THE INFLUENCE OF DECENTRALIZATION ON THE ECONOMIC DEVELOPMENT GAP BETWEEN REGIONS

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Abstract

This paper deals with a hypothesis that higher level of decentralization decrises the economic development gap between regions. An underlying of this hypothesis is derived from alredy described theoretical reasons why decentralization has a positive impact on economic performance of countries and regions so reducing regional disparities. Existing empirical research has shown positive effects of decentralization on the higher level of economic output of the economy. An indicator dispersion of regional GDP per capita was used to measure regional disparities. A decentralization index which was used to measure decentralization is uniqe in two ways: firstly it includes both quantitative and qualitative components of decentralization and secondly it is compiled based on data obtained directly from the regions.

Key words: decentralization, region, regional disparities, territorial inequality

JEL Code: H79, R12, R50

Introduction

The cohesion policy is considered to be one of the most important policies of the European Union in terms of their importance and volume of financial resources. Its main objective is to reduce economic and social inequalities between regions, the so called regional disparities. Territorial cohesion reinforces the basic orientation of the EU cohesion policy. It is not interpreted as a "mere" redistributive tool, but it is defined as a policy of development. Territorial cohesion is about mobilizing the potential, not about compensating for geographical differences. One of its principles is the rule of subsidiarity, which emphasizes decentralization and the role of public administration. The result has been a shift from the concept of "government" to the concept of "governance" (Laboutková, 2009).

This paper deals with the relationship between decentralization and regional disparities. Previous studies focusing on this issue have not reached a clear consensus about the above mentioned relationship. Most authors are engaged mainly in fiscal decentralization (Letelier 2005; Bodman and Hodge, 2010; Sepulveda and Martinez-Vazquez 2011); the

reason for their narrower focus is the fact the political decentralization is less suitable for quantification. Another weakness of these studies is that most of them are based on national rather than regional sources. Regional data are either aggregated collectively from individual states, or they are not available at all. Yet, if we are to examine the relationships between decentralization and the regional disparities, it is necessary to work with the regional data. The main goal of such an investigation is to detect regional differences rather than differences between countries.

An empirical analysis utilizing the regional data has shown that a higher autonomy of the regions - decentralization - has a significant positive impact on the economic performance of states and regions: the greater the decentralization, the stronger the economic growth. In this context, the decision-making competences are more essential than executive powers (Laboutková, 2012). Among the recent works which comprehensively investigated the influence of decentralization on regional disparities, one should include the work of Andrés Rodríguez-Pose and Roberto Ezcurra (2009) analyzing the relationship between the fiscal and political decentralizations and the development of regional disparities in a sample of twenty-six countries. The study concluded this relationship is significantly influenced by the overall economic level of the given state. While the political decentralization in developed countries does not affect the development of regional disparities, the fiscal decentralization defuses them. In contrast, fiscal decentralization in the emerging economies deepens inequalities between regions. This negative effect cannot be compensated by the observed positive effect of the political decentralization. The main cause of this is a weak redistributive capacity in these countries, in comparison to the developed ones. Such a conclusion strengthens the argument that the cohesion policy should not be understood as a synonym for redistributive policies. The authors of the presented article are inclined to accept the modern concept of cohesion policy and they understand decentralization as a set of quantitative and qualitative factors (financial decentralization and decentralization of decision-making), which complement each other.

For these reasons, an index of decentralization is utilized in this work, in which both mentioned components are included. For the measurement of regional disparities an indicator of dispersion of the regional GDP per capita is used. The aim of the study is to determine whether in the EU member states one could trace dependency or relationships between the level of decentralization and the level of the regional inequalities. Where positive impacts of a higher decentralization on the level of the economic output of the economy were empirically

demonstrated, the regional disparities can be assumed to be smaller in countries with a high degree of fiscal and political decentralization than in those with lower degree of fiscal and political decentralization.

1   Aims and methods

This article aims to identify and assess the interrelationship between decentralization and regional disparities in an economy. To measure the decentralization, the index of decentralization was selected; the regional inequalities are quantified by the used index of variance (dispersion) of the regional GDP per capita.

The cause of uneven regional development is the occurrence of spatial variability in the socio-economic development leading to the emergence of spatial inequalities. Imbalance of spatial structures in different regions represents the regional disparity and signifies a dissimilarity or disproportion of phenomena or processes having a unique spatial distribution. In terms of a theoretical explanation, it is difficult to define the causes of uneven regional development. Factors such as the size of the country, core-periphery models, technological equipment, and infrastructure affect the local allocation of private capital, and thus predetermine redistribution processes within the economy. Specific factors of regional inequality can be traced in the transition countries in connection with the change of the coordination mechanism (Ezcurra and Pascual, 2007). Globalization and liberalization was "supposed to be affecting economies positively, i.e. in favor of convergence tendencies" (Baráková, 2011: 35). In the last twenty years, the ambiguous impact of liberalization and globalization of trade has been discussed in the context of regional development (Rodríguez-Pose and Gill, 2006). Models of "new economic geography" emphasize the relationships between the uneven spatial development and economic growth (Fujita and Thisse, 2002).

Economic performance of the administrative unit (region) is characterized by creation of the gross domestic product. It represents the value of goods and services produced in all sectors in a given territory (state, region) and over a certain period of time (three months, year). The taxes on products are summed with the added gross value, while grants and subsidies are subtracted. GDP is the most comprehensive indicator measuring the macroeconomic performance, inclusive of estimates for the grey economy, non-market production of households, etc. For spatial comparisons of the regional GDP, the comparison of the regional level to the national level is usually used, or, where appropriate, with transnational units. The comparison of the GDP per capita against the average level EU-27

measured by the purchasing power standards (PPS) is the most frequently provided one. Using of this indicator leads to the conversion of the values of all components of the GDP to the average price level within the EU, and thus to elimination of differences in price levels (or deformations related to the exchange rates of national currencies against the Euro).

European regions with the highest GDP per capita are situated in the south of the United Kingdom, in southern Germany, in northern Italy, and in Belgium, Luxembourg, the Netherlands, Austria, Ireland, and Scandinavia. To the highly developed regions, those in the surroundings of the capital cities are traditionally added: around Madrid, Paris, Prague, and Bratislava. The existence of one or a few economic centres in some of the countries is a natural fact with deep historic roots. At present, this fact is also supported by the tendencies towards centralization of public administration, or by, for example, concentration of local headquarters of transnational corporations. The weakest regions are assembled in the southern, south-eastern, and south-western periphery of the European Union: in eastern Germany and in the new EU member states, in Macedonia and in Turkey. The dispersion of the regional GDP per capita ranges from 28 % of the EU-27 average GDP (6,500 PPS) in the north-west of Bulgaria called Severozapaden to 343 % of the EU-27 average of GDP (85,800 PPS) in inner London in the UK, which is more than 13 times more than the lowest value from the 275 statistically measured EU regions (271 NUTS2 regions in the EU plus three regions of Croatia and Macedonia). The second highest rung was occupied by Luxembourg with 280 % of the EU-27average GDP (70,000 PPS) and Brussels with 216 % of the EU-27average GDP (54,100 PPS). Prague ranked on the 6th place with 173 % of the EU-27average GDP (43, 200 PPS), which is the highest value among the new EU member states. (EC 2011)

The regional GDP of up to forty regions (19.4 % of the population) exceeded 125 % of the average GDP of EU-27. 56 % of the inhabitants live in regions with the performance of 75 % - 125 % of the average GDP of EU-27; sixty-seven regions (24.4 % of the population) reach less than 75 % of the GDP compared to an average GDP of EU-27. Twenty-seven regions with performance less than 50 % of the average EU-27 GDP are peopled by 9.3 % of the population. Among the regions of different countries there are also apparent significant differences of the economic performance. In thirteen out of twenty-three NUTS2 countries, the measurements revealed more than twice as high differences in the regional GDP per capita. In this group there are seven out of the nine new EU member states and only six out of the EU-15. The largest regional differences, characterized by the share of the most powerful

and the least powerful regions, were recorded in Turkey (4.9), the United Kingdom (4.8), and Romania (3.9). The lowest values of dispersion, characterized by the share of the most powerful and the least powerful regions, belong to Slovakia (1.4), Ireland (1.6), and Sweden (1.6). The middle regional disparities with a factor of less than 2 between the highest and the lowest levels of the regional GDP per capita are recorded only in the EU-15, Slovakia and Croatia. (EC 2011)

For assessment of the development in the regions within the member states, Eurostat has published **an indicator of variance (dispersion) of the regional GDP per capita** since 2007. The indicator is defined as the sum of absolute differences between the regional (level NUTS[1] 2, respectively NUTS 3) and the national GDP per capita (measured at current market prices and weighted by the regional population share in total population). The indicator of the dispersion of the regional GDP is calculated as follows (Eurostat 2011):

$$D = 100 \frac{1}{Y} \sum_{i=1}^{n} |y_i - Y| \, (p_i/P) \tag{1}$$

- y_i is the regional GDP per capita of the ith region
- Y is the average GDP per capita
- p_i is the number of inhabitants of the ith region
- P is the population of a country
- n is the number of regions in a country

The value of the variance of the GDP per capita is zero if the values of the regional GDP are identical in all regions of the country or the economic zone (as EU27); it rises if the differences in the values of the regional GDP per capita between the regions are growing. For example, the value of 30 % of the variance means that the GDP of all regions of the country weighted by the number of inhabitants in regions varies from the national value by the average of 30 %.

Decentralization can generally be divided into three categories (cf. Sharma, 2009): political, financial, and administrative. An indicator of political decentralization is the form of

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[1] For all EU member states, acceding and candidate EU member states, the common administrative division into NUTS (Nomenclature of Territorial Units for Statistics) applies. The breakdown of regions according to NUTS aims to ensure appropriate conditions for the comparison of European regions. The current definition of NUTS regions in the EU is based on the Regulation of the Council and the Parliament of the EU No. 1059/2003, which determines the population limits for the individual NUTS units and the rules and frequency of potential revisions of the regional division system. These regulations set, for example, the regional NUTS 3 unit as one of the member countries with the average of 150-800 thousand inhabitants, while the whole NUTS 2 has 0.8-3 million people, and NUTS 1 3-7 million people.

election of the top representative of the local government, which is further supplemented by formal and informal mechanisms of public consultations for planning and implementation of public projects. Fiscal decentralization is considered to be the core of decentralization. It includes two aspects: the first one is the division of responsibilities for expenditures and revenue sources among the national, regional, and local levels of government. The second is the extent of powers of the regional and local governments in terms of determination of their own spending and revenues. To make decentralized functions effective, regional governments must gain an adequate level of income locally, or it has to be transferred from the central government together with the power to decide on the spending. While local governments are usually responsible for public services on the expenditure side, this obligation does not automatically imply their right to levy taxes. This imbalance in autonomy on the revenue and expenditure sides indicates the centre attempts to maintain economic, and thus political, power rather than to delegate it to the lower levels of public administration. As regards administrative decentralization of public services, there are many dimensions, such as planning, implementation and operation, and management of public services.

In this respect, there is a unique empirical research *From Subsidiarity to Success: The Impact of Decentralization on Economic Growth,* which was carried out in the spring of 2009 by AER[2] in cooperation with the BAK Basel Economics[3]. It examined the link between the degree of autonomy of regions, respectively the degree of decentralization of the state, and the economic development. For the analysis two sets of data were used. The first one included 33 observations from 29 countries: twenty-six from Europe and three from overseas (the USA, Canada, and New Zealand). The objective of the studied data was to determine whether decentralization (among other factors) had a positive, significant impact on the economic performance and growth of a country's economy. The second data set consisting of 234 regions from 16 European countries was collected in order to answer the question whether decentralization (among other factors) had a positive, significant impact on the economic performance and the growth of the economy of the region. [4]

For measurements of decentralization, all public powers were compared (powers are used here as a synonym for the regulatory power) in a country with different levels of governance:

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[2]   The Assembly of European Regions (AER), founded in 1985, is the largest independent network of regions in the wider Europe. It comprises 270 regions from 33 countries and 16 interregional organizations.
[3]   BAK BASEL – a private economic institute, based in Basel, founded in 1980, specializes, among other things, in international comparisons of regions.
[4]   For more details about the sets of data see AER (2009).

from the highest state level to the municipal level. The more powers are delegated to regions and municipalities, the more these countries are regarded as countries with greater decentralization. From the point of view of regions and municipalities, it means greater autonomy for them. Decentralization cannot be studied or measured directly for its multidimensionality and complexity. However, many individual aspects in the vertical organization of the country can be observed. These observable aspects (altogether, there were 185 of them) were systematically collected, and the measured information was aggregated into the so called index of decentralization. *The decentralization index* contains both quantitative and qualitative components (see Fig. 1).

Figure 1 shows how the index of decentralization is composed. Financial decentralization has the weight of 40 % and it includes mainly quantitative information about the amount of income and expenditure in relation to the central government. However, it also comprises qualitative information on competence in decision-making about financial matters, such as taxation (does the region have the power to determine the tax base or tax rate?) or the public debt (does the region have the right to issue debt securities?). Decentralization in decision-making has a weight of around 60 % of the whole index. Apart from the information on the relative number of officials, the index of decentralisation contains multiple qualitative information regarding the structure and distribution of decision-making in the public affairs between the various levels of government of the state.

The analysis of the individual parts of the decentralization index implies that:

- In most countries, the degrees of the decision-making and financial powers (decentralization) are very close to each other; thus, the correlation between these two aggregates is relatively high. This suggests the regions are generally financially independent in relation to the degree of the decision-making powers.

- The dependence between qualitative and quantitative parts of the decentralization index is rather high; nevertheless, in some countries (e.g. in Scandinavia) there is a high quantitative decentralization, while in others (e.g. Greece, Croatia, Romania) there is a high qualitative decentralization. It is evident there is some "chaos" or inequality between competencies and obligations (tasks to carry out policies which were decided elsewhere).

- Comparison of indicators of "decision-making powers" and "operational (introduction) powers" shows the regions in all examined countries have more executive powers than decision-making powers. This finding is not very surprising as the public

authorities generally want to keep the decision-making powers for themselves and they delegate executive authorities to the regions.

Tab. 1: Index of decentralization and its components

| Index of decentralization	Aggregates	Subindex	Indicator
Index of decentralization (100)	*Decentralization in decision-making (60)*	Administrative decentralization (12)	EU (2)
			Employees (10)
		Functional decentralization (25)	Decision-making power (16.8)
			Implementation power (6.3)
			Territory (1.9)
		Political decentralization (20)	National parliament (3)
			Political relationships (11)
			Regional constitution (1)
			Regional government (4)
			Political distribution of power (1)
		Vertical decentralization (3)	Number of levels (1)
			Elements of level (1)
			Hierarchical structure (0.5)
			Residual autonomy (0.5)
	Financial decentralization (40)	Financial decentralization (40)	Equalization system (1.4)
			Incentives (6)
			Taxing authority (5.6)
			Debts (2)
			Revenues (10)
			Expenditures (6)
			Public consumption (4)
			Financial balance (2)
			Financial compensation (3)

Source: AER (2009)

2   Results

There are several theoretical reasons why decentralization should have a positive impact on the economic performance of countries and regions, and thus also on reductions of regional disparities. The main of them include the effectiveness and efficiency. Within a single state, the preferences of the population and the industrial structure are often very heterogeneous (varying from one region to another); the single state policy hardly meets all the requirements. In addition, the regions have the best knowledge of the preferences of their citizens and the needs of the local businesses and companies. There is a general consensus that the regional solutions (lower levels of government) are the most effective ones. The second factor boosting the economic growth is efficiency. Lower levels of government know better what the regional context and markets are like. They can also provide public goods at lower costs. Nevertheless, it is necessary to emphasize there are two moments speaking in favour of centralized decision-making. The first one is the high fixed costs or slowly declining

marginal costs - the legal system, army, etc. The second is the "spill-over" effect of externalities: if the provision of regional public services affects the citizens of other regions, central decisions will be more effective (for example, high-speed trains, larger airports, etc.). The size of these two effects must be evaluated separately in order to find the best vertical of control. However, there are a lot of remaining policies for which it is most effective when they are performed at a lower level of public administration.

The following analytical part presents the results of examining the interacting ties of the selected indicators of decentralization and the regional disparities. The resulting linear relationship supports the hypothesis about the positive impact of decentralization on reducing the regional disparities. From the figure 2, it is evident that countries with a high degree of decentralization, such as the Netherlands, Austria, and Germany, with decentralization values over 50 %, reported low levels of variance of the regional GDP per capita. On the other hand, countries with the highest coefficient of variance of the regional GDP per capita at about 40 %, such as Bulgaria, Slovakia, and Romania, also report indices of decentralization less than 40 %. In these economies, the decentralization process is partly influenced by a change of the coordination mechanism (the transition from the planned to the market economy).

Fig. 1: The relationship of indices of decentralization and regional disparities
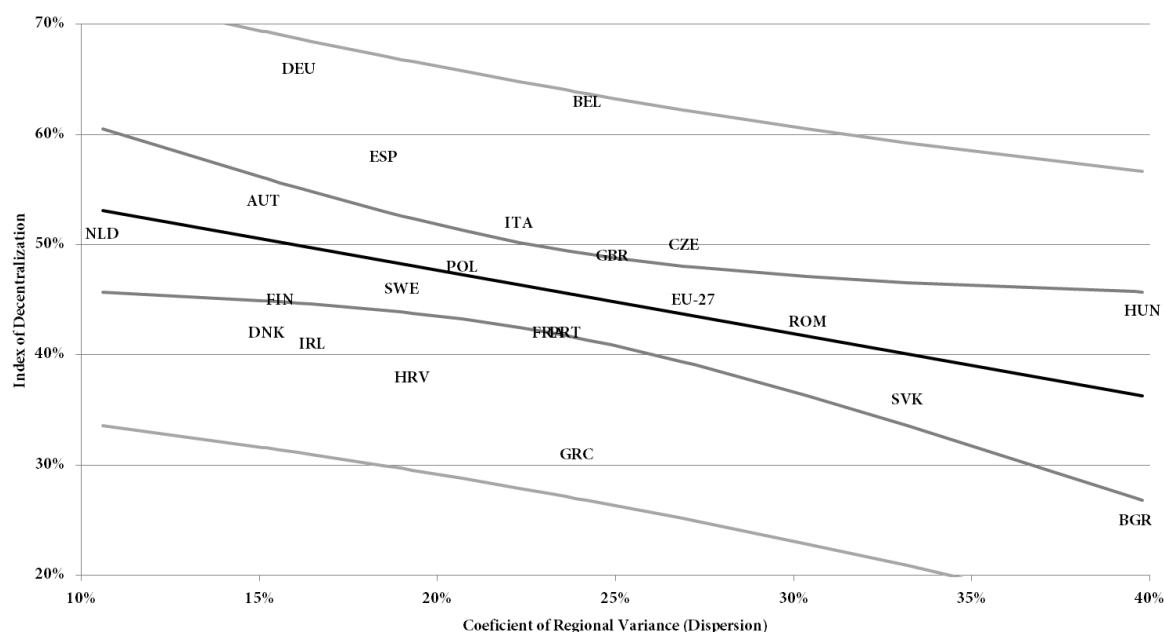
Source: our own construction using Statgraphics Centurion XVI on the basis of the data from EC (2011) and AER (2009)

Based on the values of indicators of decentralization and regional variance (dispersion) in 2009, a statistically significant association between decentralization and regional inequality was demonstrated in the selected sample of European economies, even though the correlation coefficient (-0.463601) indicates only weaker bond between the selected indicators. The mutual linear relationship is expressed by the equation:

Index of decentralization (09) = 0.592001 – 0.576236*Coefficient of dispersion (09)   (2)

From the presented equation, one can estimate that a 1% increase in the index of decentralization will be associated with a reduction in regional disparities (measured by the variance of the regional GDP per capita) by 0.5762 percentage points.

Conclusion

The basic argument in favour of decentralization is it improves the efficiency of the public sector, stimulates regional development, and promotes long-term economic growth. Negative effects of decentralization are represented by the additional costs of decentralization of power, frustration from income redistribution, achieving minor savings from scale in providing public goods, and the additional costs associated with collecting local taxes. This paper, however, in its empirical part confirmed the prevailing positive effect of decentralization on the development of regional disparities.

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