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ECONOMIC COHERENCY OF POLISH REGIONAL SPACES

1. The coherency of regional spaces

Discrepancies in the level of development between given countries are the key problems of the modern world. Non-linear mechanisms of economic development neither lead to changes in these regularities nor can be used to make up for those differences. These are non-linear regularities of development that make rich people richer and poor people poorer. The rules of worldwide political, economic and social order can be seen in great discrepancies of regional diversity. We may notice development gaps within a given region.

A region as a territorial system is characterised by a given spatial content and the arrangement of components creating this system. Between the components of the system there exist set connections. The closer ones, which are usually stronger create a region, those further and untied ones, create the surrounding. However, regions as systems of the same group differ in terms of quality and quantity. Differences in quantity are inherent in the components creating a given region and differences in quality can be observed in the connections between those components and relationship of a region with its surrounding. Thus, regional differences result not only from different levels of potential and resources but also, or perhaps most of all, from networks of internal and external connections of these resources.

Components and the network of connections have a totally different rank of spatial occurrence. This internal conformability of a spatial occurrence will be called coherency. Income, the standard of life of the inhabitants, initiative, the unemployment rate or clients' behaviour may be the components determining the economic coherency But these can also be communication networks or settlement systems which centralise different production forms and services. A system of connections between those components determines a degree of susceptibility of

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a region to internal transformations and changes in a local and global surrounding. Susceptibility, in turn, generates economic development paths. Therefore, it is possible to submit a proposition that economic coherency of regional spaces is a basis for the ability of a region to attain lasting and balanced effects of the economic development.

An internal concordance of the elements forming a given system forejudges a spatial coherency of a system. A univocal affiliation to a given group can be called an exact coherency. This would be possible for a region, as a subject of an analysis, if regional spaces had or hadn't given components, structures or features of development. As far as regional systems, spatial boundaries of the ascribed components forming this space are not univocal. Regional spaces cannot be described precisely in a dichotomous way. In practice, we use imprecise quality definitions. This imprecise language of a quality description does not make it easier to categorise things univocally.

A postulate of an exact coherency for regional spaces is too strong. It is because a given region is a set of heterogeneous components and their group boundaries are not clear-cut. It is also important that differences between those components do not result from the operation of random factors In case of a classification of such corporate bodies, it is necessary to ascribe, even partly, components to different groups. It means that regional spaces as rare goods (Domański 2002), are characterised by a fuzzy coherency¹.

There is one question, are the voivodships as divisional units of a territory of a country, which on the strength of an act² determine a regional self-governmental coherency created to execute public administration functions, economically united regions? One must remember that the shape of voivodships, which these days are very often called regions, resulted from political frictions. The question of a regional coherency is justifiable as administrative boundaries determine regional spaces, but they do not decide on its coherency.

2. Dimensions of a regional coherency

A region as a spatial system is a structure of several overlapping and intermingling dimensions of functioning. Within set administrative boundaries those dimensions are characterised by a higher of lower degree of closure. This

¹ To describe a fuzzy regional coherency, we can use the notion of a fuzzy set, introduced in 1965 r. by L. A. Zadeh in his work *Fuzzy setts*, "Information and Control", 1965, nr 8. In Polish literature considerations on the theories of fuzzy classes can be found in works: Jajuga 1990; Ostasiewicz 1986.

² 5 June 1998 Act on Voivodship Self-government (Dz. U. Nr 91, pos. 576).

higher or lower degree of closure of different functioning dimensions o lets us claim that a region is characterised by a fuzzy coherency³. In case of many dimensions it is also very difficult to isolate a region from its surroundings precisely and the greater its coherency the greater the potency of influence exerted on the surrounding. Therefore, the regional coherency is determined by the following factors:

- administrative resulting from legal regulations introducing regional divisions of the country,
- colonisation determining places of population concentration, production, services and cultural activities,
- economic determining material an immaterial potential and resources of a given region and conditions for running business,
- natural referring to natural resources, raw materials or location constraints connected with a configuration of a region,
- social showing differences in people's wealth, standard of life and social activity,
- cultural resulting from the whole historical heritage, traditions and the inhabitants' material and spiritual outputs.

We find different definitions of a region in the thematic literature. Two attitudes are important in terms of an economic coherency (Domański 2002; Szymla 2000). The first is a junction attitude and it describes a region as an area connected with a big city. A chain of bonds between a junction and its surroundings is a very important component of a regional coherency. The capital of a region is a central junction and it gathers a lot of inhabitants in a relatively small area and concentrates different forms of activity: production, services and administration. The capital centralises communal and social infrastructure, business institutions, ready markets and offers work places. It also generates a chain of different economic, social and administrative connections and forms influence, dominance and demand zones. The extent of these zones depends on the centrality of the capital of the voivodship. The capital of a region plays various metropolitan functions, supplying services for the inhabitants of the whole region and not only for its immediate surroundings. As a centre of a higher rank functioning, it produces regional goods, which are not produced in other places in the region and which are consumed by the whole region.

Undoubtedly, a junction attitude describes a region in a dichotomous way. On the one hand, it separates the capital which plays an active role, on the other hand, it separates peripheral areas located outside this centre. In practice, only the capital of a region is the place of an intensive economic development and other regions of the voivodship are continually degraded socially and economically. However, this dichotomous division does not allow for a univocal

³ In many instances we may notice that statutory competence is fuzzy.

categorisation and placing a component in one of the two separate groups. On the one hand, the centrality of the capital creates difficulty in describing the size of demand zones and on the other hand, causes a constant "spread" of regional capitals.

A dominating position of the capital makes the development of a region homocentric. This bipolar model of a regional development creates development dangers to the coherency of the whole region. The centrality of the regional capital results not only from a huge concentration of potential, but also from the fact that major cities are always the centres in which social and economic transformations are more dynamic than in other parts of the region. Capitals are also junction regions of development and they react to all challenges and development chances in their surrounding most quickly.

The second attitude defines a region as a system of zones (univocal). In this attitude, a region is treated as a compact and univocal area, selected in terms of certain features which determine its profile. This specificity makes a region different from the surrounding; however, the feature which is the criterion of selection can have many variations. This zonal attitude emphasises that a region is a territorial system different from the surrounding areas as far as the level of regional development or a clear dominance of a given activity. However, R. Domański (2002, p. 23), claims that a specific activity, such as excavation of rare minerals or specialised processing is typical only of very few regions. Others, such as agricultural goods and food products are produced in all regions. An agricultural specialization, such as cultivation of hop, tobacco or sugar beets does not determine clear-cut outlines but rather fuzzy boundaries.

Thus, the zonal attitude regards resources or potentials typical of a given region as classification boundaries. It appears that regions separated on the basis of the same feature can have a different level of development. Z. Szymla (2000, p. 13) emphasises that zonal regions are homogeneous in terms of a selected feature of development but this homogeneity is not complete, especially in peripheral areas. And if it is not complete, it is economically fuzzy⁴. In practice, regions don't compete with one another for resources or potentials which are the basis for their selection but rather for the location of specific economic sectors, business centres, technological parks, airports, motorways and highways. Thus, in the zonal context, a system of economic, market and social connections between different economic zones is an important component of the coherency of a region. In modern economy, systems of connections form new mechanisms of regional functioning and determine a new meaning of boundaries and a regional coherency (Domański 2002).

In practice, an administrative dimension, that is a spatial system separated in order to play a public administrative role, correlates with a junction and zonal

⁴ A formal description of a fuzzy economic spaces can be found in Ponsard (ed.) 1992.

one. However, one must remember that administrative boundaries of voivodships were, in many instances, created as a result of political clashes. In an administrative dimension the boundaries of the classification of regions are univocal, but they do not forejudge the degree of economic coherency of regional spaces. Established administrative divisions can even lead to an artificial congestion of space or even distort an actual concentration of economic processes⁵.

3. Determiners of the economic coherency

Regional spaces create new conditions for running a business, living, working, learning, relaxing and even health care. The differentiation of possibilities results from a spatial distribution of regional resources and potentials as well as different forms of its application.

- The attributes of regional spaces determining its economic coherency are:
 resources and potentials, both material and immaterial, concentrated in the region. In terms of a regional coherency the level of spatial distribution is not important, what is important is a mode of distribution, assignment and application of these resources and potentials. Spatial distribution of resources and potentials affects a spatial exploitation of a region. This strategic model of a spatial coherency points to prospective urban and investment areas and communication networks. To increase a planning coherency it is necessary to integrate spatial planning on a regional level. It means that planning cannot be restricted to municipal units (gmins).
- Spatial and information access to regional resources and potentials. In order to unite a region, all these resources must be economically and socially available because the coherency of a closed space resolves itself into zero. Therefore, the accessibility is connected not only with the exchange of material resources and human ones but also information. If we want to strengthen the coherency the development of information technology and telecommunication, which guarantees that regions have access to information and connection with worldwide economy is very important. Spatial access results from attractiveness of a location an conditions necessary for developing any business. In spatial terms, the better the access, the smaller the distance.

⁵ In global terms we have a very good example, a merge of a strong city, such as the capital of the country, with a huge, but undeveloped areas to make mazowieckie voivodship a leader of different rank of a regional development in Poland. However, it does not mean that the region is highly coherency.

• Distance⁶ between regional resources and potentials. Even though the role of a distance and location factors is decreasing in modern global economy, it is still important for a regional coherency. Remoteness is very important for an economic integration (transportation costs), and it influences the intensity of transportation of goods, public transport or tourism. R. Domański (2002, p. 23) writes that "if the distance is too big, transportation may appear to be unprofitable and the regions located off the critical distance are not supplied with new goods". Existing and intended transportations routes, airports, harbours and terminals in the voivodship are very important for the economic coherency of the space. A well-developed system of transportation routes allows for a free movement of people, transmission of goods and services. Regions which are accessible make their resources available and make the access to their markets easier Important routes and transportation paths determine and condition directions of a transportation coherency and, as a result, an economic one.

Summing up, the power of economic coherency of regional spaces depends on a system of functional and spatial connections of mentioned determiners of coherency. A mechanism of connections determines the susceptibility of a region to changes, the ability to recover its balance and a possibility of self-organisation and stabilisation of new regional structures. Therefore, the mode of reacting to changes always results from the coherency of a regional system.

From all major principles of the equalisation of a regional development the policy of the European continent presented during the Conference of European Ministers for Adaptation of Territories (CEMAT) in Hanover in 2000 supporting territorial coherency was selected and it was stated that it should be implemented by⁷:

- · Balanced social and economic development of regions,
- Assisting development generated by urban functions and improving relations between cities and villages,
- Promoting equal access,
- · Extending access to knowledge and information,
- Protection and a rational use of natural resources as well as natural heritage
- Protection of cultural heritage as a component of development and coherency.

⁶We can also describe a regional coherency in terms of gravitational models, in which distance plays the key role. See: Zelias (red.) 1991.

⁷ The Conference of European Ministers for Adaptation of Teritories (CEMAT), Hanover, 7–8 September 2000, pp. 8–11.

4. Spatial regions of economic integration

Regional policy is aimed at increasing an economic integration of a region, mainly by reducing internal discrepancies of development and intensifying competitiveness, that is strengthening the coherency of a region with its surroundings. While examining an economic coherency, as a subject of our examination, we choose regional space in terms of selected features determining economic dimensions of this space. Such an attitude allows for locating spatial intensity of examined features. The intensity of adaptation of a regional space depends on:

- · the density of population in the region, and
- the area where business activities are conducted by the inhabitants of the region.

Differences in the intensity of adapting regional spaces can be shown in comparison to the density of population or the area. Density coefficient is indicators of the (concentration) intensity of business activities compared with the area. Descriptions, which relate to the number of people, are called saturation coefficients⁸.

The picture of a spatial diversity of different regions very often results from the established territorial divisions. After the administrative reform in 1999, we can distinguish three homogeneous areas of the economic integration in Polish spatial regions:

- the capital of a region
- other cities having the rights of an administrative district, which were the capitals of the voivodships until 1999,
- other areas of a regional space with weak municipal centres and even weaker rural areas

A spatial distribution of selected homogeneous regions is shown in Tab. 1.

Calculations indicate that regional capitals have a dominant position in regional spaces. Other cities with the right of an administrative district show a very high concentration of economic processes. The diversity of the percentage of the economic potential in regional spaces results from the density of population, the area of separated regions and the intensity of business. For example, in mazowieckie voivodship, Warsaw in the area of 1.39% concentrates approximately 31.75% of the population of the whole region, and 41.68% of total employed persons, 65.81% of national economy institutions, 44.73% of all firms which have the status of a firm or a company and 82.99% of companies with foreign capital. Rzeszów is the weakest capital, in terms of the share in the

⁸ Methods of analysing concentration, spatial distribution and spatial correlation location presented in give other possibilities.

regional economic potential. In comparison to the total potential of the region it has the smallest share of all regional capitals. The fact that the potential presented in the specification for kujawsko-pomorskie voivodship is a total of the shares of Bydgoszcz and Toruń and for lubuskie voivodship is a total of the potential of Gorzów Wielkopolski and Zielona Góra does not change the situation.

	Area	Popula- tion	Emplo- yed persons	Ent. re	Entities of the national economy recorded in REGON register				
Specification	total	total	total	total	natural person end civil companies	with foreign capital partici- pation			
	in % voivodship								
1	2	3	4	5	6	7			
Dolnośląskie – capital city	1.47	21.32	25.73	43.18	31.24	45.06			
Cities with powiat status	1.25	11.33	10.90	11.03	12.76	12.08			
Other spatial	97.28	67.35	63.37	45.79	56.00	42.86			
Kujawsko-pomorskie – capital city	1.61	28.04	30.66	42.83	38.64	56.15			
Cities with powiat status	0.80	10.75	9.68	11.68	13.17	10.40			
Other spatial	97.58	61.21	59.67	45.49	48.19	33.45			
Lubelskie – capital city	0.59	15.94	13.04	29.28	26.88	49.12			
Cities with powiat status	0.45	8.89	6.46	11.84	13.23	15.25			
Other spatial	98.96	75.17	80.50	58.88	59.88	35.63			
Lubuskie - capital city	0.97	23.95	30.41	39.26	33.16	36.50			
Cities with powiat status	x	х	x	x	x	x			
Other spatial	99.03	76.05	69.59	60.74	66.84	63.50			
Łódzkie – capital city	1.61	2796	24.93	43.51	37.66	65.33			
Cities with powiat status	0.55	4.93	4.59	5.49	5.96	4.01			
Other spatial	97.84	67.11	70.48	51.00	56.38	30.66			
Małopolskie – capital city	2.16	22.93	2397	42.29	34.49	67.26			
Cities with powiat status	0.85	6.38	7.07	7.55	6.85	6.01			
Other spatial	96.99	70.69	68.96	50.16	58.66	26.73			
Mazowieckie - capital city	1.39	31.75	41.68	65.81	44.73	82.99			
Cities with powiat status	0.73	9.75	7.41	6.59	9.89	2.29			
Other spatial	97.88	58.50	50.91	27.60	45.38	14.62			
Opolskie – capital city	1.02	11.89	16.00	27.23	21.82	38.46			
Cities with powiat status	x	х	x	x	x	x			
Other spatial	98.98	88.11	84.00	72.77	78.18	61.54			
Podkarpackie - capital city	0.30	7.63	8.71	17.24	13.10	24.29			
Cities with powiat status	0.97	7.90	7.46	12.67	14.16	16.25			
Other spatial	98.72	84.47	83.83	70.09	48.74	59.46			

Table 1. Spatial distribution of the economic potential of voivodships

Economic Coherency of Polish Regional Spaces

1	2	3	4	5	6	7
Podlaskie - capital city	0.45	23.38	19.12	34.69	37.10	49.86
Cities with powiat status	0.49	10.99	7.84	13.16	14.16	15.07
Other spatial	99.06	65.63	73.04	52.14	48.74	35.07
Pomorskie - capital city	1.43	20.77	25.22	38.73	25.37	36.69
Cities with powiat status	1.07	18.17	20.62	24.45	22.52	33.38
Other spatial	97.50	61.06	54.16	36.82	52.11	29.93
Śląskie – capital city	1.33	7.02	11.71	14.28	9.58	19.53
Cities with powiat status	13.19	51.75	48.14	52.73	52.65	52.86
Other spatial	85.47	41.22	40.15	32.99	37.77	27.61
Świętokrzyskie – capital city	0.93	15.95	14.34	32.80	27.07	45.09
Cities with powiat status	x	х	x	x	x	х
Other spatial	99.07	84.05	85.66	67.20	72.93	54.91
Warmińsko-mazurskie –	0.36	11.87	16.20	21.18	19.87	28.10
capital city						
Cities with powiat status	0.33	8.86	8.14	14.67	11.50	9.69
Other spatial	99.31	79.27	75.66	64.15	68.63	62.21
Wielkopolskie - capital city	0.88	17.11	20.64	36.33	25.60	48.28
Cities with powiat status	0.62	7.57	7.85	8.84	8.94	7.53
Other spatial	98.50	75.32	71.51	54.83	65.46	44.19
Zachodniopomorskie –	1.31	24.02	30.42	37.47	32.41	44.33
capital city						
Cities with powiat status	1.21	8.96	9.79	10.11	11.98	8.99
Other spatial	97.48	67.02	59.79	52.42	55.61	46.68

Source: Author's research on the basis of data from *Powiaty w Polsce*, GUS, Warszawa 2001.

It is well worth mentioning that in łódzkie voivodship there are small shares of the economic potential concentrated in the cities with the right of an administrative district. It means that in this voivodship, except for the city of Łódź, municipal settlement systems are very weak. Because of a very high level of urbanisation, śląskie voivodship is an exception. Generally speaking, we may notice that the stronger the capital of the voivodship, the less important other areas of the region. One must say that a high concentration of economic processes in the capital is sufficient enough for the global competitiveness to be strong. However, it does not mean that the economic coherency of the whole regional space is high.

The coefficients of the intensity of adaptation of regional spaces of selected areas in comparison to the density of population are shown in Tab. 2.

Calculations presented in Tab. 2 show that in terms of gross value of fixed assets on one inhabitant, except for the capitals of kujawsko-pomorskie, podkarpackie and podlaskie voivodships, other voivodships show greater intensity in regional capitals than in the cities with the right an administrative district. It is typical that regional spaces almost always correlate badly with the level of intensity in the major settlement centres.

	Sold	The value	Revenue of of pow	budgets iats	Expenditure of budgets of powiats	
Specification	of industry	of fixed assets	grand total	own	grand total	investment
			per cap	ita in zł.		
1	2	3	4	5	6	7
Dolnośląskie – capital city	11 983	34 548	2 348	1 349	2 558	528
Cities with powiat status	7618	17 906	2 005	835	2 040	278
Other spatial	11 230	17 065	514	36	526	38
Kujawsko-pomorskie –	15 626	24 001	1 698	809	1 917	334
capital city						
Cities with powiat status	14 095	22 446	1 857	696	1 961	301
Other spatial	7 765	8 733	453	33	452	20
Lubelskie – capital city	8 461	36 4 50	1717	752	1 746	216
Cities with powiat status	6 6 3 1	20 887	2 003	585	2 133	274
Other spatial	5 090	7 1 5 3	458	30	462	33
Lubuskie – capital city	13 505	29 763	2 091	934	2 1 3 0	450
Cities with powiat status	X	X	X	X	X	X
Other spatial	8 088	10 380	510	38	515	26
Lódzkie – capital city	10 562	24 049	1 947	1 022	2 056	261
Cities with powiat status	10 234	15 003	1 920	131	1 824	236
Other spatial	91/6	14 618	4/0	35	481	32
Matopolskie – capital city	16 051	40 574	1 /8/	901	2 004	365
Cities with powiat status	15 303	29 137	2070	709	2 143	221
Other spatial	/ 140	8 /01	397	32	399	34
Mazowieckie – capital city	30 095	95 178	347	54	358	2
Cities with powiat status	8 117	43 /3/	1917	801	2 081	566
Other spatial	12 875	10 867	450	34	461	5
<i>Opolskie</i> – capital city	10 464	28 035	2 3 3 9	1 153	2 401	409
Cities with powiat status	X	X	X	x	x	х
Other spatial	10 256	21 328	464	35	461	27
Podkarpackie – capital city	13 533	27 229	2 186	810	2 295	478
Cities with powiat status	9 830	23 087	2 1 3 2	623	2 167	211
Other spatial	7 449	10 394	429	25	439	48
Podlaskie – capital city	8 781	24 300	1 591	656	1 736	297
Cities with powiat status	7 334	17 197	1 940	538	2 009	264
Other spatial	4 979	6 8 3 6	460	30	457	47
Pomorskie - capital city	20 7 52	49 453	2 018	1 140	2 136	466
Cities with powiat status	14 010	26 631	1 929	1 0 5 4	2 1 5 0	420
Other spatial	8 586	10 332	523	46	534	57
Śląskie – capital city	19 232	86 864	2 173	1 162	2 217	433
Cities with powiat status	20 005	30 295	1 762	876	1 829	265
Other spatial	10 465	16 384	417	35	414	34
Świętokrzyskie – capital city	9 592	25 907	1 847	762	1 962	285
Cities with powiat status	x	x	х	x	х	x
Other spatial	7 371	12 750	501	26	502	52

Table 2. Coefficientes of the intensity of adaptation of regional spaces

Economic	Coherency	/ of	Polish	Regional	Spaces
	CONVENCE		A GUARDAN	**************************************	01/4000

1	2	3	4	5	6	7
Warmińsko-mazurskie – capital city	18 663	36 759	1 874	922	1 965	194
Cities with powiat status	14 271	23 023	1 843	764	1 882	211
Other spatial	5 004	7 311	545	38	557	41
Wielkopolskie – capital city	23 991	51 142	1 992	1 097	2 087	302
Cities with powiat status	20 835	34 554	2 024	822	2 124	345
Other spatial	10 152	11 362	451	39	453	28
Zachodniopomorskie – capital city	13 740	33 521	1 898	959	2 093	440
Cities with powiat status	9 588	19 560	1 893	829	1 924	128
Other spatial	7 278	13 815	571	45	577	38

Source: As same as Tab. 1.

Warsaw is a leader in terms of total production selling in the industry on one inhabitant. Only dolnośląskie, łódzkie, opolskie and świętokrzyskie voivodships the remaining area does not differ from the intensity of the capital.

Analysed income and expenses coefficients of the administrative districts budgets on one inhabitant can be compared only to other cities with the right of an administration district On the whole, we can observe similar intensity coefficients of total income and expenses on one inhabitant in the capitals and other major cities of the region. The analysed space differentiates to a higher or lesser degree as far as investment expenses and individual incomes. Higher individual incomes in the capitals of regions result from more initiatives taken by the inhabitants of those cities. Differences in investment expenses of different budgets result from initiatives introduced by local self-governments.

Density coefficients showing the intensity of utilisation of selected region in comparison to the areas are shown in the Tab. 3.

Research shows that the coefficients of the density of adaptation of the capitals of regional spaces and other cities with the right of an administrative district are the same. It results from the fact that the cities having the right of an administrative district used to be the capitals of former voivodships and they owe their higher ranks in the structure of regional spaces to former benefits of being the centres of voivodship administration. Calculations presented in *Chart 3* show a clear lack of coherency of the density of adaptation in current capitals of voivodships and other regional spaces. The coefficients of the density of population range from 1340 people on km² in Opole (in the voivodship 115) to 3258 people on a square kilometre in Warsaw (in the voivodship 143). The coefficient of the density of the technical infrastructure shows a higher intensity of adaptation of the regional spaces in the capitals of regions.

Specification	Population	Water-Line System	Sewerage System	Gas-Line System		
	per km ²	distrib	ution network in km	ork in km per 100 km ²		
Dolnośląskie – total	149	58.8	24.5	24.0		
Capital city	2 165	391.4	258.5	434.9		
Kujawsko-pomorskie – total	117	101.3	15.7	11.2		
Capital city (Bydgoszcz)	2 213	297.8	239.7	359.3		
Lubelskie – toal	89	59.0	9.5	23.2		
Capital city	2 412	327.7	318.8	319.6		
Lubuskie – total	73	33.3	9.4	9.7		
Capital city (Zielona Góra)	2 040	.333.6	286.0	282.6		
Łódzkie – total	145	103.0	15.5	13.8		
Capital city	2 694	394.0	277.8	333.7		
Małopolskie – total	214	93.7	28.4	127.9		
Capital city	2 269	318.8	289.5	441.0		
Mazowieckie – total	143	69.2	14.1	29.4		
Capital city	3 258	374.2	319.8	444.9		
Opolskie- total	115	65.4	12.3	11.7		
Capital city	1 340	266.8	168.2	207.8		
Podkarpackie – total	119	62.8	22.8	87.2		
Capital city	3 026	424.4	453.3	555.2		
Podlaskie – total	61	44.1	6.7	4.0		
Capital city	3 181	449.8	317.8	485.1		
Pomorskie – total	120	56.4	20.2	18.3		
Capital city	1 742	241.9	241.6	387.3		
Śląskie – total	394	140.5	48.4	111.4		
Capital city	2 070	289.6	216.3	326.0		
Świętokrzyskie – total	113	79.5	12.6	24.5		
Capital city	1 928	237.8	216.0	236.8		
Warmińsko-mazurskie – total	61	39.0	10.7	5.8		
Capital city	1 983	235.9	251.6	260.1		
Wielkopolskie – total	113	84.9	14.3	26.1		
Capital city	2 200	290.7	239.0	425.1		
Zachodniopomorskie – total	76	31.3	13.1	15.2		
Capital city	1 384	194.4	131.6	244.5		

Table 3. Coefficientes of the density of adaptation of regional spaces

Source: As same as Tab. 1.

5. Final remarks

Conducted analyses show that regional spaces are characterised by a fuzzy coherency. Ambiguous groupings result from irregular distribution of components forming a regional space. Therefore, the components have

a different significance of occurrence. Intensity coefficients and the density of adaptation of the capital of a voivodship are much different from the intensity of the utilisation of other parts of the region. Other major cities in the region do not significantly contribute to the change of this situation. All the polls of the level of social and economic development of a voivodship confirm a dominant role of the capitals of voivodships. Generally speaking, voivodships with strong capitals, which play dominant roles in regional spaces, top the polls.

Modern development mechanisms whose indicator is technological development, the development of an informative society, globalisation and innovation of the economy as well as the urbanisation and centralisation of the development, do not contribute to the changes of tendencies and do not serve to make up for the development discrepancies. The trends show the polarisation of the development. The danger lays in the development of the capital of the region and the areas surrounding metropolitan regions and a relative intensification of the development of the cities with the right of an administrative district. This process creates a danger of extension of a capital and neglecting the development of remaining areas, especially rural ones. It must be expected that in such a bipolar model of development economic discrepancies in the centrality of the capitals of the voivodships and the remaining part of the regional spaces will intensify in the future. Development trends of the economy based on knowledge will result in the development of the cities of a European importance, the so called "europolis", with scientific and research institutions, innovative firms or scientific and technical institutions. As a result, major metropolitan regions will increase in importance.

The main objective of the regional policy is, on the one hand, preventing negative consequences of the expansion of a capital and, on the other hand, strengthening other settlement systems. A polycentric model of development is indispensable in order to strengthen the coherency of a region While constructing such a model the central administration as well as local selfgovernments will have to meet the challenge of improving the attractiveness of smaller towns in such a way as to allow them to be generators of the development and coherency of a region. Restructuring of rural areas is necessary if we want to stimulate new processes and mechanisms of the development of peripheral areas.

It needs to be emphasised that the European idea of the equalisation of the level of development and increasing the coherency of a region will not significantly change regional differences in the nearest future. They will be visible for many years. A spatial persistence of the borders of partitioned Poland may be the best example. We must emphasise that difficulties in equalisation of the level of development result from a non-linear mechanism of connections between components forming regional systems. In practice, this type of mechanism of connections generates chaos. The non-linearity of connections makes it possible for a regional system to reach a different coherency after a long period of time and allows it to follow different development paths. Therefore, it seems that the theory of determining chaos, which was introduced in the analysis of economic phenomena in the 1980s, can explain spatial diversity of regions and different dynamics of changes, assuming the initial conditions are the same.

Therefore, creating a united model of a region is:

- a determinant of an effective regional policy,
- the basis for the ability of the region to achieve stable effects of development,
- an essential condition for implementing the policy of a balanced development,
- the basis of the susceptibility of the region to internal and external changes,
- protection against competition in the global economy.

A region which is united economically is the one which is able to create special conditions of development, generates modern technologies and attracts investors as well as this one which has a well-developed system of settlement possibilities with a strong centre, has a good access to the system of transportation into housing estates and investment areas and is able to manage human resources efficiently and use natural resources in a rational way.

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SPÓJNOŚĆ GOSPODARCZA POLSKICH PRZESTRZENI REGIONALNYCH

Centralnym problemem współczesnego świata są kontrasty poziomu rozwoju między poszczególnymi krajami. Prawidłowości światowego porządku politycznego, gospodarczego i społecznego przekładają się także na dysproporcje rozwoju regionów. Zróżnicowania regionalne wynikają również z wewnętrznego sposobu zorganizowania regionów. Region jako system terytorialny charakteryzuje się zwykle określoną przestrzenną zwartością i zorganizowaniem elementów tworzących ten układ. Tę wewnętrzną zgodność przestrzennego występowania nazywać będziemy spójnością. Wysoka spójność oznacza, że cechy rozwoju mają podobną przestrzenną rangę występowania.

Spójność gospodarczą regionów wyznacza zatem przestrzenne rozmieszczenie dochodów ludności, poziom życia mieszkańców, przedsiębiorczość, stan bezrobocia, ale także system komunikacyjny czy układy osadnicze, które generują określone formy działalności gospodarczej. Autor podejmuje próbę odpowiedzi na pytanie, czy województwa, jako jednostki zasadniczego podziału terytorialnego kraju, które z mocy ustawy oznaczają regionalną wspólnotę samorządową powołaną w celu wykonywania administracji publicznej są regionami spójnymi gospodarczo.

Przeprowadzone analizy wskazują, że w przestrzeni regionalnej wyróżnić możemy ośrodek centralny, który koncentruje wszelką działalność gospodarczą i obszary peryferyjne. To sprawia, że intensywnie rozwijają się jedynie stolice regionów. Pozostałe obszary przestrzeni regionalnej podlegają ciągłej degradacji gospodarczej i społecznej.

Dominująca pozycja stolic regionalnych sprawia, że rozwój województw jest monocentryczny. Ten dwubiegunowy model rozwoju regionalnego stwarza więc poważne zagrożenie rozwojowe dla spójności całego regionu. Spójność jest bowiem podstawą zdolności regionu do osiągania trwałych i zrównoważonych efektów rozwoju oraz siły oddziaływania regionu na otoczenie. Spójność stanowi więc o sile konkurencyjności regionalnej.