are attached to the third level (NUTS 3), should be equaled to the regional competitiveness itself. Measurement of Kaunas city and region competitiveness from the international perspective is based on statistical data of 2007-2011.
The identification of specifics of measurement the urban competitiveness at the national and international level, presented in the article, is one of the ambitions to promote the methodological background for urban governance and improvement of competitiveness of Lithuanian cities.
The article presents the continuity of the research work of the authors in the sphere of urban competitiveness measurement.

Keywords: *national and international competitiveness, urban competitiveness, measurement of urban competitiveness.*

Introduction

Since the last decade of the 20th century, cities have become among the most complex and dynamic economic, social and ecologic systems, being open, dependant and vulnerable. Due to the rapid urban development process, recently cities are becoming both national and regional centers of economic activities, innovations and culture, as well as objects of attraction from the human and investment perspective. Scientific literature approves positive effect the cities make on economic development, market growth and establishment of new business possibilities. The economic globalization creates opportunities for an increasing number of cities to become involved in the global economic activities, thus strengthening the role of urban and reducing the significance of peripheral territories.

The research done by authors of this article (Bruneckiene et al., 2010, Kilijoniene at al., 2010) revealed the existing competitiveness between the cities and regions within different economic sectors or types of activities (industry, services, advanced technologies, tourism, etc.) and at different levels (regional, national, international) for the human capital, investment, new technologies, tourists, export markets, national and international projects and events, the government's political favor, etc. And each year this competitive struggle becomes more intensive, thus increasing the relevance of analysis on the competitiveness-related problems in the period of globalization. However, due to the same globalization process, many cities become alike, and their strategic development documents focus on the same or similar trends and priorities of the economic breakthrough. This eliminates the exclusiveness of the cities and prevents from creating their competitive advantages, thus reducing their competitive position within both the national and international market. All this increases justification of the relevance and timeliness of the problems analyzed.

Scientific literature provides frequent introduction and samples on practical application of various methods, as well as ways of measuring competitiveness of a company, region or country from both the international and national perspectives. However, there is a lack of a major academic approach and analysis on possibilities related to application of such methods at the urban level, as well as their practical applicability. The absence of methodological aids and guidelines for measuring competitiveness of the city at international and national level becomes a certain obstacle, reducing possibilities of measuring the increase in urban competitiveness and competitive advantages in comparison with other cities - the basic competitive rivals.

The object of the article - competitiveness of the cities located in the regions which, based on the territorial statistics units nomenclature, are attached to the third level (NUTS 3), from the international and national perspective.

The objective of the article - to identify the specifics of measuring the urban competitiveness and develop the methodological guidelines, based on results of theoretical and empirical research of urban competitiveness measurement from the international and national perspective.

Methods of the research: systemic, comparative and logical analysis of scientific literature; empirical research, employing systemic analysis of external secondary data.

Urbanization process, economic development and urban competitiveness

The analysis of scientific literature proves that the concept of urbanization started to prevail more intensive in discussions among researchers, politicians, strategists and entrepreneurs since the 20th century, when the urbanization process became one of the major factors of changes within the economic and social environment. Researchers (Arbušauskaitė et al., 2007, Henderson, 2003) maintain that urbanization means the increase of population, living in urbanized areas; this is the process of people moving to the cities or other densely inhabited areas. This term also defines social changes determined by the concentration of population. The authors of this article emphasize that the concept of urbanization should not be identified with the urban growth concept, which involves the growth of urbanized areas or cities themselves.

There is a close relationship between analysis of the urbanization process and the urban concept. Definitions of the city vary among different researchers, and they apply different factors for describing the city; however, many of them distinguish the result of citizen(s) activities or their presence in the city. Ciegis, Pareigis (2010) described the city as a complex labor and communications system. PricewaterhouseCoopers (2005) emphasized the system of intellectual and social, demographic, cultural, environmental, technical and financial capital and their interrelationship. Maclennan (2006) defined the city as a place of concentration of business and industry, establishment of universities, hospitals, scientific institutions, densely inhabited by people, working at and receiving income from companies or organizations established there, as well as having a particular municipal governing and policy. The studies revealed that frequently, pursuing to distinguish differences between the city and the village, researchers focus on the working place of citizens: the majority of urban population work at institutions established in the city, whereas village people work in the fields or forests. In this article the concept of the city is identified with the definition provided in the Law on Territorial Administrative Units of the Republic of Lithuania and Their Borders (Zin., 1994, Nr. 60-1183): cities are referred to the compactly built up living areas, where over two thirds of the working population work in the industrial, business, production and social infrastructure spheres.

In research references the focus is laid on a recent rapid urban growth: since 1950 till 1994 the number of population living in urbanized areas has increased from 200 million to 2,4 billion people. There United Nations Population Fund (2007) specified that recently over 50 percent of the total world population live in cities, and there is a presumption (PricewaterhouseCoopers, 2005) that in 2030 this rate can reach the average 60 percent, while in highly developed countries - even 83,7 percent. Over time the city themselves grow as well. At present there are almost 400 cities all around the world whose population is over 1 million people. Globally the largest urbanized areas refer to Tokyo (Japan), with 28 million population and New York (the USA), with over 20 million population. Ciegis et al. (2009 a, b) point out that such a rapid explosion of the urban growth is determined by the decreased mortality rate, a more rational management of agriculture, improving transport and communications system, more stable political governing and industrial revolution.

It should be stressed that the focus exclusively on the increase in the number of the urban population can not provide a comprehensive picture of the urbanization process and its rate. Besides the latter, other factors also play a significant role, such as the regional and national population which works in the cities, prevalence of the urban living standards, differences between the income of the urban and rural population, migration, etc. Consequently, Vanagas (2003) described the overall urbanization development by four interdependent aspects: a) demographic urbanization; b) economic urbanization; c) spatial-architectural urbanization; d) social urbanization. Although the author maintains that complex evaluation of all these four factors describes the real rate of the urbanization process. Further focus of this article is laid on economic urbanization, by making a presumption that the effect of the rest criteria is reflected in the concepts, factors and indicators characterizing the economic urbanization.

Scientific literature provides ambiguous evaluation of the effects that the urbanization process produces on the urban and regional economic development. Some authors (Singhal et al., 2009, Xu, Watada, 2008, OECD, 2007, Henderson, 2003, Parkinson et al., 2003) refer to the positive effect of this process on the urban economic development, by distinguishing the strength of 0,85 correlation coefficient between the urbanization rate and GDP index, major possibilities for business development, investment, increase in productivity, implementation of

innovations, more favorable living, working, learning and entertainment conditions for the population. However, other researchers (Witcher, 2006) envisage a negative impact, due to the worsening ecologic and social situation (social inequality, differences in income, poverty, etc.), increasing pollution, morbidity, lack of water, food, living space, excessive consumption of energy resources; while others (Liobikiene, Mandravickaite, 2011, Čiegis, Pareigis, 2010, Balkyte, Tvaronaviciene, 2010, Čiegis et al., 2009 a, b, Rutkauskas, 2008, Arbušauskaitė et al., 2007) focus on the necessity to implement the sustainable urban development principles in the urban development and the increase in competitiveness spheres; also they emphasize that the urban planning should involve a huge number of problems and goals, related to the economic activities, environment, cultural heritage and social-economic distribution of the development-related costs and benefits gained. In spite of the diversity existing in evaluations provided by researchers and the general prevailing tendency referring to the currently increasing population's concentration in the cities, which, according to the forecast, will pursue in the future as well, the authors of this article recognize the positive effect of the cities on regional and national economic development and stress the necessity to implement the sustainable development principles in the urban planning process.

Analysis of research literature (Sinkienė, 2008, Kresl, 2007, OECD, 2006, 1997, HM Treasury, 2003, Landry, 2000), as well as the empirical research conducted by the authors of this article (Bruneckiene et al., 2010) revealed the existing interrelationship between the urban and regional economic development and competitiveness. Kresl (2007) emphasized that the national economic wealth is determined by the urban economic vitality. HM Treasury (2003) maintained that competitive cities create prosperous regions. According to Sinkienė (2008), by major concentration of consumers and the largest national internal markets, cities become the basic driving force of the national and regional economy. OECD (2006), Landry (2000) emphasized that the urban economic vitality is a new factor of urban competitiveness. OECD (1997) also emphasized that the urban and regional competitiveness, economic growth and innovation development are closely interlinked. The empirical research conducted by the authors of this article showed that by competitiveness major Lithuanian cities coincide with administrative centers of the counties, specified by the Law on Administrative Units of the Territory of the Republic of Lithuania and Their Borders, thus proving the direct link existing between the urban economic growth and competitiveness.

The research conducted by the authors of this article revealed a direct link between the economic urbanization process, urban economic growth and competitiveness. It should be emphasized that such economic phenomenon can operate in the reverse direction, in case the city fails to adapt to the changing environment and will remain passive with respect to implementation of the sustainable development in many spheres which are significant for the city's development, such as economy, social environment, quality of the environment. OECD (2006) maintained that the link between the size of urban population and income, expressed by GDP/per person, can not be considered unambiguously. Although the Pirson's correlation coefficient verified a positive and statistically reliable link between the size of population and income, however, analysis of mega cities revealed that statistical reliability of such link appeared to be not sufficient enough.

It has been emphasized that a larger city means a wealthier city only until a particular overpopulation level is reached, which causes a bigger social and ecologic burden to the city itself. Thus, a rapidly increasing urbanization process requests an increasing focus attached to analysis of the urban economic development, including analysis on the competitiveness-related issues, and all this further contributes to justification of the relevance and timeliness of the topic analyzed.

Diversity of methods on measuring urban competitiveness

In scientific literature (Bruneckiene et al., 2010, 2009, Sinkienė, 2008) the emphasize is laid on the situation when the municipal governing authorities lack methodological aids for conducting the analysis of competitiveness of the city, which allows adopting the most efficient decisions regarding solutions of the most urgent problems in this sphere. In such case the municipal leaders will fail to fully justify decisions on enhancing development and competitiveness of the city; consequently there will be a danger of inappropriate selection of the development trends, ineffective exploitation of resources and occurrence of other respective problems. Besides, in case there is none permanently conducted assessment and analysis on urban competitiveness, the latter can not be improved, as the starting point is not identified, accordingly, there will be no possibilities to compare changes in competitiveness from the time and the city's competitive rivals perspectives. The authors of this article emphasize that the city can not be competitive in all spheres, i.e. competing city will be involved into more than one competitive struggles with other cities in many different spheres. For instance, the city A can compete with the city B in the tourism sphere, and with the city C - in production, medicine or another sphere. The authors maintain that the city A can not be considered more or less competitive than the city B or C in the absolute sense. Pursuing to measure the absolute competitiveness of different cities, specificity of the assessed cities must be similar, or the measurement criteria have to be clearly identified. This methodological aspect is relevant because it is essential to understand the specificity of different cities, their competitive advantages, in which sphere and with whom the city competes. The provided argumentation justifies the significance of methodological guidelines for the measurement of urban competitiveness from the national and international perspective, which is an essential precondition in pursuit of a higher level of urban competitiveness and influencing its changes.

Scientific literature refers to various methods on measuring competitiveness, which might be classified into three groups: econometric, non-econometric - qualitative and mixed, combining the aforementioned methods. The analysis revealed that the same methods are employed for measuring the national, regional or urban competitiveness.

Some authors are measuring urban competitiveness based on one or several indicators, others developed theoretical models of urban competitiveness, combining a particular complex of quantitative indexes, whereas others measure by index or create different mathematical equations. Porter (1990), Krugman (1996) identified the GDP/per person index with competitiveness. DeFreit et al., (2003) criticized this indicator as a measure on competitiveness and the region‘s ability to generate income. Mayerhofer (2005) measured urban competitiveness by indicator of the value added per one working age citizen and its growth. When analyzing the cities of Eastern and Central Europe, for measurement of their economic development Jeney (2010) applied the urban-rural duality index. For the assessment of regional differences Tvrdon, Skokan (2011) applied the coefficient of variation, Herfindahl index, Gini index, Theil index. Researchers (Macerinskiene, Sakhanova, 2011, Bruneckiene et. al., 2010, Bustillos et al., 2010, Jiang, Shen, 2010, So, Shen, 2004) measured urban competitiveness by a composite index. For the measurement of urban competitiveness Begg (2002) suggested a mathematical equation, composed of the sum of income gained from the retail trade and business and the value added created in production. When identifying various factors of urban competitiveness (fundamental and driving, or the input and result), based on them, other researchers constructed their own urban competitiveness models (Sinkiene, 2009, 2008, Office of the Deputy Prime Minister, 2006), and/or, based on them, analyzed and measured the cities (Kresl, 2007, Webster, Muller, 2000).

Summarizing it is possible to conclude that by applying the econometric methods researchers usually try to verify the interrelationship between competitiveness factors of one or several cities, or their impact on the general urban competitiveness. Pursuing this purpose, statistical indicators of competitiveness factors are usually identified, as well as correlation or other coefficients, defining the relationship, are calculated, or various mathematical functions are created. By applying the non-econometric - qualitative methods researchers usually identify, systematize and group competitiveness factors and/or combine them into a general competitiveness model, as well as analyze cities by separate factors, thus striving to define the competitive position of the city. Whereas those who apply mixed methods employ the urban competitiveness model or conduct other qualitative analysis, thus justifying competitive factors which are involved in the measurement and indicators, characterizing them, also by econometric measures they actually conduct measurement of the city‘s competitiveness.

The analysis revealed that application of econometric and non-econometric - qualitative methods offers opportunities to describe the competitive position of cities or regions and envisage their future perspectives more explicitly and comprehensively. In their other articles (Bruneckiene, Krusinskas, 2011, Bruneckiene et al., 2010, Snieska, Bruneckiene, 2009) the authors of this article provided a comprehensive presentation on peculiarities, advantages and disadvantages of measuring urban and regional competitiveness by index; also they provided justification on suitability of this method for measuring territorial competitiveness.

However, in scientific literature, especially that of Lithuanian authors, there is a lack of more comprehensive and explicit studies on application of non-econometric - qualitative methods for measuring urban competitiveness, which encourages researchers to increase their focus on this sphere. It should be emphasized that the first scientific efforts in forming methodological basis for measuring urban competitiveness are observed in Sinkiene‘s research (2009, 2008), which includes introduction of the urban competitiveness model, distinguishing the process of formation of competitiveness of the city‘s activities, as well as the basic micro and macro environment factors, which was empirically tested with regard to other Lithuanian cities.

Analysis of scientific literature and strategic plans of different cities allowed to distinguish the most frequently used non-econometric - qualitative methods, applied for measuring urban competitiveness: SWOT, problem analysis, identification of competitive advantages and scenarios. A short description of such methods, distinguished by the authors, and their advantages and disadvantages from the urban competitiveness measurement perspective are presented in Table 1.

It should be emphasized that exclusively methods, most frequently used within the urban strategic planning process, are included into Table 1. Other researchers and practitioners also apply other, more adapted and empirically justified, from the regional, industrial branch or company perspective, methods, whose applicability at the urban level is seldom analyzed in scientific literature, which demands additional academic focus on this sphere:

- Importance-strength analysis, comprising the matrix of the competitive strength or advantages by importance and their effect on the general competitiveness.
- Systemic competitiveness analysis, comprising analysis of the total economic system competitiveness. The analysis involves four levels: Meta level (ability of the parties concerned to cooperate and trust and agree on the common priorities), macro level (financial possibilities and management), meson level (possibilities and measures of promoting the local economy), and micro level (relationship between enterprises (clusters))
- Multi-sector quantitative analysis (MSQA), comprising quantitative and qualitative analysis methods, enabling to identify possibilities of the local economic growth. Each economic sector is rated as strong, medium, and weak by the specified criteria, which are assigned weight coefficients, in pursuit to achieve a common result.
- Regional competitiveness performance cube (Stimson et al., 2005), from the dynamic perspective measuring regional competitiveness in three dimensions: management (strong, weak), institutions (efficient, inefficient), resources and adaptability to the market (good, poor).
- Balanced business scorecard, comprising analysis of the business strategy balance by four dimensions: financial potential, consumers, business process (efficiency), learning and growth.

Table 1

Advantages and disadvantages of the most frequently used non-econometric - qualitative methods from the urban competitiveness measurement perspective

Method	Description	Advantages	Disadvantages
SWOT	The most frequently used method. Facilitates identification of the strong and weak sides of the city, its possibilities and threats.	Does not require much data; Both quantitative and qualitative (e. g. provided by experts) information can be used; Convenient to use because it facilitates analysis of various spheres and aspects; Frequently serves as the initial source of information for identification of the urban development priorities and competitive advantages; Does not require much method application-related costs.	Requires a comparison of the city data with the same data outside its borders – other cities, region, country (external information). Falsely interpreted and applied methodology on application of this method determines a false defining of strong and weak points and their confusion with possibilities and threats.
Problem analysis	Facilitates identifying the essential problem/challenge of the city. The analysis is conducted in four stages: 1. Making a long initial list of problems and challenges (or description of the undesirable situation and its characteristic features); 2. Identification of one or several basic – essential problems causing the occurrence of other problems; 3. Identification of the problems - causes and problems - consequences; 4. Setting up the hierarchy of problems identified.	Most frequently qualitative data is used; Various data interpretation forms are available: by setting up a problem tree, objectives tree, etc. Possibility to describe visually the problems hierarchy and causes-consequences chain. This method does not request econometric knowledge; Does not require much method application-related costs.	Complicated stages of conducting analysis; Practically the problem hierarchy and causes-consequences chain is not always successfully identified, because majority of problems are determined by many problems. There is a demand for the experts, involved in the analysis, to be well aware of the situation in the city and specificity of the local economy; Quality of the obtained results often depends upon the problem analysis moderation process and concern of people involved in the analysis process.
Competitive advantage analysis	Facilitates measuring the competitive potential of the city, create and maintain competitive advantage with respect to other competitive rivals.	Due to the lack of standardized methods of analysis, there is a possibility for various data interpretation forms by applying different models of competitiveness, combining majority of factors determining competitiveness of the city into a common system; Encourages a novel approach to the competitive potential and advantages of the city through other competitiveness determining factors, which constitute the model. This method does not require econometric or other methods application-related knowledge;	Methodological justification of the competitiveness model used in the measurement is requested; The model adaptation to the city specificity is important; Usually requests for a more comprehensive information, both quantitative and qualitative, by each factor of competitiveness identified in the model. For the purpose of making comparisons between the cities, identical information on other cities is required; Excellent proficiency of experts', conducting the analysis, knowledge on competitiveness theory and its application to the city and regional economy is required.
Scenario planning (identification)	Facilitates identification of possible future changes, and based on them, selection of appropriate strategies for the development and maintenance of competitiveness of the city. Scenario planning involves three measures: - Qualitative scenario planning (by employing experts' knowledge and prognosis); - Quantitative scenario planning (by employing economic prognosis methods, in pursuit to identify how particular microeconomic changes can affect competitiveness of the city; Frequently the qualitative and quantitative scenario planning methods are combined together. - Identification of the future (first describing what the city will be in the future, and then preparing the strategy and forming measures for the achievement of specified objectives.	Future perspective-oriented and facilitates preparing for particular challenges in advance; May act as an aid of measuring the efficiency of current strategies on the increase in competitiveness of the city and preparation for future changes; Scenario planning can be based on both quantitative and qualitative information;	Not all forecasted future changes can occur in reality, or not all changes can be forecasted and measured; Although the number of scenarios is not specified, usually in practice two or three scenarios are identified; Three is a demand that experts who conduct the analysis were creative and distinguished themselves by dynamic approach; There might be a need to employ econometric methods and computer-based modeling programs.

- Core competencies/white spaces analysis, comprising analysis on the essential advantages of regional competitiveness and unexploited regional competitive abilities.

The conducted analysis of research literature on methods of measuring urban competitiveness provided the initial methodological basis for the empirical assessment of competitiveness of Kaunas city, the second largest city of Lithuania, at the national and international level.

Methodology of measuring competitiveness of Kaunas city

The choice of Kaunas city was determined by the results of analysis conducted by the authors of this article (Bruneckiene et al., 2010, Snieska, Bruneckiene, 2009), which revealed that city's competitiveness, by the ranking of 2007-2009, permanently exchanged with Klaipeda, the third largest city of Lithuania; however, the gap by indexes was annually decreasing, this was a warning about the likelihood of losing city's competitive position in the future. Pursuing to retain competitiveness of the city within the hierarchy of Lithuanian cities, it is essential to analyze its current potential and identify possibilities of its employment for ensuring and strengthening its future competitiveness. For achieving this purpose, it is essential to analyze both the national and international competitiveness of the city.

For measuring competitiveness of the city, the empirical analysis is based on the following methodological presumptions:

- Competitiveness is identified as the ability to take advantage of the competitiveness factors for establishing and maintaining a competitive position among other cities and regions.
- Competitiveness is approached from the dynamic perspective: competitiveness is treated as self-encouraging process, during which the result (output) turns into the contribution (input), which further determines the new result.
- Urban and regional competitiveness are closely interrelated.
- A complex measurement of competitiveness (comprising econometric and non-econometric-qualitative methods) allows to reveal city's competitive potential in more explicit and comprehensive way;
- An essential condition of the competitiveness measurement process refers to the involvement of the sustainable development principles.

Quantitatively, from the national perspective, competitiveness of Kaunas city was measured by comparing it with other major Lithuanian cities – Vilnius, the capital of Lithuania, and Klaipeda, by employing statistical data of 2007 - 2010. Competitiveness of Kaunas city was conducted based on the Lithuanian Urban Competitiveness Index (LUCI), consisting of 3 components: Economic, Social and Environmental status competitiveness; 7 groups of factors: results of economic activities, growth of economic capacity, human resources and education system, social welfare, living conditions, efficiency of management, environmental quality; 22 different factors and 30 indicators. This article refers to continuation of the LUCI theoretical and empirical analysis, presented in another article of the authors "Measurement of the Lithuanian Urban Competitiveness" (2010), aimed at measuring competitiveness of Kaunas city in 2010.

The main problem, that was faced when measuring competitiveness of Kaunas city at the international level, refers to the absence of official data at the urban level, and/or problems of their comparison with other foreign cities.

There are recommendations provided in studies of foreign authors to include into the measurement of competitiveness exclusively the cities with population over 0,5, 1 or 1,5 million (Jeney, 2010, OECD, 2006, Rainisto, 2003), or in the analysis to consider as the city the region where over 75 percent of the regional population live and work in the city (Office of the Deputy Prime Minister, 2006). The only Lithuanian city whose population exceeds 0,5 million is Vilnius, the capital of Lithuania; however, measuring it from the national perspective would be pointless due to the "capital effect", i.e. this is the city of politics, diplomacy, international cooperation, commerce, representation of the country, which automatically adds to its competitive advantage with respect to other cities. It should be emphasized that sometimes even in large and economically powerful countries, such as Germany, Italy, Switzerland, the USA capitals does not coincide with the cities of financial capital concentration. The authors of this article remark that this tendency does not apply in such small countries as Lithuania, Latvia and Estonia.

Considering the availability of official data on the regional and urban level, international competitiveness of Kaunas city is identified with the regional competitiveness itself, and its quantitative measurement is based on statistical data of 2007 - 2011, obtained from the World Economic Forum Global competitiveness index assessment results. The authors of this article support Jucevicius et al. (2006) opinion that European competitiveness is a much more significant criterion than the global competitiveness. This is due to the fact that none country, especially a small one, can be treated as an autonomic economic subject; it functions as a composite part of a larger economic system. The regional, supranational system will entrust such country with only such value creation functions which will best contribute to the productivity of the whole system. Taking this into account, the international competitiveness of Kaunas city and region is assessed with respect to the neighboring countries - Latvia, Estonia and Poland.

Pursuing to develop methodological guidelines for measuring urban competitiveness from the national and international perspective, empirically, with respect to Kaunas city, the following methods were applied: SWOT, the competitive advantage identification and scenario identification. The problem analysis method was rejected due to the complexity and complications related to setting up the problem hierarchy and causes-consequences chain, they are commonly closely interrelated and determine each other. When performing the SWOT analysis, the following principle was observed: if measurement of the subject exceeds country's average, it is considered as encouraging competitiveness, if it is lower - suppressing competitiveness,

and if it is close to the average - then it is neither encouraging, nor suppressing competitiveness. By applying the competitive advantage identification method, competitiveness of Kaunas city was measured based on M. Porter's national "Diamond model", whose suitability for the analysis of national and separate region or city competitiveness was justified by scientific research (Simanaviciene et al., 2007). Application of the scenario identification method was also based on the previously conducted scientific and research studies: the Strategy Europe 2020, National reforms schedule (2011), Lithuanian progress strategy "Lithuania 2030" (for the projects discussion), Kaunas city strategic development plan of 2005-2015, Lithuanian innovations strategy of 2010-2020, the National long-term development strategy, study on updating the National long-term development strategy and demand for strategic documents (2009), Insight of the Lithuanian economic development according to the regional and global tendencies (2007), a complex study on the Lithuanian economic growth and competitiveness sources (2006).

Results of empirical measurement of Kaunas city competitiveness

Taking into account that the objective of this article refers to setting forth the methodological guidelines related to measuring urban competitiveness from the national and international perspective, this chapter involves a brief presentation of the empirical analysis results, on whose basis the methodological guidelines themselves were developed.

Based on the calculated Lithuanian Urban Competitiveness Index (see Figure 1), the most competitive cities of 2007 - 2010 include: Vilnius (1st place), Kaunas, Klaipeda (2nd and 3rd place), and Palanga (4th place).

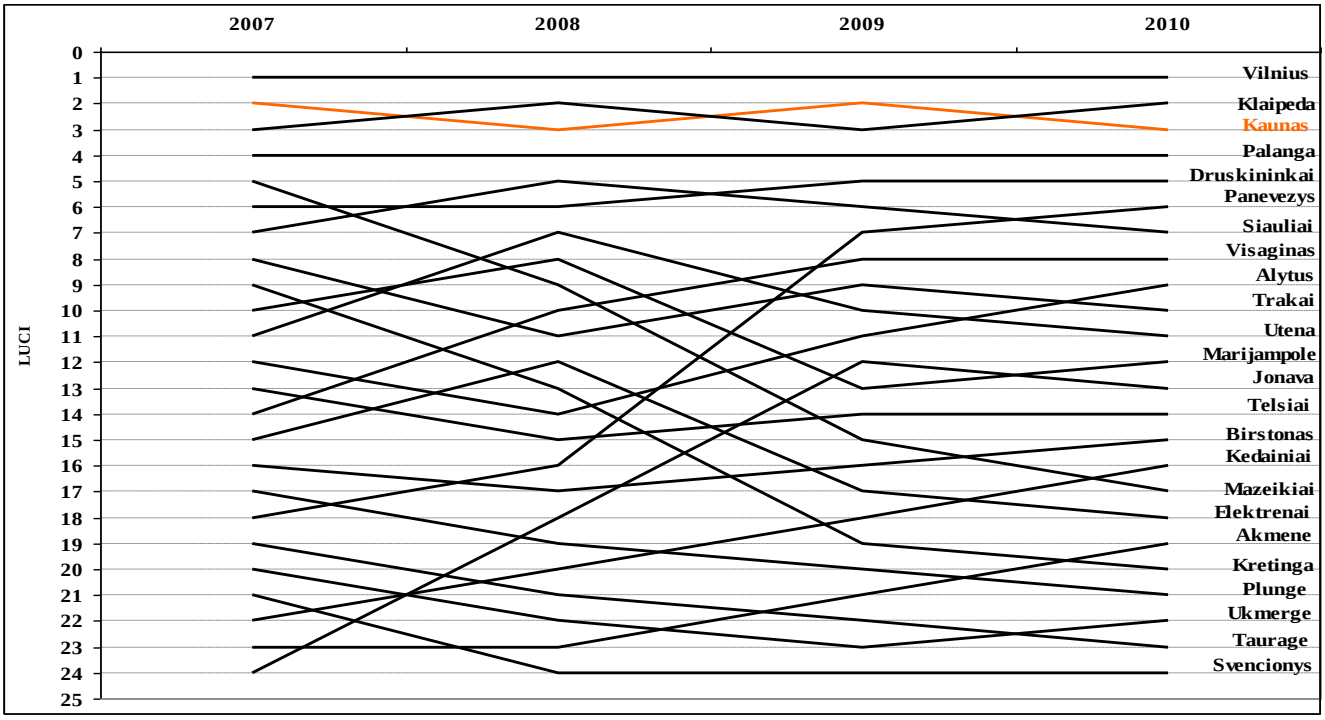

Figure 1. Changes in Lithuanian urban competitiveness in 2007-2010

Besides being an instrument of the economic social and environmental status analysis, enabling to measure the general change of competitiveness from the time and competitors perspective, LUCI can also be applied for distinguishing urban competitiveness by separate factors (see Table 2), thus facilitating more comprehensive identification of the strong and weak points of urban competitiveness.

Table 2

Lithuanian urban competitiveness by separate groups of factors, in 2010

City	LUCI, 2010		Economic competitiveness		Social competitiveness		Environmental competitiveness	
	Index	Rating	Index	Rating	Index	Rating	Index	Rating
Kaunas city	**15,9739**	**3**	**6,7120**	**4**	**8,0014**	**2**	**1,2605**	**22**
Klaipeda city	16,2147	2	7,7125	2	7,5022	3	1,0000	23
Vilnius city	19,8554	1	8,6676	1	9,3346	1	1,8531	13

Measurement of Kaunas city competitiveness by LUCI shows that at major extent competitiveness of the city is reduced by factors related to the environmental status (22nd place) and unexploited economic potential (4th place). By social competitiveness Kaunas occupies the second place, following Vilnius city.

While analyzing the international competitiveness of Kaunas city and region according to the World Economic

Forum data (see Table 3 and 4), it is possible to distinguish that at major extent the international competitiveness of Lithuania (including Kaunas city and region) is increased by the higher education and professional training infrastructure (bold information in Table 4); Physical infrastructure (especially that related to railway, communications); application and assimilation of Advanced technologies. Whereas at major extent the international competitiveness of Lithuania (including Kaunas city and region) is reduced (information marked by a different color) by the Country‘s macroeconomic stability (especially the negative budget balance); Institutional factors (particularly inefficient distribution of governmental expenditure (waste), low rate of trust in politicians, security of intellectual property, corruption; Efficiency of the commodity market (particularly an insufficient efficiency of the anti-monopoly policy, big burden of taxes); Development of the financial market (particularly a complicated obtaining of loans); Efficiency of the labor market (particularly related to the „brain drain“, strict regulation of the labor market).

When assessing the competitive situation of Kaunas city by the SWOT method, due to limitations on the volume of the article, exclusively the city‘s strengths and weaknesses are distinguished, excluding identification of threats and possibilities (see Table 5).

Measuring the competitive situation of Kaunas city from the international perspective by the competitive advantage identification method revealed that frequently major factors of the city competitive advantages can be identified with those of the country (see Table 6).

Table 3

Dynamics of Lithuania‘s international competitiveness, based on the Global Competitiveness Index (GCI) provided by the World Economic (maximum GCI – 7 points)

Country	2007-2008		2008-2009		2009-2010		2010-2011		2011-2012	
	GCI	Rating	GCI	Rating	GCI	Rating	GCI	Rating	GCI	Rating
Lithuania	38	4,49	38	4,49	53	4,3	47	4,38	44	4,41
Latvia	45	4,41	45	4,41	68	4,06	70	4,14	64	4,24
Estonia	27	4,74	27	4,74	35	4,56	33	4,61	33	4,62
Poland	51	4,28	51	4,28	46	4,33	39	4,51	41	4,46
Total countries	134		134		133		139		142	

Table 4

Sub indexes of Lithuanian international competitiveness

A. BASIC FACTORS					
	Total evaluation	1. Institutions	2. Infrastructure	3. Macro-economic environment	4. Health care and primary education
Rating	49 (44)	62	43	73	46
Evaluation	4.82	3,94	4,64	4,71	5,99

B. EFFICIENCY INCREASING FACTORS							
	Total evaluation	**5. Higher education**	6. Efficiency of commodity market	7. Efficiency of labor market	8. Development of financial market	**9. Technological preparedness**	10. Size of the market
Rating	48 (44)	**26**	64	54	89	**34**	79
Evaluation	4,31	**5,08**	4,25	4,53	3,86	**4,70**	3,46

C. INNOVATION AND SOPHISTICATION FACTORS			
	Total evaluation	11. Business sophistication	12. Innovation
Rating	50 (44)	54	48
Evaluation	3,78	4,13	3,48

Table 5

Matrix of the Kaunas city strengths and weaknesses (from the national perspective)

STRONG SIDES	WEAK SIDES
INDIVIDUAL LEVEL	
Abundance of people with higher education, competent employees. High abilities of citizens to use information technologies. Abundance of people who know more than one foreign language.	Prevalence of standard thinking attitude, instead of innovative, an adaptive approach prevails: adaptation to others, implementation of ideas suggested by others, instead of generating their own ideas.
Strong national identity of the citizens of Kaunas (the Lithuanian identity).	Reported tendency of postponing the performance of activities, event when its vision is present.
High entrepreneurship and commercial spirit of Kaunas population.	Public distrust in the city authorities and its decisions.
ORGANIZATION LEVEL	
Strong intellectual potential in information technologies, telecommunications, chemistry, food processing technologies, mechanics, electronics, medicine and pharmacy, construction at universities and business structures.	Lack of cooperation culture and team work traditions. Lack of experience in practical employment of the entrepreneurship and competition via cooperation principles.
Relatively high competitiveness of companies within the national market.	Insufficient investment, particularly of the private sector, in scientific research and experimental development. Within the education system, insufficient focus on strengthening the critical thinking abilities, insufficient training in the creation of ideas sphere and their practical implementation.
High computerization level of enterprises, good availability of the Internet.	
URBAN LEVEL	

STRONG SIDES	WEAK SIDES
Economic competitiveness	
Favorable geographic position with respect to transit.	Few enterprises of the local origin, leading within the national and international markets.
Knowledge and education appreciation-related culture.	Insufficiently attractive investment environment.
Well-developed infrastructure of information technologies and electronic communication.	High emigration rate, determining the drain of intellectual resources.
Attractive nature and landscape, rich historical and cultural heritage.	Insufficient visibility of the city, unformed image (from tourism, investment, business perspectives).
Implementation of e-solutions in different functional spheres (the e-city development).	Undeveloped cooperation between science and business.
	Undeveloped tourism infrastructure and services, heritage objects are not adapted to tourism needs.
	Lack of unoccupied land.
Social competitiveness	
Developed network of higher education institutions.	Rapid reduction of the number of population and their aging.
Developed culture infrastructure.	Decreasing attractiveness of living and working conditions.
Developed network of health protection and care. Due to the Kaunas Medical University and its clinic, the city is a prevailing national medical service centre.	Complicated situation within the labor market and unattractive amount of the remuneration.
Profound sports traditions.	Increasing number of population assigned to the social risk group.
Increasingly active cultural and sports life	High social burden to the city.
Kaunas pursues to become an educational city	Insufficient security in the city.
Environmental status competitiveness	
Convenient geographic position (in the center of the country)	Unsatisfactory quality of the city's transport infrastructure
Sufficiently dense network of transport infrastructure	Unexploited favorable potential of geographic position in the passenger and cargo transportation sphere.
Strong scientific potential working in the alternative energy resources exploitation sphere.	
Developed water safety infrastructure	

Table 6

The Kaunas city "Diamond" from the international perspective

COMPETITIVENESS ENCOURAGING FACTORS	COMPETITIVENESS SUPPRESSING FACTORS
OPERATIONAL CONDITIONS	
Favorable geographic position and transport corridors. Sufficiently developed network of educational and scientific institutions. Positive public attitude towards striving for knowledge and higher education. Established conditions for innovative development – high quality of the broadband Internet, developed information technologies network, widespread application of optic communications.	Education system is not flexible, too little attention is attached to strengthening the critical thinking abilities, insufficient teaching with respect to the development of ideas and their practical implementation. Society lacks openness and tolerance towards different approach and unconventional thinking. Insufficient investment, particularly of the private sector, in scientific research and experimental development. High emigration, determining the brain-drain. High level of corruption.
DEMAND CONDITIONS	
Economics is characterized by openness to other markets.	Small and unsophisticated local demand. Low purchasing power of the local market.
CORPORATE STRATEGY, STRUCTURE AND COMPETITION	
Abundance of people with higher education, competent employees	Economy lacks creativeness Poor enterprises investment in innovations Bureaucratic procedures and non-tariff trade barriers reducing economic flexibility, increase in competitiveness and employment of creative potential Lack of business social responsibility Relatively high price of fuel and energy resources Absence of the international companies - European leaders – headquarters.
RELATED AND SUPPORTED INDUSTRIES	
Some initiatives of integration into international clusters	Lack of cooperation culture; Low rate of leadership within the international market

The authors of this article introduce future vision of the city from the economic, social and environmental status perspectives (see Table 7), developed by applying the scenario identification method and based on the conducted analysis on strengths and weaknesses of the city. This authors' opinion was announced in the strategy "Explicit involvement of intellectual potential into the social-economic development process of the city" (2011) (prepared while implementing the Project "Update of the long-term strategic plan of 2005-2015 and strategic activities plan of 2010-2015", financed by the Human resources development operational program measure VP1-4.2-VRM-02-R).

Table 7

Scenario of the Kaunas city future

Aspect	Scenario proposed by the authors of the article
Economic competitiveness	This is the national industry driver, the city of high technologies and creative industries. Products manufactured in the city are in demand within the international markets and extensively exported. This is the transport and logistics center of Eastern Europe, with a well-developed, efficiently functioning and highly integrated system of highways, railway, air and inland waterway transport. This is well-known internationally and distinctive city, with its own specific characteristics. This is the national conference and zoo tourism center, water tourism center of central Lithuania with a highly developed infrastructure and services, conforming to the modern quality standards. This is historical city, where values of the past and culture are integrated into modern social and physical infrastructure of the city. This is an E-city, where the use of information technologies has become an integral part of the routine operational activities, thus creating a bigger value to the society and business.
Social competitiveness	This is the city of students and young people, where high quality technological and social studies attract for studies a large number of the youth. The studies process ensures the development of the students' practical skills. The youth coming to the city to study are offered accommodation opportunities and establish themselves within the labor market after studies. This is the city of qualified workforce. This is a university city of dissemination the scientific and technologic competences of the Baltic Sea region (particularly within the mechatronic, electronic technologies, information technologies, telecommunications, chemistry, food technologies, pharmacy, energetic and construction spheres). Scientific research, widely applied in business, is actively conducted. There is active cooperation existing between scientific, business and government institutions, including practical implementation of decisions. The existing competence of Kaunas city, as well as experience, is transferred to other cities and regions as well. This is the center of the theatre, museums and high-level musical culture, with explicit attendance of cultural events and their international fame. This is the sports capital, with attractive and internationally recognized professional sports events. Healthy lifestyle principles are integrated into the citizens' habits. Public areas (parks, sports fields, and the yards of apartment buildings) are accommodated for the population health demands. This is the educational city, with creative, continuously studying, spiritually rich, healthy and safe society. Principles of the studying city are integrated into functional systems of the city. This is the city of engineers, scientists, artists, actors and sportsmen. This is the city of families, where the social infrastructure is directed towards the child's comprehensive education, encouragement of creativeness and increasing engagement into after-school activities. Various prevention programs are implemented to prevent the juvenile delinquency. This is the center of the curative medical tourism of Baltic States (particularly in the spheres of attendance to oncologic, kidney, liver, heart and eye diseases, as well as the mother and child health care), where high quality health care services are provided both to Lithuanian and foreign populations.
Environmental competitiveness	This is the city located in central Lithuania, fast and conveniently reached due to well-developed communication system (highways, railway, inland waterways, the airport, public transport). This is the city with streets, cycling and pedestrian paths which are safe and convenient for both the city population and guests. This is the city without traffic jams, with well-arranged traffic flows and car parking system. This is the city of clean water and green parks. Clean waters of the Nemunas and Neris rivers and Kaunas Lagoon, nicely arranged beaches, embankments, slopes and city parks (Ąžuolynas, Panemunės wood and others) are attractive for entertainment and recreation. Citizens take an appropriate care of natural resources and domestic animals. This is the leader of the 'green' energy in Lithuania. The renewable energy sources are widely used for both private and city needs. The waste collection and removal system is integrated, and citizens intentionally sort out the domestic waste.

The conducted Lithuanian regional competitiveness prognosis of 2015 by the competitiveness index data of 2001-2009, assuming that neither region will apply new competitiveness increasing-related strategies, was introduced in another article of the authors "Cluster analysis of Lithuanian regional competitiveness" (2011). Based on the same method, when the index constituent indicators are forecasted five years in advance, and the predictive LUCI and ratings of urban competitiveness are calculated, the results are provided in Table 8.

Table 8

Kaunas city future scenario by LUCI

City	2010		2015	
	Competitiveness rate from the national perspective	Competitiveness rate by LUCI	Competitiveness rate from the national perspective	Competitiveness rate by LUCI
Vilnius	Strongly competitive	1	Strongly competitive	1
Klaipeda	Competitive	2		2
Kaunas		3	Competitive	3

Although Kaunas city occupies the second or third position within the Lithuanian urban competitiveness hierarchy, by strongly competing with Klaipeda city; however, the analysis from the time perspective reflects a negative tendency of changes within the indicators of competitiveness factors. The change of one indicator in the negative direction causes a rapid negative change within other indicators, i.e. there is a threat that in the nearest future the insufficient attractiveness of the city from the investment and tourism perspective, high rate of citizens emigration, the ageing society may misbalance the total economy and increase the social burden for the city, and reduce the rate of material wealth and public security.

These negative changes incurred can not be compensated by the still existing competitive advantages of the city - competitive enterprises, science and studies infrastructure, transport infrastructure, health protection infrastructure. Thus, it is essential for Kaunas to strengthen its competitive advantages and reduce factors that suppress competitiveness now because otherwise the prevailing „input - result" operational principle within the Kaunas economic, social and environmental status system would destroy and strongly negatively affect the total harmony, whose recovery would demand huge financial and time resources. At the same time Kaunas city would yield its competitive position to Klaipeda city, or even to other

cities, thus falling far behind Vilnius city, which would deprive the city of an opportunity in the nearest future to become one of the most competitive cities of Lithuania. The authors of this article emphasize that not all competitiveness encouraging or suppressing factors can be affected, due to:

- Inability to change the factor itself (for instance, the urban, regional and Lithuanian market is not big);
- Changing the situation is time consuming;
- Some factors are related at the national, but not at the regional or urban level.

Taking this into account, it is essential for the strategic planning process to identify such factors which can be primarily affected by the city itself, and thus strengthen its competitiveness.

Recommended methodological guidelines of measuring urban competitiveness from the national and international perspective

Pursuing to make the urban strategic planning process dynamic, but not static, it is essential to involve both econometric and non-econometric - qualitative methods into the urban competitiveness measuring process, thus enabling to reflect the current competitive situation of the city, the city‘s competitive strengths and weaknesses, foresee possible future changes and, based on them, project and form future competitiveness of the city.

The conducted theoretical and empirical analysis of measuring urban competitiveness from the national and international perspective provided possibilities for authors of this article to develop methodological guidelines, which could be applied as the basis for measuring competitiveness of the cities, located in regions, which, by the territorial statistical units nomenclature, are assigned to the third level (NUTS 3):

- Define the economic system, where the city itself functions as one of integral parts. As none city, especially that of a small country, can be autonomous, and its competitiveness is also determined by the competitiveness of the economic system and its constituent subjects.
- Define the boundaries of national and international competitiveness, i.e. in respect of which cities, regions and countries competitiveness is assessed.
- Clearly introduce and methodologically base the competitiveness measurement methodology.
- Comprehensively assess each competitiveness factor and identify and include into the urban strategic planning process only those factors which produce the biggest effect on competitiveness and urban economy. Otherwise, due to the abundance and diversity of competitiveness factors, the strategic planning process itself will be impeded and complicated.
- Measure urban competitiveness from the dynamic perspective, i.e. to combine the static and dynamic competitiveness measurement methods. Urban competitive strategies, based exclusively on one method, are too narrow and not comprehensive enough in the case of tough competition between the cities for the same factors (investment, tourists, human capital, etc.).
- Compare the current competitiveness of the city with competitiveness of cities, similar by specificity, i.e. to compare competitive strengths and weaknesses of the city with the strengths and weaknesses of other cities. It is important that the urban competitive strategies were based on the unique strengths of the city.
- Employ and combine both quantitative and qualitative information for the measurement. If urban competitiveness is not based on quantitative and qualitative data, there is a risk regarding the urban strategy being based exclusively on presumptions and speculations.
- Measure future tendencies and forecast future competitiveness of the city. It should be stressed that the current urban competitiveness increasing factors will not always remain the competitiveness increasing factors in the future. It is essential to identify the fundamental factors which can ensure competitiveness of the city and improve its competitive position in the future, irrespective of future changes.
- Analyze if the urban competitiveness improvement factors are suitable and sufficient enough for pursuing the established vision and priorities of the city.
- If possible, to conduct economic assessment of the increase in urban competitiveness and benefits gained, i.e. to conduct the cost/benefit analysis.

It should be emphasized that such conditions as involvement of experts of different spheres, creative and qualified experts, experienced moderators who could moderate the group work, competence of seeking compromise within different interests, performance of the analysis itself during several sessions (as the one-day work can not always bring a desirable result) would facilitate the process of measuring urban competitiveness itself and increase its efficiency.

Conclusions

1. The urbanization process, its effect on the economic development and competitiveness, considered in the article, reflect a constantly increasing interest of the world theoreticians, analysts and politicians in the urban competitiveness issues.
2. The conducted research justified the significance of sustainable development principles in the relationship existing between the urbanization process, urban economic growth and competitiveness. Although the research revealed a direct link between these economic dimensions, however, an inverse relationship should be emphasized, determined by the city‘s inadaptability to the changing environment and passiveness regarding implementation of sustainable development in the urban strategic planning process.
3. Researches proved that concepts of urban and regional competitiveness are closely interrelated. None city, especially that of a small country, can be autonomous, and it functions as a composite part of a larger urban-regional-national economic-social hierarchy system.
4. The city‘s ability to retain competitiveness in few, but not in all spheres, justifies the importance of identification of particular city competitiveness sphere within the city‘s strategic planning and competitiveness improvement sphere.
5. The researches proved that the same tools, methods and viewpoints of analysis of national (regional) competitiveness can be adapted to the analysis of urban competitiveness.

6. Combination of econometric and non-econometric - qualitative methods in the measurement of urban competitiveness facilitates more comprehensive description of the urban competitiveness status and envisages their future perspectives. Econometric methods help to prove interrelationship between competitiveness factors or effect produced on the general competitiveness, as well as forecast future competitiveness indicators; whereas non-econometric - qualitative methods facilitate identification and more comprehensive analysis and assessment competitiveness factors themselves.

7. Involvement of different methods into the urban strategic planning and competitiveness improvement process facilitates solution of the quantitative and/or qualitative information availability problem.

8. Analysis of research literature and strategic plans of different cities enabled to distinguish the most frequently used non-econometric - qualitative methods, applied for measuring urban competitiveness: SWOT, problem analysis, competitive advantage identification and scenarios identification. As every method has its advantages and disadvantages, the application of econometric and non-econometric - qualitative methods together in the process of urban strategic planning let to solve the problem, which method is most suitable.

9. Identifying competitiveness of the cities, located in the regions, which, by the territorial statistical units nomenclature are assigned to the third level (NUTS 3), with regional competitiveness facilitates solution of the problem regarding the absence of official data at the urban level, and the application of different methods justifies the correctness of results on identification of urban and regional competitiveness measured from the international perspective, or the lowest probability of the obtained information nonconformity to reality.

10. The conducted research justifies that competitiveness factors by the possibility of impact can be attached to the city, region or country, thus, in the urban strategic planning process it is essential to identify such factors which can be primarily affected by the city itself, thus improving its competitiveness.

11. Not all competitiveness encouraging or suppressing factors can be affected by the city, due to inability to change the factor itself and long time in the change of situation.

12. During the empirical analysis on measuring Lithuanian urban competitiveness from the national and international perspective it was established that competitiveness of the cities, located in the regions, by the territorial statistical units nomenclature assigned to the third level (NUTS 3), at major extent is reduced by the factors and conditions related to the economic situation of the whole country or region, and it is increased by unique competitiveness factors inside the city.

13. Practical involvement of methodological guidelines of measuring urban competitiveness from the international and national perspective, provided in the article, into the urban strategic planning and competitiveness improvement process would facilitate and methodologically justify the urban development and competitiveness improvement-related decisions and reduce the risk of selecting inappropriate directions of development, inefficient employment of resources and other respective problems.

14. The research done by the authors identified the possible future research developments:

- The analysis of urban competitiveness of the main Lithuanian cities from the Baltic States or the Baltic Sea region countries perspective. This analysis will extend the scope of international urban competitiveness of Lithuanian cities.

- The analysis of urban competitiveness of the capitals of the European Union countries. This analysis will extend the scope of Vilnius, the capital of Lithuania, and the general competitiveness of Lithuania from the European Union perspective.

- Determination of competitiveness factors according to different level: urban, regional and national and interlink between them. This will allow improving the effectiveness of the urban, regional and national strategic planning process.

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Miestų konkurencingumo vertinimo nacionaliniu ir tarptautiniu mastu ypatumai

Santrauka

Nuo XX a. paskutinio dešimtmečio miestai tapo vienomis sudėtingiausių ir dinamiškiausių ekonominių, socialinių ir ekologinių sistemų, kurios yra atviros, priklausomos ir pažeidžiamomis. Dėl spartaus urbanizacijos proceso, šiandien miestai tampa svarbiausi tiek šalių, tiek ir atskirų regionų ekonominio aktyvumo, inovacijų ir kultūros centrais, žmonių ir investicijų traukos objektais. Mokslinėje literatūroje pripažįstama teigiama miestų įtaka ekonomikos plėtrai, rinkų augimui ir naujų verslo galimybių atsiradimui. Ekonomikos globalizacija suteikia galimybių vis didesniam miestų skaičiui dalyvauti pasaulinėje ūkinėje veikloje, taip stiprinant urbanizuotų ir silpninant periferinių teritorijų vaidmenį.

Straipsnio autorių tyrimai parodė, kad miestai ir regionai tarpusavyje konkuruoja skirtinguose ekonominiuose sektoriuose ar veiklos rūšyse (pramonė, paslaugos, aukštosios technologijos, turizmas ir pan.) ir skirtingais lygiais (regioninis, nacionalinis, tarptautinis) dėl žmogiškojo kapitalo, investicijų, naujų technologijų, turistų, eksporto rinkų, nacionalinių ir tarptautinių projektų ir renginių, vyriausybės politinio palankumo ir pan. Ir kiekvienais metais ši konkurencinė kova intensyvėja, todėl miestų konkurencingumo problematikos analizė tampa vis aktualesnė globalizacijos laikotarpiu. Tačiau dėl tos pačios globalizacijos proceso, daugelis miestų supanašėja ir jų strateginiuose plėtros dokumentuose akcentuojamos tos pačios ar panašios ekonominio proveržio kryptys bei prioritetai. Tai panaikina miestų išskirtinumus ir nesukuria konkurencinių pranašumų, o tai mažina miestų konkurencingumą tiek nacionalinėje, tiek ir tarptautinėje rinkoje. Tai dar labiau pagrindžia nagrinėjamos problematikos aktualumą ir savalaikiškumą.

Mokslinėje literatūroje dažnai pristatomi ir praktiškai taikomi įvairūs metodai ir būdai, leidžiantys vertinti įmonių, regionų ar šalių konkurencingumą tiek tarptautiniu, tiek nacionaliniu lygmeniu. Tačiau pasigendama platesnio akademinio požiūrio ir analizės apie šių metodų pritaikymo miesto lygmeniu galimybes ir praktinį taikomumą. Metodologinių priemonių ir gairių, vertinant miesto konkurencingumą tarptautiniu ir šalies lygmeniu nebuvimas tampa viena iš kliūčių, mažinančių miestų konkurencingumo didinimo ir konkurencinių pranašumų vertinimo galimybes bei konkurencines perspektyvas lyginant su kitais miestais – pagrindiniais konkurentais.

Darbo objektas – miestų, kurie yra regionuose, pagal teritorinių statistinių vienetų nomenklatūrą priskiriamuose trečiajam lygiui (NUTS 3), konkurencingumas tarptautiniu ir nacionaliniu mastu.

Darbo tikslas – identifikuoti miestų konkurencingumo vertinimo ypatumus ir suformuluoti metodologines gaires, pagrįstas teorinio ir empirinio miestų konkurencingumo vertinimo tarptautiniu bei nacionaliniu mastu rezultatais.

Tyrimo metodai: sisteminė, lyginamoji ir loginė mokslinės literatūros analizė; empirinis tyrimas atliktas naudojant išorinių antrinių duomenų sisteminę analizę.

Straipsnio autorių atlikti tyrimai parodė tiesioginį ryšį tarp ekonominės urbanizacijos proceso, miestų ekonominio augimo ir konkurencingumo. Pabrėžtina, kad šie ekonominiai reiškiniai gali veikti ir priešinga kryptimi, jei miestas neprisitaikys prie kintančių sąlygų ir bus pasyvus diegiant darnią plėtrą daugelyje miestui svarbių sričių, tokių kaip ekonomika, socialinė aplinka, aplinkos kokybė. Taigi, spartėjantis urbanizacijos procesas reikalauja vis didesnio dėmesio miestų ekonominės plėtros ir konkurencingumo problemos nagrinėjimui, tai dar labiau pagrindžia analizuojamos temos aktualumą ir reikalingumą.

Mokslinėje literatūroje pateikiami įvairūs konkurencingumo vertinimo metodai, kuriuos galima suklasifikuoti į tris grupes: ekonometrinius, neekonometrinius - kokybinius ir mišrius, sujungiančius prieš tai įvardintus metodus. Tyrimai parodė, kad tie patys metodai naudojami vertinti šalių, regionų ar miestų konkurencingumui.

Tyrimai parodė, kad ekonometrinių ir neekonometrinių - kokybinių metodų taikymas gali leisti plačiau ir išsamiau apibūdinti miestų ar regionų konkurencinę būklę ir įžvelgti jų perspektyvas ateityje. Straipsnio autoriai plačiai pristatė miestų ir regionų konkurencingumo vertinimo indeksu ypatumus, jų privalumus ir trūkumus kituose savo straipsniuose bei pagrindė šio metodo tinkamumą vertinant teritorijų konkurencingumą. Tačiau mokslinėje literatūroje, ypač lietuvių autorių, pasigendama išsamesnių ir tikslinių neekonometrinių - kokybinių metodų taikymo, vertinant miestų konkurencingumą, tyrimų, o tai reikalauja didesnio šiai sričiai.

Mokslinės literatūros ir įvairių miestų strateginių planų analizė leido išskirti dažniausiai naudojamus neekonometrinius - kokybinius metodus, taikomus vertinant miestų konkurencingumą: SSGG, problemos analizės, konkurencinio pranašumo identifikavimo ir scenarijų identifikavimo. Kiti mokslininkai ir praktikai taiko kitus, tačiau labiau adaptuotus ir empiriškai pagrįstus regionų, pramonės šakos ar įmonės lygmeniu, metodus (svarbiausių konkurencinių stiprybių analizė, sisteminio konkurencingumo analizė, daugiasektorė kiekybinė analizė, regiono konkurencingumo kubas, subalansuoto verslo kortelė, esminių kompetencijų/baltųjų vietų analizė ir kt.), apie kurių taikomumą miesto lygmeniu mokslinėje literatūroje tyrimų randama mažai. Tai reikalauja papildomo akademinio dėmesio šiai sričiai:.

Empiriniame tyrime analizuotas antras pagal dydį Lietuvos miestas – Kaunas. Kauno miesto pasirinkimą lėmė tai, kad straipsnio autorių atlikti tyrimai parodė, kad nors šio miesto konkurencingumas pagal rangus 2007-2009 m. nuolat keitėsi su trečiu pagal dydį Lietuvos miestu – Klaipėda, tačiau atotrūkis pagal indeksus kasmet mažėjo. Tai perspėja apie galimą miesto konkurencinių pozicijų praradimo grėsmę ateityje. Siekiant išlaikyti miesto konkurencingumą Lietuvos miestų hierarchijoje, svarbu analizuoti dabartinį jo potencialą ir identifikuoti jo panaudojimo galimybes konkurencingumui užtikrinti ir sustiprinti ateityje. Šiam tikslui pasiekti svarbu analizuoti ne tik nacionalinį, bet ir tarptautinį miesto konkurencingumą. Nacionaliniu lygmeniu Kauno miesto konkurencingumas vertintas, lyginant jį su kitais pagrindiniais Lietuvos miestais – šalies sostine Vilniumi ir Klaipėda, naudojant 2007 - 2010 m. statistinius duomenis. Oficialių duomenų regioniniu lygmeniu pateikiamumas parodė, kad miestų, kurie yra regionuose, pagal teritorinių statistinių vienetų nomenklatūrą priskiriamuose trečiajam lygiui (NUTS 3), tarptautiniu lygmeniu konkurencingumui vertinti reikėtų prilyginti pačiam regiono konkurencingumui. Kauno miesto ir regiono konkurencingumo tarptautiniu lygmeniu vertinimas pagrįstas 2007 - 2011 m. statistiniais duomenimis.

Atlikta teorinė ir empirinė miestų konkurencingumo vertinimo nacionaliniu ir tarptautiniu mastu analizė straipsnio autoriams leido suformuoti metodologines gaires, kuriomis remiantis siūloma vertinti miestų, (kurie yra regionuose, pagal teritorinių statistinių vienetų nomenklatūrą priskiriamuose trečiajam lygiui (NUTS 3)) konkurencingumą:

- Apibrėžti ekonominę sistemą, kurioje kaip viena iš sudėtinių dalių funkcionuoja pats miestas. Nes nei vienas miestas, o ypač mažos šalies, nėra savarankiškas ir jo konkurencingumas taip pat priklauso nuo ekonominės sistemos ir ją sudarančių subjektų konkurencingumo.
- Apibrėžti nacionalinio ir tarptautinio konkurencingumo ribas, t.y. kokių miestų, regionų ir šalių atžvilgu vertinamas konkurencingumas.
- Aiškiai pristatyti ir metodologiškai pagrįsti konkurencingumo vertinimo metodologiją.
- Išsamiai įvertinti kiekvieną konkurencingumo veiksnį ir identifikuoti bei į miesto strateginio planavimo procesą traukti tik tuos, kurie daro didžiausią įtaką konkurencingumui ir miesto ekonomikai. Kitu atveju dėl konkurencingumo veiksnių gausos ir įvairovės bus apsunkintas ir komplikuotas pats strateginio planavimo procesas.
- Miesto konkurencingumą vertinti dinaminiu požiūriu, t.y. derinti statinius ir dinaminius konkurencingumo vertinimo metodus. Miestų konkuravimo strategijos, pagrįstos tik vienu metodu, yra per siauros ir nepakankamai išsamios aršios konkurencijos tarp miestų dėl tų pačių veiksnių (investicijų, turistų, žmogiškojo kapitalo ir pan.) atveju.
- Esamą miesto konkurencingumą lyginti su kitų panašių pagal specifiką miestų konkurencingumu, t.y. miesto konkurencines „stiprybes ir silpnybes“ lyginti su kitų miestų „stiprybėmis ir silpnybėmis“. Svarbu miesto konkuravimo strategijas pagrįsti unikaliomis miesto „stiprybėmis“.
- Vertinime naudoti ir derinti tiek kiekybinę, tiek ir kokybinę informaciją. Jei miestų konkuravimo strateginiai sprendimai yra nepagrįsti kiekybiniais ar kokybiniais duomenimis, tai atsiranda rizika, kad miestų strategija pagrįsta tik prielaidomis ir spėlionėmis.
- Vertinti ateities tendencijas ir prognozuoti miesto konkurencingumą ateityje. Akcentuotina, kad dabartiniai miesto konkurencingumą didinantys veiksniai ne visada išliks konkurencingumą didinančiais veiksniais ateityje. Svarbu identifikuoti fundamentinius veiksnius, kurie užtikrins miesto konkurencingumą ir stiprins jo konkurencines pozicijas ateityje, nepriklausomai nuo pokyčių ateityje.
- Analizuoti, ar miesto konkurencingumą didinantys veiksniai yra tinkami ir pakankami miesto užsibrėžtai vizijai ir strateginiams prioritetams pasiekti.
- Jei įmanoma, ekonomiškai vertinti miesto konkurencingumo didinimo ir atnešamos naudos efektą, t.y. atlikti kaštų/naudos analizę.

Pabrėžtina, kad tokios sąlygos kaip įvairių sričių ekspertų įtraukimas, kūrybingi ir kvalifikuoti ekspertai, patirtį turintys moderatoriai, kurie moderuotų darbą grupėse, kompromiso paieškos tarp skirtingų interesų, kompetencija, pačios analizės atlikimas per kelias sesijas (nes vienos dienos darbas ne visada atneša norimų rezultatų) palengvintų patį miestų konkurencingumo vertinimo ir strateginio planavimo procesą bei padidintų jo efektyvumą.

Raktažodžiai: *nacionalinis ir tarptautinis konkurencingumas, miestų konkurencingumas, miestų konkurencingumo vertinimas.*

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