

**DANUTA KOŁODZIEJCZYK**

Institute of Agricultural and Food Economics  
– National Research Institute in Warsaw

## **A TERRITORIAL PERSPECTIVE ON THE ECONOMIC AND SOCIAL COHESION OF COMMUNES IN POLAND**

**Abstract:** This study presents a four-stage scale of territorial and socio-economic cohesion of communes in Poland. For the calculation of both cohesion ranges, Hellwig's development measure was used. The highest degree of socio-economic and territorial cohesion was noted in municipal communes and the lowest in rural communes. In 66% of the communes surveyed, a link between two ranges of cohesion was noticed. The results obtained confirmed the significant impact of territorial cohesion on the evolution of socio-economic cohesion with the correlation coefficient at 0.52.

**Key words:** Socio-economic cohesion, territorial cohesion, types of communes (municipal, municipal-rural, rural).

### **Introduction**

For many years there has been a discussion on the economic and social cohesion of regions in the European Union and their considerable variation has always been highlighted. A territorial perspective on economic and social cohesion has already been stressed in Article 2 of the Treaty of Rome, creating the EEC in 1957 [*The Treaty...* 1957, p. 950]. It states that the community should develop harmoniously in order to strengthen its economic and social cohesion. Similar provisions were continued in other legislation (*i.a.* the Single European Act and other adopted Treaties). An objective of the Union policy "social and economic cohesion" was introduced in the first package by Delors in the 1980s [*Report...* 1987]. Since then, the cohesion policy has been programmed in the long term ; its implementation brings many positive outcomes, such as infrastructure development, job creation, environmental improvement, *etc.*

What was crucial for European cohesion policy was the provision of the Treaty of Lisbon, which added territorial cohesion to economic and social cohesion<sup>1</sup>. It stressed that the achievement of territorial cohesion should be implemented at all levels: European, national, regional and local, with due regard to the subsidiarity principle and the main objective of cohesion policy. In Poland, more interest in cohesion policy was seen with the country's accession to the Union, when Poland could benefit from cohesion policy instruments aimed at enhancing economic, social and territorial cohesion.

The inclusion of the territorial dimension within cohesion policy was due to the uneven socio-economic development of individual areas. The aim of the cohesion policy is not bridging geographical differences, but providing such mechanisms through which changes can be made in the quality of the economic, social, or infrastructural base. The success of cohesion policy depends on supporting territorial development based on endogenous potential and strengthening the Community dimension (supporting pro-development projects which are significant on the local scale and lead to the integration of territories).

Recent studies by Stanny [2013] show that Poland still has clear differences in socio-economic development between urban or central areas and rural areas. To ensure territorial development based on the endogenous potential, it is necessary to look at the variation of endogenous potentials as major factors for future socio-economic development, i.e. spatial planning (territorial cohesion). At the local level this concerns mainly the right equipment in infrastructure, as well as strengthening human, social or material capital. In this context, the idea of territorial cohesion is an integrated approach in achieving economic and social benefits.

There are different ways to define territorial cohesion and the methods of its measurement [*Communication...* 2008; Schon 2005, pp. 387-413]. Generally, it is treated as a complement and reinforcement of economic and social cohesion. In this study – as stated previously – territorial cohesion is closely connected with the level of development of the most important factors in spatial planning for sustainable development in the socio-economic dimension.

The main objective of the study is to assess the degree of socio-economic and territorial cohesion in Poland and present the relationship between territorial cohesion and socio-economic cohesion. Reference to territorial cohesion (the demographic and infrastructural sphere of local development) will allow for identification of the structures which constitute a serious barrier to the socio-economic development of certain areas. The following sub-objectives were set:

- determining the level of socio-economic cohesion of communes,
- determining the level of territorial cohesion of communes,
- presenting territorial cohesion in the context of economic and social cohesion.

---

<sup>1</sup> Protocol No. 28 on economic, social and territorial cohesion of the Treaty of Lisbon.

The phenomena analyzed refer to the years 2005 and 2012, with particular reference to 2012. Quantification of phenomena is based on the Local Data Bank by GUS. The data concerned 2479 communes, of which 306 were municipal communes, 584 municipal-rural, and 1580 rural.

### **1. Applied research methodology for the socio-economic and territorial cohesion of communes**

The complexity of the issue of cohesion stems primarily from its multi-dimensionality and interdisciplinarity. At the same time, we need to deal with the co-existence of different definitions [including Ryszkiewicz 2013 p. 22, Jasiński 2012, pp. 11-12, Kurzynowski 2010, p. 19]. In all the definitions presented, cohesion is considered in the context of the degree of inequality and there are three aspects of cohesion: economic, social and territorial.

Cohesion research can be conducted for counties (inter-country cohesion), as well as for smaller statistical areas (intra-country). Intra-country cohesion may refer to different sizes of statistical units: NUTS 2, NUTS 3, NUTS 4 and NUTS 5, the most common analyses being carried out for the (NUTS 2) regions. Disparities between (NUTS 5) communes in economic and social development are also increasingly becoming a research issue, both from the empirical and theoretical perspective.

In this study, the local dimension of cohesion is considered. As presented in the theory of economic development [Blakley, Bradshaw 2002], a prerequisite for economic development is to create the right environment to stimulate new types of activities. In other words, it needs to occur, first of all, by improving the conditions for growth and employment through increased investment in human and physical capital. By placing great emphasis on the presentation of a “development base”, this work attempts to offer a holistic view of local structures affecting the present and future socio-economic development. Attention is therefore drawn to territorial cohesion and economic and social cohesion. This is described in two time periods: the years 2005 and 2012. This not only helped to evaluate cohesion, but also to determine whether there is a process of socio-economic and territorial cohesion among communes in Poland.

Due to the fact that the economic and social cohesion of communes is linked to their socio-economic development, which to a large extent is due to the condition of the economy, the financial situation of communes as well as the labour market, the description is based on the following characteristics:

- number of operators per 10,000 working-age people,
- number employed per 10 thousand working-age people,
- own income per capita in communes.

The socio-economic cohesion indicator calculated on the basis of these features is not equivalent to the general economic level. It only shows the development generated by non-agricultural activities.

However, the analysis of the territorial cohesion of communes was conducted from the perspective of technical infrastructure and human resources development. It was assumed that good development indicators from the above perspectives are a condition for territorial cohesion in communes and contribute to the growth of socio-economic cohesion.

To determine the territorial cohesion of communes the following characteristics are used:

- proportion of the commune population out of the total number of the population under investigation,
- population density in communes
- proportion of population at pre-working age in the total commune populations
- natural growth in communes of proportion of working-age population in the total communes population (over a 3-year period) per 1000 persons,
- migration balance in communes (over a 3-year period) per 1000 inhabitants,
- percentage of the population using gas,
- percentage of the population using sewer systems,
- percentage of the population using waterworks,

In order to identify the synthetic indicator for socio-economic and territorial cohesion Hellwig's development measure (Hellwig 1968) was used allowing us to bring a large number of variables investigated into one synthetic indicator.

In view of this fact, most synthetic results are comparable over time and the values obtained are presented in relation to the average for the investigated area (assumed to be 100). The idea was to apply the method given in such a way as to obtain not only results, but so that it could also produce an objective assessment of the phenomenon studied over time.

## **2. Analysis of results**

### **2.1. Assessment of the socio-economic and territorial cohesion at the local level**

Comparing the status of communes in 2005 and 2012 in terms of the level of socio-economic and territorial cohesion in relation to the average for the areas under investigation, no significant variation was found. These differences are shown in Tables 1 and 2.

- from Table 1 it follows that, on a national scale, large differences in the level of economic and social cohesion and territorial cohesion are seen between the different types of communes; municipal communes reached the highest indicators

in comparison with municipal-rural communes and rural communes, both in 2005 and 2012. However, the relations between the commune with the highest level of cohesion (compared to the average for the areas under investigation) and the commune with the lowest cohesion in both these areas for each type of commune in 2012 were less favourable than in 2005. There was no “catch-up effect” as described in the subject matter literature [Williamson 1965]. The catch-up effect is achieved through a higher growth rate in poorer areas than in richer areas. According to Williamson, there is an optimal point of regional inequalities, which is focused in the beginning on the development of the strongest centres, initially causing them to increase. Only in the longer term, owing to diffusion and polarization, does the development of central settlements entail the development of the whole region, leading to a reduction in disparities.

Table 1

Indicators of socio-economic and territorial cohesion  
in the various types of communes in Poland

Type and size of commune	Cohesion indicators			
	average	change 2012/2005	variation indicator	change 2012/2005
<b>level of economic and social cohesion</b>				
municipal-rural communes				
< 5	111.2	108.3	76.0	279.0
5 – 7.5	94.8	101.0	26.3	75.5
7.5 – 15	100.3	97.9	24.4	118.0
15 – 30	121.5	100.9	31.3	125.5
> 30	137.6	101.0	14.0	98.7
rural communes				
< 2.5	85.0	96.2	31.0	116.3
2.5 – 5	80.4	92.7	31.6	33.0
5 – 10	86.7	101.4	72.4	261.8
10 – 15	94.9	98.8	28.5	88.8
> 15	121.3	114.9	51.0	108.4
municipal communes				
< 10	144,7	108,3	58,1	170,3
10 – 20	141,5	100,5	18,6	94,6
20 – 50	146,0	99,3	17,0	110,9
50 – 100	147,2	101,0	12,6	113,2
> 100	183,5	105,3	18,0	108,1

Type and size of commune	Cohesion indicators			
	average	change 2012/2005	variation indicator	change 2012/2005
<b>level of territorial cohesion</b>				
municipal-rural communes				
< 5	80.3	96.8	25.1	52.6
5 – 7.5	87.0	97.4	15.3	41.1
7.5 - 15	97.5	100.1	10.9	24.7
15 – 30	111.1	99.7	9.2	38.8
> 30	135.4	100.3	10.4	16.9
rural communes				
< 2.5	59.3	86.2	67.0	127.7
2.5 – 5	77.0	98.1	24.2	29.6
5 – 10	88.6	101.3	16.1	69.0
10 – 15	103.0	103.4	10.1	43.3
> 15	116.5	105.5	10.0	14.8
municipal communes				
< 10	95.7	97.2	12.9	32.0
10 – 20	120.3	97.2	11.2	24.4
20 – 50	143.6	97.2	11.3	30.4
50 – 100	179.4	97.2	9.4	34.8
> 100	358.7	97.7	63.0	176.9
Poland	100.0	100.0	50.0	140.1

Source: Local Data Bank – own calculations (Tabs. 1-5).

Table 2

Selected indicators for the level of socio-economic and territorial cohesion  
in the various types of communes in Poland

Description	2005			2012		
	municipal	municipal-rural	rural	municipal	municipal - rural	rural
economic and social cohesion						
Average	147.0	107.8	87.9	149.7	108.3	87.1
Mean	144.5	102.5	79.9	144.6	101.8	78.7
Minimum	66.4	61.3	54.3	75.4	57.7	48.3
Maximum	287.6	358.8	1888.1	657.8	491.7	1618.1
Standard deviation	29.3	29.2	53.4	42.7	35.3	49.4
Variation variable	19.9	27.0	60.8	28.5	32.6	56.7

Description	2005			2012		
	municipal	municipal-rural	rural	municipal	municipal - rural	rural
territorial cohesion						
Average	167.6	102.0	86.2	163.7	101.4	87.1
Mean	141.9	101.8	87.4	138.6	101.9	89.0
Minimum	74.3	15.8	-24.2	73.6	1.0	-97.2
Maximum	1358.1	162.9	130.5	1377.0	186.1	141.2
Standard deviation	113.5	16.0	15.5	112.8	17.7	19.7
Variation indicator	67.7	15.7	18.0	68.9	17.4	22.6

The data from Table 1 show that catching up with the level of socio-economic and territorial development of richer municipalities by poorer is very slow; what is more, this happens alongside an increase in inequality in some communes during the investigated period. In analyzing these processes, in the case of communes in Poland, persistent inequalities in the level of socio-economic and territorial cohesion can be explained by the fact that this is a temporary phenomenon – a higher level of socio-economic and territorial cohesion will only be seen at the higher stages of development and by the fact that in the investigated period the richer communes used the funds for regional (cohesion) policy. These communes had a better financial situation and it was easier for them to accept one of the key principles of cohesion policy – “the principle of additionality”. In these areas, there has been a process of convergence rather than divergence. It may be that when cohesion policy is extended within the territorial dimension, where greater attention is paid to the creation of opportunities for levelling disparities in the development within voivodeships, the convergence process will occur faster. It was assumed that the determinants of the practical evolution of cohesion policy are not only the objectives declared, but also effective tools for their implementation.

The current socio-economic and territorial cohesion of communes in Poland is also affected by a higher level of development in communes, the inclusion of which significantly increased the level of inequality between all communes in Poland.

The significant differences in levels of socio-economic and territorial cohesion between the different types of communes are noticeable based on the variation indicator, which is much higher among rural and municipal-rural areas than urban areas, as well as differences between the mean and average (Table 2). For socio-economic cohesion in 2005 in the communes surveyed, 49.4% of municipal communes had a mean value below the average, the municipal-rural 48.9% and rural communes 49.4%; the corresponding values in 2012 were 47.7%, 49.8% and 51.2%; However, in the case of territorial cohesion, analogous values in 2005 were 50.4%, 49.6%, and

50.1%, and, in 2012, 50.3%, 50.1%, and 50.4%. If the mean and average are at a similar level, this means little variation.

It was noted that the indicators of the level of socio-economic and territorial cohesion had higher values with the increase in the number of commune inhabitants (the exception being the smallest municipal-rural communes below 5,000 inhabitants in the case of economic and social cohesion – *i.e.* these had higher values). When the size of the commune is taken into account and expressed in the number of inhabitants, much higher levels of cohesion are seen in municipal communes than in municipal-rural or rural (Table 1). Although we can discern a continued similar level of cohesion and low growth in the variability indicator in each type of commune between 2005 and 2012, it cannot be said that this is the case within the different types of communes according to the number of inhabitants. This can be interpreted on the basis of certain regional and local development theories, including the theory of growth poles and the attraction model. It seems that the region is not developing economically in the same way throughout the area. Economic development is correlated primarily with the population and infrastructure potential. We need to add here that communes with a larger population tend to have a significantly better demographic and infrastructural makeup.

A further point of analysis was a comparison of the classification of communes in terms of the level of socio-economic and territorial cohesion. We base this on the assumption that territorial cohesion is an important factor for socio-economic development, and this is seen through a high correlation coefficient between territorial cohesion and socio-economic cohesion ( $r=0.52$ ). In terms of the level of socio-economic and territorial cohesion, 4 groups of communes have been identified:

- low level  $x_i < \bar{x} - \delta_x$
- average-low level  $\bar{x} > x_i \geq \bar{x} - \delta_x$
- high level  $\bar{x} + \delta_x > x_i \geq \bar{x}$
- very high level  $x_i \geq \bar{x} + \delta_x$
- $\bar{x}$  - average,  $\delta_x$  - standard deviation

Spatial differentiation in terms of the level of socio-economic and territorial cohesion is shown in Figs. 1 and 2. When analysing these figures, we can conclude that the variable which signified considerably diversification in the level of cohesion in both areas was the location of communes in the region.

When comparing the classification of communes in terms of socio-economic and territorial cohesion, it can be concluded that in 1647 communes (66.4%), there is a clear correlation between two ranges of cohesion (Table 3). The value of the correlation coefficient is at  $r=0.79$  (for  $p < 0.001$ ). Very high economic and social cohesion and territorial cohesion is seen only in 61 communes, of which 96.7% concerns the



population identified and 19.3% all communes in Poland. The largest group (1187) are communes with a low average cohesion in both ranges analysed. There are 1004 rural communes (84.6% of the group of communes identified and 63.5% of their total number). There are no communes with low levels of cohesion in both ranges. However, in the group of medium-high level (399 communes), the best represented are municipal-rural – 31.6% in relation to their total number in Poland.



Figure 1. Diversity of territorial cohesion in Poland

Source: Local Data Bank – own calculations (Figs 1 and 2).

The other communes are characterized by a lack of consistency between the cohesion ranges analyzed. They are distinguished by either very high territorial cohesion or high or average socio-economic cohesion, or *vice versa*. This is disadvantageous for the evolution of development in communes, because the limited cohesion in one range reduces the possibilities of using the potential in another. Creating a strong impetus to socio-economic development in communes requires improving the quality of human resources and capital strengthening of space by supporting the development of infrastructural equipment.

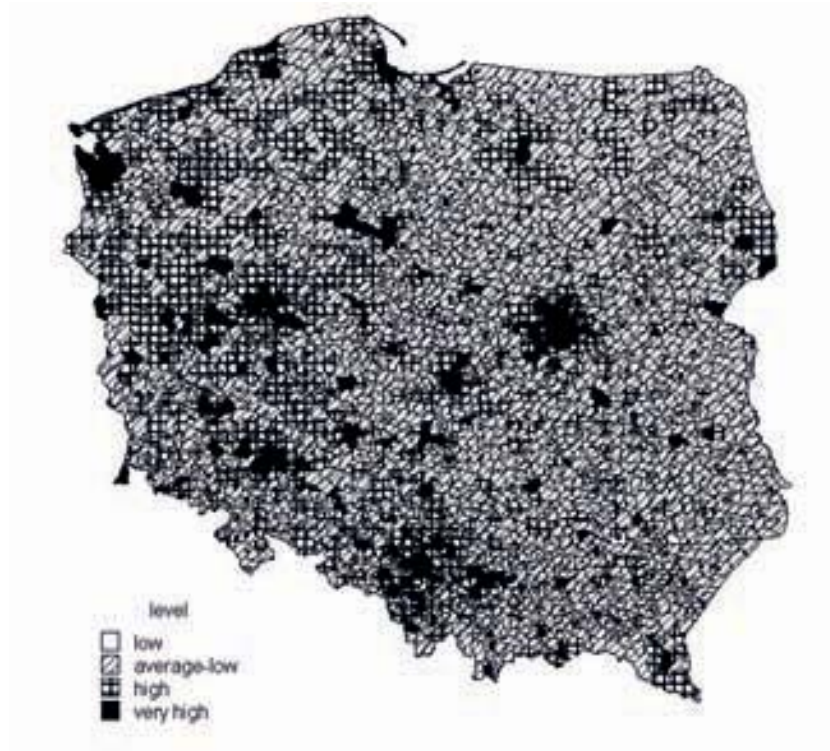


Figure 2. Diversity of socio-economic cohesion in Poland

Table 3

## Socio-economic cohesion and territorial cohesion of communes

	Level	Type of communes	Territorial cohesion				Together
			low	average-low	high	very high	
Socio-economic cohesion	low			3	1		4
		rural		3	1		4
	average-low		48	<b>1187</b>	329		1564
		municipal		6	7		13
		rural	46	1004	221		1271
		municipal-rural	2	177	101		280
	high		4	211	<b>399</b>	61	675
		municipal		17	89	59	165
		rural	3	109	125		237
		municipal-rural	1	85	185	2	273

	Level	Type of communes	Territorial cohesion				Together
			low	average-low	high	very high	
	very high		3	38	134	<b>61</b>	236
		municipal		13	56	59	128
		rural	3	20	36		59
		municipal-rural		5	42	2	49
	together		55	1439	863	122	2479

## 2.2. Assessment of the socio-economic and territorial cohesion of communes in the regions

An assessment of socio-economic and territorial cohesion was conducted in the various types of communes in voivodeships. Data from Tables 4 and 5 show that the highest level of socio-economic cohesion and territorial cohesion is noted in Western voivodeships (Wielkopolskie, Dolnośląskie and Śląskie) and the lowest in Lubelskie and Podlaskie. Also, regional differences occur and increase in the various types of communes. Inequalities between these communes significantly increased in the regions in terms of economic and social cohesion, and decreased in terms of territorial cohesion. In the case of socio-economic cohesion the spread between the communes with the highest and the lowest level increased in 2012, when compared to 2005 –in municipal communes by 8.1%, in municipal-rural by about 2.2% and in rural by 14.4%. During this period, there was also a decrease in the level of cohesion in relation to the average in most regions; for example, in the case of municipal-rural communes there was a decline in all regions, in municipal communes in 8 regions and in rural communes in 5 regions. A different situation occurred in terms of the level of territorial cohesion. Here, the spread decreased by 3.1% in municipal communes, in municipal-rural communes by 7.6% and in rural by 11.1%. The varied degree of reduction of the spread in each type of commune may be a consequence of concentrated activities – mainly in infrastructure – in some types of communes (e.g. rural). In almost all regions, there was an increase in the level of territorial cohesion in rural communes. Perhaps this translated into a greater degree of reduction of the spread in the level of territorial cohesion.

Meanwhile, an analysis of the coefficient indicator in different types of communes in the regions confirms the earlier finding that less variation in socio-economic cohesion occurs in municipal communes and municipal-rural communes than in rural ones. From the point of view of cohesion processes, what is interesting is not so much the level of inequalities, but their dynamics. A small decrease in variation measured by a variation indicator for the years 2005-2012 was noted only in the case of socio-economic cohesion among rural communes. At the same time, within the regions there are stronger polarized processes between the various types of communes, as well as among the different types of communes in the region. Investigating inequalities

Table 4  
Levels and variation in socio-economic cohesion in the various types of communes according to voivodeships  
in 2005 and 2012

Voivodeship	Economic and social cohesion 2012				Change 2012/2005				Variation indicator 2012				Change 2012/2005			
	rural		municipal - rural		rural		municipal - rural		rural		municipal - rural		rural		municipal - rural	
	municipal	municipal - rural	municipal	municipal - rural	municipal	municipal - rural	municipal	municipal - rural	municipal	municipal - rural	municipal	municipal - rural	municipal	municipal - rural	municipal	municipal - rural
Dolnośląskie	143.0	102.2	115.2	102.8	103.0	100.0	26.2	40.9	46.6	118.4	161.3	131.0	103.9	110.5	119.7	104.4
Kujawsko-Pomorskie	139.7	87.4	100.7	100.5	98.8	99.4	18.9	27.1	21.5	118.7	71.1	103.9	110.5	119.7	104.4	104.4
Lubelskie	133.6	70.7	90.8	98.3	94.5	96.1	17.3	41.9	22.2	136.5	141.2	110.5	119.7	104.4	104.4	104.4
Lubuskie	145.6	95.4	115.1	98.4	100.0	97.7	20.1	20.5	21.6	103.8	128.2	119.7	104.4	104.4	104.4	104.4
Łódzkie	141.4	97.4	115.3	101.0	97.6	104.7	15.2	138.2	31.6	135.3	88.3	138.9	104.4	104.4	104.4	104.4
Małopolskie	168.3	79.6	107.7	104.2	102.7	97.7	15.9	25.5	23.5	84.0	135.4	104.4	104.4	104.4	104.4	104.4
Mazowieckie	153.6	82.2	118.5	101.1	97.9	101.8	22.8	37.1	33.5	104.3	121.7	112.4	104.4	104.4	104.4	104.4
Opolskie	173.3	90.3	107.9	104.1	103.9	98.1	21.6	27.0	18.1	111.7	111.8	94.0	104.4	104.4	104.4	104.4
Podkarpackie	157.5	75.0	89.2	100.0	96.4	95.9	18.8	24.5	22.2	102.2	111.4	150.0	104.4	104.4	104.4	104.4
Podlaskie	130.4	79.8	86.5	99.4	100.2	99.9	16.1	34.0	19.7	170.7	111.4	110.9	104.4	104.4	104.4	104.4
Pomorskie	175.0	95.8	103.2	110.4	101.5	101.6	61.4	26.6	13.6	254.2	116.5	92.1	104.4	104.4	104.4	104.4
Śląskie	149.7	103.3	109.3	99.9	100.2	99.9	21.2	31.0	19.5	109.8	95.2	105.6	104.4	104.4	104.4	104.4
Świętokrzyskie	162.3	73.7	100.4	105.2	98.2	97.9	19.4	28.8	31.0	124.3	108.8	118.9	104.4	104.4	104.4	104.4
Warmińsko-Mazurskie	136.5	83.9	98.3	97.8	97.4	98.9	16.3	24.4	21.2	115.2	115.5	135.3	104.4	104.4	104.4	104.4
Wielkopolskie	156.0	100.6	114.9	102.5	101.3	100.7	19.9	40.3	25.9	101.2	106.4	108.7	104.4	104.4	104.4	104.4
Zachodniopomorskie	148.0	108.1	120.6	100.6	100.7	104.9	13.3	43.8	49.8	96.2	80.8	132.1	104.4	104.4	104.4	104.4
Investigated area	149.7	87.1	108.3	101.6	99.2	99.8	28.6	56.7	32.6	147.2	93.7	122.0	104.4	104.4	104.4	104.4

Table 5  
Levels and variation in territorial cohesion in the various types of communes according to voivodeships in 2005 and 2012

Voivodeship	Territorial cohesion 2012			Change 2012/2005			Variation indicator 2012			Change 2012/2005		
	municipal	rural	municipal - rural	municipal	rural	municipal - rural	municipal	rural	municipal - rural	municipal	rural	municipal - rural
Dolnośląskie	138.4	94.5	98.8	95.8	105.0	99.8	72.5	12.5	13.8	104.4	120.8	109.5
Kujawsko-Pomorskie	166.3	94.8	103.2	97.1	101.7	99.4	54.1	11.2	11.8	100.7	125.8	101.9
Lubelskie	150.2	72.6	87.1	96.2	96.6	94.4	49.1	24.7	20.0	102.6	138.3	109.6
Lubuskie	148.3	93.6	103.7	97.8	104.6	100.5	34.7	9.4	9.4	104.4	120.0	94.0
Łódzkie	174.9	75.5	92.7	95.4	99.4	98.3	80.8	15.4	16.5	97.4	116.1	105.2
Małopolskie	178.0	95.4	111.8	101.4	102.0	97.9	102.0	16.0	16.4	102.0	121.0	109.2
Mazowieckie	183.5	81.7	102.9	100.1	101.5	102.2	115.8	19.8	23.2	101.3	126.7	115.9
Opolskie	174.3	85.1	99.1	94.7	102.2	96.9	20.6	11.6	13.4	107.6	120.9	91.8
Podkarpackie	150.3	95.4	105.5	97.2	100.4	100.4	28.8	13.3	9.8	103.6	109.4	94.4
Podlaskie	150.6	59.4	78.2	97.4	90.0	94.6	54.5	61.0	28.9	104.1	165.7	121.2
Pomorskie	166.6	105.7	114.6	99.2	104.4	101.3	54.5	9.8	9.2	99.8	105.0	118.3
Śląskie	166.9	92.6	97.3	97.6	102.3	100.6	42.5	17.1	25.3	96.2	112.0	106.4
Świętokrzyskie	174.5	75.8	88.8	94.1	96.9	96.5	40.9	24.3	19.6	104.9	125.1	117.8
Warmińsko-Mazurskie	160.7	95.8	101.9	97.7	101.8	99.2	28.0	9.6	10.7	103.3	126.3	103.9
Wielkopolskie	174.9	100.0	108.9	97.7	103.2	101.8	62.9	12.0	13.1	99.1	129.3	107.5
Zachodniopomorskie	171.9	100.5	102.0	96.9	102.8	99.1	60.1	9.0	12.1	103.5	126.4	100.0
Investigated area	163.7	87.1	101.4	97.7	101.0	99.4	69.0	22.6	17.4	101.8	125.7	111.0

according to types of commune in different voivodeships indicates that in most voivodeships an increase in inequalities was reported both in terms of economic and social cohesion and territorial cohesion. In the case of economic and social cohesion, the highest increase in inequality was in the communes in the Pomorskie Voivodeship – the variability indicator grew by 154%, in municipal-rural communes in the Podkarpackie by 50%, and in rural communes in the Lubelskie by 48%; However, the highest decrease in inequalities was in the municipal communes in the Małopolskie Voivodeship – by 15.9%, and in municipal-rural communes in the Pomorskie by 7.5%. Additionally, the highest increase in territorial disparities was noted in rural communes in the Podlaskie – by 60%, in municipal-rural communes in the Podlaskie by 20.9% and in municipal communes in the Opolskie by 7.5%. The highest decrease in inequalities was in municipal communes in the Lubuskie by 7.5% and in municipal-rural communes in the Opolskie by 8.3%. Despite the increase in the level of territorial cohesion in each voivodeship in rural communes, no decline in inequalities was noted.

Generally, we cannot discern any catching-up effect (with communes with higher levels of development) by communes with a lower level, which may indicate that at the local scale the effect reaches socio-economic and territorial cohesion too slowly. Based on the data from Tables 1, 2, 4, and 5 we can partially confirm this view by analyzing, *i.a.*, the pace of change in territorial and socio-economic development, which remained at a relatively low level in the years 2005-2012 and revealed ever deeper or even advancing variation at the local level. This is an especially worrying symptom for a country that is a beneficiary of a cohesion policy, from which funds are used to reduce differences between regions and communes.

## Conclusions

From the above considerations, it follows that:

- There are clear differences in terms of the level of socio-economic and territorial cohesion in three types of communes: municipal, municipal-rural and rural communes. Municipal and municipal-rural communes showed a higher level than rural communes in both periods analysed.
- The increasing values of variation indicators in both ranges of cohesion suggest that, from the point of view of characteristics used for analysis between 2005 and 2012, there was an increase in differentiation between types of communes, and also between types of communes within the voivodeships. Increasing variation means a reduced degree of local cohesion,
- Only 66.4% of communes in 2012 showed consistency in both ranges analysed; this was mainly a group of communes with an average low and medium high level. In this group, municipal communes were only 9.3% and 49.8% of the total number of municipal communes; analogous indicators in the case of municipal-rural communes amounted to 22.1% and 61.7% and in rural communes to 68.2% and 71.1%.

- In terms of territorial cohesion, 39.7% of communes in 2012 were in the group of communes with a very high and high level, and in terms of socio-economic cohesion the analogous indicator amounted to 36.7%. When comparing this to 2005, it can be concluded that a larger shift to this group of communes occurred in territorial cohesion. In this light, it can be concluded that there is heterogeneity of local cohesion improvement processes.
- More than 70% of communes displaying cohesion at a very high and high level in both ranges are located in the western voivodeships and around major cities.
- The mathematical and statistical results obtained (a high correlation coefficient) confirm the assumption made about the significant impact of territorial cohesion on the evolution of economic and social cohesion.
- Implementation of the diffusion/ polarization model in Poland risks deepening differences in terms of socio-economic and territorial cohesion.

The conducted analysis confirms that the group of communes identified on the scale of the level of socio-economic and territorial cohesion requires a separate communes cohesion policy, which would create conditions for making better use of existing and potential local resources in accordance with the strategic objectives for the development of Member States and the European Union. The idea is that the increase in competitiveness of the wealthy communes does not impact on the deterioration of the socio-economic situation of the poorer ones. Rural communes are affected more in this respect. In the case of areas with an average degree of cohesion, economic changes must be stronger than demographic changes for us to notice any quality changes in demographic processes. It has been observed that areas with a low level of cohesion are facing a large threat because of structural and resource-based underinvestment. Only a few local governments can afford infrastructural investments, which would become an important stimulus in attracting new businesses.

It is important therefore to increase funding and create the conditions to raise off-budget funds. Meanwhile, the possibility of obtaining those funds is limited by, inter alia, the act on public finances, defining the size of possible debt for individual territorial units. Thus some communes are deprived of opportunities to obtain financial resources for funding projects. The economic weakness of the communes is the most common cause of imbalance between endogenic and exogenic factors in socio-economic development.

Spatial observation of socio-economic transformation in recent years leads one to think of a lack of cohesion policy, which would enable the use of existing resources and at the same time would be a factor in compensating for development opportunities.

Only appropriately structured mutual links between socio-economic and territorial cohesion can ensure consistency at the local level (sustainable development) that would satisfy both the society and the operators carrying out their activities there.

## References

- Blakely E. J., Bradshaw T. K., 2002, *Planning Local Economic Development. Theory and Practice*. Third Edition, Sage Publications, Inc., Thousand Oaks (CA).
- Communication from the Commission to the Council, the European Parliament, the Committee of the Regions and the European Economic and Social Committee, "Green paper on Territorial Cohesion. Turning territorial diversity into strength"* [SEC(2008) 2550], Brussels, 6.10.2008.
- Hellwig Z., 1968, *Zastosowanie metody taksonomicznej do typologii podziału kraju ze względu na poziom ich rozwoju oraz zasoby i strukturę wykwalifikowanych kadr*: Przegląd Statystyczny, Vol.15, Warsaw.
- Jasiński L. J., 2012, *Spójność ekonomiczna i społeczna regionów państw Unii Europejskiej*. Oficyna Wydawnicza Politechniki Warszawskiej, Warsaw.
- Kurzynowski A., 2010, *Spójność na poziomie lokalnym. Teoria i doświadczenia*, [in:] *Spójność społeczna na poziomie lokalnym*, L. K.Gilejko, B. Błaszczuk (Eds.). Vol. V, Pułtusk.
- Report by the Commission to the Council and Parliament on the financing of the Community budget COM(87) 101 final*, Brussels Commission of the European Communities, 28.02.1987.
- Ryszkiewicz A., 2013, *Od konwergencji do spójności i efektywności, Podstawy teoretyczne polityki spójności gospodarczej i terytorialnej Unii Europejskiej*. Oficyna Wydawnicza SGH, Warsaw.
- Schon P., 2005, *Territorial Cohesion in Europe?*, "Planning Theory & Practice", Vol. 6, No. 3, September, pp. 387-413.
- Stanny M., 2013, *Przestrzenne zróżnicowanie rozwoju obszarów wiejskich w Polsce*. IRWiR PAN, Warsaw.
- Williamson J. G., 1965, *Regional Inequality and the Process of National Development: a Description of the Patterns*. "Economic Development and Cultural Change", Vol.13, pp. 1-84.
- The Treaty Establishing the European Economic Community*, Rome, "A Collection of Documents", 1957, No. 5, p. 950.