# RECENT REGIONAL CHANGES OF DEVELOPMENT OF LITHUANIAN ECONOMY

### Donatas Burneika, Edikas Kriaučiūnas

Institute of Geology and Geography, T. Ševčenkos str. 13, LT-03223, Vilnius E-mail: donatas.burneika@geo.lt, edis@geo.lt

### Introduction

Economic development of Lithuania experienced a lot of different disturbances during the last two decades. Market economy reforms, economic blockade of the Soviet Union, tremendous inflation, crisis in banking sector and most recent economic crisis in Russia have made deep impacts on whole economy of the country. However these impacts are rather obvious and do not raise a lot of questions. Much more difficult is to detect and explain inner regional effects of these disturbances. Previous researches have revealed that greatest regional differences of economical development appear during critical periods of development, when the negative impacts are very uneven. Actually more or less steady but constant growth of economy in post reform period until 2000 was evident just in capital city Vilnius and in lesser extent in Klaipėda (Burneika, 2004). All other municipalities experienced very great, mostly negative fluctuations. However the last crisis has occurred more than 5 years ago and the whole economy of Lithuania is on a steady rise. Though the development pace was one of the fastest in Europe, its inner spatial effects are still unclear.

The main aim of this article is to find out main recent trends of development of economy in Lithuania on a municipal level and to try to establish main regularities of spatial development of economy during the periods of stable growth.

## 1. Methodology

The article analyses just general trends of economical development not trying to observe structural changes of economy. For these purposes the GDP per capita usually is supposed to be the best indicator, however the Statistical services do not calculate this indicator at municipal level. Trying to solve the problems, the authors have elaborated its own methodology for calculating the indicator. The calculations are based on existing data concerning GDP levels on a County level adjusting them according levels of employment and average earnings in different municipalities. The same methodology was employed during earlier researches and is described in earlier published articles (Burneika, 2004, 2003). However the received data has certain bias, so can be used just for comparative purposes. For example high level of GDP of a county can make certain raising impact on calculated level of GDP in less developed municipalities. Though previous research permits to state that these effects cannot make decisive impact on the results, some disturbances must be considered. For this reason, measuring and comparing general economic development of municipalities, the authors employed data from the State Tax Inspection. The employed methodology is based on differences of income of employees, but on the other hand profit composes the second important part of GDP so data of state tax inspection concerning gathered profit taxation were analysed in the article.

## 2. Main Trends of Spatial Development of Economy in Lithuania in 1996-2001

Previous researches of spatial development of economy in Lithuania revealed huge and growing disparities of GDP per capita among different municipalities. Analysis of main tendencies, which took place in 1996 – 2001, have shown that the territory of the Lithuania has gone to the great economical depression and the growth of the economy was concentrated in very few points, which include the capital of the country, port Klaipėda and at a smaller scale some and cities, with competitive giant enterprises from the Soviet period. There was no spatial influence from growing centres to the surrounded territories at the first stage, the differences of the GDP per capita were highest only inside Vilnius county.

In 2001 spatial differences of GDP per capita in municipalities reached 5 times. The major part of the country went in even deeper depression comparing with the strongest, from the economical point of view, cities, which have formed rather mute regions of relatively medium economy around themselves.

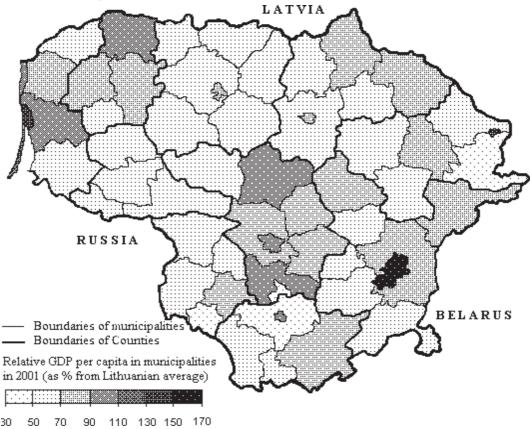


Fig. 1. Differences of GDP per capita in the municipalities of Lithuania in 2001 (% from Lithuanian average).

Consequently three core growing regions could have been found in Lithuania. These included more or less compact territories consisting of 3–4 municipalities around Vilnius and Kaunas as well as around Klaipėda, though the last one was not so uniform (Burneika, 2004). In general, cities presented the most developed territories and they were the fastest developing ones as well. While municipalities surrounding them developed a little bit slower.

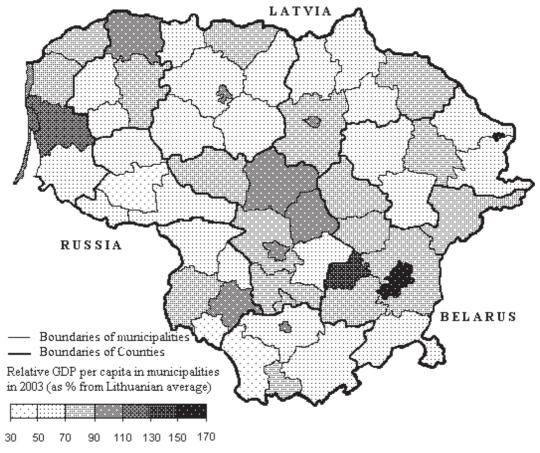
The growing regions were mostly related with the new or renovated branches of economy and do not correspond completely with the strongest municipalities from the point of view of present amounts of GDP per capita.

Implemented researches permitted to make an assumption, that the highest spatial economic disparities appear during periods of great economic recessions, while during periods of relatively stable development spatial differences evolve much slower.

The research prepared in 2005 revealed some changes of spatial economic development in Lithuania, though the main economical centres are the same.

## 3. Peculiarities of Differences of GDP per Capita in Municipalities of Lithuania in 2003

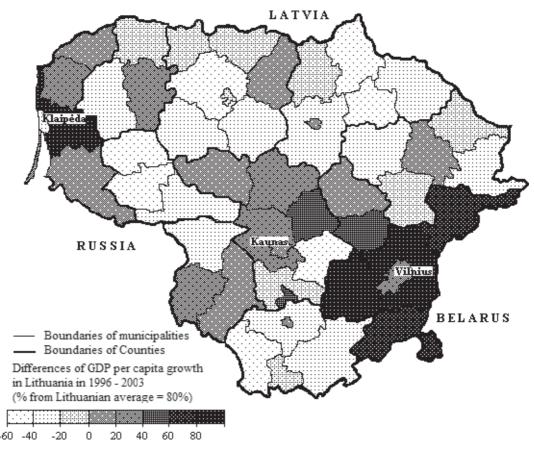
Though general situation of spatial pattern of Lithuanian economy in 2003 did not change very drastically comparing with 2001, some clear changes in some particular cases can be easily spotted. First of all it should be mentioned, that some new centres, with GDP per capita, equal to the one of Lithuanian average appeared. Most of theses positive changes happened in the municipalities, which have giant enterprises built during soviet times and which used to play dominating role in their economy. Among these Jonava, Mažeikiai, Kėdainiai, Elektrėnai should be mentioned. Not necessarily all this growth is related to successful operation of old but renovated industries, in some cases, like in Marijampolė and Klaipėda district municipalities, which also exceeded Lithuanian average GDP per capita, growth is mostly related with new activities, based on export (Fig. 2).



**Fig. 2.** Differences of GDP per capita in the municipalities of Lithuania in 2003 (% from Lithuanian average). (According to the data of Statistical department of Lithuania: Counties..., 2004.)

Anyway the great misbalance between Vilnius and remaining territory of Lithuania still exists. Capital city composes such a big part of Lithuanian economy, that most other municipalities hardly can reach an average GDP per capita of Lithuania. This forms the situation, when there are just few relatively well developed territories and vast areas remain in economic depression.

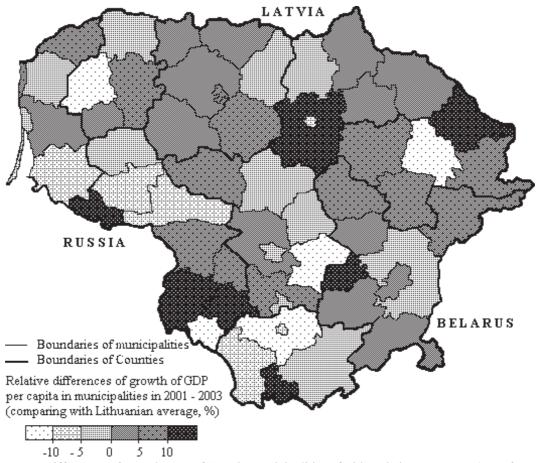
Changes of spatial pattern of GDP per capita map in Lithuanian is a consequence of changes of trends of development of economy in Lithuania. Previous researches illustrated great differences of pace of growth of economy, which reached 60% in the period since 1996 untill 2001. The differences of GDP per capita, which existed in 1996, increased during that period considerably (Burneika, 2004). Cities and city regions like Vilnius or Klaipeda developed much faster than country regions. Analyzing situation in longer period we would find out that situation is slightly different. Economic development was concentrated in the same three development cores, though we may observe some spread of the development and it seems that Vilnius and Kaunas are starting to form one bigger development area, which partly corresponds with urban frame of the Country. However the fastest growth was common for city regions (municipalities surrounding main cities) not for cities themselves during the period since 1996 until 2003 (Fig. 3). That is the main difference comparing to the shorter period, when the development of economy was very instable.



**Fig. 3.** Differences of growth rates of GDP in municipalities of Lithuania in 1996–2003 (as % from Lithuanian average) (According to the data of Statistical department of Lithuania: www. std.lt).

Such difference comparing to the period before 2001 can be explained by the spatial processes, which took place in recent years. Fig. 4 illustrates the pace of development of

economy in municipalities during recent years of stabile growth of Lithuanian economy. Also there were no changes in territorial administrative system during recent years, so comparison can be more precise. In general it may be stated, that there were no clear bigger regions of growth or decline in Lithuania during these three years. Main trend – faster development of relatively poorer municipalities, but there as well can be found some exceptions. Anyway, we may summarize that in recent years misbalance of economical development has decreased considerably. Visaginas was the only municipality with the highest GDP per capita levels, which still developed much faster than the whole country. It can be easily explained by the stabile and permanent operation of Nuclear Power Plant. So the conclusion that the growth of economy spreads to wider regions during periods of stable growth of economy of the whole Country can be made.



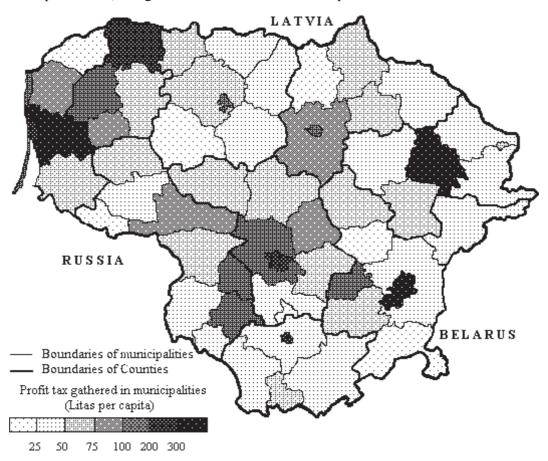
**Fig. 4.** Differences of growth rates of GDP in municipalities of Lithuania in 2001–2003 (as % from Lithuanian average) (According to the data of Statistical department of Lithuania: www. std.lt).

## 4. Spatial Differences of Profitability in Lithuania

Calculations of GDP per capita at municipal level were based on differences of employment and salaries, which make main impact on GDP. However second important component of GDP – profit, was not evaluated. Trying to fully evaluate real spatial differences of development of Lithuanian economy, the authors have analysed differences of gathering of profit tax in municipalities. Profit is a part of income, which changes very quickly depending

of trends of development of economy. General trend for Lithuania is rather rapid increase of amounts of gathered profit tax, what is absolutely normal in the after recession period. Gathered amount of profit tax was negative in almost half of municipalities back in 2001. The clear trend of increase of gathered amount of taxes during the last four years illustrates fast development of economy but on the other hand stable amount of gathered income taxes permits to state that benefits of this growth mostly goes to business makers but not for employees.

Spatial pattern of gathering of profit tax was rather similar to the one of GDP with the exception that differences were much higher. This is obvious situation, because headquarters of most companies are located and registered in central cities and pay taxes there. On the other hand profit itself is much more flexible dimension. That's why Utena district pays so much profit taxes, though calculated GDP is not so exceptional.



**Fig. 5.** Differences of gathered profit taxes in Lithuanian municipalities in 2003, Litas per capita. (Data of Lithuanian State Tax Inspection.).

Such a pattern of spatial differences of profitability permits to state that in general previously presented GDP per capita scheme is accurate enough. On the other hand it may be stated, that established differences of GDP per capita should in fact be even higher. Differences between biggest cities and surrounding regions should be higher as well. However these differences are related to some stochastic factor, which can vary a lot in time and so cannot be used very directly defining economical development of the territory.

#### **Conclusions**

- 1. Main regional misbalances of development of Lithuanian economy appeared during period of great economic fluctuations after collapse of Soviet Union and they tended to increase up to the new millennium. Rapid changes of condition of economic development concentrate economic growth into few areas, which have highest relative advantages in the new circumstances.
- 2. Main regions of growth of economy in Lithuania remain the same but their spatial structure is on the change. Stable growth of economy of the country makes premises for spreading of growth processes into wider regions, which started to grow faster than central city municipalities.
- 3. Spatial distribution of growing municipalities in recent years shows that this growth is more related to factors of macro-economy or to the growth of whole country but not for the spread of growing potential from core development regions.
- 4. Analysis of spatial structure of gathered profit tax general confirms established regularities of inner spatial differences of GDP per capita in Lithuania, with the exception that differences between central cities and surrounding regions should be even higher.

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http://www.std.lt

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### Donatas Burneika, Edikas Kriaučiūnas

Geologijos ir geografijos institutas, Vilnius

## Naujausios Lietuvos ūkio regioninės plėtros tendencijos

#### Santrauka

Straipsnyje autoriai nagrinėja vidinius Lietuvos ekonomikos vystymosi skirtingumus 1996–2003 metais. Šiam tikslui apskaičiuoti bendro vidaus produkto, tenkančio vienam gyventojui, dydžiai Lietuvos savivaldybių mastu ir palyginta jų kaita minėtu laikotarpiu. Žlugus Sovietų Sąjungai šalies ūkio vystymosi sąlygos ėmė keistis labai greitai tiek laiko, tiek erdvės atžvilgiu – depresijas keitė spartaus augimo laikotarpiai ir atvirkščiai. Autoriai ištyrė, kad iki pat naujojo tūkstantmečio ekonominio išsivystymo lygio skirtingumai šalyje tik didėjo – sparčiai augo keletas miestų savivaldybių, tuo tarpu didžioji šalies teritorijos dalis vystėsi labai lėtai. Tokia situacija rodo, kad esminiai reformuojamos ekonomikos šalių ūkio vystymosi vidiniai skirtingumai formuojasi staigių ūkio vystymosi pokyčių laikotarpiu, kai prie greitai besikeičiančių sąlygų gali prisitaikyti tik keletas santykinį pranašumą turinčių ūkio centrų.

Pastaraisiais metais, kai šalies ūkio plėtra įgavo stabilios plėtros tendenciją, situacija pasikeitė. Apskaičiuota, kad sparčiau ūkis pradėjo augti tose savivaldybėse, kuriose BVP vienam gyventojui yra mažiausi. Kita pastarojo tarpsnio tendencija – spartesnė platesnių didžiųjų miesto regionų plėtra, o ne pačių miestų augimas. Nors apskritai ūkio išsivystymo atžvilgiu ir toliau išsiskiria trys šalies regionai, jų erdvinė raiška kiek keičiasi – darosi akivaizdu, kad Vilniaus ir Kauno regionai jungiasi į vieną – didesnį erdvinį augimo darinį, iš dalies sutampantį su šalies urbanistiniu karkasu.

Trečiame darbo skyriuje analizuojami 2003 m. pelno mokesčio surinkimo erdviniai skirtingumai. Kadangi skaičiuojant BVP erdvinius skirtingumus šalyje remtasi tik kompensacijos dirbantiems gyventojams skirtumais, autoriai pabandė panagrinėti antros pagal svarbą BVP dedamosios dalies skirtingumus. Iš esmės pelno vienam gyventojui erdvinio pasiskirstymo charakteristikos atitinka nustatytus BVP dydžio vienam gyventojui pasiskirstymo dėsningumus, tik šiuo atveju skirtumai padidėja iki keliasdešimt kartų. Daugiausiai pelno mokesčio surenkama centro funkcijas vykdančiuose miestuose, kur registruota daugiausia pelningai dirbančių firmų. Atsižvelgus į tai galima teigti, kad realusis BVP vienam gyventojui dydžių šablonas, įvertinus gaunamo pelno netolygumus, iš esmės atitiktų pateiktąjį straipsnyje, tačiau patys ekonominio išsivystymo skirtingumai tarp labiausiai išsivysčiusių ir labiausiai atsilikusių savivaldybių dar padidėtų.