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EVALUATION OF LOCATION'S ATTRACTIVENESS FOR BUSINESS GROWTH IN THE CONTEXT OF SMART DEVELOPMENT

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INTRODUCTION

Relevance of the research topic. In the light of a modern business environment, rapid changes of conditions and consumer needs, globalisation, technical progress, new standards and social regulations entrepreneurs, self-employed persons and investors have to analyse and evaluate the existing locations and search for new places for business development and to rethink the existing and new opportunity selection strategies. The selection of new locations[1] for business development is mainly influenced by a combination of factors: costs, access to consumers and markets, quality, availability of information and resources, etc. Changes in the taxation system, social policy innovations, labour cost and availability, political stability, economic and financial crises, i.e. the economic, political and social environment where business or investment is planned are equally important. Therefore, the environment of business and investment plays an important role in market economy with all factors and conditions present in a specific location. The mix of these factors and conditions helps to set up and develop businesses and attract investments. It should be emphasised that the attractiveness of a location for business development[2] is influenced not only by local authorities but also by the geographic, natural, infrastructural, technological, demographic, sociocultural conditions of the location as well as economic entities operating there. Marketing solutions used by local authorities to create the location's image and to highlight its competitive advantages translate into a message for the target group and draw the attention of entrepreneurs, self-employed persons and investors. Therefore, local authorities become the main creators and marketers of the location's attractiveness for business development. On the other hand, entrepreneurs, self-employed persons and investors are information searchers, analysers and decision makers. They choose the location which provides a competitive advantage both in the long and short term. There is a close relationship between the location's attractiveness for business development and business execution (operation of economic entity) and investment. New businesses and investments promote economic development, increase competitiveness and ensure social well-being in the location. Therefore, the factors determining the attractiveness of a location for business development are strategic guidelines in the formation of the economic policy of the location.

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[1] *Different territorial units, such as cities, regions and states are analysed in scientific literature regarding the attractiveness of a location. The factors of both the region and the city attractiveness are analysed in the dissertation to reveal the attractiveness of a location for business development and explain the arguments of choosing it.*

[2] *The concept of location's attractiveness for business development goes beyond the notion of investment attractiveness, which is most often analysed in research literature, because it encompasses not only investment but also business development by legal as well as natural persons.*

It must be noted that attractiveness is not a static concept but, rather, a process. In the future – even in the near future – a location which is attractive in the current period may no longer be attractive to the target group – entrepreneurs, investors, employees, companies and other entities. The target group would move out or not choose an unattractive location. Thus, improving the attractiveness of a location must be a consistent and continuous process. Otherwise, the location will lose its advantages over other competitors in the battle for investments, human capital, business projects, companies, technologies, etc. The long-term goal of making a location more attractive for business development must be consistently considered while planning and making the economic policy of the location. Boosting the location's attractiveness is a part of the location development promotion process and a prerequisite of economic growth, higher competitiveness and social wellness in that location. To achieve economic and social prosperity and competitive business development the location must be attractive to business and investment. The expense of boosting the attractiveness of a location is economically viable: one euro invested in promoting the attractiveness creates more than one euro in economic benefit and reduces the loss caused by the commitment to meet social obligations, i.e. it reduces the social burden. The attractiveness of a location for business development is built through various attractiveness promotion strategies and measures. Their effectiveness guarantees that investments and new businesses and are attracted, maintained and developed. In the light of information availability in global markets, fast decision-making and ever-changing business conditions, some locations become more attractive and others lose their attractiveness for business development over time. Therefore, attractiveness, as a characteristic of a location, changes in the course of time and has to be analysed, evaluated and improved on a regular basis. This can be achieved by employing effective strategies and measures aimed to boost the location's attractiveness to business.

The effectiveness of these strategies depends on planners' strategic understanding of the concept of attractiveness *per se*. The ever-changing business conditions, public opinions and requirements raised for companies, entrepreneurs and investors create a new approach towards the attractiveness of a location for business development. Standard factors and indicators are not sufficient to create the appeal of a certain location and to draw the attention of the target group because many locations identify the same or similar factors of business attractiveness, which do not create a competitive advantage for locations, and the latter become akin in terms of business development. The newest research papers highlight that nowadays the competitive advantage is created not by means of buildings and facilities but by means of dynamic capabilities, such as commercial or technical insights, knowledge and innovations, learning, networking, collaboration, etc. Researchers (Pihkala et al., 2007, Harmaakorpi, 2006) define dynamic capabilities as the ability to

address rapidly changing environment, adjust to it and use it for own purposes. Dynamic capabilities show the ability to find new and innovative forms of development or competitive advantage. Thus, a new approach is required both in the concept of attractiveness for business and in investment attractiveness boosting strategies. Authors (Jucevičius et al, 2016; Sinkienė, Grumadaitė, 2014) note the need for smart growth on the company and area level. Smart growth is a prerequisite for a location to become attractive to the target group. Locations competing for business, investment, human resources, technologies, projects and other incentives have to analyse the concept of investment attractiveness in the background of smart development, which conveys, characterizes and complies with the trends of modern economy development, globalization processes and modern business development strategies and patterns. Strategies for improving the attractiveness of a location for business development should be grounded in smart development dimensions, new approaches and ideas. The relevance of the issues analysed in the dissertation is supported by the relationship between the location's investment attractiveness and economic development, competitiveness and social wellness in the area. Regular monitoring and evaluation of location's attractiveness for business development proves the timeliness of the research. The necessity for the research is explained by severe competition for investment and business among locations, whereas the novelty of the research lies in the analysis of these issues.

In summary, it could be said that modern economy, market needs and business conditions demand for a new approach not only in practice but in research methodologies, too. Smart improvement of attractiveness to business and the creation of location attractiveness boosting strategies and measures requires the evaluation of the current attractiveness of the location in the background of smart growth. This should be done by distinguishing the major attractiveness enhancing factors in terms of smart growth, by identifying the strengths and weaknesses of a location, by comparing the investment attractiveness of the analysed location with other locations and of the location itself in the course of time. Methodological tools, which produce clear, precise and timely information about the general attractiveness of the location and its position in the competitive hierarchy, identify the main competitive advantages and disadvantages, have become a very important instrument of strategic planning and a prerequisite for economic development, competitiveness and social wellness in the area. Methodological tools used to evaluate the attractiveness of a location to business have not been based on smart development so far; therefore, there is a need for a methodological review and a renewal of scientific approach towards the concept of location's investment attraction and its evaluation methods. It is of high importance both on the academic and on the practical level. A new approach, i.e. the incorporation of smart growth dimensions into the concept of location's attractiveness to

business contribute significantly to the location's economic and strategic planning and provide methodological grounds for modelling.

Justification and the level of investigation of the research problem. The concept of attractiveness is not a new subject in scientific literature. There are numerous fundamental works analysing the topic of attractiveness. Researchers have mainly discussed the concept of attractiveness with regard to direct foreign investments (Lessmann, 2013; Lukoseviciute & Martinkute-Kauliene, 2016; Markusen, 2013; Moura & Forte, 2010; Naraškevičiūtė & Barkauskaitė, 2014; Šimelytė & Liučvaitienė, 2012) and improvement of the business environment (Ezmale, 2012; Litavniece, 2014; Miot, 2015; Van den Berg and others, 2007). This topic is common in the works by both foreign and Lithuanian authors (Bruneckienė et al., 2016; Sinkienė & Kromalcas, 2010; Snieška & Zykienė, 2011; Zykienė & Snieška, 2015). It must be noted that researchers who work on this topic have mainly focused on purifying and elaborating the definition of the concept of attractiveness (while distinguishing between attractiveness for investments and attractiveness for business development) and on characterising attractiveness (Ballota, 2004; Serrano, 2003; Servillo and others, 2011; Snieška & Zykienė, 2011), as well as on identifying and analysing the factors determining attractiveness (Ambroziak, 2014; Arauzo-Carod et al., 2010; Bruneckienė et al., 2016; Crozet et al., 2004; Ezmale, 2012; Godlewska-Majkowska, 2012, 2013; Litavniece, 2014; Nikolova & Plotnikova, 2013; Serrano, 2003; Sáez & Periáñez, 2015; Strzelczyk, 2014) or providing a more detailed analysis of individual factors and determining their impact on the overall attractiveness (Kuliavienė & Solnyškinienė, 2014; Moraru, 2013; Naraškevičiūtė & Barkauskaitė, 2014; Ruplienė & Garšvienė, 2008; Altiner, 2012), as well as on developing strategies and shaping measures to ensure attractiveness (Bruneckienė and others, 2016; Sinkienė & Kromalcas, 2010) and on the ways to present investment and business opportunities in foreign and national markets (Bose et al., 2016; Chen et al., 2012; Lin et al., 2016; Vanolo, 2015; Zenker & Erfgen, 2014; Kim & Perdue, 2011; Lemaire & Viassone, 2015). Both foreign and Lithuanian researchers (Bruneckienė et al., 2016; Godlewska-Majkowska & Komor, 2017; Glebova et al., 2015; Murillo et al., 2015; De Noni et al., 2014; Siemens, PwC & Berwin Leighton Paisner, 2014; Spalanzani et al., 2016) have only quite recently focused on the analysis of the methodological framework for evaluating the attractiveness of a location.

In the scientific literature (Caragliu et al., 2011; Jucevičius, Jucevičienė, 2016; Giffinger, 2011; Jucevičius, Radzvickienė, 2016; Sinkienė, 2016; Bruneckiene, Lopez, 2015; Bruneckienė, 2014; Komninos, 2011, 2008, 2006), the concept of smartness has been analysed with regard to different elements of the economic system, e.g. the government, economy, community, infrastructure; however, the concept of attractiveness has not been analysed in the context of smart development. Works by both foreign and Lithuanian authors (Alawadhi et al., 2012; Allwinkle & Cruickshank, 2011; Anttiroiko, 2013; Bakıcı et al.,

2013; Nam & Pardo, 2011; Sinkienė, 2016; Sinkienė, Grumadaitė, 2014) have analysed the concepts of a smart country, a smart region and a smart city by differentiating between their specific criteria of smartness. Lithuanian authors (Jucevičius, Kinduris, 2016; Jucevičius, Liugailaitė-Radzvickienė, 2016; Patašienė, Patašius, 2016; Sinkienė, 2016; Stanislovaitienė et al., 2016) analysed a smart social system through the concept of dynamic capabilities, which provided the methodological framework for analysing specific economic phenomena in the context of dynamically smart development.

It must be noted that, in scientific literature, the concept of attractiveness has been analysed at different levels, including the attractiveness of shares, also that of a company, branch of economy, city, region and country. The academic community has mainly focused on the concept of attractiveness of a company, (Czinkota & Ronkainen, 2006; Dubé et al., 2016; Frenkel, 2012; Giner et al., 2017; Kronenberg, 2013; McDonough Kimelberg & Nicoll, 2011; Mota & Brandao, 2013; Nielsen et al., 2013; Spalanzani et al., 2016), of a branch of economy (Bonasso et al., 2014, Cohen, 2006, Davies et al., 1994, Kimelberg et al., 2012; Wedemeier, 2010; Van Oort et al., 2014) and of a country (Glebova et al., 2015; Godlewska-Majkowska, 2012, 2013; Yatsenko, 2016). So far, the attractiveness of a location at a sub-country level has received relatively little attention. In scientific literature, the analysis of location's attractiveness for business development most often covers two different aspects, i.e. (1) the location's attractiveness from the perspective of a company, which involves evaluating the process of identifying the optimal solution in selecting a location that would be suitable for developing business (Czinkota & Ronkainen, 2006; Dubé et al., 2016; Frenkel, 2012; Giner, 2017; Kronenberg, 2013; Kimelberg & Nicoll, 2011; Mota & Brandao, 2013; Goerzen, et al., 2013; Spalanzani et al., 2016) and (2) a global analysis of the attractiveness of specific locations for companies, which involves identifying individual factors that determine their attractiveness (Ambroziak, 2014; Arauzo-Carod et al., 2010; Bruneckiene et al., 2016; Crozet et al., 2004; Ezmale, 2012; Godlewska-Majkowska, 2012, 2013; Litavniece, 2014; Sáeza & Periáñez, 2015; Strzelczyk, 2014). However, these studies do not approach the attractiveness of a location as the ability to attract, create and maintain business and investments, and since attractiveness comprises a dynamic process, its analysis must be based on a dynamic approach. At present, competitive advantages are provided by both static and dynamic factors, thus, it is not enough to simply identify individual factors determining attractiveness. This requires a new approach towards the concept of attractiveness, one which is based on the dynamic capabilities of a location that allow shaping the capability of the location to be attractive. Besides, scientific literature approaches the concept of attractiveness mostly from two different perspectives, i.e. from the perspective of public authorities and from the perspective of companies and investors. Public authorities are most often seen (UNCTAD, 2014; Cohen, 2000; Bruneckienė et al., 2016; Glebova et al., 2015;

Kinda, 2013; Gilmore et al., 2003, Blomstrom & Kokko, 2003; Nemati et al., 2013; Stanislovaitienė et al., 2016) as the entities which are responsible for creating and shaping the factors and implementing the strategies to improve a location's attractiveness, meanwhile companies and investors (Alamá-Sabater et al., 2011; Bonasso et al., 2014; Bruneckienė et al., 2016; Dubé et al., 2016; Kimelber & Nicoll, 2011; Mota & Brandao, 2013; Serrano, 2003;) are viewed as the users of location's attractiveness (they either choose the location for developing business, or not). However, when analysing the concept of attractiveness from the dynamic point of view, we can no longer separate the two approaches which dominate in scientific literature, as both, the local authorities and economic entities, and location-specific environment and conditions create and shape the overall attractiveness of the location. Thus, it is essential that an integrated approach is employed to view and evaluate the attractiveness of a location for business development, encompassing the interests of entrepreneurs and investors who are looking for business development-friendly conditions, and of the local government who seek to ensure the socio-economic development and competitiveness of a specific location, along with the location-specific environment and conditions.

The concept of attractiveness is one of the most complex research areas to generalize and systematize. This is determined by the different layers and levels of analysis of the topic, different entities, different specifics of locations, the diversity of the concept of attractiveness, and the abundance and variety of factors determining the attractiveness of a location. Different aspects of analysis of the concept of attractiveness highlighted by researchers have led to the development of different models of attractiveness which structurally link all the factors that determine attractiveness. The models that are most often referred to in the scientific literature (Global Attractiveness Index, A Global Foreign Direct Investment Country Attractiveness Index, A. T. Kearney's Global Services Location Index™, Global opportunity index) are intended for analysing the attractiveness of companies and industries as well as national attractiveness, and not the sub-national level of attractiveness, i.e. location's attractiveness. The limited possibilities of adapting these models when assessing a location's attractiveness for business development has warranted the development of a model comprising the factors of location's attractiveness for business development in the context of smart development (*VPV*) that is presented in this thesis. The lack of a well-established concept of location's attractiveness for business development in the context of smart development is also illustrated by the abundance and variety of factors determining the location's attractiveness that have been identified in scientific literature (Ambroziak, 2014; Arauzo-Carod et al., 2010; Bruneckienė et al., 2016; Crozet et al., 2004; Ezmale, 2012; Godlewska-Majkowska, 2012, 2013; Litavniece, 2014; Sáeza ir Periáñez, 2015; Strzelczyk, 2014). Since every location is distinguished by its specifics and environment, scientific literature does not provide any systematized or

interlinked key factors that determine location's attractiveness for business development. In the absence of a model of factors determining the location's attractiveness for business development in the context of smart development (*VPV*), as a methodological framework for analysis, it is rather challenging to evaluate attractiveness, as well as the adoption and implementation of correct decisions for improving location's attractiveness for business development and achieving economic strategic set of goals created for the location.

In scientific literature, the concept of attractiveness is evaluated using different approaches. Some researchers (Nikolova & Plotnikova, 2013; Yatsenko, 2016; Kosinova et al., 2014; Savluk, 2013) evaluate attractiveness using individual statistical macroeconomic indicators and their dynamics, others (Czinkota & Ronkainen, 2006; Dubé ir kiti, 2016; Frenkel, 2012; Giner, 2017; Kronenberg, 2013; McDonough Kimelberg & Nicoll, 2011; Mota & Brandao, 2013; Nielsen et al., 2013; Spalanzani et al., 2016) identify attractiveness form the perspective of financial performance of companies, another group of researchers (Glebova et al., 2015; De Noni et al., 2014; Siemens, PwC & Berwin Leighton Paisner, 2014) analyse the good practices, while others (K. Schwab's Global Competitiveness Report of the World Economic Forum, IMD World Competitiveness Yearbook, Ernst & Young's 2012 European attractiveness survey, Global Urban Competitiveness Project) provide the results of a questionnaire-based or expert evaluation. Scholars often evaluate the attractiveness of a location using common (standard) factors and indicators which describe the factors. The inclusion of standard indicators in the methodology for evaluating attractiveness for investments and business development has in many cases been determined by the possibility to obtain official statistics. Such indicators as labour, infrastructure, socio-economic environment, the public sector, etc. have become standard characteristics that describe the location's attractiveness for business development. This aspect is particularly relevant when analysing the concept of attractiveness at the regional and urban level. However, the selection of statistical indicators which characterise the dynamics of location's attractiveness lacks a dynamic approach, which should be coordinated keeping in mind that attractiveness is a dynamic characteristic, and a capability to ensure location's attractiveness through economic entities and public authorities.

One of the most common methods for evaluating attractiveness is using the index that is widely represented in research works (Godlewska-Majkowska, 2012, 2013; Yatsenko, 2016; Nikolova & Plotnikova, 2013; Cablyk, 2013). This method is recognised for its benefits and expedience as one of the most suitable ways to evaluate complex issues. Using different indexes, Lithuanian authors have evaluated not only the attractiveness of the country, industry (Godlewska-Majkowska, 2012, 2013; Yatsenko, 2016; Nikolova & Plotnikova, 2013; Cablyk, 2013) or a residential area (Bruneckienė et al., 2016; Vidickienė, Melnikienė, 2008), but also the smartness (Caragliu et al., 2011; Jucevičius,

Jucevičienė 2016; Giffinger 2011; Radzvickienė Jucevičius, 2016; Sinkienė, 2016; Bruneckiene, Lopez, 2015; Bruneckienė, 2014; Komninos 2011), competitiveness (Bruneckienė, 2010; Piliutytė, 2007; Sinkienė, 2014), the export (Bruneckienė, 2010; Snieška & Meilienė, 2014) and innovativeness (Levickaitė & Reimeris, 2011; Martinaitytė & Kregždaitė, 2013) of a location by individual components. In recent literature (Armstrong et al., 2012; Čeičytė & Petraitė, 2014; Melnikas, 2013; Vasauskaitė & Krušinskas, 2009), indexes are employed to evaluate globalization (Global opportunity index, Global Power City Index, Sustainable cities index) and other socio-economic phenomena. Although the list of the most popular indexes worldwide includes different attractiveness indexes (A Global Foreign Direct Investment Country Attractiveness Index, Global Attractiveness Index, Kearney Global Services Location Index™), works by foreign and, particularly, by Lithuanian authors do not provide any indexes for evaluating the sub-national, i.e. location's attractiveness for business development in the context of smart development. Besides, most often researchers describe a unified process of calculating the index itself, without taking a closer look at the possibilities of improving the calculation.

Research issue. The attractiveness of a location for business development is a well-analysed research issue. A broad analysis of this issue was done on the national level, especially the matters of attracting foreign direct investment and improving business environment. However, a more detailed analysis of the problem on the sub-national level, i.e. the location aspect, is missing. Furthermore, changing business conditions and environment require a new approach both in business practice and research papers. In the current background, a new dynamic approach answering the challenges of the changing environment is missing in the research of location attractiveness for business development. The analysis of the concept of attractiveness from the dynamic point of view requires viewing it as a capability of the location to maintain, create and attract business and investments, which depends on the activities of local authorities and economic entities, rather than a set of individual factors that determine attractiveness. No researchers have employed an integrated approach towards the perception and evaluation of location's attractiveness for business development. The issues of location attractiveness have not been researched in the context of smart growth seen as a new medium (conditions) where locations compete for investment, new jobs, human resources, technologies, knowledge and other factors.

To sum up, despite the increasing interest in the topic of location's attractiveness for business development, scientific literature does not discuss the theoretically and empirically justified methodology for evaluating location's attractiveness for business development in the context of smart development. Therefore, the analysis of the research issue elucidation level has led to the following formulation of the research issue: the absence of the link between the

factors determining the location's attractiveness to business and interrelations between them in the context of smart growth (the absence of location's attractiveness for business development in the context of smart growth (*VPV)* model), which, for the lack of a methodological base, impedes the evaluation of location attractiveness to business and interpretation of evaluation results important for designing effective attractiveness improvement strategies and measures that would ensure the growth of economy, competitiveness and social wellness in that location.

Research object: factors determining the location's attractiveness for business development in the context of smart growth and their interrelations.

Research goal: to develop a model of factors determining the location's attractiveness for business development in the context of smart growth which allows to evaluate location's attractiveness at the fixed point in time and dynamically, and in relation to other locations, and which reveals the strength of factor interrelation and effect on the overall attractiveness.

Research methods:

- systemic and comparative analysis of concepts and conclusions made in research papers based on comparative, classification, systematisation and generalisation methods;
- synthesis of analysis results and logically derived conclusions;
- expert evaluations and questionnaires;
- correlation and factor analysis, Granger causality test;
- mathematical and statistical analysis of empirical research results using SPSS 17.0, EViews 8 and Microsoft Office Excel 2007 programs for data processing.

The structure of the dissertation. The research work consists of three parts. The first section of the dissertation analyses the concept of location attractiveness for business development in the context of smart growth and the prerequisites for building attractiveness by comparing theoretical and empirical research papers on the concept and classification of location, on its attractiveness to business, on the factors of location's attractiveness to business, on the effect of attractiveness to location's economy and on the concept of smart growth. After the systemic and comparative analysis of concepts found in research literature, identification of relations between different elements and drawing the essential research conclusions, a definition of location's attractiveness for business development in the context of smart growth was formulated.

The second section of the dissertation presents the dimensions of location's attractiveness to business in the context of smart growth identified by comparing, systematising and generalising the methods and principles for evaluating the attractiveness of a location used in research literature, the methodological principles for evaluating the location's attractiveness for business development in the context of smart growth and a model of factors

determining the location's attractiveness for business development in the context of smart growth.

The third section of the dissertation covers the questionnaire and expert evaluations obtained using the empirical research methodology developed for this purpose. The evaluations were employed to revise the model of factors determining the location's attractiveness to business in the context of smart growth designed on the basis of research literature analysis. The location attractiveness index was calculated and analysed for validity and responsiveness. The relationship between the index of county attractiveness for business development in the context of smart growth, separate sub-indexes and indicators giving an objective description of business expansion in the counties were evaluated. Recommendations for improving the calculation and analysis of indexes used to evaluate the location's attractiveness for business development in the context of smart growth were made. The relationship between the location attractiveness and business attractiveness factors was evaluated by means of a correlation analysis, Granger causality test and factor analysis. Empirical research data were processed by using SPSS 12.0 software package and Microsoft Office Excel 2007 program.

Dissertation length. The dissertation consists of 185 pages, 14 figures, 38 tables, 16 equations and 3 annexes. 246 reference sources were used.

Publication of dissertation research results. The results of this dissertation research results were presented in national and international conferences and published in reputable Lithuanian and foreign publications. Research results were published in nine scientific papers.

REVIEW OF THE DISSERTATION CONTENTS

1. THE CONCEPT OF LOCATION'S ATTRACTIVENESS FOR BUSINESS DEVELOPMENT IN THE CONTEXT OF SMART GROWTH AND THE ASSUMPTIONS OF BUILDING ATTRACTIVENESS

1.1. The concept and classification of locations

This chapter reviews the variety of location concepts and classifications found in research literature, reveals different scientific approaches to location's attractiveness and its importance for business development. The analysis can be summarised by saying that in terms of attractiveness to business, a location is defined as a territory, the geographical, socio-economic, demographic, technological, political, infrastructural factors which give the economic entity a competitive advantage, hence, it develops its business there. Such definition of a location enables us to analyse the concept of attractiveness by means of determining factors, which is important for the improvement of location's attractiveness from a strategic perspective.

1.2. The notion of location's attractiveness for business development

This chapter presents the notion of location's attractiveness by distinguishing the concept of location's attractiveness for business development, which is analysed in this dissertation. It is a wider concept compared to the notion of investment attractiveness, which is often analysed in research literature, because it encompasses not only investment but also business development both by legal and natural persons. The analysis of research results leads to the conclusion that the concept of attractiveness should be viewed not only as an outcome but also as an ever-changing process. Attractiveness changes either upwards or downwards. Different target groups may perceive the same location differently, i.e. one target group may find the location attractive and the other group may see it as unattractive. Attractiveness is built by different measures considering different target groups; therefore, it is important to identify the specific requirements raised by the target group. The following definition of location attractiveness was developed after the secondary research and used in the dissertation text: location attractiveness is the ability of the location to attract, develop and maintain business and investments by means of developed environment and operation of economic entities (private and public sector), which give them a competitive advantage over other entities. It should be noted that attractiveness seen as an outcome makes the assessment process static, whereas seeing it as a process brings a dynamic aspect into the assessment procedure and substantiates the necessity to monitor the permanent state of attractiveness and to create attractiveness improvement strategy.

1.3. The variety of factors determining the location's attractiveness for business development

This chapter analyses the attractiveness factors assessed by an entrepreneur while selecting a location for business development. According to research literature, the location's attractiveness cannot be described by one major factor; therefore, a number of different factors of attractiveness are identified and included in indexes used to assess the attractiveness of certain locations (regions or cities). The variety of factors and methods used for the analysis of attractiveness to business has revealed that although the topic of location's attractiveness for business development has been broadly researched, the majority of papers present a limited analysis of attractiveness factors, giving little consideration to modern trends of urbanisation and technology development. Basic factors (infrastructure, accessibility, climate, natural resources, etc.) are mainly used in the assessment of location attractiveness giving little attention to the "soft" factors. It should be noted that previous studies are closely related in a special nature of the territories analysed and the applicability of methods proposed in research papers is very limited; or, conversely, attractiveness is assessed in general, without considering the territory's specificity.

1.4. The effect of attractiveness to business on location's economy

This chapter evaluates the effect of location's attractiveness on the economy in that location. This effect can be positive or negative. Attractiveness to business in research literature is most often assessed by quantifying the attracted investment, created jobs and increase in productivity, without identifying the link with attractiveness to business and investment. The effect of attractiveness and investment on economy identified by researchers is analysed on international, national and regional level in order to provide a methodological basis for assessing the location's attractiveness for business development and investment. Empirical and theoretical research studies have proved that investment is regarded as an important economic growth promotion measure in the creation of location's attractiveness assessment methodology.

1.5. Relationship between location's attractiveness and competitiveness

The chapter discusses the relationship between the location's attractiveness and competitiveness. This relationship is proved by calculations presented in research papers; however, the majority of researchers regard a location's attractiveness as a prerequisite for competitiveness in spite of the fact that a location's attractiveness is comparable to competitiveness in research papers. The secondary research results lead to the conclusion that the attractiveness of a location is related to the ability to attract and/or retain certain resources in the location, whereas competitiveness is related to the ability to use

these resources for value creation, improvement of the quality of life, etc. Having identified this material difference, the dissertation author assesses attractiveness as a precondition for a location to achieve competitiveness and the concept of attractiveness is analysed from the perspective of a permanent self-empowerment process. The output of this process is converted into input that further generates output. It means that, in a specific period of time, the location has a mix of attractiveness factors which had been created during the previous periods, and are affected by specific internal and external factors at a particular moment. All these factors create a new combination of location's attractiveness factors that is further used to create the location's attractiveness and competitiveness.

1.6. Smart growth concept

This chapter analyses the concept of smart social development and application of smartness characteristics in the analysis of social systems. According to researchers, in the light of globalisation and a rapidly changing environment, the economic development of locations increasingly depends on dynamic capabilities making it possible to react to an ever-changing environment and create new and innovative forms of development and competitive advantage rather than on static factors and resources. Thus, the smartness of a location becomes an important prerequisite for attractiveness, thus the qualitative characteristics of smartness are appropriate to use in analysing the issues of location's attractiveness for business development.

Secondary research leads to the conclusions that the attractiveness of a location to business is closely interrelated with smartness elements. The development of each location smartness element directly adds to the improvement of location's attractiveness, which, in turn, promotes the development of separate smartness elements and the development of the smart location on the whole. For instance, attractiveness for business development directly promotes the elements of economy, management, agility and environment and these elements promote smart development of the location. Conversely, location's smart development directly positions the location as attractive to investors, inhabitants, entrepreneurs and tourists. In addition, both the smart growth of social systems and attractiveness are viewed as a permanent dynamic process and as a static outcome of a certain period. Therefore, the need to assess the location's attractiveness in the context of smart development is substantiated not only by the search of new attractiveness improvement measures and the relevance of this issue in the light of globalization and ever-changing environment, but also by the methodological harmonization of the concept. This explains why the location's attractiveness to business should be assessed by means of eight characteristics of the smart social system development: intelligent, knowledge-driven, learning, networked, innovative, agile, sustainable and digital. Based on secondary research, the author defined

the location's attractiveness for business development in the context of smart growth as the location's ability to attract, develop and maintain business and investments by means of developed environment (consisting of intelligence, knowledge-driving, learning, networking, innovations, agility, sustainability and digitalization factors) and smart operation of economic entities (private and public sector), which give them a competitive advantage over other entities.

2. METHODOLOGICAL PRINCIPLES AND THE MODEL FOR ASSESSING THE LOCATION'S ATTRACTIVENESS FOR BUSINESS DEVELOPMENT

2.1. Attraction to business assessment characteristics and methods

This chapter presents a comparative analysis of attraction to business assessment methods and techniques. There is a lack of agreement among authors about the most precise and useful methods. There are discussions about the integrated use of qualitative and quantitative methods supplemented with missing information, which is successfully applied by international consulting companies, banks or researcher groups that develop attractiveness assessment indexes for countries, regions or cities. Different concepts of attractiveness presented in research literature relate to assessment methods and available for empirical research. Secondary research suggests that the methods described in research papers are focused on location ranking, specific projects or companies when their decision regarding the selection of a certain location is analysed. The analysis of location's attractiveness assessment methods found in research papers leads to the conclusion that the most frequently and broadly used method is attractiveness assessment indexes, which give a comprehensive evaluation of location's separate areas covering the multidimensionality of attractiveness.

2.2. Dimensions of location's attractiveness for business development in the context of smart growth

This chapter gives descriptions of eight characteristics of the social system identified in the theorhetical part of the dissertation as the most appropriate methodological approach to assess a location's attractiveness for business development and describes the influence of each characteristic in the overall attraction of the location to business.

2.3. Basic methodological principles for assessing the location's attractiveness for business development in the context of smart growth

This chapter lists the main methodological principles characterising the assessment process of the analysed issue. Based on these principles, the model of factors (*VPV*) determining the location's attractiveness for business development in the context of smart growth was designed. This model combines

the main factors of attractiveness and describes their interrelations and relation with overall attractiveness; therefore, it is a methodological basis for assessing attractiveness by index. The assessment of attractiveness by combining the *VPV* model and attractiveness index make it possible to assess the location's attractiveness over a given period in an integrated, methodologically and statistically reliable manner, in a simple and user-friendly form (expressed in one-digit number) and following the globalization trends (by including the dimensions of smartness), compare the obtained result with other locations and analyse the change of attractiveness over time.

2.4. The model of factors (*VPV*) determining the location's attractiveness for business development in the context of smart growth

In the model, factors determining the location's attractiveness for business development in the context of smart growth are organised in 8 groups: 1) a group of factors making the location attractive as intelligent, 2) a group of factors making the location attractive as networked and having good infrastructure, 3) a group of factors making the location attractive as sustainable, 4) a group of factors making the location attractive as digitalized, 5) a group of factors making the location attractive as learning, 6) a group of factors making the location attractive as agile, 7) a group of factors making the location attractive as innovative, 8) a group of factors making the location attractive as knowledge-driven. Each group contains certain factors which can be distinguished as those which form the attractiveness dimension (see Fig. 1).

The model is aimed at assessing the location's ability to use and/or create the factors determining its attractiveness for business development in order to attract and develop new or maintain the existing businesses and investment. It is important to highlight the multi-criteria nature of the concept of location's attractiveness to business as attractiveness is determined by many factors; therefore, the *VPV* model should be viewed as a methodological tool that makes it possible to analyse both the mix of attractiveness factors and individual factors in the hierarchy of all factors. It should be noted that factors formed on the national level (e.g. national security) or factors having the same effect in all locations (e.g. governmental policy) are excluded from the model. Major factors identified through theoretical and empirical analysis were included in the model; however, it is acknowledged that the state of play of attractiveness changes due to the influence of different factors at different points in time. Therefore, the model can be substituted or revised considering the location's specific nature and the analysed period. The possibility to supplement the model expands its applicability both on the national and international level.

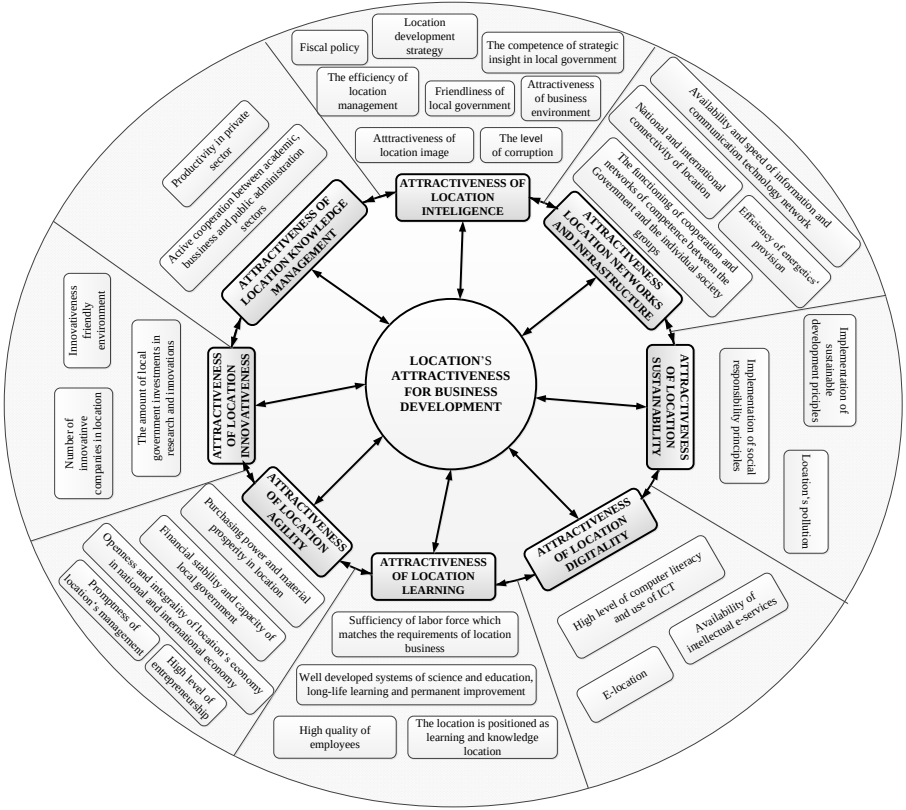

Fig. 1 The model of factors determining the location's attractiveness for business development in the context of smart growth

The location's goal is to attract and develop new or maintain the existing businesses (competitive on the local, national and international level) and investment. The multi-criteria nature of the attractiveness concept confirms that attractiveness assessment by index is appropriate. Qualitative and quantitative characteristics of factors determining the location's attractiveness are important for the assessment of the location's attractiveness for business development in the context of smart growth. The author of the dissertation recommends using her VPV model and assessing the location's attractiveness for business development in the context of smart growth through 8 groups of factors consisting of 32 factors, 101 qualitative and 36 quantitative indicators.

3. ASSESSING THE ATTRACTIVENESS OF A LOCATION FOR BUSINESS DEVELOPMENT IN THE CONTEXT OF SMART GROWTH USING THE EXAMPLE OF LITHUANIA'S COUNTIES

The attractiveness of a location for business development in the context of smart growth is assessed using the example of Lithuanian counties. Based on the EU standardized Nomenclature of territorial units for statistics (hereinafter NUTS), Lithuania has 10 Level 3 NUTS regions: Alytus, Kaunas, Klaipėda, Marijampolė, Panevėžys, Šiauliai, Tauragė, Telšiai, Utena, and Vilnius.

Mathematical-statistical, expert evaluation and questionnaire survey methods were used complementary for assessing the attractiveness of Lithuanian counties for business development. The use of methods depends on the possibilities of information collection.

In the dissertation, the attractiveness of counties for business development was **assessed in 6 steps**:

1) **In the first step**, the empirical research methodology was designed. Questionnaires for the survey and expert evaluation were designed, the required respondent sample was calculated, and requirements for experts were identified. Methodological principles for assessing the compilation of location attractiveness index and relationship of sub-indexes with business development factors were drawn.

2) **In the second step**, the questionnaire survey and expert evaluation was conducted. The questionnaire survey was selected in order to interview the subjects who are best informed about the issues covered by the dissertation, namely, companies and entrepreneurs. As a representative questionnaire survey on the country level requires substantial resources (time, organizational and financial), a pilot survey was conducted in Alytus county. To cover all analysed regions, experts from the entire country were selected for expert evaluation. This method was chosen in order to achieve high quality results with minimum resources. The results obtained in steps 1 and 2 were used to review the model of location's attractiveness for business development in the context of smart growth designed on the basis of on the secondary research.

3) **In the third step**, the index of location's attractiveness for business development was calculated and 10 Lithuanian counties were ranked by the overall index and separate sub-indexes for the period 2005–2015.

4) **In the fourth step**, the index validity and responsiveness was checked.

5) **In the fifth step**, the relationship between the index of county's attractiveness for business development in the context of smart growth and its sub-indexes and indicators which objectively define business development was assessed.

6) **In the sixth step**, recommendations for increasing the location's attractiveness to business were made on the basis on the survey results. Possibilities for improving index calculation and analysis were also analysed in this step.

3.1. Methodology for assessing the survey in Alytus (pilot case study) and survey results

The town of Alytus was used as a location case for the pilot study. A questionnaire survey was done with entrepreneurs having business in Alytus and entrepreneurs who had not chosen Alytus to develop their business. The aim of the questionnaire survey was to learn the opinion of company owners and investors in Alytus about the town's attractiveness for business development, as well as the opinion of company owners and investors who had not chosen Alytus to develop their business. That is, the aim is to analyse the town's investment attractiveness, i.e. to determine the main factors promoting business development and investment in the region.

The main factors attracting entrepreneurs to Alytus were as follows: availability of qualified labour, fast document processing in the municipality, affordable real-estate purchase/lease prices, cheap labour, personal contacts and low competition in the market (untapped market). These factors are seen as measures used to build the attractiveness of Alytus for business development and position the business environment, i.e., strategic factors. According to researchers, these factors have a direct influence on the city's well-being, attractiveness to business, and build the city's attractiveness along with the measures used for making the basic factors effective.

The respondents indicated that the following factors had a weak influence on making the decision to start business or invest in Alytus town: land and real-estate taxes lower than average, a well-developed road infrastructure, closeness to Polish, Russian and Belorussian markets, international profile of the town, good connection with the biggest Lithuanian cities, and low competition in the market (untapped market). These factors are seen as inevitable in order to start considering the decision to develop business or invest there. Thus, these factors should be seen as basic, in the absence of which the decision to start business in Alytus would not be considered.

The respondents indicated the following factors that had no influence on their choice to start business in Alytus: multimodal transport possibilities, simplified document processing, flexibility of municipal institutions considering the investor's requests, proximity of the city centre, operations of big market players in the city, support and consultations on business starting, development and investment issues, clear and stable business development strategy of Alytus, land lot buying possibilities, multiple real-estate purchase/lease offers, availability of natural resources required for business operations, and national profile of the town. These factors are classified as "gray" factors present in all investment territories, thus they have no exceptional character in terms of attracting investment to Alytus, although they influence the investment decision making *per se*.

The questionnaire survey results confirm the classical location attractiveness factors found in research literature and included in the attractiveness assessment index. Additional indicators not analysed in research literature were mentioned by the questionnaire survey interviewees: acquaintances in town, family business traditions, flexibility of decision-makers toward investor requests and fast document processing. These indicators were included into the model of location's attractiveness for business development in the context of smart growth.

3.2. Expert evaluation methods and results

Expert evaluation confirmed the factors promoting business and investment development identified in the pilot case study. The experts particularly emphasised that decisions to invest in industry segments in a certain location were influenced by the availability of highly qualified potential employees who can cope with the tasks and the location's geographical convenience for product transportation. Experts also noted that almost all Lithuanian regions had the latter factor as a result of a well-developed transportation system, infrastructure and proximity of export markets (Poland, Germany, Latvia and Russia).

In experts' opinion, the following factors undermine the location's attractiveness for business development:

- nepotism and protectionism of friends in government institutions;
- bureaucracy in government institutions.

Experts also indicated the following factors that promote business development:

- collaboration of community with economic entities;
- community's positive approach towards business development in the location;
- prioritisation of local products/services;
- implementation of circular economy concept.

These indicators were included into the model of location's attractiveness for business development in the context of smart growth.

The analysis of 58 questionnaires filled in by experts made it possible to identify the weight factors of the groups of factors determining the attractiveness of Lithuanian counties for business development and investment. According to the experts, the group of intelligence factors (0.141 points) has the greatest influence on the attractiveness of Lithuanian counties to business and investment. This group is followed by the learning factor group (0.139 points), and the innovation factor group (0.137 points). The knowledge-driven factor group (0.13 points) and the digitalisation factor group (0.128 points) were regarded by the experts as less important. In the opinion of experts, factor groups having the least influence on the region's attractiveness to business are as follows: agility (0.111 points), networking (0.109 points), and sustainability (0.105 points).

Experts were also asked if the definition of location's attractiveness for business development was understandable and were encouraged to give their comments regarding the improvement. 89.7 % of the respondents (52) stated that the definition was clear and understandable. 10.3 % of the respondents (6) stated that the definition was not understandable; however, they had no suggestions for revision. Consequently, the following definition formulated after the secondary research and tested through expert evaluation was approved: *location's attractiveness for business development is the location's ability to attract, develop and maintain business and investments by means of developed environment (consisting of intelligence, knowledge-driving, learning, networking, innovations, agility, sustainability and digitalisation factors) and smart operation of economic entities (private and public sector), which give them a competitive advantage over other entities.*

3.3. Methodological principles for designing the index of location's attractiveness for business development in the context of smart growth (VPindex)

After secondary research, a model of factors determining the location's attractiveness for business development in the context of smart growth was designed. The model consists of eight groups of attractiveness factors and their qualitative and quantitative characteristics. The index of location's attractiveness for business development in the context of smart growth (hereinafter VPindex) was designed on the basis of the quantitative characteristics of attractiveness factors. Index composition schematics is presented below:

$$\begin{aligned} \textbf{VPindex} = (w_1)\ \textbf{Intel\_Patr\_Index} + (w_2)\ \textbf{Darnum\_Patr\_Index} + \\ + (w_3)\ \textbf{Skaitmen\_Patr\_Index} + (w_4)\ \textbf{Mokym\_Patr\_Index} + \\ + (w_5)\ \textbf{Judrum\_Patr\_Index} + (w_6)\ \textbf{Inovatyv\_Patr\_Index} + \\ + (w_7)\ \textbf{Žin\_Patr\_Index} + (w_8)\ \textbf{Infrastrt\_Patr\_Index} \end{aligned} \quad (1)$$

where:
VPindex is the index of location's attractiveness for business development in the context of smart growth;
Intel_Patr_Indexis the intelligence attractiveness index;
Darnum_Patr_Index is the sustainability attractiveness index;
Skaitmen_Patr_Index is the digitalisation attractiveness index;
Mokym_Patr_Index is the learning attractiveness index;
Judrum_Patr_Index is the agility attractiveness index;
Inovatyv_Patr_Index is the innovation attractiveness index;
Žin_Patr_Index is the knowledge-driving attractiveness index;
Infrastrt_Patr_Index is the infrastructure attractiveness index;
w_i *is the weighting factor of the* i^{th} *factor.*

It should be noted that although the location's attractiveness for business development in the context of smart growth model includes the attractiveness of networking, it is hardly possible to characterise this dimension by quantitative indicators due to the absence of quantitative indicators on the regional and national level. For this reason, the networking attractiveness was substituted with the infrastructure attractiveness in the VPindex in order to deviate as little as possible from the theoretical substantiation of the model. Additional attention should be given to developing the methodological basis for the qualitative assessment of networking, which might be the area for future research.

The Min Max Normalization method was used when calculating the VPindex. Researchers (Snieška, Bruneckienė, 2007) have proved that the most appropriate normalization method for multi-criteria concepts that are evaluated by indexes is to calculate the distance from the minimum and maximum values or standard deviation from the mean value. It is important to note that the attractiveness of the analysed location should be compared not to the average but to the most attractive location, i.e., the target and align with the maximum value.

When calculating the VPindex, all eight sub-indexes were given the same weighting factor in order to eliminate the possibility of manipulating the final index result by weighting factors obtained through expert evaluation. The effect of different weighting factors on the final result is discussed in index validity and responsiveness analysis. The weighting factors of sub-indexes are different because each sub-index is made of a different number of indicators.

The interdependence between index indicators was examined by calculating the Pearson correlation coefficient in order to verify whether the factors and indicators included in the VPindex reflect the location's attractiveness for business development objectively without duplicating similar information and trends. This calculation helped to purify index indicators and avoid excessive ones. Following the correlation analysis, those indicators, the linear association of which with other

index indicators was too strong (the Pearson correlation coefficient was above 0.8) were removed from the index.

After the examination of indicator pairs with very strong linear association, those indicators which had very strong linear association with more than one index indicators, where removed. The following indicators were removed from the index: the share of companies operating in the sector of information and communication; the length of motorways (national and local); government gross debt compared to municipality's GDP; the share of employees involved in R&D in higher education and government sector. In the following sections of the dissertation, the index of location's attractiveness for business development in the context of smart growth consists not of 36 indicators listed in Table 2.2 but of 32 indicators (the removed indicators in Table 2.2 are marked in italic).

The correlation and complementation of factors included in the VPindex support the conclusion derived from the theoretical analysis that the attractiveness of a location for business development is an integrated concept.

The correlation and complementation of factors included in the VPindex support the conclusion that it is not enough to strengthen one factor to improve the location's attractiveness; all factors must be strengthened in an integrated manner.

Correlation analysis of index indicators enabled to eliminate excessive indicators (32 out of 36 were left) with the strongest linear association; therefore, the index became more convenient for practical use and the duplication of similar information was eliminated. An index with better practical application stands out from other attractiveness assessment indexes described in research literature.

3.4. Methodological principles for assessing the relationship of VPindex with factors of business development

The relationship between the location attractiveness and business attractiveness factors was evaluated by means of correlation analysis, Granger causality test and factor analysis. Correlation analysis enables to evaluate only the strength of association between two variables, but it does not evaluate the causality, i.e., it does not explain which indicator is the cause and which indicator is the consequence. Granger test was run for a more detailed assessment and supplementation of the relationship between the index of location's attractiveness to business and business development indicators. Granger causality, contrary to correlation, investigates not the relationship between the data of the same period but also verifies whether there is a delayed (longer than one period, one year in our case) effect between two variables.

Factor analysis examines the structure and patterns of a phenomenon. It was applied to examine the interrelationship between different business development factors in order to see if the selected business development factors represent different aspects of business development, or if certain factors are interrelated. This method allows us to aggregate some analysed indicators into broader

indicators and to simplify the analysis and assessment process as well as avoid the loss of meaningful information.

3.5. VPindex and ranking of Lithuanian counties in 2005–2015

The calculation of location's attractiveness for business development in the context of smart growth showed that in 2005–2015 the following counties listed below in priority order were the most attractive for business development: Vilnius, Kaunas, Klaipėda and Telšiai. The attractiveness of these counties remained stable through the entire reference period. The counties of Vilnius and Kaunas stood out prominently among other regions. The attractiveness of Klaipėda and Telšiai counties assessed by means of VPindex was similar (see Fig. 2).

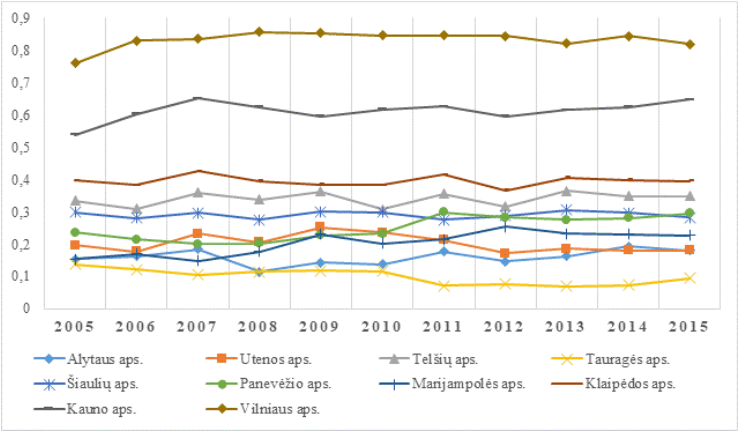

Fig. 2 VPindex of Lithuanian counties in 2005–2015

It is difficult to identify which sub-indexes had an effect on the change of Lithuanian counties' VPindex in the course of time because the change was observed not only in the attractiveness of the analysed county but in competing counties as well. Pearson correlation coefficients (between VPindex and sub-indexes) (see Table 3.10) and Kendall rank correlation coefficients (based on ranks) were calculated from the values of VPindex and sub-indexes and ranks of all counties in the period 2005–2015 in order to find out which sub-indexes influenced the VPindex most. The strongest correlation was observed with the sub-indexes of knowledge (0.906 points), digitalisation (0.901 points), learning (0.885 points), infrastructure (0.88 points), and intelligence (0.878 points). A somewhat weaker correlation was noted with regards to the attractiveness sub-indexes of sustainability (0.672 points) and agility (0.719 points). Thus, the obtained Pearson correlation coefficients confirm that all attractiveness formation factors distinguished in the VP model can be regarded as the causality factors behind the location's attractiveness to business.

Kendall rank correlation coefficients showed that the VPindex correlates best with the ranks of infrastructure capacity (0.798 points), digitalisation (0.745 points), intelligence (0.705 points), innovation (0.698 points). Kendall rank correlation coefficients are consistent with the results of the Pearson correlation coefficients.

Lithuanian regions can be classified according to their attractiveness to business into five groups: highly attractive (platinum), very attractive (golden), relatively attractive (silver), averagely attractive (copper) and little attractive (aluminium). This classification of counties by the attractiveness for business development is based only on VPindex and ranking in the hierarchy and over time.

It should be noted that the index allows us not only to establish the region's position in relation to other regions but also to analyse it by separate sub-indexes. Thus, it is possible to distinguish each region's strengths and weaknesses, which are important for the formation of its attractiveness to business strategies and find the reasons why some regions managed to improve their attractiveness and ranked higher in the hierarchy, while other regions maintained the same level of attractiveness and others face a decline of attractiveness.

3.6. Attractiveness of Lithuanian counties by specific sub-indexes of the VPindex

To obtain the necessary and precise information, the concept of attractiveness to business should be examined in a long-term perspective and in the context of comparative analysis. The comparison of Lithuanian regions' attractiveness by specific sub-indexes proved that the VPindex is an appropriate tool to examine the location's attractiveness to business not only in terms of time and in relation to competing regions but also by separate factors determining the location's attractiveness. This kind of analysis makes it possible to highlight the strengths and weaknesses of the region in comparison to competing regions as well as from the perspective of time.

The conducted survey also confirmed that attractiveness of different locations is determined by different factors which change with time. In general, the dynamics of factors determining the county's attractiveness allow the conclusion that attractiveness is a relative process which changes with time; therefore, the country's attractiveness can be formed by different factors every year.

3.7. An analysis of Lithuanian counties' VPindex validity and responsiveness

The ranks of Lithuanian counties' VPindex by using different data normalization methods showed that the selection of normalization methods has no effect on the final results. The Kendall rank correlation coefficient calculated from the data of all regions of the period 2005–2015 is equal to 0.996 (when the

calculated p-value is lower than 0.05). That means that throughout the entire reference period the attractiveness of counties assessed by ranking results were identical, irrespective of the normalization method used. The ranking assessment did not coincide between the regions of Utena and Marijampolė in 2011, when different normalization methods produced a difference in ranks by one rank. This difference did not change the conclusion that different data normalization methods, i.e. either the Min Max Normalisation method, or standard deviation from the mean value method had no effect on the VPindex ranks.

Therefore, the validity and responsiveness analysis confirmed that one of the two data normalization methods – standard deviation from the mean value or Min Max normalization – can be used for the assessment of location's attractiveness to business by index. The author of the survey is free to choose the normalization method, however, the dissertation author recommends using the Min Max normalization method because the concept of attractiveness assessment suggests comparing the analysed location with the most attractive and not the average one.

The obtained Kendall's coefficient of concordance values has shown that there is no agreement between ranks calculated by different data selection methods, i.e., the W value is not close to 1. These results prove that the selection of sub-indexes, factors and indicators for the calculation of the index can become a tool for manipulation in order to obtain the sought result.

Based on Kendall's coefficient of concordance values, a conclusion can be drawn that the following methods, listed below in descending order, have the greatest effect on the final results: sub-indexes, factor and indicator selection methodology, and weighting methodology. The data normalization method has little effect on the final results. The empirical research justified the importance of sub-index, factor and indicator selection as well as methodological substantiation and argumentation of the weighting method in the process of assessing a certain concept by index.

3.8. The relationship of the VPindex with indicators describing the location's development

A statistical relationship (correlation) and causality (Granger test) analysis of VPindex and indicators best describing business development in the county was done in order to verify the hypotheses found in research literature which state that there is a strong relationship between the location's attractiveness to business and development (founding) of the business in that location. The author of the dissertation made a detailed list of indicators identified by researchers (Strzelczyk, 2014) and experts of the survey. The list of indicators describing business development in a location is given in chapter 3.1. According to the author, the following indicator groups describe the situation and trends of business development in a location:

1. A group of company development (setting up) indicators;
2. A group of self-employability indicators;
3. A group of youth self-employability indicators;
4. A group of infrastructure under construction indicators.

The above-listed indicator groups are made of the following indicators:

1. A group of company development (setting up) indicators:
   - the share of newly registered companies among the operating companies, per 1 000 of a population;
   - the number of small and medium enterprises registered in one year, per 1 000 of a population;
   - the number of small and medium enterprises withdrawn from the register in one year, per 1 000 of a population;
   - the number of new jobs created in one year, per 1 000 of a population;
   - gross value-added by one employed resident, EUR/per 1 000 of a population.
2. A group of self-employability indicators:
   - natural persons holding a business license, per 1 000 of a population;
   - natural persons registered as sole proprietors, per 1 000 of a population;
3. A group of youth self-employability indicators:
   - the share of youth (18–29) holding a business license in the total number of all holding a business license;
   - the share of youth (18–29) registered as sole proprietors in the total number;
4. A group of infrastructure under construction indicators:
   - the number of issued permits to build new non-residential buildings, per 1 000 of a population;
   - the number of issued permits to build new non-residential buildings, per 1 000 of a population;

The calculations were done and data were processed by means of SPSS Statistics (version 17.0) and *EViews* 8 software.

Correlation analysis results confirmed that in the case of Lithuania there is a link between the attractiveness to business and business development (setting up) in the location. It is apparent, from the combination of empirical research done in the framework of this dissertation and empirical research of other authors (Godlewska-Majkowska, Komor, 2017, Strzelczyk, 2014), that there is a link between the attractiveness of regions and business development there in large and small economies.

As correlation analysis results by different groups of Lithuanian counties showed different strength, no unequivocal conclusion can be drawn for all counties. Nevertheless, the identified correlation reveals the following trends:

- There is a stronger link between attractiveness to business and development of companies in economically stronger regions of the same country compared to weaker regions.
- There is a stronger link between attractiveness to business development and self-employability in economically stronger regions of the same country compared to weaker regions.
- There is a positive link between attractiveness to business development and self-employability of the youth in economically stronger regions of the same country.
- There is a negative link between attractiveness to business development and self-employability of the youth. This negative link is influenced by emigration trends or employment in companies without giving preference to self- employment in economically weaker regions.
- There is positive link between attractiveness to business development and construction of new non-residential buildings in economically strong regions of the same country.

It should be noted, however, that additional calculations are required with an inclusion of more data (taken from a longer time span and regions of other countries) for more precise conclusions.

The analysis of causality between the VPindex and business development indicators and the proof of the link between them leads to the conclusion that investment into the region's attractiveness via the dimensions of smart growth has an effect on business development not only instantaneously, but in the long term as well.

Factor analysis of business development indicators was done in order to examine which business development indicators best reflect business development in the region. Although the author grouped 11 indicators of business development in a region into four groups, factor analysis statistically proved the possibility of having only three groups reflecting different aspects: self-employability, company development (setting up) and infrastructure under construction. Moreover, the calculation of factor analysis enabled to evaluate different weights of indicators in separate groups. The weights show the strength of representing the overall trend of change within the analysed indicator group, i.e. the stronger the weight factor is, the more the indicator changing trend coincides with the trend of change within the indicator group. The examination of weighting factors revealed that out of 11 of the identified indicators, 6 indicators with the biggest weight in separate groups are sufficient to characterise business development in a location. These indicators represent 85.472 per cent of the total change of all indicators:

1. The group of self-employability indicators is best represented by:

1.1. the number of natural persons holding a business license, per 1 000 of a population;

1.2. the number of natural persons registered as sole proprietors, per 1 000 of a population;

2. The group of company development (setting up) indicators is best represented by:

2.1. the number of small and medium enterprises registered in one year, per 1 000 of a population;

2.2. the number of new jobs created in one year, per 1000 of a population;

2.3. gross value-added by one employed resident, EUR/per 1000 of a population.

3. The group of infrastructure under construction indicators is best represented by the number of issued permits to build new non-residential buildings, per 1 000 of a population.

In summary, the empirical research confirmed that the involvement of factor analysis into the methodology of assessing the location's attractiveness to business development and investment simplifies the assessment process by eliminating excessive indicators and leaving only the crucial information for analysis and conclusions.

3.9. The relationship of VPindex with the indicators describing business development in the location

It is important to determine the link between separate sub-indexes of the VPindex and indicators identifying business development in a certain location in order to have a detailed view of the issues of location's attractiveness for business development and the effect of separate factors of attractiveness on the overall attractiveness of the region. Therefore, the correlation between separate sub-indexes of the VPindex and 6 main indicators identified after the factor analysis were analysed.The results of correlation analysis revealed a direct, although weak, relationship between the sub-indexes of the VPindex and indicators identifying business development in the location. A more detailed research is required to examine the strength of this relationship by including more regions and more time spans. The calculations have revealed that:

- Company development (setting up) correlates best with intelligence, digitalisation, learning, and innovation attractiveness.
- Self-employment has the strongest correlation with learning, innovation, and agility attractiveness.
- Infrastructure under construction has the strongest correlation with digitalisation, innovation, and knowledge-driven attractiveness.

The correlation of the sub-indexes of the VPindex with separate business development indicators confirm that all attractiveness distinguished in the model of factors can be seen as attractiveness-increasing factors influencing investment and business development.

3.10. RECOMMENDATIONS FOR IMPROVING THE LOCATION'S ATTRACTIVENESS FOR BUSINESS DEVELOPMENT IN THE CONTEXT OF SMART GROWTH

This section presents the principles which must be considered in the formulation of location's attractiveness to business strategy. Proposals are made to improve the attractiveness of Lithuanian counties for business development in the following areas:

- Increasing the accessibility of information about business development opportunities to potential entrepreneurs;
- Raising awareness about potential locations;
- Establishing and maintaining viable networks between business, education and science institutions, communities and the public sector;
- Effective and smart use and development of physical infrastructure;
- Improving the supply and accessibility of e-services;
- Upgrading education and science sector services and optimization of infrastructure with the focus on market needs;
- Increasing the efficiency and flexibility of governmental sector;
- Promotion and development of innovations.

CONCLUSIONS

This dissertation analyses specific characteristics of location's attractiveness for business development in the context of smart growth and methodological aspects of integrated assessment. A continued interest of foreign and Lithuanian researchers in this issue confirms the relevance and timeliness of the research. Location's attractiveness in the context of smart growth is barely dealt with in the papers of Lithuanian and foreign researchers which proves the scientific novelty of the dissertation.

The following conclusions were derived from theoretical and empirical analyses:

1. The author of dissertation specified the notion of location's attractiveness for business development in the context of smart growth highlighting that it is the ability of location to attract, create and sustain business and investments through the formed environment which consists of intelligence, sustainability, digitality, agility, innovativeness, networks, knowledge and learning, and smart operation of economic subjects. The theoretical analysis revealed that location's attractiveness for business development is a multidimensional concept. Viewing the location's attractiveness for business development as a dynamic process and not a static state of play clarifies the assessment process in the sense that the attractiveness of a location constantly changes. The change can be positive and negative. The approach that the attractiveness of a location for business development is formed not only by local authorities but also by economic entities as well as location's environment and conditions supports

the multidimensionality of the concept. The incorporation of these two approaches into the concept of location's attractiveness for business development makes the assessment integrated and dynamic.

2. The approach that the attractiveness of a location for business development preconditions the growth of location's competitiveness specifies the concept of attractiveness to business in the aspect of continuity and self-empowerment. It means that at a specific period of time, the location has a mix of attractiveness factors created during the previous periods and at the particular moment is effected by specific internal and external factors. All these factors create a new combination of location's attractiveness factors which is further used to improve the location's attractiveness. The attractiveness of a location for business development depends on the variety and abundance, i.e. a mix of factors. One or several factors are not enough to reveal the concept of attractiveness; therefore, an integrated assessment is required. The inclusion of dynamic factors into the process of assessing attractiveness meets the condition of analysing the location's attractiveness as the location's ability to be attractive.

3. The concept of smart social development is not a merely theoretical one. This concept emerged from globalization processes, ever-changing environment and altered circumstances and conditions of locations' competition for business and investment. The concepts of smart social development and location's attractiveness for business development are connected by the elements of smart growth; therefore, the inclusion of smart growth dimensions into the assessment of attractiveness clarify the concept of attractiveness and ensure that the assessment process meets the modernity and up-to-datedness requirements.

4. Assessment using the index method ensures that the attractiveness of a location for business development in the context of smart growth is assessed in an integrated manner. The following methodological characteristics of assessment by index were identified after the surveys conducted in dissertation research:

- The index is calculated in the following steps: normalization of factor indicator values, allocation of weighting factors to sub-indexes and/or their indicators, calculation of the index, verification of index validity and responsiveness.
- The inclusion of methodological identification of factors based on the analysis of literature and strategic documents, questionnaire survey and expert evaluation into index calculation process supplements index calculation steps, characterises and introduces the author's approach to the analysed issue and increases the reliability of assessment process.
- The assessment process must involve not one or several factors and/or indicators but a set of factors and indicators since the attractiveness of a

location for business development in the context of smart growth is a multidimensional concept.

- The results of assessing the location's attractiveness for business development in the context of smart growth by using an index are affected by all index calculation methods in all steps: the selection and grouping of factors and indicators, obtaining data for the calculation, normalization of the data, assigning weighting factors, creating the index function.
- The requirements for the indicators to be relevant, reliable, realistic, accessible, comparable and timely increase the reliability of the assessment process and correctness of assessment results (up-to datedness).
- Qualitative research methods are the most suited for the analysis of the networking attractiveness at lower than national level because qualitative methods produce a more precise view of the situation in the location compared to quantitative methods.
- The use of both qualitative and quantitative methods for the assessment of attractiveness substantiates the methodology of the assessment process as well as supplements and specifies assessment results.
- Attractiveness factors influence each other and the overall attractiveness of the location. This interrelationship hinders the identification of cause and effect (all factors are interrelated).

5. Researchers' different approaches towards the concept of location's attractiveness to business brings diversity in identification, grouping and combining the factors into the general scheme. This diversity substantiates the necessity to present the research author's interpretations of the concept and to provide methodological grounds of factor identification and consolidation into the general scheme in the process of assessing the location's attractiveness to business development. The designed model of factors which determines the location's attractiveness to business development in the context of sustainable growth (*VPV*) contains the key factors of attractiveness combined into a general interrelationship scheme. The factors are grouped as follows:

- A group of factors making the location attractive as intelligent: location's local and international profile; location's development strategy; friendliness of local authorities; strategic foresight competence of local authorities; location's management efficiency; attractiveness of business environment; tax policy; level of corruption.
- A group of factors making the location attractive as networked and having good infrastructure: availability of ICT network and broadband speed; location's accessibility on the national and international level; independence of energy and efficiency of energy supply; functioning of cooperation and excellence networks between local authorities and civil society groups.
- A group of factors making the location attractive as sustainable: implementation of sustainable development principles in the location;

pollution in the location; implementation of social responsibility principles in the location.
- A group of factors making the location attractive as digitalized: a high level of digital literacy and use of ICT in the location; the availability of intellectual e-services; e-location.
- A group of factors making the location attractive as learning: well-developed systems of higher education and science, life-long learning and professional development; a developed image of "learning and knowledge location"; a highly skilled workforce; a sufficiency of workforce meeting business needs.
- A group of factors making the location attractive as agile: fast decision-making of the location management; financial stability and capacity of local authorities; the purchasing power and material wealth in the location; the openness and integration of location's economy in the national and international economy; a high level of entrepreneurship in the location.
- A group of factors making the location attractive as innovative: innovation-promoting environment; an abundance of innovative companies in the location;
- A group of factors making the location attractive as knowledge-driven: active collaboration between science and research, business and government sectors; high productivity in the private sector.

The model of factors (*VPV*) determining the location's attractiveness for business development in the context of smart growth combined the location theory and the concepts of smart growth and attractiveness for business development.

6. Empirical research into the model of factors (*VPV*) determining the location's attractiveness for business development in the context of smart growth combined the *VPV* model with the method of assessment by index (the index of location's attractiveness for business development in the context of smart growth (*VPindex*). The combination of *VPV* model and VPindex led to an integrated static and dynamic assessment of location's attractiveness for business development in the context of smart growth by doing the cross-sectional analysis by all factors, separate factors or factor groups, over time and in relation to other locations. The empirical research based on the case study of Lithuanian counties confirmed the validity of the methodology and led to the following conclusions:

6.1. In 2005–2015 the following Lithuanian counties (listed below in priority) order were the most attractive for business development: Vilnius, Kaunas, Panevėžys, Šiauliai and Klaipėda (positions 1 to 4). Another group of Lithuanian counties that were involved in severe competition with other regions for a higher position in the ranking list were Panevėžys, Šiauliai, Marijampolė, Utena and Alytus regions (positions 1 to 9). The region of Tauragė was the least attractive for business development (position 10).

6.2. The index value alone gives little information about the location's attractiveness to business. To obtain comprehensive information, the index value should be analysed in relation to other locations and over a period of time.
6.3. Locations are classified into groups by the similarity of their attractiveness for business development in the context of smart growth by means of index ranking. The main competitors of the location or similar locations can be identified through cluster analysis. Empirical research made it possible to classify Lithuanian counties into five groups according to their attractiveness for business development in the context of smart growth: highly attractive (platinum) (Vilnius county), very attractive (golden) (Kaunas County), relatively attractive (silver) (Klaipėda and Telšiai counties), averagely attractive (copper) (Panevėžys, Alytus Šiauliai, Marijampolė, Utena counties) and less attractive (aluminium) (Tauragė county).
6.4. Assessment by using an index makes it possible to analyse the location's attractiveness by sub-indexes or separate factors in order to identify the location's advantages which improve its attractiveness for business development in the context of smart growth as well as issues of concern, to evaluate the effectiveness of attractiveness improvement strategies and measures.
6.5. The validity and responsiveness analysis of the index showed that the result of assessment mainly depend on the selection of sub-indexes, factors, and indicators as well as on the weighting factor allocation methodology. Data normalization methods have little effect on the final results. Different weighting methods have a bigger influence on the results of counties averagely attractive to business compared to the highest and lowest ranked counties. It is advisable to use the Min Max Normalization method in the analysis of location's attractiveness for business development in the context of smart growth because the analysed location should be compared with the most attractive and not the average one. The maximum values should be targeted in order to get more exact information about the current situation and make correct strategic decisions. This dissertation proved the importance of methodological substantiation and argumentation of sub-indexes, factor and indicator selection and weighting factor assignment in the process of assessing the location's attractiveness for business development in the context of smart growth.
6.6. Correlation and factor analyses which were included into the process of assessing the location's attractiveness for business development in the context of smart growth by using an index makes it possible to eliminate factors and indicators which characterise similar conditions from the assessment and to avoid the duplication of information. Correlation and factor analyses ensure the statistical validity of assessment methodology, the correctness of results,

as well as the simplicity, attractiveness and convenience of applying the assessment in practice.

6.7. Correlation analysis and Granger test included into the process of assessing the location's attractiveness for business development in the context of smart growth by using an index makes it possible to analyse the cause and effect with a time delay and interpret the results with greater precision and dynamic aspect during the period when attractiveness factors had an effect on business development (since when and for how many periods). The Granger test proved that investment into location's attractiveness to business is effective not only in the period of investment but also later. These findings substantiate the correctness of the approach that the attractiveness of a location to business is a process and confirm that it is necessary and important to invest into the location's attractiveness for business development.

7. A questionnaire survey and empirical research results suggested the modification of 11 indicators identified in the secondary research that best describe business development. The indicators were grouped as Company development (setting up), Self-employability and youth self-employability, and Infrastructure under construction indicators.

7.1. A statistical analysis of the relationship between the VPindex and business development indicators showed that all Lithuanian counties are in linear relation of different strength. Although the empirical research does not make it possible to draw general conclusions about the strength of the relationship, it confirms the existence of relationship between the indicators of the VPindex business development in the case of Lithuanian counties in the period 2005–2015. Investment into location's attractiveness for business development in the context of smart growth influence the business growth not only in the short, but also in the long term. More detailed research is required to verify the strength of the relationship.

7.2. Calculations showed that business development (setting up of companies) correlates mostly with intelligence, digitalization, learning and innovation attractiveness; self-employability has the strongest correlation with learning, innovation, and agility attractiveness; infrastructure under construction correlates the most with digitalization, innovation and knowledge-driven attractiveness.

7.3. Correlation of all sub-indexes of the VPindex with separate business development indicators confirmed that the characteristics of attractiveness used in the *VPV* model are seen as factors promoting the location's attractiveness for business development, i.e. all dimensions of smart growth are important for improving the location's attractiveness for business development.

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REZIUMĖ

Temos aktualumas. Šiuolaikinės verslo sąlygos, sparčiai kintanti aplinka ir vartotojų poreikiai, globalizacija, techninė pažanga, nauji standartai ir visuomenės nuostatos verčia verslininkus, savarankiškai dirbančius asmenis bei investuotojus analizuoti ir vertinti esamas bei ieškoti naujų vietovių verslo plėtrai ir pergalvoti turimas bei naujas galimybių pasirinkimo strategijas. Renkantis naujas vietoves verslo plėtrai lemiamą įtaką daro visas kompleksas veiksnių: kaštų, vartotojų bei rinkų prieinamumo, kokybės, informacijos bei išteklių gavimo galimybės ir kt. veiksniai. Svarbi ir ekonominė, politinė bei socialinė terpė, kurioje yra priimamas sprendimas vykdyti veiklą ar investuoti: mokestinės sistemos pokyčiai, socialinės politikos naujovės, darbo jėgos kaina ir prieinamumas, politinis stabilumas, ekonominės bei finansinės krizės ir kt. Taigi rinkos ekonomikoje ypatinga svarba suteikiama verslo bei investavimo aplinkai, t. y. sąlygoms, veiksniams bei aplinkybėms, kurios kaip rinkinys yra suformuotos atitinkamoje vietovėje ir kurios pritraukia, išlaiko ar skatina sukurti naują verslą ir investicijas. Pabrėžtina, kad vietovės patrauklumą verslo plėtrai formuoja vietovės valdžia, pati vietovė per savo geografinę, gamtinę, infrastruktūrinę, technologinę, demografinę, socioekonominę, kultūrinę bei kt. aplinką ir ekonomikos subjektai, veikiantys toje vietovėje. Vietovės rinkodariniai sprendimai, susiję su valdžios institucijų kuriamu vietovės įvaizdžiu, akcentuojančiu vietovės konkurencinius pranašumus, tampa informacine žinute ir pritraukia tikslinės grupės – verslininkų, savarankiškai dirbančių asmenų, ir investuotojų – dėmesį. Taigi dažniausiai vietovės valdžios institucijos tampa pagrindiniais vietovės (kaip patrauklios plėtoti verslą) kūrėjais, formuotojais ir reklamuotojais. Antra vertus, verslininkai, savarankiškai dirbantys asmenys bei investuotojai yra informacijos rinkėjai, analitikai bei sprendimų priėmėjai, todėl jie iš daugybės vietovių pasirenka tą, kuri suteikia konkurencinius pranašumus prieš konkurentus tiek ilguoju, tiek ir trumpuoju laikotarpiu. Taigi egzistuoja glaudus ryšys tarp vietovės patrauklumo verslo plėtrai ir verslo vykdymo (ekonomikos subjekto veiklos) bei investavimo vietos. O tai yra vietovės ekonominės plėtros, konkurencingumo didinimo ir socialinės gerovės užtikrinimo sąlyga. Dėl šių priežasčių vietovės patrauklumo verslo plėtrai veiksniai tampa pagrindinėmis strateginėmis gairėmis vietovės ekonominės politikos formavimo procese.

Pabrėžtina, kad patrauklumas nėra statinė koncepcija. Tai procesas. Tarkime, esamuoju laikotarpiu vietovė yra patraukli, bet ateityje (ir net artimoje) ji gali tapti nebepatraukli tikslinei grupei – verslininkams, investuotojams, darbuotojams, įmonėms ir kitiems subjektams. Tikslinė grupė iš nepatrauklios vietovės išsikels arba nepasirinks jos. Todėl vietovės patrauklumo didinimas turi būti nuoseklus ir nepertraukiamas procesas. Kitu atveju vietovė gali prarasti savo pranašumus prieš kitus konkurentus kovoje dėl investicijų, žmogiškojo kapitalo, verslo projektų, įmonių, technologijų ir pan. Taigi vietovės patrauklumo verslo plėtrai didinimas yra ilgalaikis tikslas, į kurį turi būti nuosekliai atsižvelgiama

planuojant ir formuojant ekonominę politiką vietovėje. Patrauklumo verslo plėtrai didinimas yra vietovės plėtros skatinimo proceso dalis ir būtina vietovės ekonominio augimo, konkurencingumo didinimo bei socialinės gerovės pasiekimo sąlyga. Norint, kad vietovė ekonomiškai bei socialiai klestėtų ir plėtotųsi konkurencingas verslas, vietovė turi būti patraukli verslui bei investicijoms. Finansinės lėšos (išlaidos), skirtos vietovės patrauklumo verslo plėtrai didinimui, yra ekonomiškai tikslingos: į patrauklumo didinimą investuotas euras sukuria daugiau nei eurą ekonominės naudos ir sumažina išlaidas, kurios atsiranda dėl vietovės socialinių įsipareigojimų įgyvendinimo, t. y. mažina socialinę naštą. Vietovės patrauklumas verslo plėtrai formuojamas per įvairias patrauklumo verslo plėtrai didinimo strategijas ir priemones. Jų efektyvumas tampa sėkmės garantu pritraukiant, išlaikant ir sukuriant naujus verslus bei investicijas. Atsižvelgiant į tai, kad šiuolaikiniame globalizacijos procesų sąlygotame pasaulyje informacija yra plačiai prieinama, sprendimai prieinami ir įgyvendinami operatyviai, o verslo sąlygos nuolat kinta, vienos vietovės laikui bėgant tampa daugiau, kitos – mažiau patrauklios verslo plėtrai. Todėl pats vietovės patrauklumas verslo plėtrai, kaip charakteristika, yra kintamas laike, tad jis nuolatos turi būti analizuojamas, įvertinamas ir didinamas. Tai galima pasiekti per efektyvias patrauklumo verslo plėtrai didinimo strategijas ir priemones.

Vietovės patrauklumo verslo plėtrai didinimo strategijų efektyvumas susijęs su jų formuotojų ir įgyvendintojų požiūriu į pačią patrauklumo koncepciją. Šiandien sparčiai kintanti verslo aplinka, besikeičiančios visuomenės nuostatos ir jų reikalavimai įmonei, verslininkui bei investuotojams sąlygoja naują požiūrį į vietovės patrauklumą verslo plėtrai. Požiūris į vietovės patrauklumą verslo plėtrai, išreikštas standartiniais veiksniais ir rodikliais, jau yra nepakankamas reprezentuoti šią koncepciją ir patraukti tikslinės grupės dėmesį, kadangi daugelis vietovių vertinamos pagal tuos pačius ar panašius savo patrauklumo verslo plėtrai veiksnius, kurie šitaip nebesukuria konkurencinio išskirtinumo vietovėms, o šios tampa panašios patrauklumo verslo plėtrai aspektu. Naujausioje mokslinėje literatūroje pabrėžiama, kad šiandien konkurencinis pranašumas kuriamas pasitelkiant ne statinius, o dinaminius pajėgumus – įžvalgos, žinių bei inovacijų, mokymosi, tinklaveikos bei bendradarbiavimo ir kt. Pasak mokslininkų (Pihkala ir kiti, 2007, Harmaakorpi, 2006), dinaminiai pajėgumai – tai gebėjimas atitikti greitai kintančią aplinką, prisitaikyti prie jos ir išnaudoti ją savo tikslams. Jie rodo sugebėjimus pasiekti naujas ir inovatyvias plėtros ar konkurencinio pranašumo formas, todėl naujas požiūris turi atsirasti tiek vietovės patrauklumo verslo plėtrai koncepcijoje, tiek ir patrauklumo verslo plėtrai didinimo strategijose. Mokslinėje literatūroje (Jucevičius ir kiti, 2016; Sinkienė, Grumadaitė, 2014) pabrėžiama, kad tiek įmonė, tiek ir vietovė turi vystytis sumaniai. Sumanus vystymasis tampa būtina sąlyga vietovei tapti patrauklia tikslinei grupei. Taigi siekiant vietovėms konkuruoti tarpusavyje dėl verslo, investicijų, žmogiškųjų išteklių, technologijų, projektų ir kitų veiksnių, svarbu patrauklumo verslo plėtrai koncepciją nagrinėti

sumanaus vystymosi kontekste, kuris atspindi, charakterizuoja bei atitinka šiuolaikines ekonomikos plėtros tendencijas, globalizacijos procesus ir šiuolaikinio verslo vystymosi strategijas bei tendencijas, taip pat vietovės patrauklumo verslo plėtrai didinimo strategijas grįsti sumanaus vystymosi dedamosiomis, nauju požiūriu ir idėjomis. Taigi vietovės patrauklumo verslo plėtrai ryšys su vietovės ekonomikos plėtra, konkurencingumu ir socialine gerove pagrindžia disertacijoje nagrinėjamos problematikos aktualumą, vietovės patrauklumo verslo plėtrai nuolatinis stebėjimas ir vertinimas pagrindžia nagrinėjamos problematikos savalaikiškumą, aršios konkurencijos tarp vietovių dėl verslo ir investicijų egzistavimas – būtinumą, o jos analizavimas sumanaus vystymosi kontekste – naujumą.

Apibendrintai galima teigti, kad šiuolaikinei ekonomikai, rinkos poreikiams ir verslo sąlygoms reikalingas naujas požiūris ne tik praktikoje, bet ir mokslinėse metodologijose. Siekiant sumaniai didinti vietovės patrauklumą verslo plėtrai ir formuoti patrauklumą didinančias strategijas bei priemones, pirmiausia reikėtų įvertinti esamą vietovės patrauklumą sumanaus vystymosi kontekste: išskiriant pagrindinius patrauklumą lemiančius veiksnius sumanaus vystymosi aspektu, identifikuoti vietovės stipriąsias bei problemines sritis, palyginti nagrinėjamos vietovės patrauklumą verslui su kitomis vietovėmis ir laike. Metodologinės priemonės, leidžiančios gauti aiškią, tikslią ir laiku informaciją apie bendrą vietovės patrauklumą ir jos konkurentų hierarchinėje sistemoje, identifikuoti esminius konkurencinius pranašumus ir silpnybes, tampa vienu svarbiausių strateginio planavimo įrankių ir vietovės ekonominės plėtros, konkurencingumo didinimo bei socialinės gerovės užtikrinimo sąlyga. Iki šiol mokslinėje literatūroje vietovės patrauklumo verslo plėtrai vertinimo metodologinės priemonės nebuvo pagrįstos sumanaus vystymosi aspektais, todėl atsiranda poreikis metodologiškai peržiūrėti ir atnaujinti mokslininkų požiūrį į vietovės patrauklumo verslo plėtrai koncepciją ir jos vertinimo metodologines priemones. Tai ypač aktualu tiek akademiniam, tiek ir praktiniam strateginiam lygmenims. Naujas požiūris, t. y. sumanaus vystymosi dedamųjų inkorporavimas į vietovės patrauklumo verslo plėtrai koncepciją, smarkiai prisideda prie vietovės ekonominio bei strateginio planavimo ir modeliavimo metodologinių pagrindų formavimo.

Mokslinės problemos pagrindimas ir jos ištyrimo lygis. Mokslinėje literatūroje patrauklumo koncepcija nėra nauja tema. Sutinkama gausybė fundamentalių darbų, skirtų patrauklumo problematikai nagrinėti. Daugiausia mokslininkai nagrinėjo patrauklumo koncepciją tiesioginių užsienio investicijų (Lessmann 2013; Lukoseviciute & Martinkute-Kauliene, 2016; Markusen 2013; Moura ir Forte, 2010; Naraškevičiūtė ir Barkauskaitė, 2014; Šimelytė ir Liučvaitienė, 2012) ir verslo aplinkos tobulinimo (Ezmale, 2012; Litavniece, 2014; Miot, 2015; Van den Berg ir kiti, 2007) aspektais. Ši tematika plačiai sutinkama ne tik užsienio, bet ir lietuvių autorių darbuose (Bruneckienė ir kiti, 2016; Sinkiene ir Kromalcas, 2010; Snieska ir Zykiene, 2011; Snieška ir Zykienė,

2015). Pabrėžtina, kad šią problematiką nagrinėjantys mokslininkai didžiausią dėmesį skyrė paties patrauklumo (atskiriant tiek investicinio, tiek ir verslo plėtros) sampratos gryninimui bei detalizavimui ir charakteristikų nustatymui (Ballota, 2004; Serrano, 2003; Servillo ir kiti, 2011; Snieska ir Zykiene, 2011), patrauklumą lemiančių veiksnių identifikavimui ir analizei (Ambroziak, 2014; Arauzo-Carod ir kiti, 2010; Bruneckiene ir kiti, 2016; Crozet ir kiti, 2004; Ezmale, 2012; Godlewska-Majkowska, 2012, 2013; Litavniece, 2014; Nikolova ir Plotnikova, 2013; Serrano, 2003; Sáeza ir Periáñez, 2015; Strzelczyk, 2014) ar atskirų jų veiksnių išsamesnei analizei atlikti bei daromo poveikio bendram patrauklumui nustatyti (Kuliavienė ir Solnyškinienė, 2014; Moraru, 2013; Naraškevičiūtė ir Barkauskaitė, 2014; Nosheen, 2013; Ruplienė ir Garšvienė, 2008; Altiner, 2012), patrauklumo strategijoms kurti ir priemonėms formuoti (Bruneckienė ir kiti, 2016; Sinkiene ir Kromalcas, 2010), investicinėms ir verslo galimybėms pristatyti užsienio ir nacionalinėse rinkose (Bose ir kiti, 2016; Chen ir kiti, 2012; Lin ir kiti, 2016; Vanolo, 2015; Zenker ir Erfgen, 2014; Kim ir Perdue, 2011; Lemaire ir Viassone, 2015). Patrauklumo vertinimo metodologinių pagrindų analizė tiek užsienio, tiek ir lietuvių mokslininkų darbuose (Bruneckienė ir kiti, 2016; Godlewska-Majkowska ir Komor, 2017; Glebova ir kiti, 2015; Murillo ir kiti, 2015; De Noni ir kiti, 2014; Siemens, PwC ir Berwin Leighton Paisner, 2014; Spalanzani ir kiti, 2016) sulaukė dėmesio gana neseniai.

Mokslinėje literatūroje (Caragliu ir kiti, 2011; Jucevičius, Jucevičienė, 2016, 2015; Giffinger, 2011; Radzvickienė, Jucevičius, 2016; Sinkienė, 2016; Bruneckiene, Lopez, 2015; Bruneckienė, 2014; Komninos 2011, 2008, 2006) sumanumo koncepcija nagrinėta skirtingiems ekonominės sistemos subjektams, pvz., valdžia, ekonomika, bendruomenė, infrastruktūra, tačiau patrauklumo koncepcija nebuvo analizuota sumanaus vystymosi kontekste. Tiek užsienio, tiek ir lietuvių autorių darbuose (Alawadhi ir kiti, 2012; Allwinkle ir Cruickshank, 2011; Anttiroiko, 2013; Bakıcı ir kiti, 2013; Nam ir Pardo, 2011; Sinkienė, 2016; Sinkienė, Grumadaitė, 2014) nagrinėta sumani šalis, regionas ir miestas, išskiriant jų specifinius sumanumo kriterijus. Lietuvių autoriai (Jucevičius, Kinduris, 2016; Liugailaitė-Radzvickienė, Jucevičius, 2016; Patašienė, Patašius, 2016; Sinkienė, 2016; Stanislovaitienė ir kiti, 2016) į sumanią socialinę sistemą žvelgė per dinaminių pajėgumų prizmę, kuri sudarė metodologinį pagrindą tam tikrą ekonominį reiškinį nagrinėti dinamiškai sumanaus vystymosi kontekste.

Pabrėžtina, kad patrauklumo koncepcija mokslinėje literatūroje nagrinėta skirtingais lygiais: įmonės, ūkio šakos, miesto, regiono ir šalies. Daugiausia dėmesio akademinėje visuomenėje sulaukė įmonės (Czinkota ir Ronkainen, 2006; Dubé ir kiti, 2016; Frenkel, 2012; Giner ir kiti, 2017; Kronenberg, 2013; McDonough Kimelberg ir Nicoll, 2011; Mota ir Brandao, 2013; Nielsen ir kiti, 2013; Spalanzani ir kiti, 2016), ūkio šakos (Bonasso ir kiti, 2014, Cohen, 2006, Davies ir kiti, 1994, Kimelberg ir kiti, 2012; Wedemeier, 2010; Van Oort ir kiti, 2014) ir šalies (Glebova ir kiti, 2015; Godlewska-Majkowska, 2012, 2013;

Yatsenko, 2016) patrauklumo koncepcija. Vietovės, kaip žemesnis už šalį lygmuo, iki šiol sulaukė gana mažai dėmesio. Mokslinėje literatūroje vietovės patrauklumas verslo plėtrai dažniausiai analizuotas 2 skirtingais aspektais: pirma, iš įmonės perspektyvos, kai vertinamas optimalus sprendimas, susijęs su veiklai plėtoti tinkamos vietovės atrinkimo procesu (Czinkota ir Ronkainen, 2006; Dubé ir kiti, 2016; Frenkel, 2012; Giner, 2017; Kronenberg, 2013; Kimelberg ir Nicoll, 2011; Mota ir Brandao, 2013; Goerzen ir kiti, 2013; Spalanzani ir kiti, 2016), ir antra, globaliai analizuojant konkrečių vietovių patrauklumą įmonėms, paprasčiausiai išskiriant patrauklumą lemiančius veiksnius (Ambroziak, 2014; Arauzo-Carod ir kiti, 2010; Bruneckiene ir kiti, 2016; Crozet ir kiti, 2004; Ezmale, 2012; Godlewska-Majkowska, 2012, 2013; Litavniece, 2014; Sáeza ir Periáñez, 2015; Strzelczyk, 2014). Tačiau šiuose tyrimuose pasigendama požiūrio į vietovės patrauklumą kaip į gebėjimą pritraukti, sukurti ir išlaikyti verslą bei investicijas, nes pats patrauklumas yra dinaminis procesas, todėl ir patrauklumo analizė turi būti pagrįsta dinaminiu požiūriu. Šiandien, kai konkurencinius pranašumus kuria ir statiniai, ir dinaminiai veiksniai, nebeužtenka identifikuoti tik atskirų patrauklumą lemiančių veiksnių. Būtinas naujas požiūris į patrauklumo koncepciją, pagrįstas dinaminiais vietovės pajėgumais, leidžiančiais formuoti vietovės gebėjimą būti patrauklia. Be to, daugiausia mokslinėje literatūroje patrauklumo koncepcija analizuojama iš dviejų skirtingų subjektų – valdžios institucijų ir įmonių bei investuotojų, – perspektyvų. Valdžios institucijos dažniausiai analizuojamos (UNCTAD, 2014); Cohen, 2000; Bruneckienė ir kiti, 2016; Glebova ir kiti, 2015; Kinda, 2013; Gilmore ir kiti, 2003; Blomstrom ir Kokko, 2003; Nemati ir kiti, 2013; Stanislovaitienė ir kiti, 2016) kaip atsakingos už vietovės patrauklumo didinimo veiksnių kūrimą, formavimą, strategijų įgyvendinimą, o įmonės ir investuotojai (Alamá-Sabater ir kiti, 2011; Bonasso ir kiti, 2014; Bruneckienė ir kiti, 2016; Dubé ir kiti, 2016; Kimelber ir Nicoll, 2011; Mota ir Brandao, 2013; Serrano, 2003) kaip vietovės patrauklumo naudotojai (arba pasirenka tą vietovę, arba ne). Tačiau patrauklumo koncepcijos analizė dinaminiu požiūriu nebeleidžia šiuos du mokslinėje literatūroje dominuojančius požiūrius analizuoti atskirai, nes tiek vietos valdžios institucijos, tiek ekonomikos subjektai ir pati vietovės aplinka bei sąlygos kuria ir formuoja bendrą vietovės patrauklumą. Todėl yra svarbus kompleksinis vietovės patrauklumo verslo plėtrai supratimas ir vertinimas, sujungiantis verslininko ir investuotojo, kuris ieško palankių sąlygų verslo plėtrai, vietinės valdžios, siekiančios užtikrinti konkrečios vietovės socialinę bei ekonominę plėtrą ir konkurencingumą, interesus, pačią vietovės aplinką bei sąlygas.

Patrauklumo koncepcija yra viena sunkiausiai apibendrinamų ir susisteminamų tyrimo sričių. Tai susiję su skirtingais problematikos analizės pjūviais, lygiais, subjektais, pačių vietovių specifikomis, pačios patrauklumo koncepcijos įvairialypiškumu, patrauklumą lemiančių veiksnių gausa ir įvairove. Skirtingi mokslininkų patrauklumo koncepcijos analizės išryškinti aspektai

sąlygoja įvairių patrauklumo modelių, struktūrizuotai sujungiančių į bendrą visumą patrauklumą lemiančius veiksnius, atsiradimą. Dažniausiai mokslinėje literatūroje sutinkami modeliai (Pasaulinis patrauklumo indeksas (angl. *Global Attractiveness Index*), Pasaulinis šalies patrauklumo tiesioginėms užsienio investicijoms indeksas (angl. *A Global Foreign Direct Investment Country Attractiveness Index*), A. T. Kearney pasaulinis paslaugų vietovių indeksas (angl. *Global Services Location Index*™), Pasaulinis galimybių indeksas (angl. *Global Opportunity Index*)) skirti nagrinėti įmonių, pramonės šakų ir nacionalinį patrauklumą, o ne žemesnį už šalies lygmenį, t. y. vietovės patrauklumą. Šių modelių ribotos adaptavimo galimybės vertinant vietovės patrauklumą verslo plėtrai pagrindė disertacijoje sukurto vietovės patrauklumo verslo plėtrai sumanaus vystymosi kontekste veiksnių (*VPV*) modelio atsiradimo būtinumą. Viešai pripažintos vietovės patrauklumo verslo plėtrai sumanaus vystymosi kontekste sampratos stoką iliustruoja ir mokslinėje literatūroje (Ambroziak, 2014; Arauzo-Carod ir kiti, 2010; Bruneckiene ir kiti, 2016; Crozet ir kiti, 2004; Ezmale, 2012; Godlewska-Majkowska, 2012, 2013; Litavniece, 2014; Sáeza ir Periáñez, 2015; Strzelczyk, 2014) identifikuotų vietovės patrauklumą lemiančių veiksnių gausa ir įvairovė. Nors kiekviena vietovė išsiskiria savo specifika ir aplinka, mokslinėje literatūroje pasigendama susistemintų ir į bendrą sistemą ryšiais sujungtų pagrindinių vietovės patrauklumą verslo plėtrai lemiančių veiksnių. Vietovės patrauklumo verslo plėtrai sumanaus vystymosi kontekste veiksnių (*VPV*) modelio, kaip metodologinio pagrindo, nebuvimas sunkina patrauklumo vertinimo procesą ir teisingų vietovės patrauklumo verslo plėtrai didinimo sprendimų priėmimą bei įgyvendinimą, taip pat vietovės užsibrėžtų ekonominių strateginių tikslų pasiekimą.

Mokslinėje literatūroje patrauklumo koncepcija vertinama skirtingais metodais. Vieni mokslininkai (Nikolova ir Plotnikova, 2013; Yatsenko, 2016; Kosinova ir kiti, 2014; Savluk, 2013) patrauklumą vertina remdamiesi atskirais statistiniais makroekonominiais rodikliais ir jų dinamika, kiti (Czinkota ir Ronkainen, 2006; Dubé ir kiti, 2016; Frenkel, 2012; Giner, 2017; Kronenberg, 2013; McDonough Kimelberg ir Nicoll, 2011; Mota ir Brandao, 2013; Nielsen ir kiti, 2013; Spalanzani ir kiti, 2016) identifikuoja pagal įmonių veiklos finansinius rodiklius, treti (Glebova ir kiti, 2015; De Noni ir kiti, 2014; Siemens, PwC ir Berwin Leighton Paisner, 2014) analizuoja geruosius pavyzdžius, o ketvirti (K. Schwab Pasaulinio konkurencingumo ataskaita Pasaulio ekonomikos forumui (angl. *Global Competitiveness Report of the World Economic Forum*), IMD pasaulinio konkurencingumo ataskaita (angl. *IMD World Competitiveness Yearbook*), Ernst & Young Europos patrauklumo apklausa (angl. *Ernst & Young's 2012 European attractiveness survey*)), Pasaulinis miestų konkurencingumo projektas (angl. *Global Urban Competitiveness Project*) – pateikia anketinio ar ekspertinio vertinimo rezultatus. Dažnai mokslinėje literatūroje vietovės patrauklumas vertintas įprastais (standartiniais) veiksniais ir juos apibūdinančiais

rodikliais. Būtent standartinių rodiklių įtraukimą į patrauklumo investicijoms ir verslo plėtrai vertinimo metodologiją dažnai lėmė oficialių statistinių duomenų gavimo galimybės. Tokie rodikliai kaip darbo jėga, infrastruktūra, socialinė bei ekonominė aplinka, viešasis sektorius ir kt. tampa standartine charakteristika, aprašančia vietovės patrauklumą verslo plėtrai. Ši problematika ypač aktuali patrauklumo koncepcijos analizėje regioniniu ir urbanistiniu lygmeniu. Tačiau pasigendama dinaminio požiūrio, suderinto su požiūriu į patrauklumą kaip į dinaminę koncepciją ir kaip į gebėjimą užtikrinti per ekonomikos subjektus ir valdžios institucijas, kad vietovė bus patraukli. Vienas dažniausiai taikomų patrauklumo vertinimo metodų – vertinimas indeksu, kuris plačiai pristatytas (Godlewska-Majkowska, 2012, 2013; Yatsenko, 2016; Nikolova ir Plotnikova, 2013; Savluk, 2013) mokslininkų darbuose. Pripažįstama šio metodo, kaip vieno iš tinkamiausių būdų vertinti kompleksinę problematiką, nauda ir tikslingumas. Lietuvių autorių darbuose indeksu vertintas ne tik šalies, pramonės šakos patrauklumas (Godlewska-Majkowska, 2012, 2013; Yatsenko, 2016; Nikolova ir Plotnikova, 2013; Cablyk, 2013) ar gyvenamosios vietovės (Bruneckienė ir kiti, 2016; Vidickienė, Melnikienė, 2008) patrauklumas, bet ir vietovės pagal atskiras komponentes sumanumas (Caragliu ir kiti, 2011; Jucevičius, Jucevičienė 2016, 2015; Giffinger 2011; Radzvickienė Jucevičius, 2016; Sinkienė, 2016; Bruneckiene, Lopez, 2015; Bruneckienė, 2014; Komninos, 2011), konkurencingumas (Bruneckienė, 2010; Piliutytė, 2007; Sinkienė, 2014), eksportas (Bruneckienė, 2010; Snieška ir Meilienė, 2014), inovatyvumas (Levickaitė ir Reimeris, 2011; Martinaitytė ir Kregždaitė, 2013). Šiuolaikinėje literatūroje (Armstrong ir kiti, 2012; Čeičytė ir Petraitė, 2014; Melnikas, 2013; Vasauskaitė ir Krušinskas, 2009), globalizacija (Galimybių miesto indeksas, Miesto pasaulinės jėgos indeksas, Darnių miestų indeksas) ir kiti socialiniai ekonominiai reiškiniai. Nors pasaulyje labiausiai populiarūs įvairūs patrauklumo indeksai (Pasaulinis patrauklumo tiesioginėms užsienio investicijoms indeksas, Pasaulinis patrauklumo indeksas, Kearney pasaulinis paslaugų vietovių indeksas), tačiau užsienio, o ypač lietuvių darbuose pasigendama vietovės, žemesnės už šalies lygmenį, patrauklumo verslo plėtrai sumanaus vystymosi kontekste indekso. Be to, dažniausiai mokslininkai pateikia unifikuotą paties indekso skaičiavimo procesą, nesigilindami į skaičiavimo tobulinimo galimybes.

Mokslinio tyrimo problema. Mokslinėje literatūroje vietovės patrauklumo verslo plėtrai problematika nėra nauja tema, ji itin plačiai nagrinėta šalies lygmeniu ir tiesioginių užsienio investicijų pritraukimo bei verslo aplinkos tobulinimo klausimais. Pasigendama išsamesnės problematikos analizės žemesniu už šalies lygmenį – t. y. vietovės aspektu. Be to, kintančioms verslo sąlygoms ir aplinkai reikalingas naujas požiūris tiek verslo praktikoje, tiek ir moksliniuose darbuose. Šiandienos perspektyvoje vietovės patrauklumo verslo plėtrai problematikoje pasigendama dinaminio požiūrio, sąlygoto kintančios aplinkos. Patrauklumo koncepcijos analizei dinaminiu požiūriu reikia į patį patrauklumą

žiūrėti ne kaip į atskirų patrauklumą lemiančių veiksnių rinkinį, o kaip į vietovės gebėjimą, sąlygotą per vietos valdžios institucijų bei ekonomikos subjektų veiklą, išlaikyti, sukurti ir pritraukti verslą bei investicijas. Pasigendama kompleksinio vietovės patrauklumo verslo plėtrai supratimo ir vertinimo. Sumanaus vystymosi kontekste, kaip naujoje terpėje (sąlygose), kurioje vietovės konkuruoja viena su kita dėl investicijų, darbo vietų, žmogiškojo kapitalo, technologijų, žinių ir kt. veiksnių, mokslinėje literatūroje problematika nėra nagrinėta. Apibendrinant galima teigti, kad, nepaisant didėjančio susidomėjimo vietovės patrauklumo verslo plėtrai problematika, mokslinėje literatūroje pasigendama teoriškai ir empiriškai pagrįstos vietovės patrauklumo verslo plėtrai sumanaus vystymosi kontekste vertinimo metodologijos. Taigi atlikta mokslinės problemos ištyrimo lygio analizė leidžia suformuoti tokią mokslinę problemą: vietovės patrauklumą verslo plėtrai sumanaus vystymosi kontekste lemiančių veiksnių bei jų tarpusavio ryšių sujungimo į vieningą sistemą nebuvimas (Vietovės patrauklumo verslo plėtrai sumanaus vystymosi kontekste veiksnių (*VPV)* modelio nebuvimas), kuris dėl metodologinio pagrindo stokos apsunkina vietovės patrauklumo verslo plėtrai sumanaus vystymosi kontekste vertinimo procesą bei rezultatų interpretavimą, svarbių efektyvių patrauklumo didinimo strategijų bei priemonių, užtikrinančių verslo plėtrą, ekonomikos augimą, konkurencingumo didėjimą ir socialinę gerovę vietovėje, kūrimą.

Mokslinio tyrimo objektas: vietovės patrauklumo verslo plėtrai sumanaus vystymosi kontekste veiksniai ir jų tarpusavio ryšiai.

Mokslinio tyrimo tikslas: sukurti vietovės patrauklumo verslo plėtrai sumanaus vystymosi kontekste veiksnių modelį, leidžiantį vertinti vietovės patrauklumą momentiniu bei dinaminiu aspektu ir kitų vietovių atžvilgiu, atskleidžiant veiksnių tarpusavio ryšio bei įtakos patrauklumui stiprumą.

Siekiant iškelto tikslo, suformuluoti šie tyrimo **uždaviniai:**

1. Patikslinti vietovės patrauklumo verslo plėtrai sumanaus vystymosi kontekste sampratą vietovės gebėjimo pritraukti, sukurti ir išlaikyti verslą bei investicijas ir sistemos sumanaus vystymosi požiūriu.
2. Išanalizuoti vietovės patrauklumo verslo plėtrai ir ekonomikos plėtros bei konkurencingumo tarpusavio ryšį bei specifiką ir identifikuoti bei suklasifikuoti pagrindinius vietovės patrauklumą verslo plėtrai didinančius bei mažinančius veiksnius.
3. Išskirti sumanaus vystymosi ypatumus ir dedamąsias, taikytinas vertinant vietovės patrauklumą verslo plėtrai.
4. Atlikti patrauklumo verslo plėtrai vertinimo metodikų analizę ir išskirti pagrindinius vietovių patrauklumo verslo plėtrai vertinimo metodologinius principus, svarbius patrauklumo vertinimo procesui.
5. Išskirti bei sujungti į bendrą sistemą pagrindinius vietovės patrauklumą verslo plėtrai lemiančius veiksnius ir apibrėžti ryšius tarp jų bei vietovės patrauklumo verslo plėtrai sumanaus vystymosi kontekste.

6. Taikant sukurtą modelį atlikti vietovės patrauklumo verslo plėtrai sumanaus vystymosi kontekste veiksnių empirinį tyrimą Lietuvos apskričių pavyzdžiu.

7. Nustatyti vietovės patrauklumo verslo plėtrai įtaką verslo plėtros rodikliams ir pateikti rekomendacijas Lietuvos apskričių patrauklumo verslo plėtrai didinimui.

Mokslinio tyrimo darbo struktūrą lemia suformuluotas mokslinio tyrimo tikslas ir jam pasiekti numatyti aštuoni uždaviniai, atsispindintys trijose disertacijos darbo dalyse.

Pirmoje dalyje analizuojama vietovės patrauklumo verslo plėtrai sumanaus vystymosi kontekste koncepcija ir identifikuojamos jo formavimo prielaidos, kuriomis remiantis suformuojamas vietovės patrauklumo verslo plėtrai sumanaus vystymosi kontekste apibrėžimas. Šioje dalyje analizuojamos vietovės, sumanaus vystymosi bei patrauklumo verslo plėtrai sąvokos, identifikuojami pagrindiniai vietovės patrauklumą verslo plėtrai didinantys bei mažinantys veiksniai, charakterizuojama patrauklumo verslo plėtrai įtaka vietovės ekonomikai ir nustatomas ryšys tarp patrauklumo verslo plėtrai bei konkurencingumo. Identifikuojama sumanaus vystymosi svarba, išskiriamos pagrindinės sumanios socialinės sistemos dedamosios, išryškinami sumanios vietovės ypatumai ir bruožai.

Antroje dalyje pristatomi pagrindiniai vietovės patrauklumo verslo plėtrai sumanaus vystymosi kontekste vertinimo metodologiniai principai, prielaidos ir ypatumai. Šioje dalyje apžvelgiami pagrindiniai patrauklumo verslo plėtrai vertinimo metodai, ypatingą dėmesį skiriant vertinimui indeksu. Charakterizuojamos vietovės patrauklumą verslo plėtrai sumanaus vystymosi kontekste lemiančios dedamosios, kurios sudaro pagrindą formuojant vietovės patrauklumo verslo plėtrai sumanaus vystymosi kontekste veiksnių (VPV) modelį. Šioje dalyje ypatingas dėmesys skiriamas vietovės inteligentiškumo patrauklumo, vietovės tinkliškumo bei infrastruktūros patrauklumo, vietovės darnumo patrauklumo, vietovės skaitmeniškumo patrauklumo, vietovės mokymosi patrauklumo, vietovės judrumo patrauklumo, vietovės inovatyvumo patrauklumo ir vietovės grindžiamumo žiniomis patrauklumo kokybinėms bei kiekybinėms charakteristikoms.

Trečioje dalyje atliekamas vietovės patrauklumo verslo plėtrai sumanaus vystymosi kontekste veiksnių modelio empirinis tyrimas Lietuvos apskričių 2005–2015 metų pavyzdžiu. Pristatoma apklausos Alytuje (bandomojo tyrimo) ir ekspertinio vertinimo (visos Lietuvos mastu) tyrimo metodika bei rezultatai. Suformuluojami vietovės patrauklumo verslo plėtrai sumanaus vystymosi kontekste indekso (*VPindex*) sudarymo metodologiniai principai ir apskaičiuojami skirtingų Lietuvos apskričių patrauklumo verslo plėtrai sumanaus vystymosi kontekse indeksai ir rangai pagal bendrą patrauklumą bei pagal konkrečius *VPindex* subindeksus. Skaičiavimo metodikai ir rezultatams pagrįsti atliekama

VPindex tvirtumo ir jautrumo analizė. Suformulavus *VPindex* ryšio su verslo plėtros veiksniais vertinimo metodologinius principus, įvertinamas bendro ir pagal atskirus *VPindex* subindeksus patrauklumo verslo plėtrai ryšys su vietovės verslo plėtrą nusakančiais rodikliais. Remiantis atliktais skaičiavimais pateikiamos rekomendacijos Lietuvos apskričių patrauklumo verslo plėtrai sumanaus vystymosi kontekste didinimui.

Išvadose pateikti apibendrinti viso disertacijoje atlikto teorinio ir empirinio tyrimo rezultatai.

Disertacinio tyrimo metodai:

Rengiant pirmąją ir antrąją disertacijos dalis, tiriant teorinius sumanaus vystymosi bei patrauklumo verslo plėtrai aspektus ir sudarant vietovių patrauklumo verslo plėtrai sumanaus vystymosi kontekste tyrimo metodiką buvo taikoma *sisteminė, lyginamoji ir loginė mokslinės literatūros analizė, išvadų ir apibendrinimų formavimas*.

Rengiant trečiąją disertacijos dalį buvo taikomi *matematiniai statistiniai, anketinės apklausos bei ekspertinio vertinimo metodai*. Anketinės apklausos metodas taikytas patikslinti teorinio tyrimo metu identifikuotus esminius vietovės patrauklumo verslo plėtrai sumanaus vystymosi kontekste veiksnius ir verslo plėtrą nusakančius rodiklius. Ekspertiniu vertinimu buvo siekiama suteikti Lietuvos apskričių patrauklumo verslo plėtrai sumanaus vystymosi kontekste veiksnių grupėms svorio koeficientus. Empiriniam tyrimui atlikti naudoti statistiniai duomenys, kuriais remiantis atliktas Lietuvos apskričių patrauklumo verslo plėtrai sumanaus vystymosi kontekste 2005–2015 metais tyrimas. Šiam tikslui buvo taikomi kiekybiniai matematiniai statistiniai metodai – *indekso skaičiavimo, koreliacinė-regresinė, Granger priežastingumo, faktorinė analizė*. Empirinio tyrimo duomenys apdorojami pasitelkiant statistinės programinės įrangos paketus *SPSS 17.0* bei *EViews 8* ir *Microsoft Ofice Excel 2007*.

Disertacinio tyrimo rezultatų mokslinis naujumas

- Patikslintas vietovės patrauklumo verslo plėtrai sumanaus vystymosi kontekste apibrėžimas, vietovės gebėjimo pritraukti, sukurti ir išlaikyti verslą bei investicijas ir sistemos sumanaus vystymosi požiūriu. Vietovės patrauklumas verslo plėtrai sumanaus vystymosi kontekste – tai vietovės gebėjimas per suformuotą aplinką (sudarytą iš inteligentiškumo, darnumo, skaitmeniškumo, judrumo, inovatyvumo, tinklaveikos, grindžiamumo žiniomis, mokymosi veiksnių) ir ekonomikos subjektų (privataus bei viešojo sektoriaus) sumanų veikimą pritraukti, sukurti ir išlaikyti verslą bei investicijas, suteikiančias jiems konkurencinį pranašumą prieš konkurentus. Šio apibrėžimo naujumas lyginant su kitais apibrėžimais yra susijęs su požiūriu, kad vietovės gebėjimą būti patrauklia verslui formuoja tiek valdžios institucijos, tiek ekonomikos subjektai, tiek ir vietovės aplinka bei sąlygos.
- Suformuotas vietovės patrauklumo verslo plėtrai sumanaus vystymosi kontekste veiksnių (*VPV*) modelis, kuriame išskirti pagrindiniai patrauklumą

formuojantys veiksniai, sujungti į bendrą tarpusavio ryšius atspindinčią sistemą, juos grupuojant į skirtingų patrauklumų veiksnių grupes pagal sumanaus vystymosi komponentes. Lyginant su analizuotais moksliniais darbais, šis modelis sujungia patrauklumo verslo plėtrai ir sistemos sumanaus vystymosi komponentes. Jis taip pat išsiskiria tuo, kad yra pritaikytas vietovės gebėjimo užtikrinti, jog bus patraukli, sumanaus vystymosi kontekste analizei. *VPV* modelis sudaro metodologinį pagrindą atlikti kiekybinę ir kokybinę vietovės patrauklumo verslo plėtrai sumanaus vystymosi kontekste analizę.

- Sukurtas vietovės patrauklumo verslo plėtrai sumanaus vystymosi kontekste indeksas (*VPindex*), leidžiantis vertinti skirtingų vietovių patrauklumą momentiniu bei dinaminiu ir kitų vietovių atžvilgiu, pagal bendrą ir atskirus *VPindex* subindeksus. Lyginant su kitais analizuotais indeksais, *VPindex* skirtas žemesnio už nacionalinį lygmens vietovių patrauklumo analizei. Šis indeksas nuo kitų mokslinėje literatūroje sutinkamų indeksų skiriasi tuo, kad jo skaičiavimo metodologija patobulinta įtraukiant į ją faktorinę ir Granger priežastingumo analizę, leidžiančią patikslinti bei pagrįsti veiksnių įtraukimo į skaičiavimą būtinumą ir eliminuoti pasikartojančią informaciją.

Mokslinio tyrimo rezultatų galimos pritaikymo sritys

1. Vietovės patrauklumo verslo plėtrai analizei momentiniu bei dinaminiu aspektu ir kitų vietovių atžvilgiu.
2. Vietovės patrauklumą verslo plėtrai didinančių ir mažinančių veiksnių identifikavimui.
3. Vietovės sumanaus vystymosi analizei momentiniu bei dinaminiu aspektu ir kitų vietovių atžvilgiu.
4. Vietovės patrauklumo verslo plėtrai sumanaus vystymosi kontekste ir pačios vietovės ekonominės plėtros prognozei.
5. Vietovės patrauklumo verslo plėtrai didinančių strategijų bei priemonių įgyvendinimo pagrindimui ir jų efektyvumo nustatymui.

Galimos tolimesnės mokslinių tyrimų kryptys

- Vietovės patrauklumo verslo plėtrai sumanaus vystymosi kontekste prognozavimas.
- Vietovės patrauklumo verslo plėtrai didinimo strategijų taikymo efektyvumo įvertinimas.

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