## The Impact of Vilnius City on the Transformation Trends of the Sparsely Populated EU East Border Region

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**SUMMARY:** This paper analyses the general trends of the socio-economic development of the multicultural Vilnius city region. It is located in South-East Lithuania, which stands out as the poorest area of Lithuania in terms of its socio-economic situation. Moreover, in a broader context, Vilnius city region is also located in the middle of the international Central European region, which is often perceived as one of the most "depressed" areas of the contemporary EU. Together with the systemic reforms of the early 1990s the profound economic and social changes have started, in which the Vilnius city region has been experiencing one of the most significant transformations throughout Lithuania. It is obvious that at present the main factor of the intense development of South-East Lithuania is the presence of Vilnius city. It has been growing very fast during the recent decades, thus a significant impact on the population structure and the economy of the surrounding areas has been made. The main questions of this paper are: what is the effect of Vilnius' development on the surrounding region and how profound this impact is. The process of transformations of the rural area into the urban one, changes of the population structure, ethnic landscape and economic processes are of greatest concern in the given paper. The Vilnius city region is the area of very dynamic changes, where socio-economic tension of various kinds is almost inevitable, while the means of planning and sustainable development are quite limited.

KEYWORDS: VILNIUS CITY REGION, SOUTH-EAST LITHUANIA, SOCIO-ECO-NOMIC DEVELOPMENT

### Introduction

The development of the Vilnius metropolitan region is one of the most evident examples of the post-Soviet spatial transformations taking place in Lithuania in the recent decades. The most prosperous city of Lithuania is developing in the area, where the demographic decline displays the most

negative trends across the country (Burneika at al. 2013). Almost all East Lithuania<sup>1</sup>, with the exception of the Vilnius urban region, is now turning into the sparsely populated zone, which can be distinguished by the low population density, weak economy and shrinking networks of social infrastructure. The density of rural population is less than 12,5 persons per square kilometre in most rural districts, with the exception of those adjacent to Vilnius city.

Significant economic and demographic changes took place in the Vilnius city region in the last decades. Vilnius city became one of the most important factors facilitating the development of the surrounding district municipalities. Its impact on the development of more remote areas is more ambiguous and has positive as well as negative sides. Like many other post-Soviet capital cities, Vilnius also experiences the transformation and expansion of its urban space (Gentile et al. 2012; Kostinskiy 2001; Sýkora and Ouředníček 2007; Nuissl and Rink 2005; Hamilton et al. 2005; Timar and Varadi 2001; Boren and Gentile 2007; Kok and Kovács 1999; Krišjāne and Bērziņš 2009). These processes are often related to the conversion of the rural space into the urban one in the adjacent city areas (Novak and Sýkora 2007; Ouředníček 2007; Tammaru et al. 2009). The encounter of the two different societies (rural and urban) goes in line with these changes. The suburbanising population is as a rule economically more prosperous, urban life style is predominant and usually those people have weak relations with the new local environment. The difference in terms of the socioeconomic status between the residents of Vilnius and the residents of its surrounding rural region is more than obvious. The average wage in the Vilnius city municipality was 1.5-1.65 times higher than in the surrounding municipalities in 2001, when the process of suburbanization gained momentum (Statistics Lithuania 2013). In 2012, the difference exceeded 1.7 times in Šalčininkai and was lower in the Vilnius district municipality (1.36 times). The difference of income between the newcomers and the old residents of the Vilnius city region should have been even greater, because owning a private house in the vicinity of Vilnius city is quite expensive. The disparities between urban and rural life styles were discussed in many studies (cf. Krupickaitė 1999).

The process of suburbanisation may lead to a series of social, economic, political and cultural transformations. Diverse social tension may arise in such areas due to partly different value systems, needs, worldviews

<sup>&</sup>lt;sup>1</sup> Eastern Lithuania is usually perceived as an area, which includes the counties of Vilnius, Alytus and Utena.

and opportunities between the arriving urban residents and the original rural population. In the case of the Vilnius region, it also means the intersection of two different ethnic groups, represented by different political parties. This factor may contribute further to the potential political tension in the area (Ubarevičienė et al. 2012).

The process of the city sprawl itself is not the only one that alters the social situation in the surrounding region. More remote areas of the region play a role of a social "trashcan" of the city, when socially disadvantaged people are being "exported" to the more remote areas of East Lithuania that have an oversupply of the poor quality housing facilities. Such phenomenon causes additional problems for the development of the area (Burneika and Ubarevičienė 2011). Various economic and social relations between the city and its surroundings also have an impact on their social environment and economic performance. Vilnius city is the main destination point of innermigration from other parts of Lithuania. This process is also one of the reasons of the population decline in the peripheral parts of East Lithuania.

The aim of the given paper is to explore the main trends of the socio-economic development in the Vilnius city (functional) region or namely the area, the development whereof is being substantially influenced by the existence of the capital city. The city is surrounded by the region characterized by a significantly different ethnic, cultural, political and economic context. It is not surprising that such situation may generate a number of challenges for the development of the area. It may have both positive and negative effects in the various fields of human environment. It may create opportunities in some places and (or) raise conflicts elsewhere. It is important to gain more understanding about the Vilnius region and use the knowledge when planning decisions are made. On the other hand, the situation of sharp contrasts enables us to detect a scale of the on-going spatial and socio-economic transformations, because we can easily follow changes over time.

This paper uses several economic and demographic indicators to measure the influence of Vilnius city on the development of the surrounding region. Resident income tax and added value per capita created by employees reflect the influence of the city on the economy of the region. Meanwhile, altering ethnic composition and population redistribution illustrate the process of urban expansion and allows the identification of the areas characterised by the most rapid changes.

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### Vilnius City Region - Defining the Study Area

Vilnius city functional region, South-East Lithuania, Vilnius country (Vilniaus kraštas), Vilnija – there are many names for the area analyzed in this paper. It is a territory, the development whereof has always been influenced by the proximate existence of the Vilnius city. We think that the most appropriate term to describe this territory from the researchers' point of view is the Vilnius city functional region, emphasizing thereby the functional character of this nodal region. Many social phenomena, including multi-ethnic structure, originated in the city and gradually penetrated into the surrounding region. The same applies to economics - the general world-wide tendencies of decentralization resulted in the suburbanization of businesses; non-central locations have become more profitable in many aspects (Reckien and Martinez-Fernandez 2011). There is no doubt that Vilnius remains an important source of jobs, income, goods and services for the residents of the region. However, little is known about the effect of Vilnius on the adjacent region and how strong the impact is. Therefore, our aim is to get a deeper insight into the role of the Vilnius city on the development of the entire region.

The concept of *city region* has been important in the regional science for a long time and its relevance persists until the present days. In the literature, city region is often perceived as a territorial system, where the central city is the most important factor for the development of an area and vice versa (Jonas and Ward 2007; Harrison 2010). Nowadays, there is a large body of urban planning and geography literature devoted to the analysis of the functional relationships between cities and their hinterlands (cf. Parr 2010). Jane Jacobs, one of the most influential urban researchers, argued that city-regions are even more functional than the nation-states in which they are located (Jonas and Ward 2007). City region typically includes two constituent elements: the city and the territory surrounding it. According to Parr (2010) obvious complementarities exist between the two zones in terms of the supply and the demand relationships that form the basis for a strong zonal interdependence. Thus, city region is like a system that functions as a single unit. Usually, such regions are the most important centres of national economies within which they are situated. Capital city regions typically include the whole country and even the areas beyond, though with the distance the functional relations tend to decrease. Therefore, the limits of any city region are relative and vague and thus should not be interpreted literally.

The term "city functional region" (or "metropolitan region" in the case of major cities) could be employed in order to define the area, which

is closely related to the city by means of strong mutual dependences. Such processes as everyday commuting could illustrate close and intense functional relations and as a consequence mutual influence on the socio-economic processes. Obviously such relations involve very remote areas but in our case we deal with the areas, where central or metropolitan city makes a decisive influence on the trends of their development. Socio-economic development of this region is strongly influenced by the core city and vice versa.

City or urbanized space can be (and often is) considered as a region itself. In this case the term "urban region" could be used. It represents an area that has emerged as a result of continued peripheral urban growth (Parr 2010), though it is not necessarily a purely urban space. The term "wider city" sometimes refers to this space as well. In this case "Vilnius **urban region**" is a territory where actual residents of Vilnius permanently live and work (wider Vilnius). The limits of the urban region go beyond the administrative city limits and roughly coincide with the zone of suburbanization. Administrative city limits define only the legal city, while the actual city includes much wider and much more complex structure. There is little sense to make a distinction between those suburbanising inside the present city borders and outside them (though sometimes the term "suburbs" is used only to the neighbourhoods outside the city limits). In both cases we should regard those people as actual residents of Vilnius. The main factor determining the place of residence is the proximity of the city, thus the formal limits become insignificant. The Vilnius urban region is not a pure urban space either; it is an area, where the city already exists, though rural spaces and lifestyles may dominate there, especially in the peripheral parts (in the case of Vilnius city, rural spaces could be found even in the middle part of the administrative city).

A wider concept, "Vilnius city functional region" – the main object of our study – is treated as a functionally united spatial system, where Vilnius is one of the main factors of the development of the area and vice versa. For the simplicity, the term "Vilnius city region" could be used as a synonym. This area could be regarded as a Vilnius labour market region, because it coincides with the zone of commuting flows going towards the core city, but of course commuting to the city is not the exceptional process that makes the given space a functional region. Functional relations and personal contacts are intense in this zone, thus we could expect that the processes of change are also clearly visible here. Economic, social and other relations consolidate this territory and it should be qualified as an integral region.

The relative limits of the Vilnius city (functional) region were esta-

blished during the previous research of the authors (Fig. 1, Ubarevičienė et al. 2011). Several indicators (intensity of traffic flows, patterns of suburban transportation, land prices, evolution of city limits) as well as direct observations during the field trips had been used to determine the limits and structure of the given region. According to our estimations, the Vilnius city region involves the municipalities of the Vilnius county (except Ukmergė) as well as parts of Molėtai and Varėna municipalities from two adjacent counties. The limits of the region denote the distance, which is acceptable for a number of people to maintain permanent (daily) ties with the city under present economic and infrastructural conditions. The fact that the permanent commuting flows already exist allows us to claim that there is a potential for the further sprawl of the Vilnius urban region into more distant areas. In fact, this area almost corresponds to the so called South-East Lithuania, or the region with mixed ethnical structure.

In the remaining part of the paper we will analyse the impact of Vilnius city on the demographic and economic development of the surrounding region. Our exploratory analysis will be based on the territorial concepts presented above. We will start with the analysis of the recent demographic changes (changes in population and its ethnic structure) caused by the urban sprawl. In the next chapter we will discuss the most evident transformations of the economic development of the South-East Lithuania as a consequence of the impact made by Vilnius city.

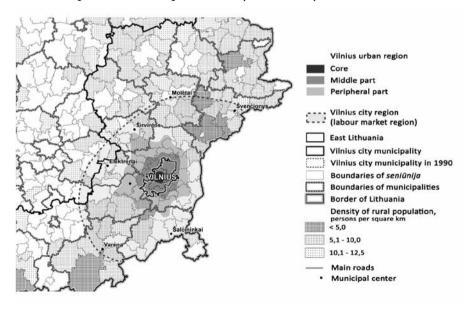


Figure 1. Simplified structure of the Vilnius city region.

## The Impact of Vilnius City on the Population Change in South-East Lithuania

All major cities of Central and Eastern Europe followed a similar path of rapid and profound changes in their spatial organization since the demise of the Soviet Union (Novak and Sýkora 2007; Sýkora and Ouředníček 2007; Nuissl and Rink 2005; Sailer-Fliege 1999). These changes were determined by the transition from the centrally planned economies, to market-led economies (Gentile et al. 2012; Stanilov 2007; Kostinskiy 2001). The most significant spatial changes in Vilnius are related to the process of urban sprawl into the surrounding rural region that started short after 1990s. What makes Vilnius unusual in an international context is that the city is situated within the region with the lowest population density and the fastest rates of depopulation in all Lithuania. This can be illustrated by the statistical data from 1989, 2001 and 2011 population census.

8 out of 13 the most sparsely populated municipalities of Lithuania are located in the South-East Lithuania (Statistics Lithuania 2012). The lowest density of rural population is in Anykščiai, Ignalina, Zarasai, Švenčionys and Varena district municipalities, where it dropped below 10 residents per square km. The density of rural population in Molėtai, Utena and Ukmergė district municipalities fails to reach 12.5 residents per square km as well. All these municipalities could be defined as sparsely populated regions. Moreover, the pace of depopulation is increasing there since 2000 and it is the highest in the country (15-20% and more). For example, Ignalina district municipality is shrinking by more than 2% a year. Population decline is most evident in the peripheral rural areas, which are shrinking already a few decades. Both factors - out-migration and natural change - determine the population decline in East Lithuania (out-migration comprises a larger part in the rest of the country). The proportion of the potential emigrants is relatively small in this part of Lithuania, because of the ageing population. In some settlements old-age pensioners constitute more than a half of the residents. For example, in the municipality of Ignalina the negative natural change resulted in the 70% decrease of the population.

Different trends can be observed in the Vilnius urban region. The processes of urban sprawl and suburbanization have a substantial influence on the demography of the Vilnius district and Trakai municipalities and partly on Šalčininkai and Širvintos district municipalities. In fact, apart from the Vilnius suburbanization effect, those municipalities suffer from the same processes as the remaining part of South-East Lithuania. Accor-

ding to the population census data (Statistics Lithuania 2002; Statistics Lithuania 2012), the population in the Vilnius suburban zone increased by about 30,000 (+20%), whereas in the city itself it decreased by 40,000 (-7%) since the restoration of Lithuanian independence. The process of urban sprawl of the last decade is illustrated in Figure 2 (due to the inconsistent statistical territorial units, we were not able to show the changes in the earlier years). It can be seen that the increase of population took place in a relatively small number of elderships (seniūnija, LAU2 regions) situated around the city of Vilnius. This area may be considered to be a zone of intense suburbanization and it mainly corresponds to the middle part of the Vilnius urban region (compare to Fig. 1). It can be seen that the population decrease is lower throughout the Vilnius city functional region, compared to the tendencies of sharp population decline prevailing in the remaining part of East Lithuania (or at the outskirts of the Vilnius city region). Under such circumstances a stable number and even slight decrease in the population can also be associated with the direct or indirect impact of Vilnius city. This implies that the city of Vilnius has a stronger influence on the region (e.g. providing better jobs, services, market, etc.) and diminishes the rates of an out-migration.

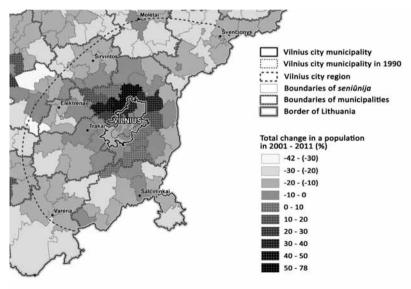


Figure 2. Change in a population in the Vilnius city region in 2001 - 2011 on the eldership level (seniūnija, LAU2).

The number of the rural population was increasing in the Vilnius district municipality during the last decades, though it is difficult to estimate the exact rate of the growth. According to the data of the Department of Statistics (Statistics Lithuania 2013) there were 90,700 residents in 2012, while the representatives of administrations of the LAU2 regions claim that there were some 96,000 residents at the same time (these differences appeared due to the different methods of data collection used). The actual number of the residents should be even higher, because many of them (due to various reasons) failed to report officially their place of residence in the Vilnius district municipality. Since 1989 the number of population in Gineitiškės (Zujūnai eldership) increased 9 times, in Antežeriai (Zujūnai eldership) 7 times and in Didžioji Riešė 4 times (Riešė eldership). However, some bigger settlements in the peripheral part of the region were shrinking (e.g. Kalveliai and Paberžė).

According to 2001 and 2011 Lithuanian population census data, most of the LAU2 regions, bordering with Vilnius city, were growing between 2001 and 2011. The highest growth took place in LAU 2 regions to the north-west of the city: the population in Riešė and Avižieniai increased by more than 70%, in Sudervė - by some 45%, in Bezdonys by 39%, in Zujūnai by more than 20%. These are the areas with a better connection with the city, better infrastructure, better land supply and, perhaps, better image. Historically, the majority of industrial and related activities have been located in the southern part of the city. Although the increase of the population also took place to the south and east of Vilnius, the process of suburbanization was slower there. More remote LAU2 regions were losing population, however, the decline was slower there than in the areas in the periphery of the Vilnius functional region. The dominant factor of the depopulation rate was the location of an area. The further from the Vilnius city municipality an area is located, the more intense depopulation is taking place. There are little doubts that Vilnius plays a decisive role in determining the trends of the demographic development of the region. The areas that are not affected by the process of suburbanization suffer from the same problems as the remaining sparsely populated East Lithuania. The suburbanisation inside Vilnius city municipality was also evident but the central part of the city has been facing population decline since 1990. This is the phenomenon typical of many European cities (Steinführer and Haase 2007; Panagopoulos and Barreira 2012).

# The Impact of Vilnius City on the Ethnic Structure in South-East Lithuania

One of the most distinctive features of the South-East Lithuania is its ethnic structure. The intense process of suburbanization is strongly associated with the changing ethnic composition in the Vilnius urban region. The changing ethnic structure in the suburban zone confirms that the main driving force of the population change is an inflow of newcomers, instead of natural change of population due to the increasing birth or decreasing death rates. Moreover, substantial changes of the ethnic composition can help us to identify the areas where the actual process of suburbanization takes place. Therefore, the analysis of the changing ethnic structure of the Vilnius region is an important part of this research.

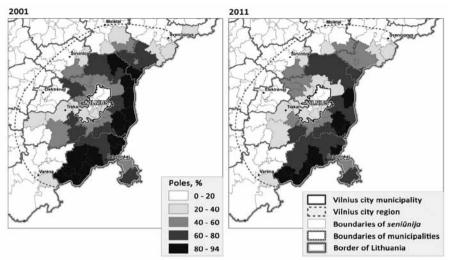
The recent process of rapid urban sprawl and an unusual spatial pattern of the region's ethnic composition encourage the researchers to pay more attention to the current socio-spatial development of the Vilnius urban region. Being aware of the historical context is important for a better understanding of the on-going processes. According to the findings of some authors (cf. Gaučas 1997), Vilnius city was playing the role of one of the main driving forces for the changes in the ethnic composition of the surrounding region at least since the beginning of the 19<sup>th</sup> century. Therefore it is not erroneous to define this multiethnical area as the Vilnius city region even from the historical point of view. Direct and indirect impact on the other social and economic processes existed as well. Of course, being one of the major sources of the diffusion of the Polish culture into Lithuania, Vilnius cannot be regarded as the only factor for the processes of ethnic and economic development in the area throughout the ages, but its importance cannot be questioned.

The situation became opposite at the end of the 20th century. After the repatriation of the Polish population in 1945–46 and 1956–59, which mostly involved urban residents (cf. Eberhardt 2011, Czerniakiewicz and Cerniakiewicz 2007, Stravinskienė 2004), Russian and Lithuanian ethnic groups started to be more dominant in the city, whereas Polish residents remained prevailing in the surrounding areas. The repatriation from the rural areas, according to Czerniakievicz and Cerniakiewicz (2007), was limited because of the fear of the Lithuanian SSR administration that the depopulation and labour force shortage might start there. This led to the emergence of the ethnic segregation in the Vilnius region. The sharp ethnic contrast between the central city and its surroundings remained evident down to the recent days, when the process of urban sprawl started to change the

given situation. The city of Vilnius has started to "export" people to the surrounding region (not language or culture as it was before).

Figure 3 shows the ethnic segregation in the Vilnius region and the changes in the ethnic landscape between 2001 and 2011. Comparison of maps shows that the percentage of the Polish population decreased in the outskirts of the city during the sample period. The decline was most evident to the north and north-west of the city. The share of the Polish population decreased by 27% in Sudervė eldership, by 22% in Riešė eldership and by 19% in Aviežieniai eldership; by more than 10% it also decreased in Dūkštos, Bezdonys, Mickūnai and Zujūnai elderships. These are the areas where the process of suburbanization was the most intense in the recent decades (Fig. 2). The research of Ubarevičienė, Burneika and van Ham (the results are not published yet, but can be found in IZA discussion papers, http://ftp.iza.org/ dp7012.pdf.) confirmed that the majority of the new residents in those areas are ethnic Lithuanians; therefore it leads to the decrease of the proportion of Polish population in the suburban zone. The rapid changes in the ethnic composition could potentially have political consequences at the local level and may cause social tension in the region, due to the intensified contacts between two different social, economic and ethnic groups, represented by different political parties. The ethnic composition is more stable in the rural part of the region, outside the zone of suburbanization. Ethnic minorities still dominate clearly there, especially in the outskirts of the region.

The total number of population increased by 37,000 in LAU2 regions, which were gaining population in 2001-2012 (fig. 2), meanwhile the number of Poles decreased by 2,000 in this zone (Statistics Lithuania, 2002; Statistics Lithuania, 2012). The decline in the share of the Polish population also took place throughout the rest of the rural part of the region. This happened basically due to the more intense shrinkage of the Polish population compared to the decrease of the total population. This can be accounted for the faster rates of decline of "usual" rural population in the whole East Lithuania; in the Vilnius region the absolute majority of native rural population are Poles. It could also be related to the processes of periurbanization, which are taking place in more remote areas of the region. Some other processes (e.g., changes in ethnic identity, low rate of natural increase, more intense migration flows to Vilnius city of native population comparing to newcomers) may cause the decrease in the share of Polish population as well. The demographic processes in the rural areas of East Lithuania suggest that the natural decrease of the rural, predominantly Polish, population is the main reason of the population decline there.



**Figure 3.** Ethnic landscape of the Vilnius city region in 2001 and 2011 on the eldership level (*seniūnija*, LAU2).

# The Impact of Vilnius City on the Economic Development in the Surrounding Region

The processes discussed in the previous sections of the paper are, in fact, an outcome of various social and economic transformations taking place in Lithuania in the last decades. Fast economic growth of Vilnius led to the increase in migration flows to the city and sprawl of its urban space. It is not only residential suburbanization that is taking place in this region. It also involves suburbanisation of Vilnius economy, spatial expansion of its labour market and intensification of all other economic relations with the region. Economical phenomena are usually much less attached to a certain place than people, who change their place of residence quite seldom due to various economic, social and psychological barriers. However, economic transformations can be regarded as an indicator of the forthcoming social changes, because sooner or later changing economic conditions result in the changing social environment.

Most of the statistical indicators of the economic development were the worst in East Lithuania since the early 1990s (see Figure 5, Burneika 2007). There are various reasons for such negative trends. First of all, historical-geographical reasons determine the processes of peripherization of the given area. It is located between East and West Europe and suffers from the negative processes characteristic of other peripheral regions. Eastern Lithuania is a part of a bigger international peripheral problem region, which could be found in the environs of the eastern EU border. The eastern parts of Estonia, Latvia, Lithu-

ania, Poland, Slovakia, Hungary and most western, frontier area parts of European Russia, Belarus and Ukraine can be described as less developed areas of the respective countries. The whole area, including Moldova, could be titled as a Middle European depression zone (Daugirdas and Burneika 2006). Other reasons of the weak economy of the region may be found in the historical context (delayed land use reforms in the pre-war period, forced repatriation of most educated, "unreliable" for the soviet regime persons in 1945–1946 (Eberhardt 2011), human factor or poor resources of the region). The area has poor agricultural resources, which used to form the background of the whole economy throughout ages. Farmers of East Lithuania face a lot of obstacles, which makes a profitable agriculture more complicated. Almost all rural LAU2 regions of the South-East Lithuania have the status of "the land unfavourable for agriculture". The total area of the unused lands increased from 1% to 24% between 1990 and 2007 (Aleknavičius and Aleknavičius 2010).

Economically, Vilnius city region could be defined as an area, the development whereof is influenced by the stronger functioning of the Vilnius city market than that of the remaining part of East Lithuania. Otherwise, the entire region underwent quite similar economic and demographic trends until the early 1990s. Single labour market area is the best indicator to evaluate the range of the economic impact of Vilnius, because it reveals a zone of the most active everyday economic contacts. Although many indicators could be used to measure the spatial range of the economic influence of the city, only some of them are available at the municipal level. The most obvious impact of the single labour market could be traced by making use of the State Tax Inspectorate (STI) data - redistribution of the income tax of natural persons according to their official place of residence (State Tax Inspectorate 2013). Income tax is the main source of income of municipal budgets in Lithuania. It is being redistributed according to the official place of residence of employees instead of their working place. Therefore data of STI could reveal the hidden migratory processes (both everyday migrations and actual permanent change of residence) and some actual hidden financial flows in the region. Most of the municipalities located in the Vilnius region receive sufficient income from the capital city. It is not surprising that the share of the collected income tax, which is received from the employees working in Vilnius city, drops in line with the distance from the city (see Figure 4). It can be seen that the area of the impact almost corresponds to the area of the established labour market region. Only Varėna and Molėtai districts seem to be less dependent on the Vilnius labour market (nevertheless, more than 20% of their municipality income is generated in Vilnius). It can be assumed that the economic influence of the city is quite limited though still noticeable there. Other municipalities "earn" more than one third of their budgets in Vilnius city. One could easily notice that the higher proportion of the income tax collected in the Vilnius city municipality also corresponds to the municipalities of mixed ethnic structure. It is also evident that with the exception of Švenčionys district, the relative importance of the Vilnius labour market increased since 2007, notwithstanding economic crisis, which hit this region most seriously in Lithuania.

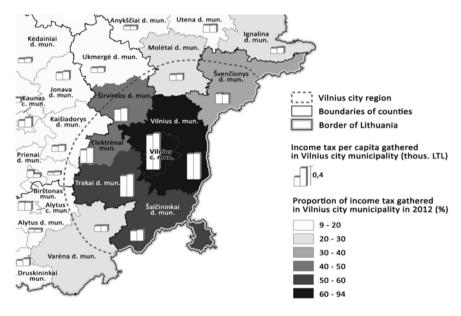
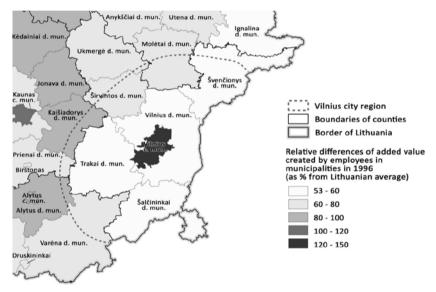


Figure 4. Income of the South-East Lithuania's municipal budgets from the resident income tax, collected in the Vilnius city municipality in 2007-2012 (based on the data of the State Tax Inspectorate, www.vmi.lt)

The positive impact of the Vilnius labour market on the development of municipalities that are in close proximity to the city is obvious. This factor alongside with the others (such as suburbanisation of Vilnius economy), makes a decisive influence on the economy development trends in the Vilnius city region. Many economic indicators, including the relative differences of added value per capita created by employees, show that this area was less developed compared with the rest of the country at the beginning of the independence period (see Figure 5). Having in mind the soviet economy it may be stated, that the region had a very weak local development potential in the first years of independence and this gradually led to a greater depression. At the same time this was also the region of the fastest development since that time (see Figure 6). The impact of the city is the only reasonable explanation of these positive trends, since other negative

factors of the economic development (poor resources of various kinds) are still existent there. Although the impact of the negative factors of the economic development of the East Lithuania still persists their relative importance is starting to decrease due to the changing economy. The natural resources play only the secondary role in the region, since traditional branches of economy are not of the first importance here. Human mobility is increasing and capital becomes much more mobile. As in many other countries, the economy of the Vilnius city region is becoming much more dependent on the development of the metropolitan urban region than on the traditional local resources. The city of Vilnius is now playing the role of an anchor sustaining the development of a quite wide region.



**Figure 5.** Relative differences of added value per capita created by employees in the East Lithuanian municipalities in 1996 (based on the data of Statistics Lithuania, http://db1.stat.gov.lt/).

Since the city of Vilnius has a positive impact on the development of the neighbouring municipalities, they stopped being the least developed in Lithuania. The processes, which we described in this paper, were exerting influence on the development of East Lithuania, especially on its central part. In some periods the municipalities surrounding the city were growing even faster than Vilnius city itself. The main differences between Vilnius city and the remaining part of the region appeared immediately after the market reforms of 1990s, when Vilnius started to develop much faster than the rest of the country. Even though the economy of the city never ceased growing, it had stopped experiencing an exceptionally fast development in the new millennium. On the contrary, it started to have a positive impact on the surrounding region.

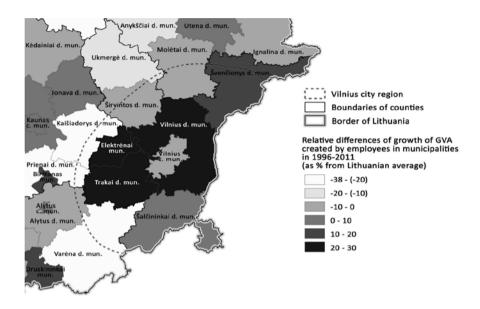


Figure 6. Relative differences of the added value per capita growth created by employees in Lithuanian municipalities in 1996 - 2011 (based on data of Statistics Lithuania, http://db1.stat.gov.lt/)

#### Generalisation and conclusions

Vilnius city was playing a decisive role in the formation of the social, economic and cultural landscape in the surrounding region during the last centuries. The complete transformation of the social, ethnic and economic system of the city in the second half of the 20<sup>th</sup> century has changed the character of this impact during the subsequent decades. The city of Vilnius will continue to be a decisive factor in the development of the South-East Lithuania in the near foreseeable future and will continue to change positively the developmental trends of the East EU border area falling within the impact zone of the city.

The impact of Vilnius city on the socio-economic processes in the South-East Lithuania commenced immediately after 1990s and it now stretches far beyond its administrative borders. The area, which experiences an exceptionally positive influence on the economic development of the region, corresponds to the commuting zone of Vilnius city. Most of the municipalities falling within this zone were developing faster than Lithuanian average since mid 1990s.

The impact on the demographic structure is related to the processes of urban sprawl and outward mobility that changed not only the number of the population, but also the ethnic landscape of the region. These demographic changes are most significant to the north and north-west of the city. Some

settlements grew 7–9 times during the last decades. The ethnic structure of these areas is under the rapid transformation as well, and the ethnic Lithuanians now make up the majority of the population in the previously Polish dominated lands.

The development of Vilnius city and its urban sprawl into the surrounding region transformed substantially the demography in the outskirts of the city limits, while economic impact can be felt throughout the multi-ethnic region of South-East Lithuania. We may expect that the same trends will continue and the "lithuanisation" of the Vilnius urban region will persist, because it is not likely that suburbanisation processes will stop in the near future. The city itself will experience a different impact, because the processes of suburbanisation and immigration from all parts of Lithuania and foreign countries might change its population structure.

The development of Vilnius and the sprawl of its urban region will continue, thus the city will become more and more important factor of the development of the region. The consequences of this spread will depend on the success of coordination of such processes in the city and in other municipalities as well as on the direction of regional planning. So far, however, almost no cooperation, common planning and regulation of the processes of suburbanisation in different municipalities exist and there are no signs for its development in the near future. Changes in the administrative system of the country and introduction of the regional level of self-governance could also help to solve many problems related to the urban sprawl and would encourage not only residential, but also the economical (commercial) suburbanisation.

The pace and consequences of the depopulation will be different in different parts of East Lithuania. The shrinkage of population and the social and economic service networks will be evident in all rural areas, except the zone of suburbanisation. The development of the new social networks is highly needed for the original population as well as for the newcomers in the zone of suburbanization, otherwise political and social tensions are almost inevitable in the area.

In the new sparsely populated areas the state policy should be directed not to the preservation of population or the existing service networks, but to the creation of the new social networks. The strengthening of the local communities and local self-governance, improvement of communication networks, simplification of land use conversion procedures, dissemination of objective information related to the on-going processes and other similar actions would be much more beneficial for the prosperity and satisfaction with life of the local population.

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### Vilniaus miesto plėtra – kaitos tendencijos retai gyvenamame ES rytinio paribio regione

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SANTRAUKA: Politinės ir su jomis susijusios ekonominės reformos ir natūralūs miestų kaitos procesai lėmė intensyvią teritorinę Vilniaus miesto kaitą, kuri reiškiasi ir itin sparčia urbanizuotos teritorijos plėtra, apimančia net teritorijas, esančias už administracinių miesto ribų. Ši plėtra vyksta daugianacionaliniame regione, kurio gyventojų tautinė sudėtis, taip pat ir socialinė struktūra iš esmės skiriasi nuo esamos Vilniaus miesto. Dėl miesto plėtros keičiasi ne tik gyventojų skaičius, socialinė struktūra, bet ir tautinė sudėtis. Tai gali kelti įvairių socialinių įtampų regione. Šiuo metu tokia gyventojų kaita sparčiausiai vyksta teritorijose šalia miesto administracinių ribų, bet kaitos požymių yra ir toliau nuo Vilniaus esančiose savivaldybėse. Šį daugianacionalinį regioną, kuriame vyrauja lenkų tautybės gyventojai, galima bent iš dalies laikyti istoriniu Vilniaus miesto regionu, nes būtent miestas buvo vienas svarbiausių tokios etninės sudėties susiformavimo ir plėtros šaltinių. Šiuo metu vyksta priešingas procesas, kai lietuvių tautybės gyventojai, migruodami į miesto priemiesčius, keičia Pietryčių Lietuvos gyventojų tautinę sudėtį. Pagrindinis skirtumas yra tas, kad šiuo atveju būtent migracija, o ne kultūros reiškinių difuzija yra pagrindinė tokios kaitos priežastis, todėl yra didesnė socialinių konfliktų tikimybė.

Spartus miesto ekonomikos vystymasis taip pat ėmė daryti įtaką ekonominiams procesams regione. Šiuo metu akivaizdi miesto įtaka ekonominiams procesams apima platesnes teritorijas nei su suburbanizacija susiję procesai. Ekonominės įtakos zona iš esmės sutampa su Pietryčių Lietuva dažnai vadinamu daugianacionalinės sudėties regionu. Tokia ekonominės įtakos zona daugiausia būna susijusi su švytuoklinėmis migracijomis, ekonominių veiklos rūšių suburbanizacija ir intensyviais prekių ir paslaugų mainais. Tai zona, kurioje socialinės struktūros kaitos procesai, susiję su miesto vystymusi, jau vyksta arba turi didžiausią potencialą prasidėti artimiausiu metu. Šiuo metu tokiu Vilniaus miesto ekonominiu funkciniu regionu galima laikyti visas Vilniaus apskrities savivaldybes, išskyrus Ukmergės savivaldybę. Dėl tokios miesto įtakos arčiausiai miesto esančios savivaldybės vystėsi sparčiau, nei vidutiniškai augo šalies ūkis, ir nebėra tarp vargingiausių šalies savivaldybių. Fizinių asmenų pajamų mokesčių perskirstymo duomenys taip pat rodo, kad Vilnius yra svarbiausia darbo vieta ne tik miesto, bet ir gretimų teritorijų gyventojams. Jis tapo vienu svarbiausiu aplinkinių savivaldybių biudžetų pajamų šaltiniu bei pagrindiniu jų ekonominio vystymosi veiksniu.

PAGRINDINIAI ŽODŽIAI: VILNIAUS MIESTO REGIONAS, PIETRYČIŲ LIETUVA, SOCIOEKONOMINĖ RAIDA.