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GINTARĖ POCIŪTĖ

SPATIAL STRUCTURE OF PERIPHERALITY IN LITHUANIA

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INTRODUCTION

Research problem. The matters of uneven regional development, increase of territorial segregation, formation of depressive regions, peripheries are topical for the scientists of various fields and different world states. In the scientific literature the methodological matters are important: the factors, which have influence on its territorial expression and process of peripheralisation, are usually analyzed, as well it is searching on what indicators it should be referred while determining the periphery. The united methodological basis is not created in the researches of periphery; it is usually referred to one or several indicators, which define peripheralisation. Therefore, the methodological matters of researches of peripherality still remain the topical theme of science.

The processes of peripheralisation create the growing, economically strong and still developing centres and economically failing peripheral regions, where the social problems show through especially. Therefore, the cognition of territorial differentiation becomes one of the most topical problems of today society and state, and at the same time the exploratory objects of social geography. Regarding the problems of social, economical and other human development caused by the uneven development of territory it becomes topical not only to cognise the territorial peculiarities of spread of this spatial phenomenon but also to understand its reasons. The solution of these problems is closely related to the solution of practical tasks of regional politics.

In these latter years the territorial spread in Europe is considered as the intensification of polarization, and it is especially clearly distinguishing tendency in the new member states of the European Union (EU) (Lang, 2011). Polarization is clearly seen while the capital and several bigger cities are rather intensively growing, whereas the territories, which are beyond the limit of economical growth, are characterized with constant decline. Tendentiously increasing economical and social differences among the regions permit to make an assumption that territorial polarization will increase conditioning peripheralisation of non-metropolis territories (Dubois et al, 2008, Lang, 2011).

The state institutions also see the increasing territorial polarization as a serious problem. In the meetings of government the increase of territorial cohesion is rather frequent object of discussions, it is proved by the plenty of presented (renewed) plans of regional development (LR Vyriausybės nutarimas „Dėl probleminių teritorijų išskyrimo...“, 2003; LR Vyriausybės nutarimas „Dėl probleminių..., 2007“; LR Vyriausybės nutarimas „Dėl probleminių teritorijų plėtros...“, 2011). The problem of regional unevenness is tried to solve in the context of the European Union, when the object to reduce the differences of development among the EU regions is considered as the one of tasks of the EU performed politics (Commission of..., 2010).

The relevance of the study. There are a lot of scientific papers, which theoretically or practically accentuate the topic of peripherality, however, the conception of peripheral

region is not still clearly and finally defined, moreover, it is rarely talked about the process of peripheralisation or the level of peripherality of region is determined. Periphery is the whole rest territory, which is not indicated as the centre, therefore, the term periphery itself is rather relational and often explained while using the comparison of values of social, economic, cultural or other indicators (Daugirdas, Bureika, 2008). Usually the papers, which analyze the peripheries, are of rather narrow nature (Copus, 2001; Nagy, 2006, Tautvaišaitė, 2007; Jakimavičius, Burinskienė, 2007; Spiekermann, Wegener, 2008; Burbulytė-Tsiskarishvili, 2012 ir kt.). Most attention is paid to the analysis of accessibility, demographic and economical aspects, therefore, very specialized conceptions of periphery and peripheral region are formed. In the researches of periphery in opinion of author of this paper a lack of geographical – complex attitude to the periphery is felt. While analyzing the selected problem the integration of sciences is one of the main recommendations as the narrow attitude to the periphery does not conform to the topicalities of these days because it stops not only the development of conception of object but also limits the cognitive possibilities of periphery itself as the territorial phenomenon. By this scientific paper it is tried to fill the deficient part of researches on peripherality and add to the development of complex geographical conception of periphery. This dissertation paper is an attempt to present the complex attitude to the periphery while including the indicators of various fields, with reference to the values of statistical indicators to distinguish the peripheral regions of different level peripherality in the territory of Lithuania.

The paper is relevant not only due to the development of theory but also due to plentiful data base of statistical indicators, which can be applied to other scientific papers as well in order to determine the regional differences in Lithuania.

The model of periphery determination prepared by the author can be a scientific basis on the researches of periphery determination in the wider context – applied to the determination of European peripheries and the evaluation of peripherality degree. As well the paper is relevant because it familiarizes with the process of peripheralisation, which appears in the territory of Lithuania.

The results of the paper should be relevant to the state institutions because the determination of peripheral regions, the position of processes of peripheralisation could be a reasoned basis on the reconsideration of realization guidelines of national regional politics in order to achieve greater benefit to encourage the competitive ability of Lithuania, optimal distribution and usage of funds of the European Union.

Research object

In a broad sense the object of this research – peripheries and peripherality.

In a narrow sense the object of research – spatial structure of peripheries and peripherality in Lithuania.

Objective and tasks of the study

The general objective of dissertation paper: to contribute to the development of the researches concerning periphery and peripherality topics.

The concrete objective is to determine the peculiarities of spatial structure of peripherality in Lithuania.

In order to realize the objective the *tasks* are formulated:

1) To review the scientific researches of periphery phenomena;
2) To formulate the conception of geographical periphery and peripheral region;
3) To prepare the methodology of complex evaluation of peripherality;
4) To make an evaluation of peripherality in the territory of Lithuania;
5) To determine the tendencies of peripheralisation in Lithuania;
6) To determine the complex peripheral regions of Lithuania.

Scientific novelty

The scientific novelty of paper is revealed with the properties of results of methodology and research:

1) For the first time in Lithuania the comprehensive analysis of scientific papers of foreign and Lithuanian authors (geography, social sciences, economics, etc.), where the topic of periphery is accentuated, has been done;
2) The original conception of periphery was formulated, where for the first time the complex-geographical attitude to the phenomenon of periphery reasoned on the different aspects, has been accentuated;
3) The statistical data base to evaluate peripherality is created, which provides a possibility to do the qualitative and quantitative evaluation of Lithuanian municipal territories of wide nature;
4) For the first time in Lithuania the peripheral regions have been localized, their peripherality degree, the number and nature of factors, which form the periphery, has been determined;
5) For the first time in Lithuania the classification of region has been done according to the peripherality degree while dividing into the groups *centre of centre, centre of periphery, periphery of centre, periphery of periphery*.

Applicability

The results of paper can be applied in several directions:

1) The theoretical application of peripherality research:
    - For the wider scientific understanding of periphery conception;
    - For the development of methodology of regional researches;
    - For the cognition of peripheralisation process in Lithuania;
    - The scientific paper makes a scientific basis for the further regional researches.

2) The practical usage of paper results:
    - For the reasoned and scientifically valid formation of state regional politics;
    - For the preparation and reasoning of programs of regional politics;
    - For the identification of problematic territories in Lithuania;
    - For the optimisation of budgetary structures of Lithuanian municipalities.
3) The usage of paper results in the educological process:
    - Geographical conception of periphery could be included into the programs of lectured disciplines of social geography; during the lectured subjects it can be used by the created statistical data base, in the scientific papers to apply the model of periphery determination in order to perform the complex researches.

Maintaind propositions

– There are a lot of scientific works, which analyze the peripheral phenomena. However, there is a lack of more complex attitude to this phenomenon, where the periphery would be considered as a territorial unit determined after evaluation of dislocation, demographic, social, economic, cultural, political and natural conditions;
– In Lithuania the processes of peripheralisation formed the differences of peripherality. According to the spatial structure of peripherality in Lithuania it is possible to distinguish the territorial units of four ranks: centres of centre, peripheries of centre, centres of periphery and peripheries of peripheries;
– The processes of peripheralisation are most clearly seen while analyzing the tendencies of change of demographic, social and economical indicators. The analysis of groups of mentioned indicators permits to highlight the territories of relative stability, partial peripheralisation and total peripheralisation in Lithuania;
– The peripheral regions of Lithuania differ according to their peripherality degree and the factors, which influence the peripherality.

Approbation of results. 4 articles, three of them from Lithuania, one – in the foreign scientific publications, were announced and published on the topic of paper. As well the theses have been published on the topic of paper in the two publications of international conferences. 4 reports have been read on the topic of peripherality in the international conferences. The author has been in the traineeships abroad for 2 times.

Extent and structure. The dissertation paper consists of the following parts: introduction, review of researches, methodology, research results, conclusions and references. The appendices are given in the electronic medium. There are 67 original figures (cartoschemes, diagrams, structural schemes) and 3 tables in the paper. 457 sources of literature are quoted in the paper.

1. CONCEPTIONS OF BASIC TERMS USED IN THE STUDY

Conception of periphery. In the general sense and most usually *periphery* is understood as „state or city edges“ (Rakucevičius, 2003) or „the locality far from the capital or other big important city“ (Periferija..., 2010). The term of periphery is not strictly defined and often changes depending on the accentuated aspect of periphery (accessibility, demographical, social, economical, cultural, etc.). The abstract definition given in the vocabularies or manuals is not rather comprehensive. More comprehensively the term of periphery is explained by the scientists, who perform their research papers in the fields of regional politics, economics, social sciences and geography.

Some authors (Rokkan, Urwin, 1982; Marada ir kt., 2006) state that *periphery* is less explicated territory being beyond the intensively economically used area, characterized with high level of incapacity to work, greater part of employees in the primary sectors of economics (especially of bioproductive economy) and usually separating by the lower life quality. Whereas M. H. Schmidt and M. Jerabek (Schmidt, 1998, Jerabek, 2006) indicates the *peripheries* as the areas, which are insufficiently integrated into the existing system and the present processes, which emphasize with the lack of functional and social relations, which is the result of uneven interaction of social, political, cultural and physical factors. Š. Tautvaisaite (Tautvaišaitė, 2007) considers the *periphery* as the rural locality, which is far from the capital or other big city, where depopulation is noticed, as well which is less developed, and the greater part of population works in the primary sector of economy, which requires more intensive manual work.

While explaining the essence of conception of periphery it is necessary to emphasize that it is important not to forget the existing dichotomy: there would be no periphery without centre, however, at the same time the periphery is left in the shadow of centre (Vaishar, 2006, Marada, Chromy ir kt., 2006, Daugirdas, Burneika, 2006). The result of relations centre-periphery is retardation of periphery, constant conservatism, slow development, passivity, unattractive place to live and occupy with the business (Raagmaa, 2003; Krugman, 2010; Daugirdas, Burneika, 2008). Furthermore, it is stated (Lang, 2011), that power (political, economical, etc.) has influence on the existence of regional unevenness and peripheries, while manipulating it, one regions emerge and become the centres whereas other part of regions are turned into the insignificant ones. The representatives of peripheral regions have a weak vote in the process of solution acceptance, the representatives of centres dwarf the representatives of peripheries not acknowledging their opinions or stating that it is not topical: „inability to fight regarding the territorial discrimination is the mark of periphery“ (Neu 2006, p. 13). Generally, rather subjective image of periphery formed through the long time is usually negative in the sub-consciousness of society. However, it should be noticed that *periphery* can exist as exclusively *positive phenomenon*, for example, in the scientific aspect the peripheries, which emphasize with individual traditions, are valuable, whereas the centre levels and

evens the cultural differences (Savoniakaitė, 2004; Daugirdas, Burneika, 2008), as well the peripheries are attractive regarding their naturalness, quietness.

Such indicator or several indicators, which clearly and unambiguously define the periphery, do not exist – periphery is a relational category, therefore, while explaining what the periphery is, various social, economical, cultural indicators, which sufficiently clearly show the differences, are often used. However, the indicators show only differences but not the level of peripherality (Daugirdas, Burneika, 2008). In all cases what makes the periphery as the periphery is difference, distance and, the most important, dependence on one or several centres (Rokkan, Urwin, 1982; Manusadžianas, 2001). Depending on the research object, the selected indicators, it is possible to distinguish the peripheries of various types. In the literature it is often stated that the most clearly declared, constantly highlighted and the most easily calculated indicator of periphery – distance (from centre, bigger cities, state border, strategically important objects, etc.) (Spiekermann, Wegener, 1996; Vaishar, 2006; Marada ir kt., 2006; Jerabek, 2006). While reasoning the existence of periphery on the indicators of accessibility *the accessibility (geometrical) periphery* is distinguished. Then, the relation of periphery, which has prevailed in Europe for the long time, to the physical distance begins to lose its importance and more often the idea is emphasized that while determining the peripheries the accessibility of human, social, economical potential should be underlined (Copus, 2001; Copus, Skuras, 2006; Burbulytė-Tsiskarishvili, 2012). Therefore, in the researches of peripherality the turn from dislocation (distance) dimension to the social-economical one is indicated with the term „*aspatial peripherality"* (Copus, 2001, Copus, Skuras, 2006). A. K. Copus (Copus, 2001) stresses that „aspatial peripherality" should be evaluated according to such elements as accessibility of internet (accessibility of information technologies), human capital (education, ambition of population to improve), network of small and medium companies, ability of administrative units to realize the regional politics (efficiency of „bottom-up" principle), ability to integrate into the national and international market.

In the scientific literature more often it can be found the papers, where "aspatial peripherality" is accentuated when determining the peripheries not dislocation but social, economical, demographic and other indicators are stressed depending on the object of research. *Social or economical periphery* becomes clear while analyzing the economical indicators such as the level of unemployment, GDP, investments, level of entrepreneurship, etc. (Keeble, 1989; Linneker, Spence, 1992; Gutierrez, Urbano, 1996; Nagy, 2006; Vaishar, 2006; Burbulytė-Tsiskarishvili, 2012). The territory, which emphasizes with the lowest indicators while calculating population density, migration, working age, birth-rate and other indicators, is considered as the *demographic periphery* (Johanston, 2005; Jerabek, 2006; Janc, 2006). There are territories, which distinguish by national and religious composition, such territory can be realized as the *cultural peripheries* (Marada, Chromy ir kt., 2006). *The political periphery* is most expressively illustrated by extreme, fully contrary than the opinion of centre population voting of

electors, keeping of political groups, as well activity of voting (Lipset, Rokkan, 1967; Johanson, Pattie, 1998; Kinsey, 2006; Perpechko ir kt. 2007; Coakley, 2008).

While defining the periphery the important aspect is the image of region itself in the sub-consciousness of society. In such case while talking about the *mental periphery,* it is important how the region is seen by „others" (Eriksson 2008; Said 2003; Jansson, 2003, 2005; Eriksson 2008; Willett 2010; Lang, 2012). While looking from the position of centre the peripheral regions are indicated by such epithets as „rural idyll", "lagging behind", „slow place of life " and others (Willett, 2010; Lang, 2011). According to T. Lang (Lang, 2012) it is not enough to present negative values of statistical indicators and state that it is a periphery. According to the scientist the statistical indicators are closely related to the steady image of region in the society – the author indicates the term „label".

How in the society the periphery is understood or how the definition of this phenomenon is defined it is partially influenced on the historical circumstances, political situation, earlier prevailed development of economics. Furthermore, the persons, who make the decisions and who realize the politics of the EU cohesion in the national or regional level, have great influence on forming the conception of periphery (Leimgruber 1994, 2004; Schmidt 1998; Lang, 2011).

In order to define the gap between the centre and the periphery, to highlight the phenomena of periphery the term *spatial exclusion* is applied (Daugirdas ir kt., 2013). The spatial exclusion is understood as the stopping of possibilities of social, economical, cultural development of territories conditioned by the depopulation processes, decline of settlement network and basic institutions (schools, cultural centres, libraries, ambulatories and others) and the increase of gap between centre and periphery.

As well while talking about the peripheries in the national territory the *internal peripheries* are distinguished – usually found on the edges of national administrative regions and the *external peripheries,* which are set near the national border (Marada, Chromy ir kt., 2006 Furthermore, in the literature the typology of peripheries exists according to their geopolitical location. S. Rokkan (Rokkan, Urwin, 1982) presents such types of peripheries as: „external", „interface", „failed-centre", „enclave".

In summary of conceptions of other authors it can be stated that the ***periphery*** *– is an area remote from the centre in the quantitative and/or qualitative attitude, which emphasizes with the lack of integrity with the present territorial system and centre.*

The periphery is understood as the area, where the processes of peripheralisation are conditioned on the formation of different peripheral regions, which differ by the degree and nature of peripherality. The periphery can be measured by one (quantitative or qualitative) aspect, and it is possible to look at the periphery in a more complex way – after evaluation of quantitative indicators to highlight the qualitative status of periphery while joining the conceptions of territorial periphery and „aspatial periphery" – while

evaluating both distance and influence of demographic, social, economical, cultural, political and natural factors on peripherality.

The peripheries determined in the doctoral dissertation (the system of selected indicators, peripherality degree to determine the periphery) is a partially consequence of subjective attitude to the periphery as a phenomenon. *In the dissertation paper the periphery is understood as the territorial unit, which emphasize with*:

1. Remoteness from the centre (capital, big cities);
2. Depopulation;
3. Lower social and economical indicators;
4. Bigger communities of national and religious minorities and political protest electorate;
5. More natural environment.

Conceptions of peripheralisation and peripherality. In order to provide practical meaning for the peripheries not only to state theoretically their existence it is more important to analyze and understand the process of peripheralisation than to talk about the consequences and results. The peripheries should be understood as the consequence of peripheralisation (Beetz, 2008; Lang, 2011).

Peripheralisation is understood while joining two constituents: static and dynamic areas, i.e. while evaluating the change of indicators values in time. In order to understand the change to one (negative) or other (positive) direction, the point of beginning – certain average should be determined, from which the change to positive or negative direction would reflect the existing situation: *peripheralisation or centralization* of territory– depending on the direction of change in respect to the average (Fig. 1).

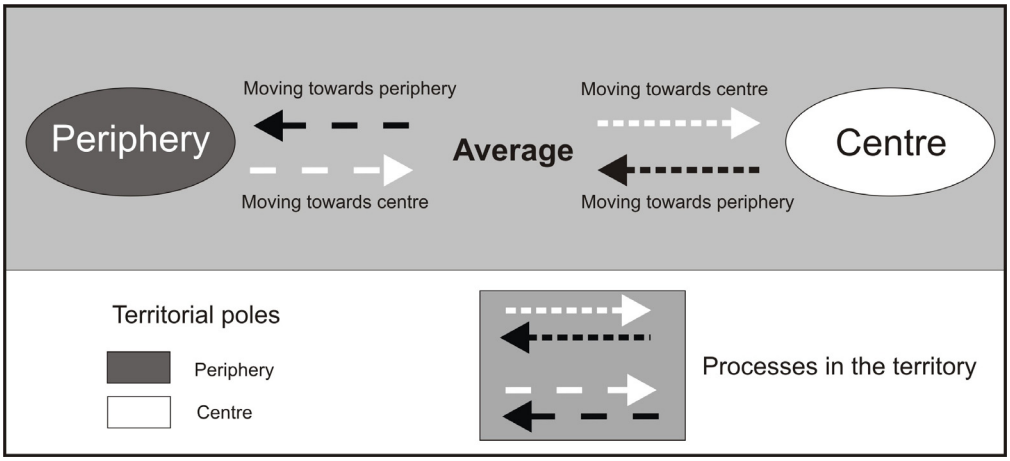

Fig. 1. Principled model of peripheralisation/centralization

Peripheralisation is understood as the tendencies of territorial system development, which reflect the changes of their qualitative indicators in respect to the centre. Meanwhile *peripherality* is considered as the feature of territory, which indicates the quantitative and/or qualitative distance from the centre. In the paper the term *peripherality degree* was also used, which should be understood as the nature of

peripheral expression showing its qualitative distance from the centre expressed with the results of quantitative evaluation.

Interpretation of distance conception in the researches of peripherality. It is rather difficult to define the becoming of territory into the periphery when a plenty of evaluative aspects (dislocation, social, economical, demographic, cultural, political, natural) is invoked into it. Most clearly the conception of periphery is revealed while operating the dimensions of distance. In the literature is possible to find various measurements of distance. While determining the peripheries, without the *metrological* expression of *distance* (Schürmann, Spiekermann, 2006; Vaishar, 2006; Dijkstra, Poelman, 2008; Jonard ir kt., 2009) the measurements of distance are rather performed by the dimensions of *time and prices* (Lutter ir kt., 1992; Hay, 1994; Chatelus, Ulied, 1995; Spiekermann, Wegener, 1996; Gren, 2003). Now it is likely the time expression has greater importance than only kilometre expression of distance. Furthermore, the *social distance* exists, which is understood as the distance between two social strata: in the different social - economical, racial or ethnic groups. This distance is usually measured by the amount of communication among the social groups (Social distance, 2004). Meanwhile, the *cultural distance* is given as the interval between two different groups as for example between culture of rural community and city (Cultural distance, 2004). And the *economical distance* is understood as the distance, which the item can travel while the price of transportation exceeds the price of item (Keeble, 1989; Linneker, Spence, 1992; Gutiérrez, Urbano, 1996; Economic distance, 2004).

Conception of peripheral region. In the literature it can be found the various conceptions of region (Алаев, 1983; Kirstukas J., Čaplikas J. 1999; Jauhianinen, 2000; Kavaliauskas, 1994, 2000; Šimelevič, Bagdzevičienė, 2001; Vaitekūnas, 2001; Vaitekūnas, 2004; Burbulytė, 2005; Burneika, 2013), therefore, to define unambiguously what the *peripheral region* is – it is also rather difficult. Namely there are not a lot of definitions, which accentuate the peripheral region because in most cases the definitions are given to explain the periphery as the phenomenon. P. L. Knox and S. A. Marston (Knox, Marston, 2001) treat the peripheral region as the territorial unit in respect to other territory, which emphasizes with undeveloped or low productivity economics of narrow specialization. According to the other author A. Vaishar (Vaishar, 2006), peripheral region – is a region, where the relations of dependence to the centre prevail, more primitive technologies and very specialized economics of low productivity are used. As well the peripheral region is understood as the „region, which is beyond the limits of economical state centre, which represents the dominating state territory“ (Daugirdas, Burneika, 2006).

As it is possible to notice while explaining the conception of peripheral region the authors still keep the economical potential and distance as the criteria of prevailing peripheral region existence though the analyzed phenomenon is treated differently.

However, the author of this paper would like to notice that it is partially correct and incomplete attitude to the peripheral region. It should not be forgotten other important aspects already mentioned in the paper: demographic, cultural, political, that helps to understand the peripheral region as the complex structure. Therefore, it is possible to formulate the conception of peripheral region, by which it is stated that the ***peripheral region*** *– is a territorial system, which does not have clear potential of development, dependent/independent on the centre and strongly standing behind the general tendencies of national development*.

System of indicators for determining the peripheral region. In order to determine the peripheral regions and evaluate peripherality it is possible to present a lot of and various indicators, however, it is necessary to notice that it is rather difficult to conclude the objective and all-embracing system of evaluative indicators when it is tried to determine the peripheral regions. The territories can be evaluated in different aspects and in various indicators, which also can be variously interpreted depending on the researcher or the goal of research. In order to evaluate the different territories the separate systems of indicators could be evaluated because every territory emphasizes with individual specifics and problems. While talking about the peripheral regions the time dimension becomes an important element – while talking about the present situation it is impossible to disassociate from the past or not to consider the future development perspective of the territories.

While concluding the comprehensive evaluative matrix of peripheral territories it is important to determine the criteria, by which the system of indicators is formed. The indicators have to reflect such criteria as: stability, level of retardation, level of poverty, sufficiency of resources, economical and social activity. However, it is marked that not in all cases it is possible to find proper measurement units.

Despite a lot of studies related to the researches of peripheries this phenomenon still is insufficiently analyzed and there is no the system of indicators, by which it is possible to quote and which using it is possible to evaluate the periphery complexly. Therefore, it is possible to analyze the periphery as the phenomenon while using various indicators, which plenty depends on the ideological provisions, attitude or goal selected by the researcher. In this case the complex evaluation of periphery is performed following seven evaluative aspects: *dislocation, demographic, social, economical, cultural, natural and political* (Fig. 2). Each of these evaluative aspects has an individual system of indicators, by using which it is possible to highlight the unevenness of spatial structure of separate indicators, on their ground to distinguish the peripheral regions and to indicate their peculiarities. These separately analyzed systems of indicators of different aspects seem rather simple and clear, easily applied to the territorial researches; however, it is new, rather difficult and complicated to unite these systems of indicators into the complex research of territory. However, only following the complex research of

territory it is possible to talk reasonably about the national peripheral territories, which require attention.

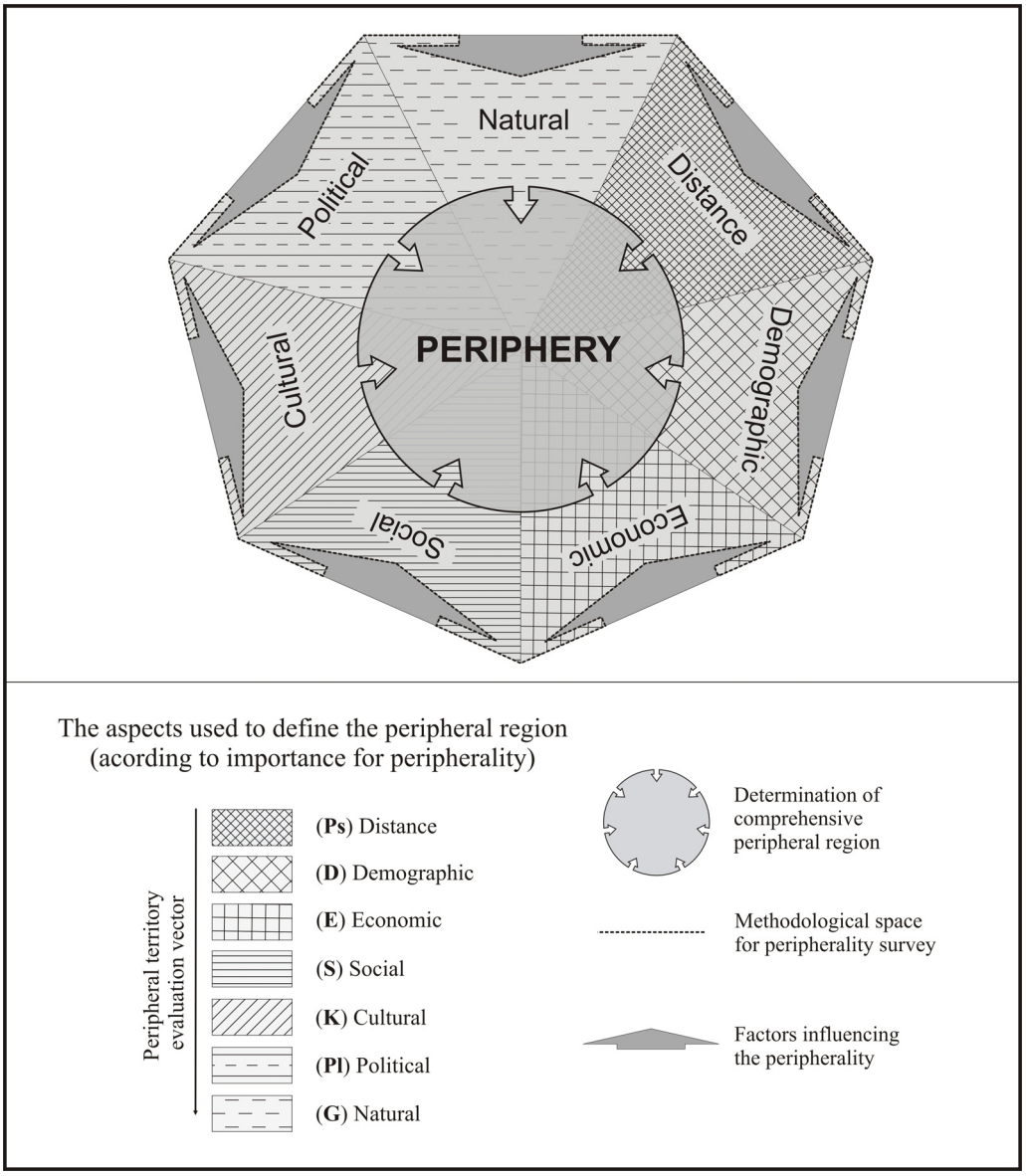

Fig. 2. Identification and evaluation model of peripheral region

2. METHODOLOGY OF THE RESEARCH

The preparation of results part of dissertation paper consists of three stages: *classification of municipalities (I), determination of peripheralisation tendencies (II)* and *evaluation of peripherality (III)* (Fig. 3). The task of the first stage is to find out the changes of statistical indicators (which highlight the peripheries) in the municipalities. The work is performed while analyzing the change of various statistical indicators (demographic, social, etc.) after the restoration of independence. Therefore, in order to show the changes during this period the change of indicators values is evaluated in the period of twenty years – from 1992 to 2012, while dividing the data in the intervals of 5 years. When the classification of municipalities is done according to the indicators

selected for the research it is passed to the second stage, which task is to highlight the regions, where peripheralisation happens. The task of the last stage is to perform the complex evaluation of peripherality and to distinguish the peripheral regions, which emphasize with the different level of peripherality.

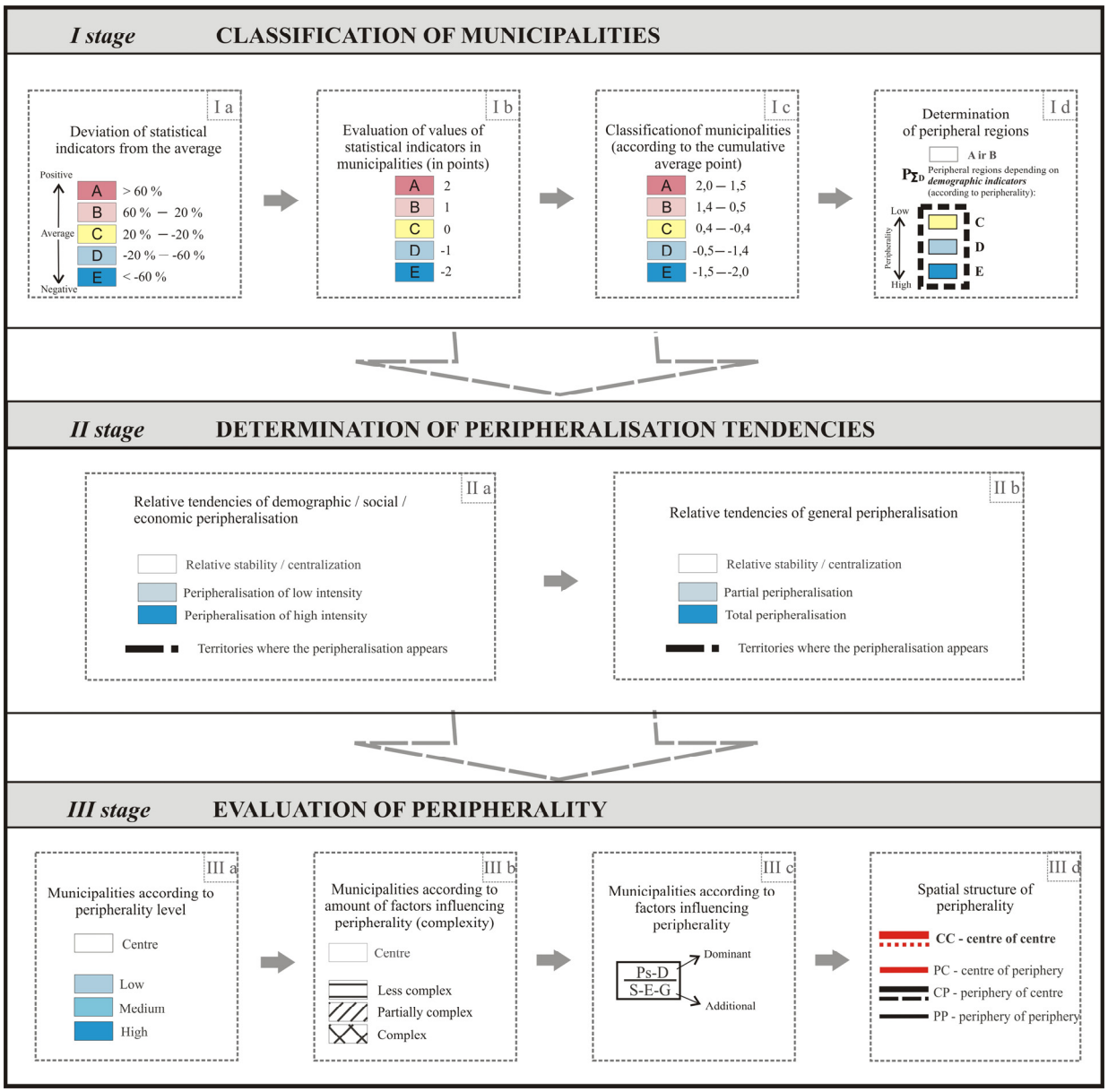

Fig. 3. Algorithm of preparation of *I, II and III stages* of the result part

I stage: the classification of municipalities according to the *deviation of statistical indicators from the average* and according to the *general total rates (according to the cumulative average point).* The first stage consists of four parts (Fig. 3). The classification is done according to the deviation from the average of Lithuania. In this result part of research there is a lot of factual information, which is given to accentuate the deviations of rates from the average and to highlight the assignment of municipalities to the certain group. The generalization of this factual information is given while

distinguishing the municipalities according to the calculated average point and while determining the peripheral regions according to the analyzed aspects.

II stage: determination of peripheralisation tendencies. The tendencies are determined following the principled model of peripheralisation/centralization processes (Fig. 1) and following the classification of municipalities according to the change of separate indicators in time done during the *I stage*. The stage of determination of peripheralisation tendencies consists of two parts (Fig. 3). In order to highlight peripheralisation of Lithuanian territory the indicators of three groups are selected: demographic, social and economical. Such selection is conditioned on the importance of indicators group in the research of peripherality (the indicators of these groups are also distinguished as the basic one according to the importance in the evaluation of peripherality (*III stage*)) and possibility to determine the changes of indicators in time. In the Lithuanian territory in the evaluative context of its peripheralisation three groups of tendencies are distinguished: *relative stability/centralization; partial peripheralisation; total peripheralisation.*

III stage: evaluation of peripherality. In this stage the peripheral regions of Lithuania are distinguished and their peripherality degree is identified. The evaluative stage of peripherality consists of four parts (Fig. 3).

After selection in the matrix of evaluative indicators of peripherality there are twenty indicators meeting the criteria of selection (Table 1). While forming the peripheral regions the weight coefficients are given to the indicators according to the importance (Table 1). The role of indicators is unequal while forming the peripheral regions. While doing the complex evaluation of peripherality the provisions is considered that the dislocation, demographic, social and economical aspects and their groups of indicators are the most important for the emphasis of territorial peripherality. Meanwhile the cultural-political and natural evaluative aspects only are additional for the conception of periphery and expression of peripherality, therefore, the lower coefficients are provided for the indicators of these aspects.

After calculation of total sum of indicators evaluated by the coefficients the classification of municipalities is prepared while ranking and grouping them according to the peripherality degree (Fig. 3). In such case the centres and the peripheries are distinguished. The peripheral municipalities are divided into the *low, medium and high* peripherality degree according to the sum of points cumulated in the complex evaluation. As well according to the nature (number) of complexity of problems prevailing in the territory the municipalities are divided into: *complex, partially complex and less complex*.

While excluding the regions following the results of complex territorial evaluation the territory of Lithuania is divided into four categories (Fig. 3, IIId). The terms are taken over from J. Galtung (Galtung, 1971) for the indication of categories: *centre of centre (CC), centre of periphery (PC), periphery of centre (CP), periphery of periphery (PP)*. In the thesis there is considered a provision that the territorial structures

distinguished and indicated by these terms in the dissertation rather clearly define the territorial differentiation of Lithuania.

Table 1. Indicators used for the evaluation of peripherality and coefficients of their importance

Indicators emphasising the territorial differences in Lithuania				
	Group of indicators	**Indicators**	**Importance coefficients for the peripherality evaluation**	
			Maximum coefficient for the group **K**	Coefficient for the indicator **K** r
Dominant indicators	*Dislocation (Ps)*	Distance to the capital and the higher rank regional centres	0,24	0,14
		Road network density		0,10
	Demographic (D)	Population density	0,24	0,10
		Natural change		0,06
		Net migration		0,06
		Proportion between pensioners and children		0,02
	Social (S)	Unemployment rate	0,20	0,10
		Proportion between recipients of social assistance benefits and all population		0,06
		School network density		0,02
		Educational level		0,02
	Economic (E)	Level of enterprise	0,22	0,06
		Added value created by employed population		0,06
		Foreign direct investment		0,04
		Investment in tangible fixed assets		0,02
		Value of residential territories land		0,04
Additional indicators	*Cultural-political*[1] *(K-P)*	Proportion of ethnic minority	0,06	0,03
		Proportion of religious minority		
		Support in referendums of joining/separation to/from geopolitical blocks		0,03
		Support of protest candidates during the second round of President election		
	Natural (G)	Naturality of the territory	0,04	0,04
			K = 1	**K** r **= 1**

While in the dissertation one of the tasks is to evaluate the peripherality and to distinguish the regions, which differ by peripherality level, only the category *periphery of periphery* (PP), which distinguishes the peripheries, are analyzed in details. Other categories of territories (CC, PC, CP) are not analyzed in details in the thesis. While doing the districting of territory of Lithuania categorised as the category PP six peripheral regions are distinguished. The regions are distinguished following the geographical dimension and in order to distinguish the regions as more homogenous as

[1] Political indicators have been adapted from V. Petrulis (Petrulis, 2009) dissertation thesis.

possible in respect to peripherality. The peripheral regions are indicated while stressing their geographical position in the territory of Lithuania.

3. MAIN RESULTS OF THE RESEARCH

3.1. Classification of municipalities according to the indicators defining peripherality

Dislocation peripheral regions. The dislocation peripheral regions were distinguished considering the time duration while reaching the capital and six national cities, as well to density of road network in the municipalities. It is important to mention that while distinguishing the dislocation peripheral regions according to the mentioned indicators, the territories of especially great peripherality did not distinguish (E group). It illustrates that in Lithuania the road infrastructure is developed well, and it is conditioned on quick and comfortable accessibility by car. The border municipalities confront with the problems of accessibility most – they are not only far from the centres, but also the border municipalities are distinguish by the rarest road network.

Northern, Northeast, Southern and Southwest municipalities distinguish by the biggest peripherality. Vilnius-Kaunas region is not attributed to the periphery because while evaluating the accessibility duration of capital this region distinguish by the best values of indicators (Fig. 4). Despite the fact that Klaipėda, Šiauliai, Panevėžys cities are in the periphery in regard to the capital, however, these cities themselves perform the functions of centres for the municipalities surrounding them, therefore, the mentioned cities are excluded from the peripheral regions as well.

Demographic peripheral regions. The situation illustrated by the demographic indicators in Lithuania and the change of this situation in the selected years render unevenness in the national territory. It is necessary to acknowledge that generally in the whole country the constantly happening processes of depopulation and ageing of population become clear. However, in some regions in the state the problems are bigger and some regions are more sensitive to the changes in time in comparison with others (Fig. 5).

While generalizing the demographic situation of Lithuania the peripheral regions are distinguished (Fig. 5). The regions of Northeast and Southern Lithuania are distinguished as the regions of the biggest demographic peripherality, which municipalities are classed to E group while analyzing the demographic indicators. They are the regions, which were settled most rarely, rapidly ageing due to the increasing part of population of pension age and negative natural change. The regions of Southwest and North Lithuania are classed to D group according to the values of indicators. Several municipalities in the Southwest and Southeast Lithuania, the region of Central Lithuania and some municipalities of Western Lithuania are classed to C group.

The big cities of country – Vilnius, Kaunas and Klaipėda, their districts and some municipalities around these cities, which feel the direct impact of big cities are distinguished by slightly different situation. The cities and the municipalities, which feel their influence, are closer to the centre than to the periphery according to the values of demographic indicators.

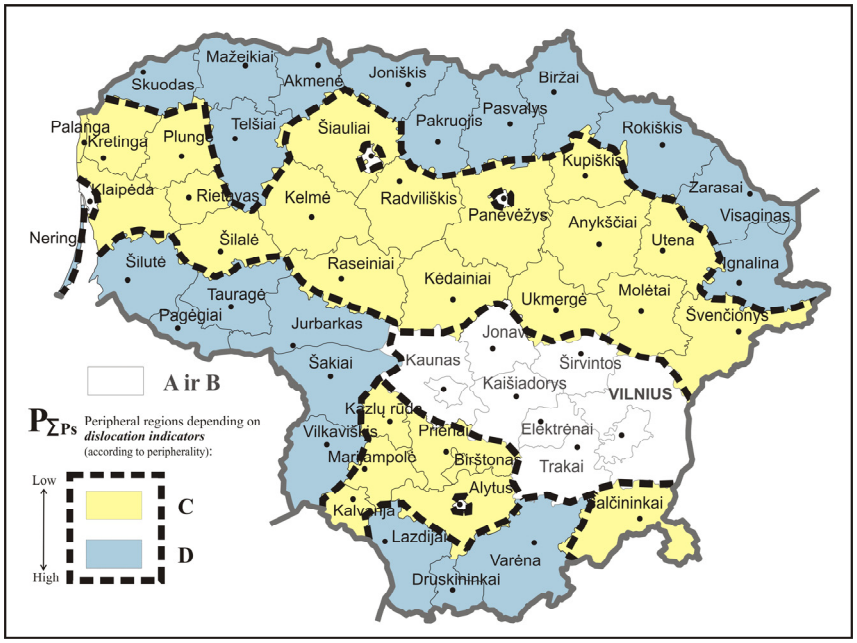

Fig. 4. Dislocation peripheral regions

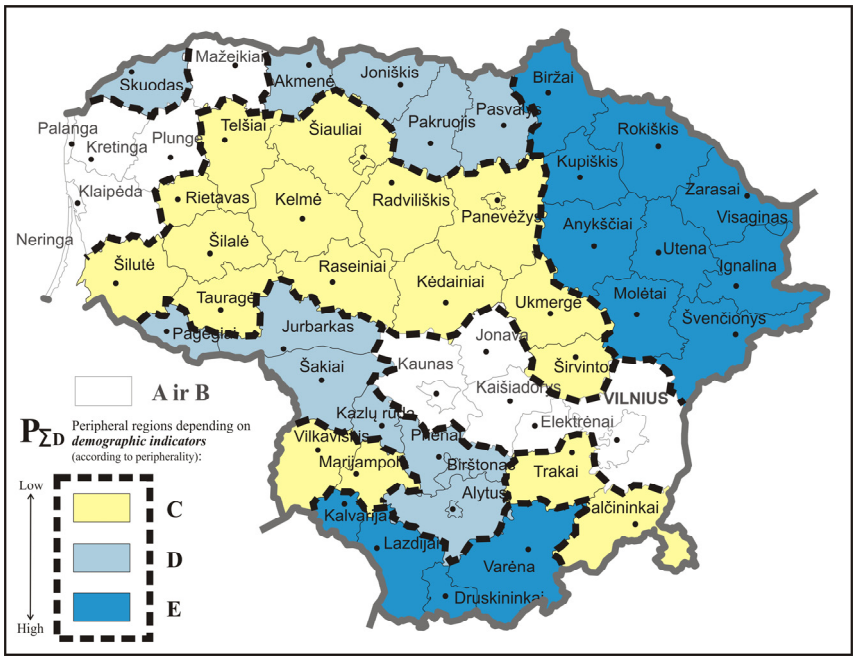

Fig. 5. Demographic peripheral regions

Social peripheral regions. The major part of Lithuanian territory is distinguishes by the lower values of indicators than the national average. Therefore, about 80% of state territory according to the social indicators is considered as the periphery. The cities and Marijampolė, Neringa, Elektrėnai and Kaunas district municipalities are distinguish by the exceptionally positive values of social indicators and are defined as the "islands" in the territory of the state. In the research these municipalities are classed to the centres (Fig. 6).

Šiaurės rytų Lietuva (ypač Švenčionių r. bei Ignalinos r. savivaldybės) išsiskiria aukštu nedarbo lygiu, dideliu socialinių pašalpų gavėjų skaičiumi, mažu mokinių skaičiumi bei retu mokyklų tinklu. Šios savivaldybės priskirtos didžiausią periferingumą atspindinčiai E grupei. Šiaurės, Pietų, Vidurio, Pietvakarių Lietuva taip pat išsiskyrė žemesnėmis už šalies vidurkį rodiklių reikšmėmis, todėl priskirta D grupei. C grupei priskirtos Šiaurės vakarų, kelios Rytų, Vidurio, Pietvakarių regionų savivaldybės (Fig. 6).

Economic peripheral regions. According to the economic indicators the greater part of Lithuania should be indicated as the peripheral one (Fig. 7). Only the municipalities of Vilnius city, Kaunas city, Klaipėda city, Palanga city, Neringa and Klaipėda district are distinguished as the centres. Only in these municipalities the values of most economic indicators exceeded the average national values.

The biggest economic peripherality was in the North, Northeast, South, Southwest regions of Lithuania and in some municipalities of region of Central Lithuania. According to the most economic indicators the municipalities of the indicated regions were classed to E group. The regions of Central and Western Lithuania are of slightly lower peripherality. In these regions according to the most indicators the municipalities were classed to D group. The lower peripherality was noticed in the Eastern Lithuania (Vilnius district, Trakai district and Elektrėnai municipalities, which feel the influence of Vilnius city) and single municipalities of Druskininkai, Mažeikiai district, Marijampolė, Utena district and Kaunas district. The mentioned municipalities were classed to the C group.

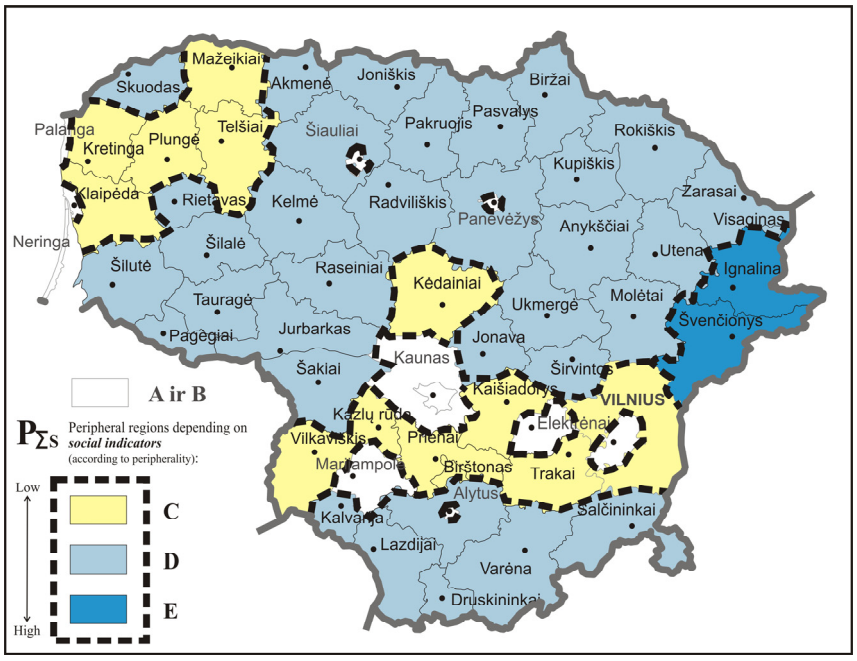

Fig. 6. Social peripheral regions

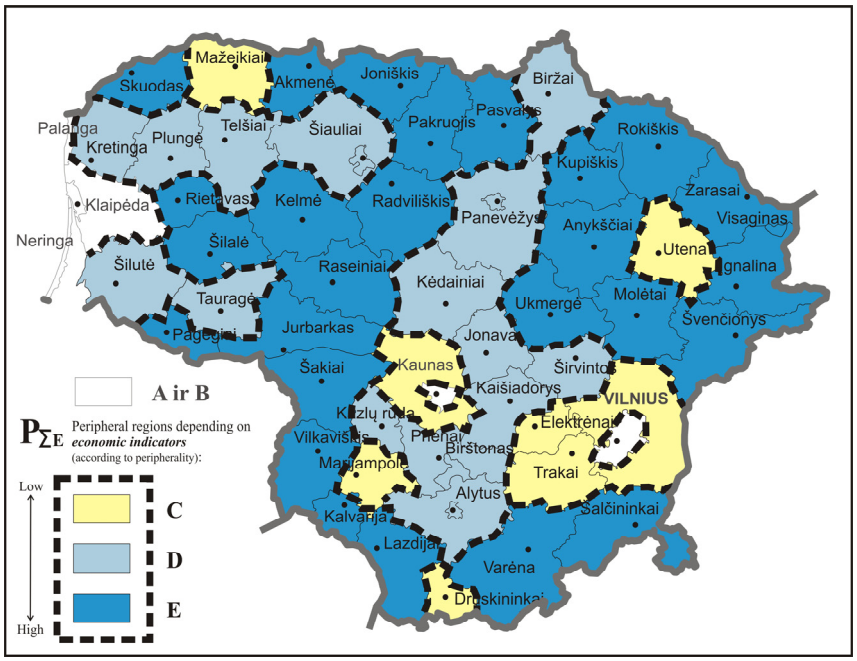

Fig. 7. Economic peripheral regions

Cultural-political peripheral regions. The cultural peripheral regions are distinguished according to the indicators of national and religious minorities. The cultural peripheral regions are concentrated in the Eastern Lithuania (Fig. 8). The biggest part of national and religious minorities lives in the municipalities of Zarasai district, Visaginas, Ignalina district, Švenčionys district, Vilnius district. Therefore, these municipalities were classed to the E group. The municipalities of Trakai district, Šalčininkai district and Elektrėnai are considered to the region of lower peripherality and classed to the D and C groups.

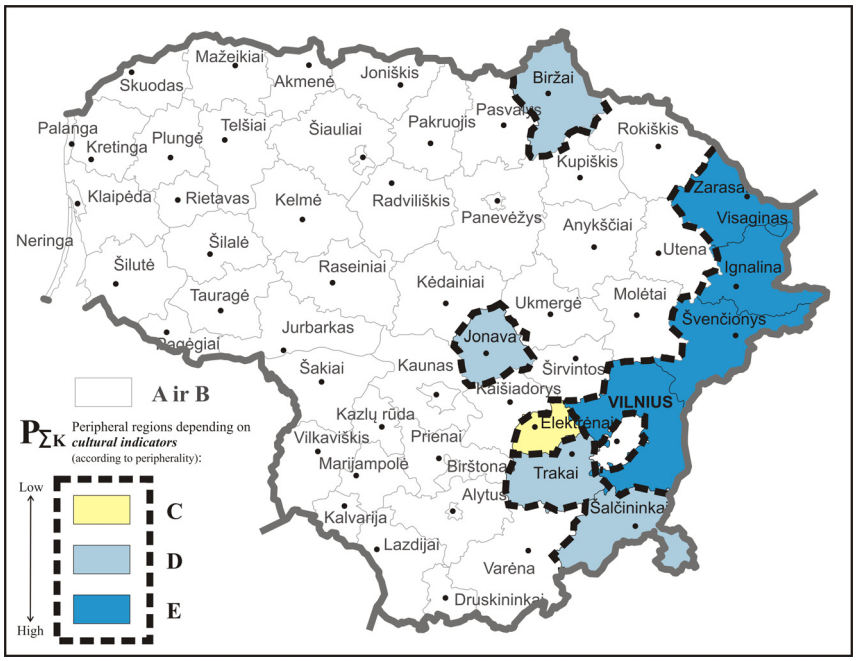

Fig. 8. Cultural peripheral regions

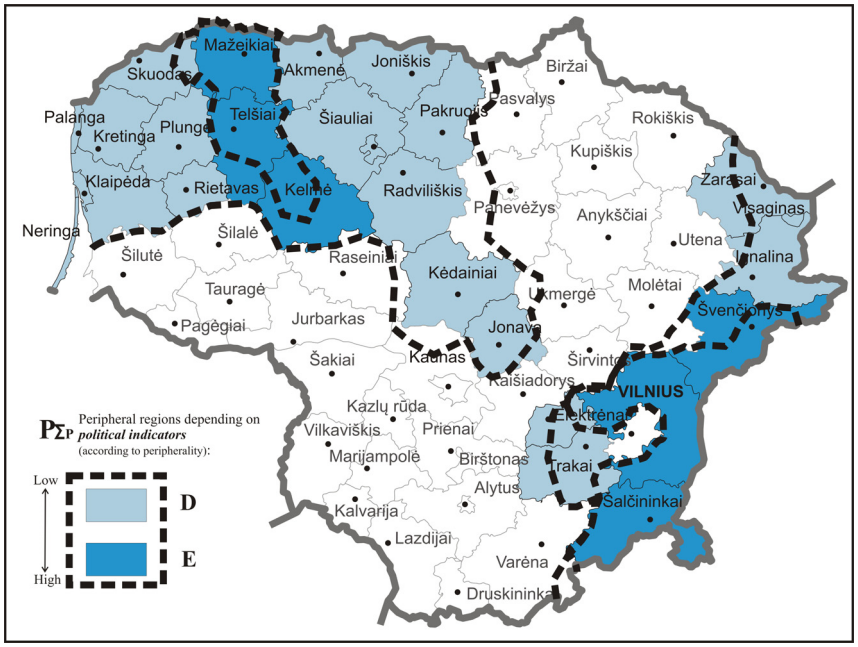

Fig. 9. Political peripheral regions[2] (according to: Petrulis, 2009, p. 264).

In this dissertation thesis the political peripheral regions were distinguished following V. Petrulis dissertation paper „A territorial structure of Lithuania's political field (*On the basis of electoral method*)" (Petrulis, 2009) (Fig. 9). In this dissertation the peripheral regions are considered as the territorial structures, which in the dissertation of V. Petrulis were distinguished as the districts of protest electorates: Kėdainiai, Suvalkija, Samogitia

[2] The boundaries of peripheral regions do not go along with the bounds of municipalities due to the intention to keep the original boundaries that author (V. Petrulis, 2009) had provided in his scientific study.

and the Southeast Lithuania (Petrulis, 2009, p. 258). In these districts the residents supported the protest candidates more during the election of President and protest (populist) parties during the election of Seimas.

In the distinguished protest electorate districts V. Petrulis highlighted the centres (cores), i.e. the districts where the majority (over 2/3) of active electors made namely the protest electorate (Petrulis, 2009, p. 264, 266). Over twice the protest electorate surpasses the traditional one in the region of Eastern Lithuania. As well more than 2/3 of all votes of electors were gotten by the protest candidate and in the wards of Mažeikiai, Telšiai, Kelmė districts, which compound the core of protest electorate of Žemaitija region. According to V. Petrulis (Petrulis, 2009, p. 267): „The centre of electorate regions can be considered as the basic power forming separate elective districts"; in such case both centres of Eastern Lithuania and Žemaitija regions had influence on the surrounding districts, where the supporters of protest candidates and parties relationally slightly surpassed the electors of traditional authority.

While summarizing the results of the dissertation V. Petrulis made an assumption that it is possible to envisage the interrelation among the ethno-cultural and electorate regions (Petrulis, 2009, p. 268).

Natural peripheral regions. The natural peripheral regions were distinguished after evaluation of what part of municipality (in percentage) occupies relatively natural territories. The Eastern Lithuania was distinguished by the highest naturalness (Fig. 10). Švenčionys district, Varėna district, Visaginas and Druskininkai were distinguished as especially natural municipalities and according to peripherality level they are classed to E group. As well Neringa and Kazlų Rūda municipalities are classed to this group.

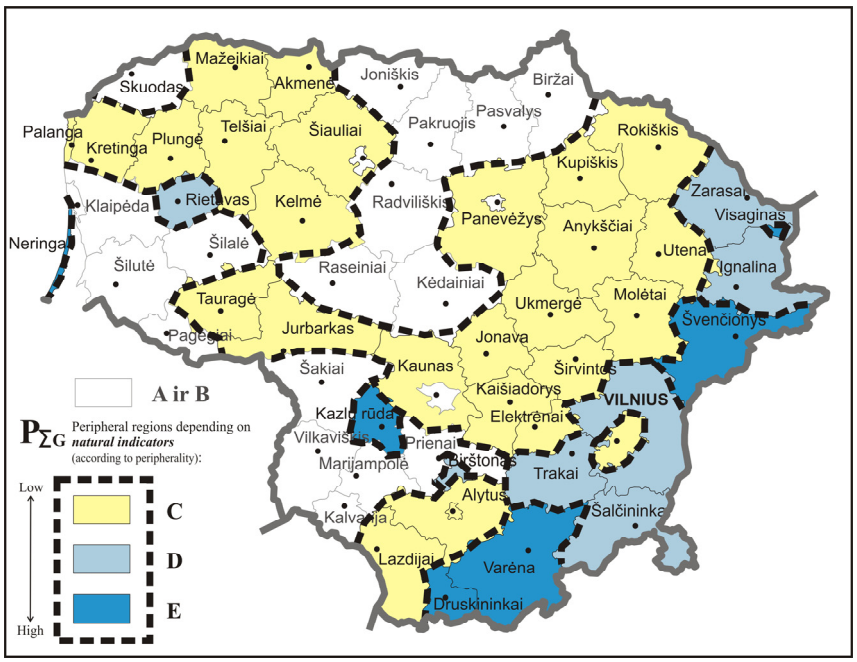

Fig. 10. Natural peripheral regions (according to the relative naturalness of territory)

Zarasai, Ignalina, Vilnius, Trakai and Šalčininkai districts, also, Birštonas and Rietavas municipalities were more covered with forests and lakes than other municipalities of Lithuania, therefore, while evaluating according to peripherality level they were classed to D group. The municipalities having recreation potential passed to E and D peripheral regions. The region of lower peripherality indicated by C group occupied the bigger part of the territory of country while joining one third of all municipalities (Fig. 10).

The municipalities of Central and Southwest Lithuania were distinguished by the lowest naturalness. There was the lowest number of lakes in these municipalities, also, lower than average number of forests. The municipalities of Central Lithuania emphasize with better quality of soil, therefore, in this region the intensive agricultural activity is performed.

3.2. Peripheralisation tendencies in the municipalities of Lithuania

Demographic peripheralisation. The demographic peripheralisation is to the extent of the whole Lithuania (Fig. 11). The negative change of average demographic indicators (population density, natural change, net migration, relation between pension-age population and children) shows the general peripheralisation of Lithuania.

The group of *relative stability / centralization* municipalities joins the territories, where during the analyzed period was a positive or in the general context of Lithuania slight, negative change of indicators. Vilnius, Kaunas, Klaipėda cities and their districts kept the strongest demographic potential. Conditionally stable change was in the municipalities being in the area of Vilnius and Kaunas influence. As well the demographic stability has been kept in the municipalities of Mažeikiai, Telšiai, Kretinga districts. *Peripheralisation of high intensity* was in the Northeast and South Lithuania (Fig. 11). In the analyzed period according to the demographic indicators these regions were distinguished by the worst values of indicators, which further decreased. Low density of population, mortality strongly surpassed birth-rate, intensive ageing and emigration processes were in the mentioned regions. *Peripheralisation of low intensity* was almost in the whole Lithuania, except the territories around three biggest cities (Vilnius, Kaunas and Klaipėda), and as well the municipalities of Druskininkai, Marijampolė, Mažeikiai district and Telšai district (Fig. 11).

The analyzed change of demographic indicators shows that emigration and low birth-rate made the greatest influence on the territorial peripheralisation of Lithuania, and accordingly it conditioned the decreasing population density and ageing of society.

Social peripheralisation. To determine the tendencies of social peripheralisation is rather difficult because the values of social indicators, which condition the classification of municipality according to the deviation from average for one or other group, change in time. However, despite the mentioned fact while summarizing the change of social

indicators during the analyzed period of twenty years it is possible to highlight the relative tendencies of social situation change in the municipalities (Fig. 12).

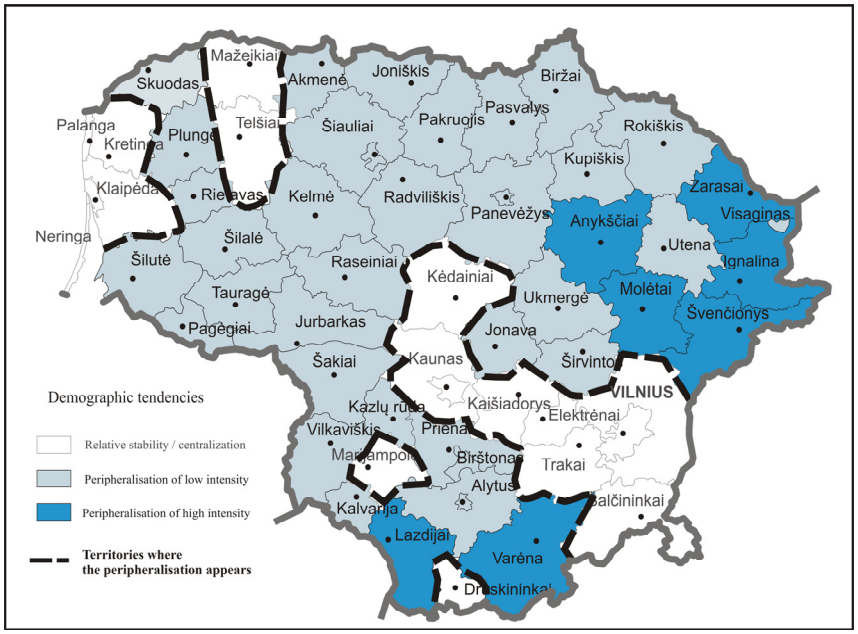

Fig. 11. Relative tendencies of demographic peripheralisation

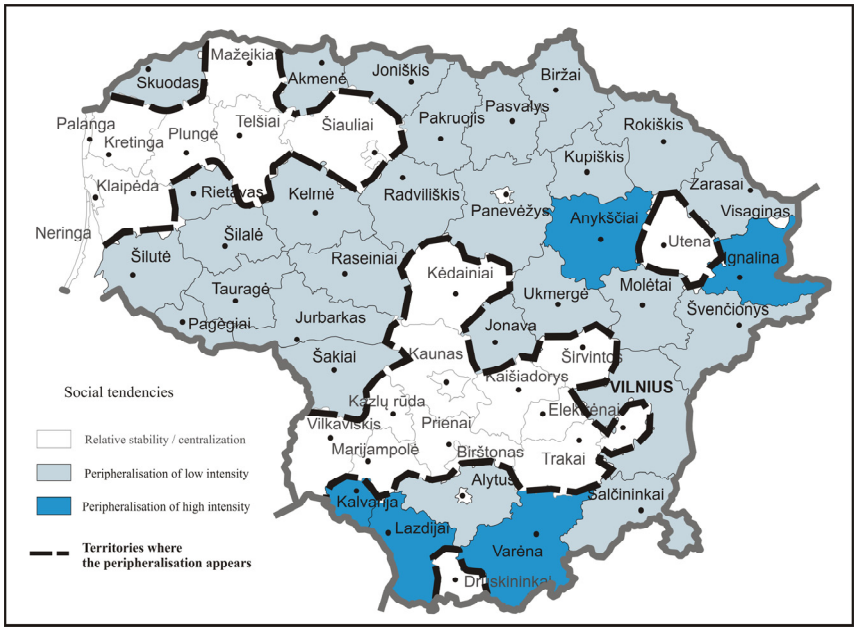

Fig. 12. Relative tendencies of social peripheralisation

Relatively stable / improving indicators were in the six big cities and in some municipalities of Central and Northwest Lithuania, also in Utena district and Druskininkai. The analyzed indicators reason that in these municipalities the level of unemployment changed similarly with the average values of country, the proportion between the recipients of social assistance benefits and population was relationally low, a great part of population made the persons having the higher education, furthermore, in these municipalities the network of schools did not decline or did not decline so quickly.

Peripheralisation of high intensity was in several municipalities of the North and South Lithuania (Fig. 12). In the mentioned regions there was a great part of recipients of social assistance benefits, rare and still decreasing network of schools due to the declining number of pupils. *Peripheralisation of low intensity* was in the major territorial part of country (Fig. 12). The intensive reduction of number of pupils and the ruining of network of schools was in majority of these municipalities. The relation between the ones, who receive the social assistance benefit and all population of municipality increased in all municipalities, where peripheralisation was. Moreover, the municipalities were distinguished by the bigger unemployment level.

In the social aspect the peripheralisation tendencies of Lithuania were mostly influenced on the level of unemployment, increase of proportion between the receivers of social assistance benefit and population of municipality, disappearance of network of schools, conditioned on the decrease number of pupils.

Economic peripheralisation. To determine the economic, as well as social, peripheralisation is rather difficult due to the instable change of indicators during the analyzed period. In most municipalities the economic indicators were instantaneous and instable. The provided tendencies of economic peripheralisation are conditional, however, able to highlight the territories of economic potential and decline (Fig. 13).

The big cities – Vilnius, Kaunas, Klaipįda, Šiauliai and Panevėžys – were distinguished as *relatively stable* in the research of economic peripheralisation. As well the municipalities around these cities were rather stable in the economic aspect. Economic *peripheralisation of high intensity* was in the South Lithuania and in single municipalities of Northeast and Middle Lithuania (Fig. 13). The mentioned regions got especially little direct foreign investments. Also, exclusively low amount of material investments were in majority of municipalities of these regions. Moreover, the works of dwelling construction were not organized in these regions. The level of entrepreneurship and the added value created by employed residents decreased in all mentioned municipalities. *Peripheralisation of low intensity* took almost fifty percentage of Lithuanian territory (Fig. 13). Despite the growing indicators of entrepreneurship level according to the mentioned indicator peripheralisation was in all municipalities of this group. It proves that the indicator of entrepreneurship level grows insufficiently quickly in comparison with the change of national average. According to the analyzed indicator of foreign direct investments the municipalities of this group were distinguished by especially poor values. The majority of these municipalities also emphasized with poverty of material investments and slowdown of construction of dwelling houses.

Such expression of economic situation states that except the big cities and the surrounding municipalities being in their influence, the rest part of Lithuania suffers from economic peripheralisation. Mostly economic peripheralisation of municipalities was conditioned on low foreign direct and material investment, decrease of

entrepreneurship level, insufficient growth of added value created by employed residents in comparison with its growth in the centres.

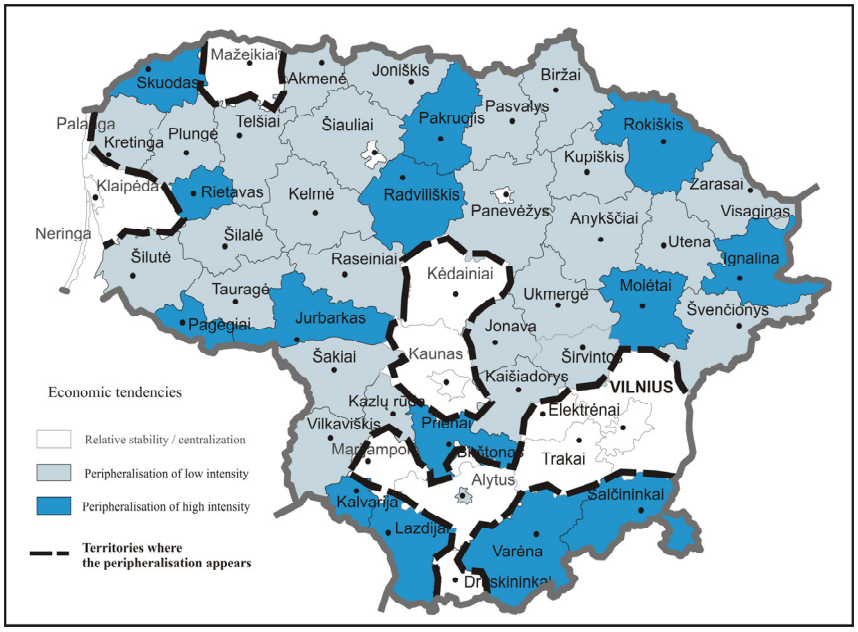

Fig. 13. Relative tendencies of economic peripheralisation

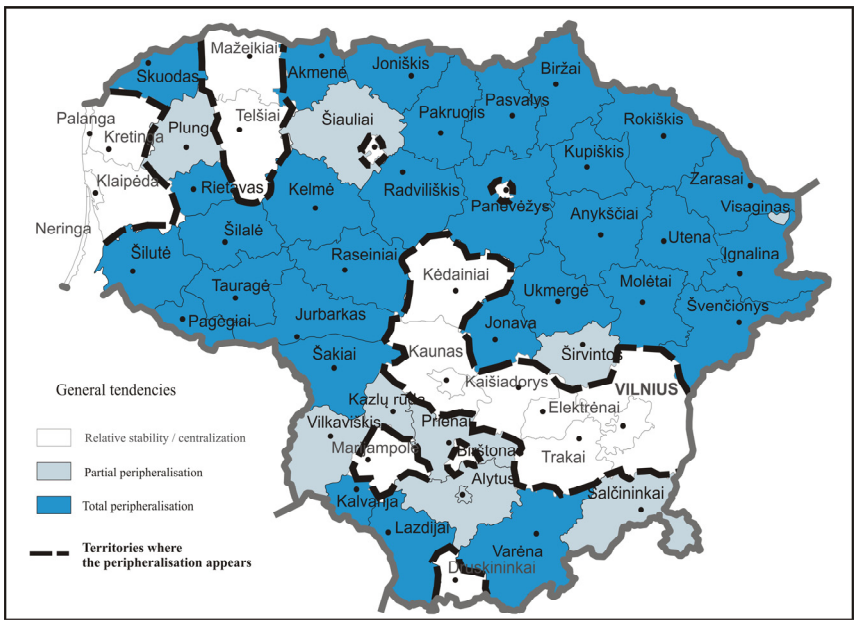

Fig. 14. Relative tendencies of general peripheralisation

Relative tendencies of general peripheralisation. Summarizing of tendencies of demographic, social, economic peripheralisation it was determined that one third (18 municipalities) of Lithuanian municipalities emphasized with the relative stability or improvement of indicators. The biggest cities and the municipalities feeling their direct influence and several single municipalities were classed to the category of *relatively stable / central* municipalities (Fig. 14); whereas peripheralisation appeared in 2/3 of Lithuanian municipalities. According to the determined tendencies of demographic,

social and economic peripheralisation the territories of *partial* and *total peripheralisation* were distinguished (Fig. 14).

Total peripheralisation was in 32 of all distinguished 42 municipalities, where peripheralisation was. It means that the decline of demographic, social and economic indicators and increase of gap in respect of centre was in these municipalities. Yet Panevėžys and Šiauliai cities were distinguished as the "islands" in the region of Northeast – North – Central Lithuania, where depopulation, decreasing economics, worsening social situation appears. However, in the general context of Lithuania the indicators defining these cities also decline and it is likely that after repeating of peripheralisation research in several years it is possible to expect that these cities will be classed to the category of running peripheralisation. *Partial peripheralisation* was in ten municipalities (Fig. 14). The municipalities differed by the nature of peripheralisation tendencies being in the territory.

The boundary between the territories of total peripheralisation and partial peripheralisation is not big, therefore, it is likely that those municipalities, which today are indicated as territories of partial peripheralisation, while doing similar research of tendency determination after several years, can be classed to the territories of total peripheralisation. The demographic, social and economic factors are closely inter-related, therefore, in most cases the decline of one or several groups of these factors makes negative influence on other(s). In case of Lithuania, the decreasing economic potential in the periphery responds negatively in the demographic indicators (while increasing depopulation), and as well in the social indicators (in the level of unemployment, while increasing the number of applicant for the social assistance benefits, etc.).

3.3. Complex evaluation of periphery

The complex evaluation revealed (Fig. 15) that only three big cities of Lithuania – Vilnius, Kaunas and Klaipėda – are distinguished by rather stable and high values of indicators. Only these cities in Lithuania can be indicated by the term – **centre of centre** (Fig. 15). These cities are competitive not only to the extent of country but also attractive to the foreign investors, distinguished by conditionally better social and economic situation, they are able to keep demographic balance. Šiauliai, Panevėžys and Alytus cities also are emphasized with rather high values of indicators despite that they are considered as the regional centres because their influence is felt in the regional level. Šiauliai, Panevėžys and Alytus cities are the centres servicing the periphery, therefore, in the dissertation thesis these cities are indicated by the term **centre of periphery**. In the Soviet times (in the second part of 20th century) these cities were important industrial centres, however, after Lithuania restored the independence (after 1990) the potential of these regional centres decline and the cities cannot keep stable demographic and economic situation and loses human and economic potential.

As being the big cities, geographically comfortably set in the territory of Lithuania and having great demographic, economic, social potential Kaunas and Klaipėda cities make influence on the neighbouring territories, and their zone of impact includes the territories of district municipalities of these cities. The running process of suburbanization, strategically comfortable place determines that Kaunas and Klaipėda districts are distinguished by conditionally high indicators and in the general context of Lithuania are closer to the centres than to the peripheries. Kaunas and Klaipėda districts are indicated by the term **peripheries of centre**.

The rest part of Lithuanian territory is the periphery, which is distinguished by the different degree of peripherality, amount and nature of factors, which influence peripherality. This territory of Lithuania is defined by the term **periphery of periphery**.

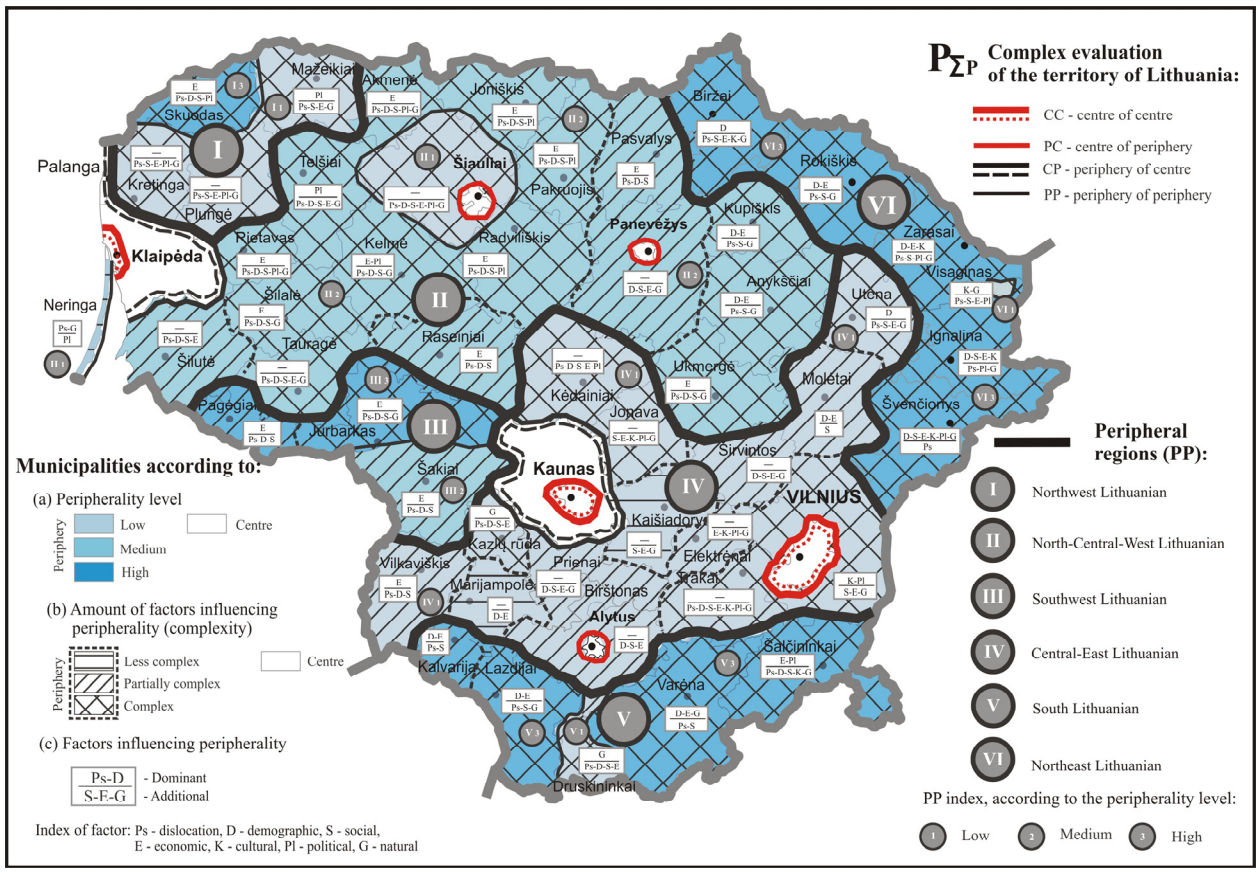

Fig. 15. Complex peripheral regions and their peripherality level

The complex evaluation allowed to distinguish six peripheral regions in Lithuania. These regions differ according to their peripherality level (Fig. 15).

I – Northwest Lithuania. Skuodas district classed to this region was distinguished by big, and the municipalities of Mažeikiai, Kretinga and Plungė districts – by low peripherality (Fig. 15). The peripherality of the region was influenced on a complex of factors. This region is set most far from the capital Vilnius, however, geographically the Northeast region is in rather comfortable position – near seaport Klaipėda and Riga city, which, it is likely, plays more important role to this region than Vilnius.

II – Northern–Central–Western Lithuania. In territorial aspect it is one of the biggest peripheral regions. According to the degree of peripherality this region is ambivalent: the major part of region was distinguished by medium, and Šiauliai district by low peripherality (61 pav.). The region of Northern–Central–Western Lithuania is not homogenous according to the amount of factors determining peripherality. The complex evaluation of peripherality shows that this region distinguishes from others that the basic accent of the region is weak the economic potential. It is reflected by the domination of economic factors while forming peripherality in most municipalities forming to the region.

III – Southwest Lithuania. Jurbarkas district and Pagėgiai municipalities of this region was distinguished by high peripherality, and Šakiai district municipality by medium. Šakiai district and Pagėgiai municipalities are indicated as partially complex. According to the complexity of factors determining peripherality Jurbarkas district municipality was classed to the complex group. The economical factors were dominating and having great influence on peripherality in this region.

IV – Central–Eastern Lithuania. It is a peripheral region taking great part of Lithuanian territory, which was distinguished by the lowest degree of peripherality. All municipalities attributed to the peripheral region of Central–Eastern Lithuania according to the complex evaluation were classed to the territories of low peripherality. It is likely that such situation is influenced on the existence of big cities – Vilnius and Kaunas – in this region. According to the nature of complexity of factors determining peripherality the municipalities, which compound the region, differ. There were not any dominating factors determining peripherality in majority of municipalities.

V – Southern Lithuania. All these municipalities, except Druskininkai, were emphasized with high peripherality (Fig. 15). According to complexity of factors determining peripherality only Kalvarija municipality was indicated as partially complex, and all other municipalities of region – as complex. According to the nature of factors determining peripherality the municipalities of this peripheral region varied, however, in the general context of Lithuania they emphasized with the plenty of dominating factors determining peripherality.

VI – Northeast Lithuania. All municipalities of the region (except Visaginas municipality) are of high peripherality (Fig. 15). A great palette of factors formed peripherality in them, therefore, all municipalities of the region were indicated as complex. Also, the region of Northeast Lithuania was distinguished as the municipalities attached to this region emphasized with plenty of dominating factors influencing peripherality. Therefore, it determined especially high level of peripherality of municipalities attached to the region.

CONCLUSIONS

1. The dislocation, demographic and economic directions of researches dominate in the researches of peripheries, mostly the indicators of accessibility, population density, level of unemployment and gross domestic product are accentuated. The accentuation of single indicators determines the formation of one-sided conception of the periphery in the researches of foreign and Lithuanian scientists, there is a lack of complex geographical attitude to the periphery.

2. The periphery is a territory, which formation is determined by the complex of factors, therefore, while determining the peripheral regions not only dislocation but also demographic, social, economic, cultural, political and natural factors have to be evaluated. It makes assumptions for the formation of the complex conception of periphery, expands the cognitive possibilities of periphery, enables to look at it more universally and more objectively. The complex view to the periphery also permits to stress the positive side of existence in the periphery and peripheralisation – the peripheries emphasize with the distinctive cultural traditions, they are attractive due to their naturalness, quietness and other factors.

3. The comprehensive evaluation of Lithuanian territory revealed the territorial structure of four ranks. Vilnius, Kaunas and Klaipėda cities are the centres of national importance and are indicated by the term *centre of centre*. Šiauliai, Panevėžys and Alytus cities are the centres of regional importance and are indicated by the term *centre of periphery*. Kaunas and Klaipėda districts are the *peripheries of centre*. The rest part of Lithuanian territory is the *periphery of periphery*.

4. Peripheralisation is a natural process in the country conditioned on the historical circumstances, political, economic, demographical tendencies. Peripheralisation might be displayed while using the social and economic indicators, however, peripheralisation is revealed by the change of demographic indicators (population density, net migration, natural change and others) best. In the Lithuanian territory peripheralisation appears unevenly. The municipalities of cities and the municipalities feeling the direct influence and being near three biggest cities of the country are distinguished by the *relative stability*. Whereas in other municipalities peripheralisation continues: some municipalities of Lithuania (Vilkaviškis district, Alytus district, Prienai district, Šiauliai district and others) emphasize with the *partial peripheralisation*, while *total peripheralisation* is especially clear in the regions of Northeast, North, South, Central and Southwest Lithuania – half of all municipalities of the country.

5. Six complex peripheral regions of different peripherality level might be pointed out in Lithuania:

– I. *Northwest Lithuania*: it is the contrastive region, where the municipalities of Mažeikiai, Plungė and Kretinga districts emphasize with low peripherality, and the municipality of Skuodas district distinguishes by high peripherality, which is determined by the economic retardation and geographic location. The contrast of

the region also becomes clear while analyzing the tendencies of peripheralisation: the municipalities of Mažeikiai district and Plungė district emphasize with relative stability in the context of peripheralisation, the municipality of Skuodas district distinguishes by total peripheralisation, and Plungė district by partial peripheralisation;

- II. *North-Central-West Lithuania*: it is the region of medium peripherality. The major part of North-Central-West Lithuania region emphasizes with total peripheralisation, when the processes of depopulation, decline of economical and social situation show through clearly. In this region relatively stable situation is only in the municipalities of Klaipėda, Šiauliai, Panevėžys cities, Telšiai district and Neringa. There is partial peripheralisation in Šiauliai district, which is influenced on the decline of demographic and economic indicators;

- III. *Southwest Lithuania*: it is the contrastive region, where the municipality of Šakiai district emphasizes with medium, and Jurbarkas district and Pagėgiai with high peripherality, which is influenced on the economic decline most. There is total peripheralisation conditioned on the decline of demographic, social and economic indicators in the whole region of Southwest Lithuania.

- IV. *Central-East Lithuania*: it is the region of the lowest peripherality level, to which Vilnius and Kaunas cities have great influence. In the region of Central-East Lithuania the general tendencies of peripheralisation differ, however, in the general context of the country this region was the most stable. The municipalities of Vilnius city and district, Kaunas city and district, Trakai district, Elektrėnai, Birštonas, Kaišiadorys district, Kėdainiai district, Marijampolė emphasize with stability. Partial peripheralisation, which is influenced on the demographic and economic factors, is in Alytus city and district, Prienai district, Kazlų Rūda and Vilkaviškis district. There are not any municipalities, which distinguish by total peripheralisation, in this region.

- V. *South Lithuania*: it is the region of high peripherality (exception – Druskininkai municipality), which peripherality is influenced on the demographic, economic, natural, political and dislocation factors. In this region Druskininkai municipality distinguishes by low peripherality. In the region of South Lithuania peripheralisation appears differently. Total peripheralisation, which is influenced on the decline of demographic, social and economic indicators, appears in the municipalities of Varėna district, Lazdijai district, Kalvarija; in Šalčininkai district partial peripheralisation appears, and in Druskininkai municipality the situation is rather stable according to the demographic, social, economic indicators.

- VI. *Northeast Lithuania*: it is the region of high peripherality, which peripherality is influenced on the demographic, social, economic, dislocation, natural, political

and cultural factors. The region of Northeast Lithuania emphasizes with intensive total peripheralisation. Visaginas municipality is an exception, where partial peripheralisation conditioned on the decline of economic and demographic indicators appears. There are intensive processes of depopulation, rather low economic and social potential in the region of Northeast Lithuania.

6. The exclusion of peripheral regions and the determination of tendencies of peripheralisation could be used for the reasoning of regional politics of Lithuania. As well the results of this thesis could be useful while preparing the documents of territorial and strategic planning.

LIST OF PUBLICATIONS ON DISSERTATION SUBJECT

In peer-reviewed editions of international databases recognized by Science Council of Lithuania:

- **Pociūtė G**., Baubinas R., Daugirdas V. 2009. Europos sąjungos rytinių euroregionų problema. *Annales Geographicae*: 42 (1-2), p. 95-104.
- **Pociūtė G.** 2010-2011. Periferinio regiono sampratos problema Lietuvoje. *Annales Geographicae* 43-44 (1-2), p. 128-143.
- **Pociūtė G.** 2012. The Problem of Klaipėda Region Peripherality . *Regional Formation and Developement Studies* No. 1 (6), p. 93-103.

In peer-reviewed foreign edition:

- **Pociūtė G.,** Daugirdas V. 2013. The border's influence on peripherality: Case study of the Lithuanian - Byelorussian border region. *Region and regionalism* No. 11 (2), p. 175-194.

In editions of scientific conferences:

- **Pociūtė G.** 2012. The model of estimation of peripheral region in Lithuania. Abstract. Kn.Networked Regions and Cities in Times of Fragmentation: Developing Smart, Sustainable and Inclusive Places. Anual European Conference, Delft, Netherlands 2012 13-16 May. p. 148. ISBN 978-1-897721-41-4.
- **Pociūtė G**. 2013. The connection between EU Cohesion Policy and PhD thesis about peripheral regions. Abstract. Kn.: OPEN DAYS Master Class. OPEN DAYS University, Brussels 2013 7-10 October. p. 64. ISBN 978-92-79-32501-4.

Read reports at the international conferences on dissertation subject:

- [2011 06 30 - 07 03] International seminar-study camp "Smithy of Ideas 2011", organized byLithuanian Society of Young Researches (LJMS). Read report "*The problem of understanding the periphery conception*".
- [2012 03 02] International conference „Places, Actions and Practice of Cross-Border Cooperation: Assessment of Sustainability, organized by Klaipėda University. Read report „*The problem of Klaipėda region peripherality*".

- [2012 05 13-16] International conference „Networked regions and cities in times of fragmentation: developing smart, sustainable and inclusive places“ (Delft, The Netherlands). Read report „*The model of estimation of peripheral region in Lithuania*”.
- [2012 09 12-14] International conference „The Eastern dimension of the united Europe“ (Chelm, Poland – Luck, Ukraine). Read report „ *The border influence for peripherality: case study of Lithuanian-Byelorussian border region*”.

Internship / training:

- [2009 09 – 2010 02] Internship at the EU *Committee of the Regions*, Brussels Belgium).
- [2011 09 – 2011 10] Internship at the *Centre for Regional Studies,* Alfold Institute, Hungarian Academy of Sciences. Bekescsaba, Hungary.
- [2013 10 8-9] International training „11th European Week of Regions and Cities. OPEN DAYS University. Master Class“ Brussels (Begium).

Participation in the projects related to the topic of the dissertation:

- [2012 – 2013] *“Sparsely populated territories of Lithuania and their residents”*, organized by Lithuanian Social Research Centre (Human geography and demography institute) and funded by the Research Council of Lithuania (LMT).
- [2013 – 2014] *“The regional peculiarities of rural settlements function change in Lithuania”*, organized by Lithuanian Social Research Centre (Human geography and demography institute) and funded by the Research Council of Lithuania (LMT).

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2003	Secondary education, Šiauliai „Lieporiai“ secondary school
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SANTRAUKA

ĮVADAS

Temos aktualumas. Nuo XX a. vidurio įvairių sričių bei skirtingų pasaulio valstybių mokslininkams vis aktualesni tampa netolygaus regioninio vystymosi, teritorinės atskirties didėjimo, depresinių regionų, periferijų formavimosi klausimai. Mokslinėje literatūroje svarbūs išlieka metodologiniai klausimai: dažniausiai analizuojamas periferizacijos procesas ir jo teritorinę raišką lemiantys veiksniai, ieškoma, kokiais rodikliais turėtų būti remiamasi nustatant periferiją. Vieninga metodologinė bazė periferijos tyrimuose nėra sukurta, dažniausiai remiamasi vienu ar keliais periferizaciją nusakančiais rodikliais. Todėl metodologiniai periferingumo tyrimų klausimai iki šiol išlieka aktualia mokslo tema tiek pasaulyje, tiek ir Lietuvoje.

Periferizacijos procesai sukuria augančius, ekonomiškai stiprius ir vis stiprėjančius centrus bei ekonomiškai silpnėjančius periferinius regionus, kuriuose ypač išryškėja socialinės problemos. Todėl teritorinės diferenciacijos pažinimas tampa viena aktualiausių šiandienos visuomenės ir valstybės problemų ir vienu svarbiausių visuomeninės geografijos tyrimo objektu. Dėl teritorijos vystymosi netolygumo sukeliamų socialinių, ekonominių ir kt. visuomenės raidos problemų tampa aktualu ne tik pažinti šio erdvinio reiškinio teritorinius sklaidos ypatumus, bet ir suprasti jo priežastis. Tuo labiau, kad šių problemų sprendimas glaudžiai siejasi su praktinių regioninės politikos uždavinių sprendimu.

Pastaraisiais metais teritorinė raida Europoje suprantama kaip poliarizacijos intensyvėjimas – ši tendencija itin ryški naujose Europos Sąjungos (ES) narėse (Lang, 2011). Poliarizacija intensyvėja sparčiai augant sostinei bei keliems didiesiems miestams, kai už ekonominio augimo ribos likusios teritorijos daugelių atveju pastoviai smunka. Tendencingai didėjantys ekonominiai ir socialiniai skirtumai tarp regionų leidžia daryti prielaidas, kad teritorinė poliarizacija tik didės, sąlygodama ne metropolinių teritorijų periferizaciją (Dubois et al, 2008, Lang, 2011).

Didėjančią teritorinę poliarizaciją kaip aštrėjančią problemą mato ir valstybės institucijos. Vyriausybės posėdžiuose teritorinės sanglaudos didinimas yra ganėtinai dažnas diskusijų objektas, tai įrodo rengiamų ir periodiškai atnaujinamų regionų plėtros planų gausa (LR Vyriausybės nutarimas „Dėl probleminių teritorijų išskyrimo...“, 2003; LR žemės ūkio ministro įsakymas „Dėl mažiau palankių...“, 2006; LR Vyriausybės nutarimas „Dėl probleminių..., 2007“; LR Vyriausybės nutarimas „Dėl probleminių teritorijų plėtros...“, 2011; LR Vyriausybės nutarimas „Dėl regionų socialinių...“, 2011). Regioninių netolygumų problemą bandoma spręsti ir Europos Sąjungos kontekste, kuomet vienu iš ES vykdomos politikos uždavinių laikomas siekis mažinti išsivystymo skirtumus tarp ES regionų (Commission of..., 2010).

Darbo aktualumas. Mokslinių darbų, teoriškai ar praktiškai akcentuojančių periferingumo tematiką, yra nemažai, tačiau iki šiol nėra aiškiai ir galutinai apibrėžta periferinio regiono samprata, be to, retai kalbama apie periferizacijos procesą ar nustatomas regionų periferingumo laipsnis. Periferija yra visa likusi teritorija, kuri nepriklauso centrui, todėl pats periferijos terminas yra gana santykinis ir dažnai aiškinamas naudojant socialinių, ekonominių, kultūrinių ar kitų rodiklių reikšmių lyginimą (Daugirdas, Bureika, 2008). Paprastai periferijas analizuojantys darbai būna gana siauro pobūdžio (Copus, 2001; Nagy, 2006, Copus, Skuras, 2006; Vaishar, 2006; Tautvaišaitė, 2007; Jakimavičius, Burinskienė, 2007; Spiekermann, Wegener, 2008; Burbulytė-Tsiskarishvili, 2012 ir kt.). Daugiausiai dėmesio skiriama pasiekiamumo, demografinių bei ekonominių aspektų analizei, todėl formuojamos labai specializuotos periferijos ir periferinio regiono sampratos. Periferijos tyrimuose, darbo autorės nuomone, jaučiamas geografinio-kompleksinio požiūrio į periferiją trūkumas, o siauras požiūris į periferiją nebeatitinka šių dienų aktualijų, nes stabdo ne tik objekto sampratos vystymąsi, bet ir apriboja pačios periferijos kaip teritorinio reiškinio pažinimo galimybes. Mokslų integracija, analizuojant pasirinktą problemą, yra viena pagrindinių rekomendacijų. Šiuo moksliniu darbu siekiama užpildyti trūkstamą periferingumo tyrimų nišą ir prisidėti prie periferijos kompleksinės geografinės sampratos vystymo. Šiame disertaciniame darbe, apjungiant įvairių sričių kokybinius ir kiekybinius rodiklius, pateikiamas kompleksinis požiūris į periferiją ir išskiriami skirtingo periferingumo laipsnio periferiniai regionai Lietuvos teritorijoje.

Darbas reikšmingas dėl parengtos gausios statistikos rodiklių duomenų bazės, kuri gali būti pritaikyta ir kitiems moksliniams darbams siekiant nustatyti regioninius skirtumus Lietuvoje.

Autorės parengtas periferijos nustatymo modelis gali pasitarnauti moksliniu pagrindu periferijų nustatymo tyrimams platesniame kontekste: jį galima pritaikyti kitų Europos periferijų nustatymui ir periferingumo laipsnio įvertinimui. Darbas aktualus ir todėl, kad supažindina su Lietuvos teritorijoje vykstančiu periferizacijos procesu.

Darbo rezultatai aktualūs valstybės institucijoms, kurios formuoja regioninę politiką, kadangi remiantis šiuo darbu regioninė politika galėtų būti stipriau moksliškai argumentuota. Tai pasitarnautų Lietuvos konkurencingumo skatinimui ir optimaliam Europos Sąjungos fondų lėšų paskirstymui bei naudojimui.

Tyrimo objektas

Plačiąja prasme šio tyrimo objektas – periferijos ir periferingumas.

Siaurąja prasme tyrimo objektas – periferijų ir periferingumo teritorinė raiška Lietuvoje.

Darbo tikslas ir uždaviniai

Disertacinio darbo *bendrasis tikslas*: prisidėti prie periferijos ir periferingumo teritorinės raiškos tyrimų plėtojimo.

Konkretusis tikslas yra nustatyti periferingumo teritorinės raiškos ypatumus Lietuvoje.

Tikslui įgyvendinti suformuluoti *uždaviniai*:

1) apžvelgti periferijos reiškinių teritorinės raiškos mokslinius tyrimus;
2) suformuluoti geografinę periferijos ir periferinio regiono sampratą;
3) parengti periferingumo kompleksinio vertinimo metodiką;
4) atlikti periferingumo vertinimą Lietuvos teritorijoje;
5) nustatyti periferizacijos tendencijas Lietuvoje;
6) nustatyti Lietuvos kompleksinius periferinius regionus.

Mokslinis naujumas

Darbo mokslinis naujumas atsiskleidžia metodologijos bei tyrimo rezultatų savybėmis:

1) pirmą kartą Lietuvoje atlikta išsami užsienio ir lietuvių autorių mokslo darbų (geografijos, socialinių mokslų, ekonomikos bei kt.), kuriuose akcentuojama periferijos problematika, analizė;
2) suformuluota originali periferijos samprata, kurioje pirmą kartą akcentuojamas kompleksinis-geografinis, skirtingais aspektais pagrįstas, požiūris į periferijos reiškinį;
3) sukurta periferingumo vertinimo statistikos duomenų bazė, kuri suteikia galimybę atlikti plataus pobūdžio kiekybinį ir kokybinį Lietuvos savivaldybių teritorijų vertinimą;
4) pirmą kartą Lietuvoje lokalizuoti periferiniai regionai, nustatytas jų periferingumo laipsnis, periferiją formuojantys veiksniai bei jų pobūdis;
5) pirmą kartą Lietuvoje atlikta regionų klasifikacija pagal periferingumo laipsnį suskirstant į *centro centro, centro periferijos, periferijos centro, periferijos periferijos* grupes.

Darbo pritaikomumas

Darbo rezultatai gali būti pritaikyti trimis kryptimis:

1) teorinis periferingumo tyrimo pritaikomumas:
    - periferijos sampratos ir periferijos reiškinio platesniam moksliniam supratimui;
    - regioninių tyrimų metodikos plėtojimui;
    - Lietuvoje vykstančių periferizacijos procesų pažinimui;
    - mokslinis darbas sudaro mokslinį pagrindą tolimesniems regioniniams tyrimams.
2) praktinis darbo rezultatų panaudojimas:
    - argumentuotam ir moksliškai pagrįstam valstybės regioninės politikos formavimui;

- regioninės politikos programų rengimui ir pagrindimui;
- probleminių teritorijų Lietuvoje identifikavimui;
- Lietuvos savivaldybių biudžetų struktūros optimizavimui.

3) darbo rezultatų panaudojimas edukacijai:
   - geografinė periferijos samprata galėtų būti įtraukta į dėstomų visuomenės geografijos disciplinų programas, dėstomų dalykų metu būtų galima naudotis sukurta statistikos duomenų baze, mokslo darbuose pritaikyti periferijos nustatymo modelį kompleksiniams tyrimams vykdyti.

Ginami teiginiai

- Yra daug periferinius reiškinius nagrinėjančių darbų, tačiau jaučiamas kompleksiškesnio požiūrio į šį fenomeną trūkumas, kuriame periferija būtų traktuojama kaip teritorinis vienetas, nustatytas įvertinus dislokacines, demografines, socialines, ekonomines, kultūrines, politines ir gamtines sąlygas;
- Lietuvoje vykstantys periferizacijos procesai suformavo periferingumo skirtumus. Pagal periferingumo teritorinę raišką Lietuvoje galima išskirti keturių rangų teritorinius vienetus: centro centrus, centro periferijas, periferijos centrus bei periferijų periferijas;
- Periferizacijos procesai aiškiausiai matomi analizuojant demografinių, socialinių bei ekonominių rodiklių kaitos tendencijas. Minėtų rodiklių grupių analizė leidžia išryškinti santykinio stabilumo, dalinės periferizacijos bei visapusiškos periferizacijos teritorijas Lietuvoje;
- Lietuvos periferiniai regionai skiriasi savo periferingumo laipsniu ir jų ypatybes formavusiais veiksniais.

Rezultatų aprobacija. Nagrinėta tema paskelbti ir publikuoti 4 straipsniai, trys iš jų Lietuvos, vienas – užsienio moksliniuose leidiniuose. Dviejų tarptautinių konferencijų leidiniuose publikuotos šio darbo tezės. Tarptautinėse konferencijose periferingumo tematika skaityti 4 pranešimai. Autorė 2 kartus buvo išvykusi į stažuotes užsienyje.

Disertacinio darbo struktūra. Disertacinis darbą sudaro šios dalys: įvadas, tyrimų apžvalga, darbo metodologija, tyrimų rezultatai, išvados bei naudotos literatūros sąrašas. Elektroninėje laikmenoje pateikiami priedai. Darbe yra 67 originalūs paveikslai (kartoschemos, diagramos, struktūrinės schemos) bei 3 lentelės. Darbe yra cituojami 457 literatūros šaltiniai.

IŠVADOS

1. Periferijų tyrimuose dominuoja dislokacinė, demografinė bei ekonominė tyrimų kryptys, daugiausia akcentuojami pasiekiamumo, gyventojų tankumo, nedarbo lygio ir

bendro vidaus produkto rodikliai. Pavienių rodiklių akcentavimas užsienio ir Lietuvos mokslininkų tyrimuose lemia vienpusiškos periferijos sampratos formavimą, trūksta kompleksinio geografinio požiūrio į periferiją.

2. Periferija yra teritorija, kurios formavimąsi lemia kompleksas veiksnių, todėl nustatant periferinius regionus turi būti įvertinami ne tik pasiekiamumo, bet ir demografiniai, socialiniai, ekonominiai, kultūriniai, politiniai bei gamtiniai veiksniai. Tai sudaro prielaidas periferijos kompleksinės sampratos formavimui, išplečia periferijos pažinimo galimybes, įgalina į ją žvelgti įvairiapusiškiau ir objektyviau. Kompleksinis požiūris į periferiją taip pat leidžia įžvelgti ir pozityviąją buvimo periferijoje bei periferizacijos pusę – periferijos pasižymi savitomis išlaikytomis kultūros tradicijomis, yra patrauklios dėl savo gamtinio natūralumo ir kt..
3. Kompleksinis Lietuvos teritorijos vertinimas atskleidė centro-periferijos keturių rangų teritorinę struktūrą. Vilniaus, Kauno bei Klaipėdos miestai yra nacionalinės svarbos centrai ir įvardintini *centro centras* terminu. Šiaulių, Panevėžio bei Alytaus miestai yra regioninės svarbos centrai ir įvardintini *periferijos centro* terminu. Kauno bei Klaipėdos rajonai yra *centro periferijos*. Likusi Lietuvos teritorijos dalis yra *periferijos periferija*.
4. Periferizacija yra natūralus šalyje vykstantis procesas, sąlygotas istorinių aplinkybių, politinių, ekonominių, demografinių tendencijų. Periferizaciją rodo socialiniai bei ekonominiai rodikliai, tačiau geriausiai periferizaciją atskleidžia demografinių rodiklių (gyventojų tankumo, neto migracijos, natūralios kaitos ir kt.) kaita. Lietuvos teritorijoje periferizacija vyksta nevienodai. *Santykiniu stabilumu* išsiskiria miestų savivaldybės ir tiesioginę įtaką jaučiančios, greta trijų didžiausių šalies miestų esančios savivaldybės. Tuo tarpu kitose savivaldybėse tęsiasi periferizacija: *daline periferizacija* pasižymi kai kurios Lietuvos savivaldybės (Vilkaviškio r., Alytaus r., Prienų r., Šiaulių r. ir kt.), o *visapusiška periferizacija* ypač ryški Šiaurės rytų, Šiaurės, Pietų, Vidurio bei Pietvakarių Lietuvoje – pusėje visų šalies savivaldybių.
5. Lietuvoje formuojasi kompleksiniai skirtingo periferingumo laipsnio šeši periferiniai regionai:
   - *I. Šiaurės vakarų Lietuvos*: tai kontrastingas regionas, kuriame Mažeikių r., Plungės r. ir Kretingos r. savivaldybės pasižymi mažu periferingumu, o Skuodo r. savivaldybė išsiskiria dideliu periferingumu, kurį lemia ekonominis atsilikimas ir geografinė padėtis. Regiono kontrastingumas išryškėja ir nagrinėjant periferizacijos tendencijas: Mažeikių r. ir Plungės r. savivaldybės pasižymi sąlyginiu stabilumu perifericacijos kontekste, Skuodo r. savivaldybė išsiskiria visapusiška periferizacija, o Plungės r. – daline periferizacija;
   - *II. Šiaurės-Vidurio-Vakarų Lietuvos*: tai vidutinio periferingumo regionas. Didžioji Šiaurės-Vidurio-Vakarų Lietuvos regiono dalis pasižymi visapusiška periferizacija, kuomet aiškiai išryškėja depopuliacijos procesai, ekonomės bei socialinės padėties prastėjimas. Šiame regione santykinai stabili situacija tik Klaipėdos, Šiaulių, Panevėžio miestų, Telšių r. bei Neringos savivaldybėse.

Šiaulių r. savivaldybėje vyksta dalinė periferizacija, kurią lemia demografinių bei ekonominių rodiklių smukimas;

- *III. Pietvakarių Lietuvos*: tai kontrastingas regionas, kuriame Šakių r. savivaldybė pasižymi vidutiniu, o Jurbarko r. ir Pagėgių – dideliu periferingumu, kurį labiausiai lemia ekonominis atsilikimas. Visame Pietvakarių Lietuvos regione vyksta visapusiška periferizacija, sąlygota demografinių, socialinių bei ekonominių rodiklių reikšmių smukimo.
- *IV. Vidurio-Rytų Lietuvos*: tai mažiausio periferingumo laipsnio regionas, kuriam didelę įtaką daro Vilniaus ir Kauno miestai. Bendrosios periferizacijos tendencijos pačiame Vidurio-Rytų Lietuvos regione skiriasi, tačiau bendrame šalies kontekste šis regionas išsilaikė stabiliausiai. Vilniaus miesto ir rajono, Kauno miesto ir rajono, Trakų r., Elektrėnų, Birštono, Kaišiadorių r., Kėdainių r., Marijampolės savivaldybės pasižymi stabilumu. Alytaus mieste ir rajone, Prienų r., Kazlų Rūdos, Vilkaviškio r. vyksta dalinė periferizacija, kurią lemia demografiniai ir ekonominiai veiksniai. Savivaldybių, kurios šiame regione išsiskirtų visapusiškai vykstančia periferizacija nėra.
- *V. Pietų Lietuvos*: tai didelio periferingumo regionas (išimtis – Druskininkų sav.), kurio periferingumą lemia demografiniai, ekonominiai, gamtiniai, politiniai bei pasiekiamumo veiksniai. Druskininkų sav. šiame regione išsiskiria mažu periferingumu. Pietų Lietuvos regione periferizacija vyksta skirtingai. Varėnos r., Lazdijų r., Kalvarijos savivaldybėse vyksta visapusiška periferizacija, kurią lemia demografinių, socialinių bei ekonominių rodiklių smukimas; Šalčininkų r. – dalinė, o Druskininkų savivaldybėje demografinių, socialinių, ekonominių rodiklių atžvilgiu situacija pakankamai stabili.
- *VI. Šiaurės rytų Lietuvos*: tai didelio periferingumo regionas, kurio periferingumą lemia demografiniai, socialiniai, ekonominiai, pasiekiamumo, gamtiniai, politiniai bei kultūriniai veiksniai. Šiaurės rytų Lietuvos regionas pasižymi visapusiška, intensyviai vykstančia periferizacija. Visagino savivaldybė – išimtis, kurioje vyksta dalinė periferizacija, sąlygota ekonominių bei demografinių rodiklių nuosmukio. Šiaurės rytų Lietuvos regione vyksta intensyvūs depopuliacijos procesai, yra pakankamai žemas ekonominis ir socialinis potencialas.

6. Periferinių regionų išskyrimas bei periferizacijos tendencijų nustatymas galėtų būti panaudotas Lietuvos regioninės politikos pagrindimui. Taip pat šiame darbe gauti rezultatai galėtų pasitarnauti rengiant teritorinio ir strateginio planavimo dokumentus.

CIRUCULUM VITAE

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2009	Bendrosios geografijos ir kraštotvarkos studijų programos magistras, Vilniaus universitetas
2010 – 2014	Geografijos krypties doktorantūros studijos, Vilniaus Universitetas, Gamtos tyrimų centras (Geologijos ir geografijos Institutas
Moksliniai interesai	Lietuvos periferiniai regionai, regionų geografija, miesto geografija, regioninė politika, teritorinė poliarizacija.