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THE INVESTMENT CLIMATE IN LATVIA'S, LITHUANIA'S AND BELARUS'S CROSS-BORDER REGIONS: THE SUBJECTIVE-OBJECTIVE ASSESSMENT*

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Abstract. As the world experience indicates, the favourableness of investment climate or, in other words, a region's entrepreneurial environment determines a region's sustainable development. First assessments of investment climate were developed and applied by western experts in the middle of the 1960s. They were based on the subjective assessment of countries' characteristics. The further development of the methodology for comparative assessment of countries' investment climate started to expand and complicate the system of characteristics assessed by experts, and to introduce objective statistical indexes. In recent decades, more research into investment climate at the level of regions appeared, as a result of the understanding of a specific and unique character of regional features, as well as its dramatic differences from the country as a whole. It is possible to distinguish objective, subjective, and subjective-objective methodologies for assessment of investment climate. According to the outcomes of the subjective-objective assessment of the investment climate in Latvia's (Latgale), Lithuania's (Vilnius, Alytus, Utena, Panevezys, and Kaunas counties), and Belarus's (Vitebsk, Grodno, Minsk, Brest oblasts, and Minsk city) cross-border regions, the regions under study were divided into 4 groups in accordance with W.Zapf's Well-being Typology Matrix: 1) low objective and subjective indicators - "Deprivation", 2) low objective indicators and high subjective indicators - "Adaptation", 3) high objective indicators and low subjective indicators - "Dissonance", 4) high objective and subjective indicators - "Well-being".

Keywords: investment climate (entrepreneurship environment), subjective-objective assessment, cross-border regions, W. Zapf's Well-being Typology Matrix.

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1. Introduction

The volume and structure of investments determine sustainable economic development and growth. Consequently, the favourableness of investment climate or, in other words, the development level of entrepreneurial environment determines a region's sustainable development (Šimelytė, Antanavičienė 2013; Tvaronavičienė *et al.* 2013; Dudzevičiūtė 2015; Ohotina *et al.* 2018). Entrepreneurship level is currently considered as one of the most important intangible growth factors in developed countries. Since the beginning of the 20th century, researchers from different countries have started to become interested in the factors that influence entrepreneurial environment and conditions in which the investment activity happens (Stern 2002; Titarenko 2005; Petrenko *et al.* 2017; Ohotina 2017; Fabus 2017, 2018; Pietrzak *et al.* 2017; Jankelova *et al.* 2018; Tvaronavičienė 2018). The Ministry of Education and Science of the Republic of Latvia also defined research into the quality of entrepreneurial environment and the assessment of its influence on investment attraction and economic growth as priority areas for social sciences in the period 2018–2021 (LR Izglītības un zinātnes ministrija 2017).

First assessments of investment climate were developed and applied by western experts in the middle of the 1960s. The Harvard Business School research which was based on the subjective assessment of countries' characteristics was one of the first in this area (Stobaugh 1969). The further development of the methodology for comparative assessment of countries' investment climate followed the way of expansion and complication of the system of the characteristics assessed by experts and introduction of objective (statistical) indexes. Nowadays, there is a large number of indicators worked out by international organizations which can be applied to assessing investment climate in the countries worldwide. Some indicators are based on microeconomic, business-orientated factors, while others are based on macroeconomic and political factors. Furthermore, alongside the given indicators there are also social, economic, and political indicators that indirectly characterize the favourableness of the investment climate. For example, if there is a lack of competition (*Global Competitiveness Index of the World Economic Forum, Competitiveness Index of the International Management Development Institute, etc.*) or political instability (*Political Risk Ranking by the agency PRS Group*) the investment climate cannot be considered as favourable. We should also consider the indicators in which the state of investment climate makes a constituent part of the indicator (*Global Competitiveness Index of the World Economic Forum*).

In recent decades more research into investment climate at the level of regions have appeared, as a result of the understanding of a specific and unique character of regional features, as well as its dramatic differences from the country as a whole and the failure to apply familiar and approved in the international practice methodological approaches to the assessment of the regional investment climate (*Model for Evaluating the Romanian Regional Competitiveness Regarding Investment Attraction; The Investment Attractiveness in the Regions and Sub-regions of Poland; Quality Index of Conditions for Small and Medium Business in 2013-2014: Regional Disproportions, etc.*).

Various criteria should be considered when assessing methods of investment climate. First, the scientific and practical significance of the indicator should be assessed (Menshikov, Lavrinenko 2008). It is also necessary to take into account the existence of the methodology on which the assessment methods are based, as well as the credibility of data and outcomes; it is important to consider for what purpose the research methods have been elaborated as well as the factors that influence the indicator; methods of data collection and their sources (Valsts reģionālās attīstības aģentūra 2012); clarity of methods (a possibility to repeat) and the approach applied to the assessment of investment climate (Litvinova 2013).

Within the framework of this article the authors developed a subjective-objective methodology for assessment of the favourableness of regions' investment climate; the methodology was tested for the assessment of the investment climate in Latvia's, Lithuania's, and Belarus's cross-border regions. The subjective assessment of the regions under study was carried out on the basis of the data of the survey on representatives of small and medium-sized businesses within the framework of the project "The Establishment of the United Entrepreneurship Support and Networking System for the Sustainable Latvia, Lithuania and Belarus Cross Border Cooperation (B2B)"; the objective assessment was carried out on the basis of objective statistical data.

2. Methodology and Research Method

Nowadays there are a large number of indicators developed by international organizations which can be applied for assessing investment climate. The authors studied objective, subjective, and subjective-objective indicators which characterize investment climate directly or indirectly.

The main advantage of applying objective methodologies of research into investment climate as compared to subjective methodologies is their lower time and financial expenses. While applying objective methodologies to carry out the research, the following downside and difficulties should be taken into consideration. Using statistical databases there is some risk of the lack of statistical data that can be used as indicators of the investment climate. While applying subjective methodologies, it is possible to assess the factors of investment climate on which there is a lack or shortage of statistical data. The main disadvantage of qualitative assessments is their strong dependence on experts' subjective opinions, as well as enterprise performance indicators – duration of a company, number of employees, income behavior, dynamics of profitability, market share, volume of output and services sold over the recent years (Ohotina 2015). Entrepreneur, manager and other expert surveys also involve high time and financial expenses. The combination of quantitative and qualitative approaches is considered to be the most preferable and common methodology for the assessment of investment climate at present. As a result, the negative aspects of applying each approach separately are reduced. Moreover, subjective data is a significant addition to the main picture which statistics provides. The authors applied this approach for the development of the methodology for assessment of investment climate in Latvia's (Latgale region), Lithuania's (Vilnius, Alytus, Utena regions, Panevezys, Kaunas counties), and Belarus's (Vitebsk, Grodno, Minsk, Mogilev oblasts, and Minsk city) cross-border regions.

The authors on the basis of the risk approach in assessing investment climate considered various types of the investment potential that influence the favourableness of the investment climate: natural-resource, labour, infrastructure, production, consumer, finance, institutional, innovation, tourist, as well as various types of the investment security: political, social, economic, ecological, criminal, financial-legislative. In the table there are statistical indicators of the factors according to which the assessment of the investment climate in the cross-border regions under study has been carried out (Ohotina et al., 2018) (see **Table 1**).

Table 1. Set of statistical indicators of the investment climate

Investment potential
p₁ – Natural-resource potential
p _{1.1} – the area of a region territory in proportion to the area of the territory of Latvia, Lithuania, Belarus; the structure of the land area, %: p _{1.2} – agricultural lands; p _{1.3} – lands with marshes and waters; p _{1.4} – wooded lands; p _{1.5} – other lands.
p₂ - Tourist potential
p _{2.1} – number of museums per 100,000 people; p _{2.2} – number of theatres per 100,000 people; p _{2.3} – number of museum visits per 1,000 people; p _{2.4} – number of theatre visits per 1,000 people; p _{2.5} – number of culture centres per 100,000 people; p _{2.6} – number of hotels per 100,000 people; p _{2.7} – hotel capacity, average number of rooms per 1 hotel; p _{2.8} – number of rural guest houses per 100,000 people; p _{2.9} – number of tourist organizations per 100,000 people.
P₃ - Labour potential
p _{3.1} – density of population; p _{3.2} – natural population growth; p _{3.3} – migration balance; p _{3.4} – working-age population; p _{3.5} – infant life expectancy; p _{3.6} – employment level; p _{3.7} – economic activity; p _{3.8} – number of students at higher education (colleges, universities) per 10,000 people.
P₄ - Infrastructure potential
p _{4.1} – density of roads, km per 1,000 km ² ; p _{4.2} – number of educational establishments (colleges, universities) per 100,000 people; p _{4.3} – number of libraries per 100,000 people; p _{4.4} – number of secondary schools per 100,000.
P₅ - Production potential
p _{5.1} – GDP per capita.
P₆ - Consumer potential
p _{6.1} – average salary (gross); p _{6.2} – average retirement pension; p _{6.3} – average income per 1 household member; p _{6.4} – availability of automobiles per 1,000 people.
P₇ - Finance potential
p _{7.1} – amount of FDI stock per resident; p _{7.2} – non-financial investments, in actual regional price in relation to general volume.
P₈ - Institutional potential
p _{8.1} – total number of enterprises per 1,000 people; p _{8.2} – number of micro-enterprises; p _{8.3} – number of small enterprises, p _{8.4} – number of middle-sized enterprises; p _{8.5} – number of large enterprises.
P₉ - Innovation potential
p _{9.1} – number of science-research centres per 100,000 people; p _{9.2} – number of staff employed at science-research centres out of the number of total population.
Investment security
R₁ - Social security
r _{1.1} – pre- working-age population; r _{1.2} – coefficient of potential demographic burden; r _{1.3} – coefficient of pensioner demographic burden; r _{1.4} – number of divorces per 100 marriages; r _{1.5} – divorce rate coefficient (number of divorces per 1,000 population); r _{1.6} – mortality rate coefficient (number of deaths per 1,000 people).
R₂ - Economic security
r _{2.1} – unemployment rate; r _{2.2} – youth unemployment rate; population with the shortage of financial resources for, %: r _{2.3} – buying meat and fish produce at least once a week; r _{2.4} – timely payment for housing and utility services; r _{2.5} – purchase of fuel (if there is no central heating); r _{2.6} – payment for unanticipated needs if required.
R₃ - Ecological security
r _{3.1} – tons in average per 1 km ² ; air pollution emissions %: r _{3.2} – solid; r _{3.3} – sulphur dioxide; r _{3.4} – carbon oxide; r _{3.5} – nitrogen dioxide; r _{3.6} – nonmethane volatile organic compounds; r _{3.7} – other types of pollution
R₄ - Criminal security
r _{4.1} – number of reported crimes per 10,000 people; r _{4.2} – road traffic accidents per 10,000 people
R₅ - Financial- legislative security
r _{5.1} – inflation; r _{5.2} – number of closed down enterprises
R₆ - Political security
r _{6.1} – expert assessment

Source: the authors' drawing based on the literature analysis

While collecting statistical data from the regions in Latvia, Lithuania, and Belarus, the national data bases were used, the data from the ministries of the countries under study, collections of statistical data that characterize social and economic development of the regions under study; the statistical base of the European Statistical Agency Eurostat for the EU regions. In order to assess political security of the territory under study the author interviewed six international experts. Поскольку понятие инвестиционного климата является многомерным, the comprehensive assessment of the investment climate has been identified on the basis of the sum method, by means of summing up true values of indicators of generalized investment potential and generalized investment security.

The authors of the research carried out the subjective assessment of the investment climate in Latvia's, Lithuania's, and Belarus's cross-border regions on the basis of the survey on representatives of small and medium-sized business within the framework of the project "The Establishment of the United Entrepreneurship Support and Networking System for the Sustainable Latvia, Lithuania and Belarus Cross Border Cooperation (B2B)" funded by the European Neighbourhood Instrument Cross-Border Cooperation Programme Latvia-Lithuania-Belarus 2007–2013.

The survey in the regions was carried out in the main communication languages in the region:

- in Russian and Latvian – in Latgale;
- in Lithuanian – in Lithuania;
- in Russian – in Belarus.

The sampling according to the method of selection has been stratified according to the key areas of the research. Requirements to the representative sampling mean that according to the emphasized parameters, the structure of the units under research should approach the corresponding proportions in the population (Yadov 2005). In the process of the work on the database in the SPSS programme, the survey data underwent the process of weighting according to the key lines of stratification; the deviations of the sampling parameters from the parameters of the population do not exceed 2.5%. The survey was carried out in the form of a questionnaire available both in a paper format and online. Therefore, companies that wanted to stay anonymous had an opportunity to fill out the questionnaire online on the Internet (Lavrinenko *et al.* 2015).

3. Empirical data and analysis

According to the calculated objective values of the integral index of the investment climate in Latvia's, Lithuania's, Belarus's cross-border regions, the classification of the regions into the quintile groups was carried out, where the regions with a very unfavourable investment climate fall into the 1st group, but the regions with a very favourable investment climate fall into the 5th group (see **Fig.1**).

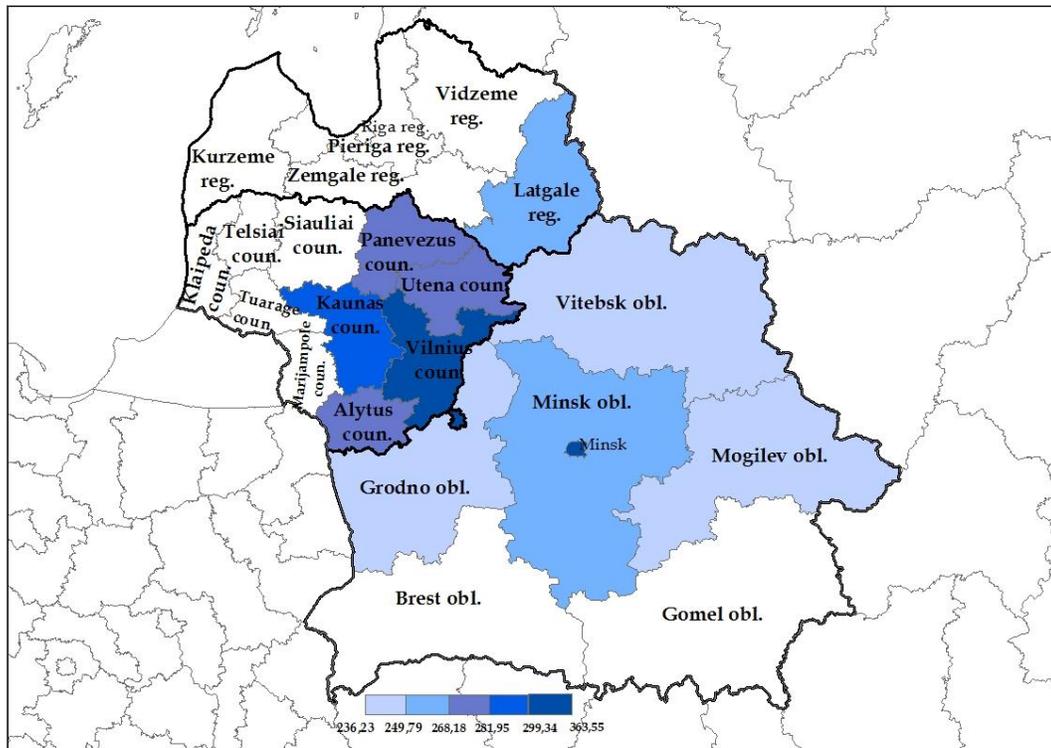


Figure 1. Map of the classification of Latvia's, Lithuania's, and Belarus' cross-border regions according to the value quintiles of the objective assesment of the investment climate

Source: the authors' figure drawn in ArcGis 10 programme according to the calculations of the statistical data of Latvia's, Lithuania's, and Belarus' cross-border regions applying the elaborated methodology for the assesment of the investment climate

The investment climate in Latvia's, Lithuania's, and Belarus's cross-border regions is quite heterogeneous as well as in other regions in these countries (Ohotina 2018). According to the values of objective assesment of the integral index of the investment climate, Vitebsk, Grodno, and Mogilev oblasts fall into the quintile 1 group; Latgale region, and Minsl oblasts fall into the quintile 2 group; Alytus, Panevezys, and Utena counties fall into the quintile 3 group; Kaunas county falls into the quintile 4 group, and Vilnius county, and Minsk city fall into the quintile 5 group.

When carrying out a more detailed analysis of values of all types of investment potential and security according to the objective assesment, a very high level of tourist, labour, consumer, production, finance, and innovation potentials, and high social and ecological security determined the place of Vilnius country in the quintile 5 group. Very high labour, consumer, and innovation potentials, and economic security, a high finance potential as well as criminal security are peculiar to Minsk. In Minsk, there is very low institutional and natural-resource potentials, financial and legislative, political and ecological security. When considering factors which determine the placement of regions in the quintile 1 group with a very unfavourable investment climate, it was pointed out that Vitebsk oblast has a very high natural-resource potential and economic security, as well as a high criminal security prevailing. All other types of potential and security are either very low or low. Mogilev oblast has a high economic security and natural-resource and labour potentials; all other types of potential and security are either very low or low (see **Table 2**).

Table 2. Ranking of investment potential and investment security according to the objective and subjective assessments

Regions	Investment climate quintile groups	Natural-resource potential	Tourist potential	Labour potential	Infrastructure potential	Production potential	Consumer potential	Finance potential	Institutional potential	Innovation potential	Social security	Economic security	Ecological security	Criminal security	Financial and legislation security	Political security
<i>Objective assessment*</i>																
Latgale region	2	4	3	1	5	2	2	1	2	3	5	1	3	2	3	3
Alytus county	3	2	4	2	3	3	4	1	4	1	3	2	5	5	4	4
Kaunas county	4	2	3	4	3	5	4	4	5	5	2	3	4	2	4	1
Panevezys county	3	2	4	2	4	4	4	2	4	1	3	3	5	3	4	5
Utena county	3	3	4	1	4	3	3	2	4	2	2	2	5	5	4	3
Vilnius county	5	2	5	5	2	5	5	5	3	5	4	3	4	1	4	1
Vitebsk oblast	1	5	2	3	2	1	1	2	2	2	2	5	2	4	1	3
Grodno oblast	2	4	2	4	1	2	2	3	1	2	1	5	1	5	1	3
Minsk city	5	1	3	5	2	2	2	4	1	5	3	5	1	4	1	1
Minsk oblast	2	5	3	5	1	2	2	4	1	4	1		2	1	1	2
Mogilev oblast	1	4	2	4	2	1	1	2	1	2	2	4	1	1	2	2
<i>Subjective assessment**</i>																
Latgale region	1	4	1	3	1	1	2	1	2	1	2	3	3	3	1	1
Alytus county	5	3	2	2	4	2	3	3	3	5	5	5	5	5	5	5
Kaunas county	4	5	5	5	5	4	5	5	4	4	4	5	5	5	5	4
Panevezys county	2	2	2	3	2	2	2	2	2	2	3	4	2	4	4	2
Utena county	5	4	3	1	3	1	1	3	1	3	4	3	4	4	3	5
Vilnius county	4	5	5	5	5	5	5	5	5	5	5	4	4	3	4	4
Vitebsk oblast	1	3	2	1	1	3	3	2	3	3	3	1	2	2	2	1
Grodno oblast	3	3	4	4	4	5	4	4	5	3	2	2	3	2	3	3
Minsk city	2	1	4	3	3	4	3	3	3	2	1	2	3	1	2	2
Minsk oblast	3	1	1	2	2	3	1	1	1	4	3	3	1	3	3	3
Mogilev oblast	3	2	3	4	3	3	4	4	4	1	1	1	1	1	1	3

Source

: *the author's calculations of the statistical data of Latvia's, Lithuania's, and Belarus's regions applying the elaborated methodology for the assessment of the investment climate

** the author's calculations of the statistical data of Latvia's, Lithuania's, and Belarus's regions applying the elaborated methodology for the assessment of the investment climate

According to the calculated subjective values of the integral index of the investment climate in Latvia's Lithuania's, Belarus's cross-border regions, the classification of the regions into quintile groups was carried out (see **Fig. 2**). According to the values of the integral index of the investment climate, Latgale, and Vitebsk oblast fall into the quintile group 1; Minsk and Mogilev oblasts fall into the quintile group 2; Panevezys and Utena counties, and Minsk city fall into the quintile group 3; Alytus county and Grodno oblasts fall into the quintile group 4; Vilnius and Kaunas counties fall into the quintile group 5.

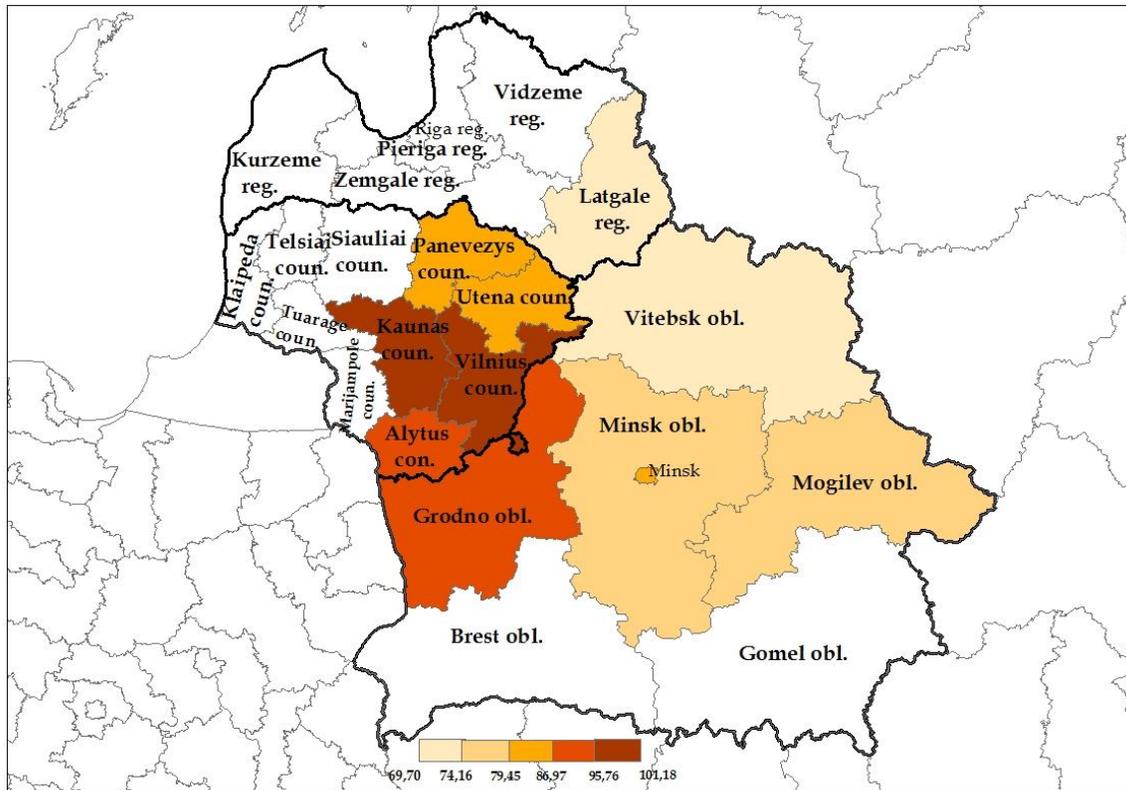


Figure 2. Map of the classification of Latvia's, Lithuania's, and Belarus's cross-border regions according to the quintile values of the subjective assessment of the investment climate

Source: the author's drawing in ArcGis 10 programme according to the outcomes of the survey on small and medium-sized enterprises in Latvia's, Lithuania's, Belarus's cross-border regions as a result of the elaborated methodology for the assessment of investment climate

In order to correlate the objective and subjective assessments of the investment climate in cross-border regions, it is possible to use W. Zapf's Well-being Typology Matrix. The axes of subjective and objective assessments form four quadrants: 1) low objective living conditions and low subjective well-being – “Deprivation”, 2) low objective living conditions and high subjective well-being – “Adaptation”, 3) high objective living conditions and low subjective well-being – “Dissonance”, 4) high objective living conditions and high subjective well-being – “Well-being” (Zapf 1984).

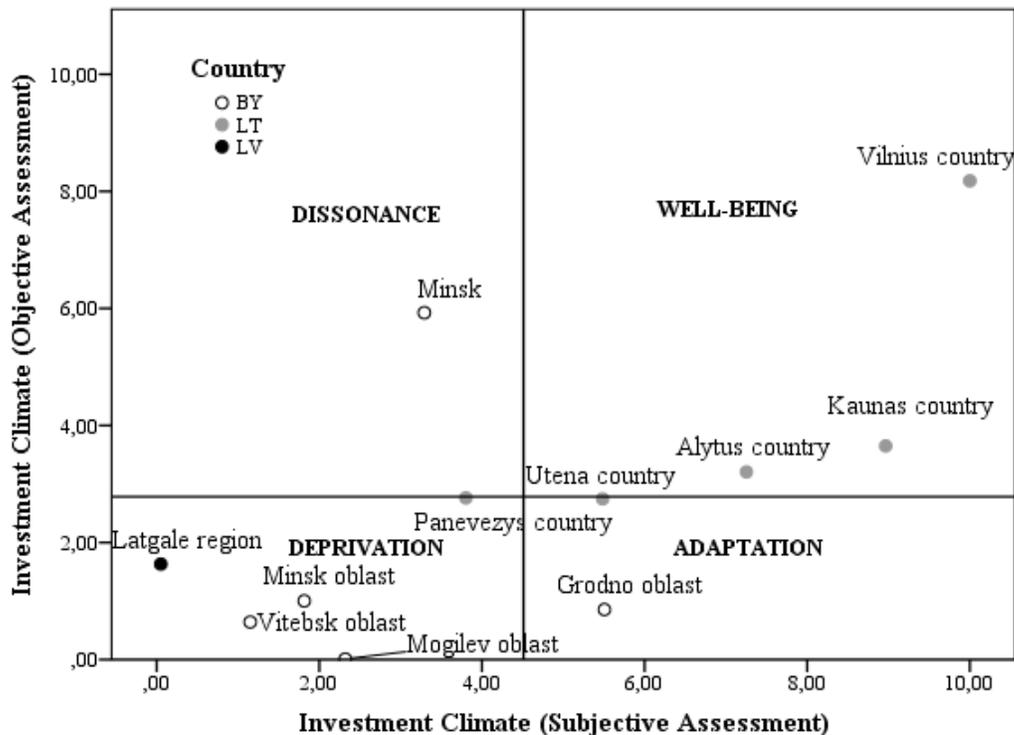


Figure 3. Placement of Latvia's, Lithuania's, and Belarus's cross-border regions on W. Zapf's Well-being Typology Matrix according to integral standardized values of objective and subjective indicators of investment climate

Source: the author's figure according to the calculation of the statistical data and the outcomes of the survey on small and medium-sized enterprises in Latvia's, Lithuania's, Belarus's cross-border regions

Latvia's, Lithuania's, Belarus's cross-border regions have been classified into 4 groups according to W. Zapf's Well-being Typology Matrix. The matrix cross point denotes the average normalized values of objective and subjective indicators in the regions, i.e. 2.78 and 4.51 respectively. According to the values of the integral standardized indicators of objective and subjective assessments, every region is located in the corresponding matrix quadrant (see **Fig. 3**).

Utena, Alytus, Kaunas and Vilnius counties fall into the “*Well-Being*” group. According to the objective assessment in Utena county there is a very high ecological and criminal security, and high tourist, infrastructure and institutional potentials (see **Table 3. 1.**); according to the subjective assessment, there is a very high political security, a high natural-resource potential, and social, ecological and criminal security. According to the objective assessment, in Alytus county there are high tourist, consumer, and institutional potentials, as well as a very high financial-legislative security. According to the subjective assessment by directors and managers of small and medium-sized businesses, in these regions there is a very high innovation potential, and social, economic, ecological, criminal, financial-legislative and political security. According to the objective assessment, Kaunas county is characterized with very high production, institutional, innovation potentials, and high labour, consumer and finance potentials, and ecological and financial-legislative security. There is a high or very high subjective assessment of all types of investment potential and investment security. According to the objective assessment, in Vilnius county there are very high tourist, labour, consumer, production, finance, and innovation potentials, and high social and ecological security. According to the subjective assessment, there is an average level of criminal security, and a high or very high level of other types of investment potential and investment security (see **Table 2.**).

Minsk city is located in the “*Dissonance*” group. As it has been already mentioned before, according to the objective assessment, in Minsk there are very high labour, consumer and innovation potentials, and economic security, a high finance potential, and criminal security (see **Table 2.**). However, subjective indicators are high only in tourist and production potentials. 60.4% of directors and managers at small and medium-sized businesses mention that Minsk has its established brand (a positive image). In the respondents’ opinion, the Minsk brand is stated in the availability of labour resources and large core enterprises; it is a clean, hospitable and cheap for tourist’s city; the status of the capital city also enhances the brand of this region (Lavrinenko *et al.* 2015). Although only 11.4% of respondents believe that the established brand promotes the improvement of the investment climate, which determines the place of Minsk in the “*Dissonance*” group.

Latgale region, Panevezys county, Vitebsk, Minsk and Mogilev oblasts fall into the “*Deprivation*” group. According to the objective assessment, in Latgale region there is a very high infrastructure potential, social security and natural-resource potential; only natural-resource potential is high according to the subjective assessment. According to the objective assessment, in Panevezys region there is a very high ecological and political security, as well as a high tourist, infrastructure, production, consumer and institutional potentials; according to the subjective assessment, there is high economic, criminal, and financial-legislative security. According to the objective assessment, in Vitebsk oblast there is a very high natural-resource potential and economic security, as well as high criminal security; all other types of potential or security are either very low or low. In this oblast, all types of investment potential and investment security are assessed as either average or lower. According to the objective assessment, in Mogilev oblast there is high economic security, natural-resource and labour potentials; all other types of potential and security are also either very low or low; according to the subjective assessment, there are high labour, consumer, finance and institutional potentials (see **Table 2.**).

Grodno oblast is located in the “*Adaptation*” group. According to the objective assessment, in Grodno oblast there is very high economic and criminal security, a high natural-resource potential, labour potential, and tourist potential. According to the subjective assessment, in the oblast there are very high production and institutional potentials, and high tourist, labour, infrastructure, consumer and finance potentials (see **Table 2.**).

Conclusions

First assessments of investment climate based on the subjective assessment of countries' characteristics were developed and applied by western experts in the middle of the 1960s. The further development of the methodology for comparative assessment of countries' investment climate started to expand and complicate the system of characteristics assessed by experts, and to introduce objective statistical indexes. Research into regions' investment climate are less common. However, in recent decades, more research into investment climate at the level of regions have appeared, as a result of the understanding of a specific and unique character of regional features, as well as its dramatic differences from the country as a whole.

Nowadays, there is a large number of indicators worked out by international organizations which can be applied to assessing investment climate. Lately, scientists have emphasized research based on the objective-subjective approach (Сухина 2004; Lonska 2015). The authors developed the methodology for the assessment of investment climate in Latvia's, Lithuania's, and Belarus's cross-border regions on the basis of the objective-subjective assessment of the factors.

According to the ratio of objective and subjective assessments of investment climate in cross-border regions following W.Zapf's Well-being Typology Matrix, Utena, Alytus, Kaunas, and Vilnius counties fall into the "Well-being" group (high objective and subjective indicators). In these regions, there are high investment opportunities and the best possible conditions for investment; directors and managers of small and medium-sized businesses also objectively evaluate this situation.

Minsk city falls into the "Dissonance" group (high objective indicators and low subjective indicators). Psychological peculiarities, temper, and a number of other factors which require a more detailed scrutiny might determine the understated assessment provided by directors and managers of enterprises.

Latgale region, Panevezys county, Vitebsk, Minsk, and Mogilev oblasts fall into the "Deprivation" group (low objective and subjective indicators). In private investors' opinion, investing in these regions might involve significant objective difficulties, as well as a number of subjective obstacles. These regions might be interesting for investors who operate in certain areas depending on what types of investment potential and security are of a high level according to objective assessment. Grodno oblast falls into the "Adaptation" group (low objective indicators and high subjective indicators).

References

- Dudzevičiūtė, G. 2015. *Ekonomikos plėtros pagrindai*. [Fundamentals of Economic Development]. Generolo Jono Žemaičio Lietuvos karo akademija, Vilnius, Mokomoji knyga.
- Fabuš, M. 2017. Current development of business environment in Slovakia and Czech Republic, *Entrepreneurship and Sustainability Issues* 5(1): 127-137. [https://doi.org/10.9770/jesi.2017.5.1\(10\)](https://doi.org/10.9770/jesi.2017.5.1(10))
- Fabus, M. 2018. Business environment analysis based on the Global Competitiveness Index (GCI) and Doing Business (DB): case study Slovakia, *Journal of Security and Sustainability Issues* 7(4): 831-839. [https://doi.org/10.9770/jssi.2018.7.4\(18\)](https://doi.org/10.9770/jssi.2018.7.4(18))
- Jankelová, N.; Jankurová, A.; Beňová, M.; Skorková, Z. 2018. Security of the business organizations as a result of the economic crisis, *Entrepreneurship and Sustainability Issues* 5(3): 659-671. [https://doi.org/10.9770/jesi.2018.5.3\(18\)](https://doi.org/10.9770/jesi.2018.5.3(18))
- Lavrinenko, O.; Ohotina, A.; Ruzha, O.; Shmarlouskaya, H.; Tumulavičius, V. 2015. Cross Border Cooperation of Small and Medium Enterprises: Problems, Opportunities, Prospects. Monograph. Rezekne Higher Education Institution. – 308 p. ISBN 978-9984-44-181-8
- Litvinova, V. V. 2013. Investicionnaya privlekatel'nost' i investicionnyj klimat regiona. [Latvia's, Lithuania's, and Belarus's cross-border regions – where is the investment climate “warmer”?] Moskva: Finansovyy Universitet. 116 s.
- LR Izglītības un zinātnes ministrija, 2017. Par prioritārajiem virzieniem zinātnē 2018–2021. gadā [Latvia's research priorities 2018–2021].
- Menshikov, V., Lavrinenko, O. 2008. Kachestvo zhizni naseleniya kak strategicheskaya cel' regional'nogo razvitiya [Quality of people's life as a strategic aim of the regional development]. Materialy IX Mezhdunarodnoj nauchnojkonferencii «Problemy prognozirovaniya i gosudarstvennogo regulirovaniyasocial'no-ehkonomicheskogo razvitiya». T. 1. Red. S.S. Polonik i dr. Minsk: NIEHI Min-va ehkonomiki Resp. Belarus'
- Ohotina A. 2015. Prigranichnye regiony Latvii, Litvy, Belarusi – gde investicionnyj klimat “teplee”? [Latvia's, Lithuania's, and Belarus's cross-border regions – where is the investment climate “warmer”?] *Sociālo Zinātņu Vēstnesis 2015, 2 (21)*. Daugavpils Universitāte, Humanitāro un sociālo zinātņu institūts, 27.-47. lpp. ISSN 1691-1881
- Ohotina, A. 2017. Investment climate in Latvia, Lithuania, Belarus cross border regions. Doctoral Thesis. Daugavpils University.
- Ohotina, A.; Lavrinenko, O.; Ignatjeva, S.; Lonska, J. 2018. Socio-economic security as a determinant of regional differences in the investment climate in the region, *Journal of Security and Sustainability Issues* 7(3): 427-438. [https://doi.org/10.9770/jssi.2018.7.3\(5\)](https://doi.org/10.9770/jssi.2018.7.3(5))
- Petrenko, E.; Isakov, N.; Metsyk, O.; Khassanova, T. 2017. Ecosystem of entrepreneurship: risks related to loss of trust in stability of economic environment in Kazakhstan, *Entrepreneurship and Sustainability Issues* 5(1): 105-115. [https://doi.org/10.9770/jesi.2017.5.1\(8\)](https://doi.org/10.9770/jesi.2017.5.1(8))
- Pietrzak, M. B.; Balcerzak, A. P.; Gajdos, A.; Arendt, L. 2017. Entrepreneurial environment at regional level: the case of Polish path towards sustainable socio-economic development, *Entrepreneurship and Sustainability Issues* 5(2): 190-203. [https://doi.org/10.9770/jesi.2017.5.2\(2\)](https://doi.org/10.9770/jesi.2017.5.2(2))
- Šimelytė, A.; Antanavičienė, J. G. 2013. Foreign Direct Investment Policy as an Instrument for Sustainable Economic Growth: a Case of Ireland. *Journal of Security and Sustainability Issues*, 2 (4): 25-34. [https://doi.org/10.9770/jssi.2013.2.4\(3\)](https://doi.org/10.9770/jssi.2013.2.4(3))
- Stern, N. 2002. The Investment Climate, Governance, and Inclusion in Bangladesh. World Bank Office of the Senior Vice President, Development Economics, Washington: World Bank.
- Suhina, S. E. 2004. Regionalnaja spetsifika investitsionnogo klimata [Regional aspects of investment climate]. Volgograd: Izd-vo VolGu. 82 s.
- Titarenko, D. 2005. Neodnorodnost investicionnogo prostranstva Latvii [Heterogeneity of Latvia's investment environment]. Transport and Telecommunication, TTI Research Journal, Vol. 6, No. 3, p. 368-377.
- Tvaronavičienė, M. 2018. Preconditions of sustainable entrepreneurship: Estimating of brexit scenarios impact on macroeconomic environment [Warunki wstępne zrównoważonej przedsiębiorczości: Ocena wpływu scenariuszu brexi <https://doi.org/10.17512/pjms.2018.17.2.19>

Tvaronavičienė, M.; Grybaitė, V.; Tunčikienė, Ž. 2013. Globalization Drivers in Developed and Less Developed Countries: if Consistent Patterns can be Traced. *Journal of Security and Sustainability Issues*, 2(4): 5-11. [https://doi.org/10.9770/jssi.2013.2.4\(1\)](https://doi.org/10.9770/jssi.2013.2.4(1))

Yadov, V. A. 2005. Strategiya sociologicheskogo isledovaniya [Strategy of sociological research]. p. 321 [Accessed 27.04.2016]. Available: <http://www.vusnet.ru/biblio/persons.aspx?id=1>

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