



Spatial exclusion in Lithuania: peripheries as “losers”, metropolitan areas as “winners”

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Abstract. This paper reports on a comprehensive evaluation of socio-spatial inequalities as a means of analysing spatial exclusion in line with demographic, social and economic components expressed using 20 key indicators. The utilised method of grouping into quartiles was able to demonstrate increasingly pronounced polarisation trends in Lithuania, with widening disparities to be noted, both between the major cities of Vilnius, Kaunas and Klaipėda and their regions, and between peripheral areas of the country. The level of spatial exclusion is seen to be highest in Lithuania’s north-eastern and southern regions, which have been identified as problematic. It is to these regions that a majority of the attention in this work has been paid.

Keywords: spatial exclusion, socio-spatial inequalities, polarisation, rural region, Lithuania.

Introduction

Marked socio-spatial differences have been arising in Lithuania, primarily given that the status of poles of growth is assignable to just the country’s three major cities and their suburbs, while all remaining parts experience rapid declines in population, economic circumstances and social infrastructure (Burneika et al., 2017). A great many young people in Lithuania’s rural areas and smaller cities on the peripheries fail to see opportunities for themselves, and so are tending to leave. Rural society is ageing, schools are being closed and a great many people are on benefits (Daugirdas et al., 2013). The fact that social inequality in Lithuania continues to grow was even emphasised in the latest report from the European Commission (dated 2017). Naturally, the issue of increased polarisation in Lithuania has also become the subject of much research work by geographers (most recently Pociūtė, 2014; Burneika et al., 2017; Kriaučiūnas et al., 2016; Ubarevičienė and van Ham, 2017; Tučas, 2018).

Aware of the prevailing situation in the country, the Government of Lithuania (in the Lithuanian Regional Policy White Paper, 2017) took up the challenge of combating polarisation via the pursuit of cohesion-based regional policy. This means that the newly-presented and accepted regional policy of Lithuania has as its objective the creation of a “respectable, active, safe, healthy and attractive life and working conditions throughout Lithuania” (translated from Lithuanian, p. 4). Inspiring as this goal may seem, the idea looks utopian, given the impossibility of arresting global trends directed towards economically-strong and growing urban centres in the country, but also beyond its borders.

The rate of depopulation to be observed in Lithuania is also highly dependent on historical circumstances, particularly the collapse of Soviet Union (Burneika, 2006) and the degradation of the '*Unified settlement planning system*' developed in the Soviet era and unable to adapt to the demands of the market economy (Vanagas et al., 2002; Pociūtė-Sereikienė and Kriaučiūnas, 2018).

Lithuania's population shrinkage (Ubarevičienė and van Ham, 2017) should not be seen as exceptional in the European context, as research shows how the continent's small, medium-sized and large cities have lost about 40% of their inhabitants for different reasons (Turok and Mykhnenko, 2007). However, a large proportion of the cities experiencing this are actually within the CEECs (Mykhnenko and Turok, 2008; Rink et al, 2010; Haase et al, 2013). In this region, struggling with the consequences of political transformations since the 1990s, a territorial polarisation is very clearly visible (Krišjāne, 2001; Nagy, 2005; Vaishar, 2006; Burneika, 2012; Lang, 2012; Otto and Chmielewska, 2014; Pociūtė-Sereikienė et al, 2014).

Worldwide, a great variety of indexes are deployed in documenting increasing socio-spatial inequality. Probably most general in nature, and gaining the widest application, are the likes of the GINI coefficient and Human Development Index (HDI) (Blackorby et al., 2005). More region-specific indexes have been presented by A. K. Copus (1999), and by C. Schürmann and A. Talaat (2002), with scholars calculating a "*peripherality index*" within European countries. While most of the indexes referred to relate to economic circumstances, models seeking to evaluate socio-spatial inequality in Lithuania have also been developed (Burbulytė-Tsiskarshvili, 2012; Pociūtė, 2014). Certain independent institutions present relevant data. Thus the Lithuanian Free Market Institute presents its "*Index of Lithuanian municipalities*" (*Lietuvos laisvosios rinkos institutas*, 2018), while the weekly *Veidas* has its annual "*Ranking of Lithuanian municipalities*" (*Veidas*, 2018) based on selected indices.

The range of available indexes and evaluations is thus great and increasing, to the point at which it becomes impossible to name all ways of offering a picture of a polarised world, region or country. This also denotes a tendency for scholars to argue for their own understandings of socio-spatial inequality.

In the present paper, we have no intention of indicating which already-existing indexes might be better or worse. Instead, we present one more possible way in which socio-spatial inequalities and spatial exclusion in the country might be evaluated. The methodology presented here suggests the possibility of polarisation in the country being assessed by looking at its territory by reference to complexity.

This article also introduces a rather new scientific term utilisable in evaluations of Lithuania's problems with polarisation and socio-spatial inequality. The term in question is *spatial exclusion*, which is first presented here in conceptual terms. A methodological part then introduces indices made use of in evaluation, before the algorithm of evaluation gains presentation. A third section focuses on the results of the case-study spotlighting Lithuania's most-excluded regions, and we end our article by summarising our main findings and then opening up the discussion to the floor.

The methodological background to the research

Understanding spatial exclusion

The concept of social exclusion is well-known to many, and often equated with poverty, deprivation, and a lack of material welfare (Poviliūnas, 2003; Levitas, 2004; Mikulionienė, 2005; Steinert, 2007; Ališauskienė et al, 2015). It is also sometimes identified from a psychological perspective, in this case equating to a certain psychological discomfort that instils a sense of insecurity, lack of dignity and other negative feelings (Tereškinas, 2015). The term exclusion is also relevant to workers in human geography, though the territorial – as opposed to the social – dimension is more important to scientists in this field. Sociologists also refer to the territorial dimension, if understanding it in much simpler terms, i.e. more locally. In research on exclusion conducted by the latter, a territory is often understood only as a residential area (rural area, city, certain part of a city) that plays an important role in population interaction (Kronborg Bak, 2018). Geographically, this would seem rather narrow thinking.

Many authors (like Krounier, 1996; Burchardt et al, 1999; Persy-Smith, 2000; Sander-son, 2000; Gonzale et al, 2015) are inclined to identify spatial exclusion mainly in terms of geographically-disadvantaged locations, the claim being that these impact significantly upon the appearance of social exclusion. The approach scientists take suggests equivalence between spatial and social exclusion dimensions, giving rise to differing viewpoints on whether it is the former or latter that needs stressing.

In summing up the above authors' points as regards the notion of social exclusion, we can state that key factors contributing to its appearance are geographical location, the natural environment, differences in economic development, poor accessibility of services (or indeed a shrinking service network) and the development of transport systems.

The factors highlighted reveal the importance researchers attach to the geographical dimension. Even sociologists' research is focused spatially, the claim being that a high level of exclusion prevails in regions (most often rural) in which people experience conditions of disadvantage.

Where Lithuania is concerned, one of the first geographers to begin to consider a broader approach to exclusion was Daugirdas (2013), who used the concept of spatial exclusion in Lithuanian terminology as the country's polarisation began to be debated. According to that author, *spatial exclusion* is related to *social exclusion*, and means that areas are located on the periphery, away from national or regional centres, with institutions providing the principal services thus far away and less accessible. Self-awareness among the residents of such areas is changing, the latter increasingly inclined to consider themselves peripheral, living “on the periphery of the world”, forgotten by the state, condemned and left to their own devices (Daugirdas et al., 2013, p. 115).

Pursuing further the above author's idea, the work detailed in the present paper has sought to offer a somewhat broader and more-comprehensive approach to the phenomenon of spatial exclusion, while at the same time ensuring that the geographical (spatial) dimension to the notion emphasised by the author is retained and highlighted. Spatial exclusion as addressed in this paper identifies a multi-dimensional concept bringing together the social, economic and demographic fields, as well as the indicators that serve to illustrate them. Where comprehensive territorial research is involved, it is reasonable to talk about ongoing changes, and areas of the state in need of the authorities' attention.

Spatial exclusion as a phenomenon may be interpreted in a variety of ways. First, it could mean a gap between units of administration at local level manifested in values assumed by indicators, and capable of being referred to as quantitative spatial exclusion. In these terms, a comprehensive evaluation of indicators would yield a list of such units presented as a variational series – from the one with lowest values for indicators to the one with highest values. Such a series expressed in relation to indicator values reveals, not only the mathematical situation rendered in numerical terms, but also a spatial dimension (in the sense of distribution across Lithuanian territory), as well as the identities of those already-settled or emerging regions that suffer from spatial exclusion.

Second, spatial exclusion can be discussed in respect of the unified network of settlements established in Soviet times and now growing increasingly sparse, and shrinking (Vaitekūnas, 1989; Šešelgis, 1996; Vanagas et al., 2002) – in which economic, social and demographic spheres were closely related. Shrinkage of the network of institutions serving residents may be treated as denoting growing qualitative exclusion in different areas of Lithuania. In Soviet times, residents who were settled evenly across national territory could access major institutions, educational establishments and jobs rapidly. In contrast, after the collapse of the Soviet Union, as networks became increasingly sparse, and shrank, the distance needing to be covered for institutions to be reached from peripheral areas increased, effectively meaning institutions “moving away” from residents, leaving accessibility further and further reduced, with physical exclusion growing and the quality of life of communities in peripheral areas worsening as a consequence (Kriaučiuonas, 2016; Kriaučiuonas et al., 2016; Baranauskienė and Daugirdas, 2017, 2018).

Data and methodology

Demographic, social and economic indicators were selected to allow spatial exclusion to be evaluated. Specifically, reference was made to 20 indicators¹ deemed to reveal the demographic and socio-economic situation in primary-level Local Administrative Units. Studies examined from the literature, which emphasise evaluation of an area and ranking of the “worst-best” kind, incorporate different indicators that, while mostly reasonable, reflect the subjective attitude of each author, and an opinion regarding the phenomenon in question. This is to say that the authors here also acknowledge the subjective nature of the system of indicators present in their research.

That said, what the authors of the present paper have to offer is an indicator system for spatial exclusion which, in their opinion, allows for informative and clear highlighting of spatial inequalities in Lithuania, with evaluation centred around disparities between those Local Administrative Units characterised by the highest or lowest indicator values. Demographic and socio-economic research dimensions were selected, in the understanding that the demographic changes arising in the regions analysed go hand in hand with socioeconomic underdevelopment; this also making it necessary for a wider range of in-

¹ The twenty indicators selected for the analysis were grouped as demographic (population density, natural change, net migration, emigration, immigration, an ageing index, change in numbers of inhabitants overall in 2001–2016, change in numbers of rural inhabitants 2001–2016, change in number of pension-age inhabitants 2001–2016, change in numbers of children 2001–2016); or socioeconomic (unemployment rate, long-term unemployment, proportionality between benefit recipients and the population as a whole, gross earnings, foreign direct investment, investment in tangible fixed assets, length of roads with improved surfaces, density of the school network, number of medical staff).

dicators to be looked into. A matrix of indicators following on from the relevant academic literature was therefore denoted, with indicators presented by scholars (like Copus, 1999, 2001; Svetikas, 2003; Janc, 2006; Marada et al., 2006; Misiūnas and Nagy, 2006; Vaishar, 2006; Burneika, 2012; Haase et al., 2013; Pociūtė, 2014; Dax and Fischer, 2018; Smętkowski, 2018), as well as legal documents from the Government of Lithuania (*Lietuvos Respublikos Vyriausybės...*, 2003; Lithuanian Regional Policy..., 2017). The selection of indicators was restricted by the availability of data to the level of the local administration (LAU-1). This means that even more indicators could be involved in evaluating spatial exclusion in Lithuania. Also, as use is made of a methodology whereby these are divided into quartiles, it might happen in some cases that mechanical assignment to one of four category groups places some with similar indicator values into different groups due to one quartile including fifteen units, with the 16th placed into another category despite having been assigned the same value.

However, in a majority of cases, the division into groups achieved is reliable and does not play a major role. Indeed, we believe the methodology presented in this paper could be adapted rather unproblematically in evaluating spatial exclusion in other countries.

Reliable official data from *Statistics Lithuania* (2018) and the Institute of Hygiene (*Lietuvos Respublikos sveikatos...*, 2002, 2017) were used in the evaluation, which was run using data from 2016. Some of the indicators were chosen on purpose to illustrate developments in the 2001–2016 period. These indicators of change play an indicative role – as residents’ reactions to trends in their area’s development are expressed in part via figures offering a reflection of demographic indicators.

The main method employed in the first part of the research was thus a statistical-mathematical analysis. This paper presents such an analysis of spatial exclusion in Lithuania’s local-authority areas on the basis of descriptive statistics. The Results section offers a more-detailed discussion of the situation pertaining in the above local areas, with the evaluation of spatial exclusion located in either the first quartile (of marked spatial exclusion) or the fourth (no spatial exclusion identified). This reflects the way in which it is these two quartiles that illustrate the poles of centre and periphery, as well as spatial exclusion expressed quantitatively.

The algorithm used in evaluating spatial exclusion

The work described here evaluated spatial exclusion by reference to indicators selected for the research, in line with which the LAU-1 level units present on Lithuanian territory and known as “municipalities” are grouped into quartiles (Leonavičienė, 2007; Statistics Lithuania, 2016). The section involving evaluation of spatial exclusion comprised three stages (marked a-c in Fig. 1): first, municipalities were grouped into quartiles (a); then scores were appointed (b); then these scores were summed and spatial exclusion evaluated on the basis of them (c).

The aim of the grouping into quartiles (Fig. 1a) is to divide municipalities into four equal parts featuring those with the highest and lowest indicator values, or else average ones. Municipalities were thus assigned to 3 categories, i.e. the first and fourth quartiles (each of 15 municipalities), and the group distinguished by average values for indicators comprising two quartiles combined (30), which are located around the median between

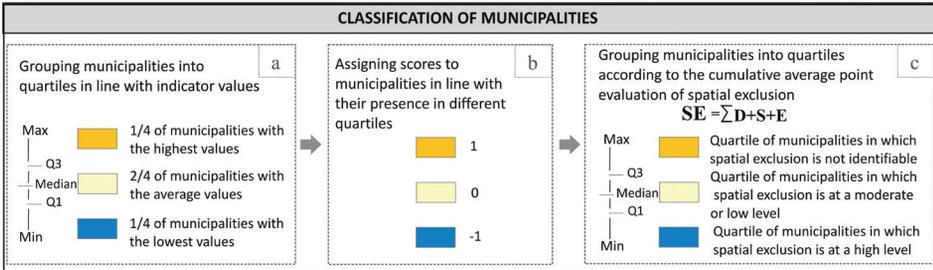


Fig. 1. Diagram of the algorithm by which spatial exclusion is evaluated. Authors' own elaboration.

Q1 and Q3. This methodology of evaluation was selected on the assumption that the research focuses solely on spatial exclusion contrasting the first and fourth quartiles.

Once the municipalities had been classified, a second stage followed whereby scores were awarded to municipalities located in the respective quartiles (Fig. 1b). Scoring of each municipality made reference to the individual indicators characterising them. The simplified scoring system used had as its main aim an indication as to whether a municipality is located in the quartile with lowest indicator values (in which case a score of -1 is awarded), in the quartiles with average indicator values (with a neutral score of 0 then being awarded), or in the quartile with the highest indicator values (warranting a score of +1). The maximum possible range for total score was thus -20 to +20. The grouping of scores as average, negative or positive thus allowed a distinction to be drawn between strong municipalities and those suffering from exclusion.

The last step entailed the comprehensive evaluation (Fig. 1c). Since the aim of the research was the quantification of spatial exclusion, the scores obtained by the municipalities assigned to each indicator in the three fields were aggregated². The total score was then calculated following the same principle as during the first stage, with this providing for a ranking of municipalities in line with the degree of spatial exclusion (or absence thereof). The variational series newly-formed in this way (in line with scores municipalities achieved) served as the basis for a further grouping of municipalities into quartiles. However, this time the evaluation was carried out in a comprehensive way, with a focus on spatial exclusion expressed as a synthesis of demographic and socio-economic indicators.

Results

Differences in levels of spatial exclusion in Lithuania

After Lithuania regained its independence and made the transition from a planned to a market economy, the development patterns of the country changed: instead of the vitality of all the country's regions being maintained artificially, the principle of "only the strongest survive" was applied. As the authorities and their regional policy have proved incapable of overcoming the prevailing trends towards polarisation, two poles of steadily

² $SE = \sum D + S + E$, where SE stands for spatial exclusion; S is the sum of social indicators; E the sum of economic indicators; and D the sum of demographic indicators.

increasing exclusion have proved discernible. These are centres that are growing and gaining in economic strength; and peripheries suffering from depopulation and socio-economic decline (Pociūtė, 2014).

The calculations made in the course of the research presented here allow for a determination of the level of spatial exclusion applying to Lithuanian municipalities (Fig. 2). The results of the analysis also correlate with, substantiate and support trends to the development of Lithuania that have gained presentation and discussion by other authors and institutions engaged in the ranking of the country’s municipalities (for example, *Lietuvos laisvosios rinkos institutas*, 2018; Veidas, 2018).

Figure 2 provides a variegated view of Lithuania, though some patterns can also be discerned. The first of these entails the spatial expression of the phenomenon of centre versus peripheries. What stand out clearly are the three centres – major cities – and their surrounding municipalities, as well as the peripheries in southern and north-eastern Lithuania, in which the municipalities suffering from spatial exclusion form entire regions. In this case evaluation of spatial exclusion spotlight the importance of the geographical-locational factor. It is obvious that the municipalities located closer to the major cities are more vital, while more-distant municipalities suffer from exclusion of greater severity.

The (fourth) quartile, in which it is not possible to discern spatial exclusion consists of the municipalities of five major cities and the municipalities surrounding Vilnius, Kaunas and Klaipėda, which maintain close demographic and socio-economic relationships with these cities. These circular municipalities of the major cities often turn into quiet residential districts for inhabitants working in the cities (Burneika et al., 2017). Respectively, the surrounding areas provide labour force for these major cities. A certain symbiosis between these municipalities is thus brought to light. A close relationship between the

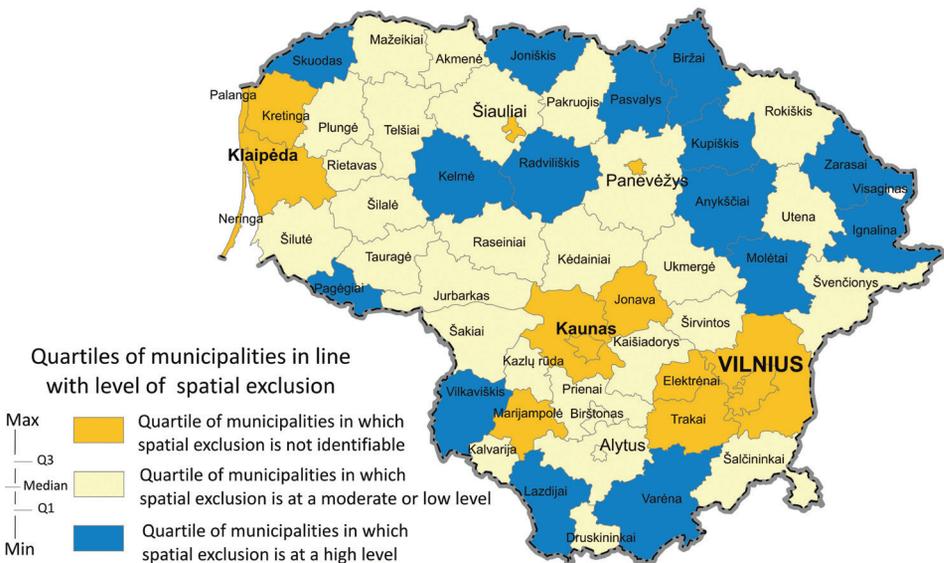


Fig. 2. Differences in levels of spatial exclusion of the Lithuanian municipalities as of 2016. Authors’ own elaboration based on data from *Statistics Lithuania*.

major cities and their surrounding municipalities is very much determined by the factor of distance. Since Lithuania is a small country, a larger city can be reached rather conveniently and rapidly from its neighbouring municipalities; and it is in the former that one can find a satisfactory job, and make use of social infrastructure. Despite the presence of several indicators with negative values that reduce the overall score for a municipality, those located in the quartile in which spatial exclusion could not be discerned illustrate the component of centre within the centre-peripheries concept, with these being territories still characterised by sufficient human and socio-economic potential to endure under market-economy conditions.

Southern and north-eastern Lithuania are characterised by a higher concentration of the municipalities distinguished by a high level of spatial exclusion (Fig. 2). However, individual municipalities suffering from spatial exclusion can be discerned in other Lithuanian regions as well. The municipality characterised by the lowest values for indicators, and the highest negative exclusion score is Zarasai district located in the North-East. This municipality comes out least favourably in relation to both the demographic and the socio-economic situation.

The matrix of indicators analysed demonstrates that municipalities suffering from a high level of exclusion are those (either rural or urban) in which depopulation is proceeding at the fastest rate. In most of these, the population has decreased by more than 25% in 15 years. Further analysis of relevant statistical indicators for these areas demonstrates that depopulation is most a consequence of a decline in the share of the population accounted for by children and young people, with strongly negative natural change and net migration. In some of the municipalities in this group, natural change is as at a level just one-tenth as high as in the municipalities located in the quartile in which spatial exclusion was not identified. Indicators of age-structure change in turn make it clear that the share of inhabitants under 15 in the municipalities located in the quartile manifesting severe spatial exclusion has decreased by 8–10 percentage points. Thus, the municipalities of this group are becoming increasingly vulnerable demographically, as it is mostly elderly residents that still live there.

A significant proportion of the municipalities in question have twice as many elderly people (65+) as they have young people under 15. For example, in the districts of Varėna, Anykščiai, Ignalina, Molėtai and Zarasai, the demographic ageing index³ exceeds the value of 200. The age structure of the population does much to impact upon the negative indicators of natural change and of changes in population that are noted. However, if the indicator of emigrants leaving a municipality is considered, an ostensibly rather positive view can be obtained: in the vast majority of municipalities located in the quartile in which spatial exclusion is on a high level, this indicator assumes extremely low values. The result is that, when ranking is carried out, the municipalities in question move to the quartile in which no spatial exclusion is identified.

To put it in simple terms, relatively rather few people emigrate from municipalities suffering from spatial exclusion. Taken as a whole, the proportion of people who left the 15 municipalities assigned to this quartile accounted for just 11.3% of all those emigrating out of Lithuania. In contrast, the statistics show that the city of Vilnius alone accounts for 17.6% of emigrants registered in 2016.

³ The index of ageing is the indicator showing the number of elderly people (65 and over) per 100 children under age 15 (*Statistics Lithuania*, 2018).

On the other hand, the low values taken on by the indicator of emigration are not surprising, given that the municipalities suffering from a high level of spatial exclusion are inhabited by elderly people who are less mobile. Data from previous research (Daugirdas et al., 2013; Kriaučiūnas et al., 2016) demonstrate that elderly people tend to live in regions as long as possible (or never leave them), only migrating (if at all) when they are no longer able to look after themselves – most often then to the place of residence of their children.

In contrast, younger citizens behave in quite the reverse way – often leaving their home town or village after finishing school, and only rarely returning to reside in such peripheral areas once their studies are complete. The population of working age proves similarly mobile, with people transferring where their jobs are. Young people and members of the working-age population often see no purpose in staying in or returning to the regions because of the lack of activities that characterises them (Pociūtė-Sereikienė and Kriaučiūnas, 2018).

In municipalities whose spatial-exclusion levels are high, values for the indicators of unemployment rate and number of long-term unemployed are also higher. It is likely that these identified indicators are affected greatly by the economic situation in the municipalities. Those assigned to this quartile also have a greater share of the population applying for benefits. It may be inferred from this that a high rate of unemployment is also connected with municipalities' demographic situations: the rate of unemployment is one of the drivers of rapid depopulation.

The evaluation of the level of spatial exclusion in Lithuanian municipalities extended to two indicators of the infrastructural network servicing inhabitants – as the number of schools and medical staff per 1000 inhabitants. Evaluation shows that the networks of both remain wide enough, with doctors in some areas even having to serve fewer patients, while teachers have smaller classes. However, a more-detailed analysis of the school network, presented in the following section, suggests a trend in the direction of shrinkage. Also inferable from the analysis of demographic indicators is the idea that the network of schools and medical institutions will soon go on to shrink faster in municipalities whose level of spatial exclusion is high. The key effect of that will be to further increase exclusion between the population and institutions capable of guaranteeing them higher quality of life.

Conclusions and discussion

The trends towards polarisation in Lithuania are clear, as disparities between the country's metropolitan areas of Vilnius, Kaunas and Klaipėda and its peripheral areas grow steadily. This leaves it increasingly relevant for both geographers and professionals in other fields to pursue research into regional inequalities; and this accounts for the existence of a number of works evaluating Lithuania's demographic and socio-economic situation, as well as the wellbeing of the municipalities (local administrative units) into which it is divided. Each of these studies tries to approach the country's development from a new angle, and to underline issues within its own field. However, as it was our considered view that most of the research on social exclusion referred to lacks a spatial dimension, the

work detailed in this paper addressed wellbeing and differences therein by spotlighting the spatial dimension.

The comprehensive evaluation offered here allowed for the polarised picture of Lithuania alluded to above to be identified – in relation to the demographic and socio-economic dimensions, given our contention that indicators relating to these represent a cornerstone indicative of the country's standing in the national and international arenas. The two dimensions are found to correlate closely with (and to influence) each other.

Research carried out employed the methodology of grouping into quartiles, with this offering an opportunity for municipalities to be ranked by reference to the exclusion index. The methodology offered here could contribute to research addressing polarisation, as it identifies both poles in a given polarised country, i.e. areas of strong growth on the one hand and weak areas lagging behind on the other.

To arrive at results allowing the polarisation present to be portrayed, it was first necessary to develop a matrix out of the various demographic and socioeconomic indicators. That meant a long list of indicators being tabulated, with the table then providing for a comprehensive look and an attendant identification of aspects/indicators most problematic in general, and at the level of each municipality. This consideration at municipal level allows results to be taken account of as regional policies are devised, with a view to problems identified by selected indicator values being tackled.

The comprehensive model by which to identify and evaluate spatial exclusion may also prove applicable to other countries, e.g. when comparing the polarisation characteristic for different Central and Eastern European Countries or Baltic States with similar historical backgrounds. It would in fact prove interesting to learn how the evaluation model would work with Lithuania's neighbour countries. That would also yield knowledge as to whether spatially-excluded regions in fact extend to both sides of a shared border.

The regions here found to suffer the most-severe spatial exclusion (i.e. the North-East and South) have been identified as the poorest welfare regions in other Lithuanian publications (*Lietuvos laisvosios rinkos institutas*, 2018; Veidas, 2018), while offering a further echo of so-called “problematic regions” identified by the Lithuanian Government with a view to special regional-policy measures being implemented (*Lithuanian national regional policy*, 2019).

This all means that, irrespective of the methodology being applied, the same north-eastern and southern regions of Lithuania are found to be lagging behind.

Given that the same problem regions are to be noted in a majority of scientific papers, a question naturally arising concerns whether or not something is actually being done to reduce the demographic and socio-economic imbalances present in the country. The short answer to that question would be “yes” as the Government decided to base Lithuanian regional policy for the period 2014–2020 on so-called “target territories”, the intention here being for problems to be tackled at a local level (*Lithuanian national regional policy*, 2019). These “target territories” in question are in fact 23 middle-sized towns located all around the country and found to be experiencing rapid depopulation and decreased entrepreneurship. As some of these towns are also naturally located in the north-eastern and southern regions, some EU investments are likely to be reaching the regions found by us to be most excluded spatially.

The fact that the current Government is not leaving the peripheries unattended to may also be signalled by the “Lithuanian Regional Policy White Paper” of 2017. The strategy

that this White Paper sets out is based on Lithuania being developed more equally, with the maintenance of major cities being accompanied by efforts to strengthen peripheral regional centres as well, in order that a certain balance for the country as a whole might be achieved.

While the ideas of this newly-presented regional policy seem “periphery-friendly”, the document is conceptual and lacks information in regard to instruments actually improving the economic and demographic situation in spatially-excluded regions, or indeed guidelines on how to attract investment or improve inhabitants’ quality of life.

It is thus apparent that the regional strategies and guidelines for regional policy that the Government presents should be less general and more place-specific. Another issue provoking academic debate concerns the way in which the Government sets growth-orientated strategies for the country’s regional policy and development. It is already declared that “growth should no longer be the universal planning goal throughout the continent” (Wiechmann and Bontje, 2015). Therefore, or maybe indeed on the contrary, the Lithuanian Government should take its regional policy in a “smart shrinkage” direction, and start talking up the idea that “being smaller and having less” is not always the worst scenario for certain regions. Policy-makers should thus choose investment strategies for each region carefully. As the population is projected to decline in most regions of Lithuania, it is appropriate to invest in regional or larger-local centres in peripheral areas, instead of investing equally in all rural territories. There should be a strategic rethink on whether it is worth promoting investment in regions left empty, in which efforts to encourage young people to come back are likely to encounter near-insuperable difficulties.

As is evidenced by recent events, schools in rural areas (renewed using EU funds despite ongoing depopulation) do not have enough pupils, making closure a necessity even in the face of all the novelty and modernity. In this respect, demographic indicators illustrate that regional policy for peripheral areas should be formulated with account taken of the elderly and their quality of life. At the same time, however, investments directed towards more-lively and active rural communities should be encouraged. It is thus populations and their age structures that should determine the development of the socio-economic environment, and the shaping of guidelines as regards regional policy.

Our evaluation of spatial exclusion not only distinguishes municipalities that are viable demographically and strong socio-economically, but also allows possible trends as regards territorial development to be reflected upon. There is no reason for the North-East of Lithuania to attempt to catch up with the country’s regions of economic development. In these regions, it is worth taking into account the strengths that municipalities possess – in this case the natural potential that should be stressed more, and exploited, not only in summer, but also during the cold season. The “emptiness” of these regions and proximity to nature are in fact advantages that have their own appeal to city residents tired of hustle and pollution.

A summing up has to begin with an acknowledgment of the continuing difficulty with discerning any demographic recovery in Lithuania in general, and all the more so its peripheral regions. An appreciation of the fact that smaller towns and villages will continue to become emptier is necessary, as this is just a natural process in this age of globalisation, consumerism, the search for prosperity, and freedom and rapidity of movement. As a result of emigration and low rates of natural change, Lithuania is identified as *the* Member State of the EU that is ageing and becoming depopulated most rapidly. The very least that

can be said if these trends in the country's development continue is that there are no prospects of sudden growth in the population of peripheral rural areas.

This research was funded by a grant (No. GER-005/2017) from the Research Council of Lithuania. This research was performed in cooperation with the junior researcher and PhD student V. Baranauskienė of the Lithuanian Social Research Centre.

This paper is dedicated to the memory of Vidmantas Daugirdas, who was one of the first in Lithuania to analyse the subjects of spatial exclusion and sparsely-populated areas.

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