ANALYSIS OF EMPLOYMENT STRUCTURE DIVERSIFICATION IN CZECH, POLISH AND SLOVAK REGIONS

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Abstract:

The article presents NUTS 2 level classification of Czech, Polish and Slovak regions with reference to sector structure of employment in 2000 and 2008. Classes comprising relatively homogenous Polish, Czech and Slovak regions were identified for the study. The analysis of changes regarding composition and descriptive parameters was performed in relation to the obtained classes in both studied periods of time. Multidimensional statistical analysis was used for the research with particular emphasis on cluster analysis methods.

Keywords:
sector structure of employment, interregional diversification, cluster analysis methods

1. Introduction

Transformation processes occurring in Central and Eastern Europe represent the most important phenomena observed in global economy. They result in fundamental transformations in national and regional economies. Their basic objective is to enhance competitiveness and stimulate effective management. Professional literature refers to transformation as a long-lasting process of structural changes occurring in economy, or a stimulating factor of multilevel structural transformations[34]. Therefore establishing new economic structures is considered as the leading goal of transformation processes and, at the same time, the factor determining competitiveness in economy at an international market.

Structural changes are of multilevel nature and may be analyzed by means of different measures. They are also reflected in transformations referring to sector structure of employment at national and regional level[35]. Sector structure of employment is commonly referred to as one of basic indicators for social and economic development level, as well as the maturity of market system[36].

The objective of the hereby study is to analyze sector structure of employment diversification in the system of 28 NUTS 2 level regions (Czech, Polish and Slovak) in 2000 and 2008, as well as the identification of homogenous groups of regions with regard to sector structure of employment.

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[34] G. GORZELAK, *Trwałość i zmiana: historia, transformacja i przyszłość polskich regionów [Stability and change: history, transformation and future of Polish regions],* „Ekonomista" no. 6, 2000.

[35] A. MALINA, *Analiza zmian struktury zatrudnienia w Polsce w porównaniu z krajami Unii Europejskiej[The analysis of employment structure changes in Poland in comparison to EU member countries],* Zeszyty Naukowe Akademii Ekonomicznej w Krakowie no. 726, Wyd. Akademii Ekonomicznej: Kraków 2006, p.. 5-21.

[36] SEE D. STRAHL, Z. PANASIEWICZ, *Długookresowe wzorce transformacji strukturalnej Polski [Long-term patterns of structural transformation in Poland]* , Międzynarodowe Studia Porównawcze, IRiSS, Warszawa 1997; A. Malina, *Wielowymiarowa analiza przestrzennego zróżnicowania struktury gospodarki Polski według województw [Multidimensional analysis of Polish economy structure spatial diversification by regions]*, Zeszyty Naukowe Akademii Ekonomicznej w Krakowie, Seria specjalna: Monografie no.162, Wyd. Akademii Ekonomicznej, Kraków 2004, p. 94; M. Zajdel, *Trójsektorowa struktura zatrudnienia w Polsce jako miernik rozwoju społeczno-gospodarczego [Tri-sector structure of employment in Poland as the measure of social and economic development]*, Zeszyty Naukowe Świętokrzyskiego Centrum Edukacji na Odległość SCENO no. 8, 2007, p. 407-417.

2. Information and methodology background for research

Sector structures of employment in 2000 and 2008 became the basis for regional classification. Four economic sectors of regional economy represent components of employment structures. They are as follows:

- − sector I – farming, forestry and fishery;
- − sector II – industry and construction;
- − sector III – non-market services;
- − sector IV – market services.

28 Czech, Polish and Slovak regions were covered by the study. They were distinguished in line with NUTS 2 classification (*The Nomenclature of Territorial Units for Statistics*).

In order to classify regions according to sector structures of employment in 2000 and 2008 the following procedure was performed twice:
− specifying diversification between studied regions by means of Squared Euclidean Distance,
− hierarchical classification of regions into homogenous groups by means of Ward method[37],
− presentation of initial classification results on a dendrogram and the diagram of distance integration in relation to integration stages,
− initial multivariate position referring to the number of groups of regions,
− multivariate classification of reigns by means of *k*-means method,
− selection of optimal classification applying Caliński-Harabasz classification quality indicator[38]
− presentation of the obtained groups of regions composition and their characteristics by applying basic descriptive parameters,
− assessment of the obtained groups of regions homogeneity using intergroup distance and the distance of particular regions from groups' gravity centres.

Having performed regions' classification twice, with regard to sector structure of employment in 2000 and 2008, the level of similarity was defined with reference to divisions by applying adjusted Rand index[39].

The obtained research results facilitate defining the specific nature of regional groups distinguished with regard to sector structure of employment, as well as the assessment of changes observed in 2000-2008.

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[37] The review of information on distance measures and classification methods possible to apply may be found, among others, in the studies by: T. GRABIŃSKI. S. WYDYMUS, A. ZELIAŚ, *Metody taksonomii numerycznej w modelowaniu zjawisk społeczno-gospodarczych [Numerical taxonomy methods in social and economic phenomena modelling]*. Warszawa, PWN 1989; J. Pociecha, B. Podolec, A. Sokołowski, K. Zając, M*etody taksonomiczne w badaniach społeczno-ekonomicznych [Taxonomic methods in social and economic studies]*. Warszawa, PWN 1988.

[38] R.B. CALIŃSKI, J. HARABASZ.: *A Dendrite Method for Cluster Analysis*, "Communications in Statistics" 1974, no. 3, p. 1-27.

[39] V. FILKOV, S. SKIENA.: *Heterogeneous Data Integration with the Consensus Clustering Formalism*, [in:] *Data Integration in the Life Sciences*, ed. E. Rahm, Springer, Berlin-Heidelberg 2004, p. 110-123.

3. The analysis of Czech, Polish and Slovak regions' classification results with regard to sector structure of employment in 2000 and 2008

Sector structures of employment and their changes occurring in 2000 and 2008 in regions under analysis are presented in table 1.

The analysis of data included in the above table facilitates the statement that in all analyzed regions a decrease of farming share in creating employment demand was observed. Definitely the biggest share of sector I (farming, forestry, fishery), in the overall number of workforce, occurred in four Polish regions: Lubelskie, Świętokrzyskie, Podlaskie and Podkarpackie. Significantly lowest importance of farming sector in workforce absorption, in 2000 and 2008, occurred in the Czech and next in the Slovak capital region (Praha, Bratislavský kraj). Capital regions were also distinctive with reference to the biggest significance of market services sector in creating new jobs.

Table 1. **Sector structures of employment in Czech, Polish and Slovak regions in 2000 and 2008 (in %)**

No.	Regions	Sector I			Sector II			Sector III			Sector IV		
		2000	2008	Change (in percentage points)	2000	2008	Change (in percentage points)	2000	2008	Change (in percentage points)	2000	2008	Change (in percentage points)
1	Praha	0,78	0,16	-0,62	21,49	19,45	-2,04	20,29	20,28	-0,01	57,44	60,11	2,67
2	Strední Cechy	6,21	3,67	-2,54	40,54	40,06	-0,48	18,47	16,78	-1,69	34,78	39,49	4,71
3	Jihozápad	8,08	5,62	-2,46	41,78	42,56	0,78	17,31	18,99	1,68	32,83	32,83	0,00
4	Severozápad	7,76	5,85	-1,91	37,01	39,45	2,44	20,40	18,16	-2,24	34,83	36,54	1,71
5	Severovýchod	6,84	4,32	-2,52	42,80	46,82	4,02	18,88	17,74	-1,14	31,48	31,12	-0,36
6	Jihovýchod	8,42	5,69	-2,73	40,40	41,73	1,33	20,75	18,79	-1,96	30,43	33,79	3,36
7	Strední Morava	6,18	3,74	-2,44	45,26	45,32	0,06	18,46	19,10	0,64	30,10	31,84	1,74
8	Moravskoslezsko	10,04	6,58	-3,46	37,55	40,03	2,48	18,61	19,77	1,16	33,80	33,62	-0,18
9	Łódzkie	18,01	17,93	-0,07	31,36	30,89	-0,47	21,95	18,91	-3,04	28,69	32,27	3,58
10	Mazowieckie	13,79	13,71	-0,08	23,64	24,83	1,19	24,31	21,19	-3,12	38,27	40,27	2,00
11	Małopolskie	21,58	21,51	-0,07	28,76	28,68	-0,08	20,64	19,08	-1,56	29,02	30,74	1,72
12	Śląskie	12,31	12,24	-0,08	32,10	31,13	-0,97	21,08	19,36	-1,71	34,51	37,27	2,76
13	Lubelskie	35,82	35,75	-0,08	21,01	20,69	-0,32	21,59	19,45	-2,14	21,59	24,12	2,53
14	Podkarpackie	25,71	25,63	-0,07	29,37	28,47	-0,90	22,39	19,07	-3,31	22,54	26,82	4,28
15	Świętokrzyskie	33,01	32,94	-0,07	26,11	27,34	1,23	20,20	18,39	-1,81	20,68	21,34	0,65
16	Podlaskie	31,45	31,38	-0,07	22,94	22,68	-0,26	23,26	21,18	-2,08	22,35	24,77	2,41
17	Wielkopolskie	17,15	17,07	-0,08	35,44	35,35	-0,09	19,31	17,01	-2,29	28,11	30,57	2,46
18	Zachodniopomorskie	9,09	9,02	-0,08	29,67	29,76	0,09	23,93	23,07	-0,85	37,31	38,15	0,84
19	Lubuskie	10,71	10,63	-0,07	33,81	35,61	1,80	23,17	21,84	-1,32	32,32	31,92	-0,40
20	Dolnośląskie	10,79	10,72	-0,07	33,26	35,68	2,42	22,31	20,92	-1,39	33,64	32,68	-0,95
21	Opolskie	17,88	17,80	-0,07	33,35	35,41	2,06	20,03	19,19	-0,84	28,75	27,60	-1,15
22	Kujawsko-Pomorskie	17,36	17,29	-0,07	33,71	34,08	0,38	21,29	19,58	-1,71	27,65	29,06	1,41
23	Warmińsko-	15,08	15,00	-0,08	31,54	32,77	1,23	20,68	21,26	0,59	32,71	30,97	-1,74

	Mazurskie												
24	Pomorskie	10,69	10,61	-0,08	33,32	33,92	0,60	20,22	20,76	0,55	35,78	34,71	-1,07
25	Bratislavský kraj	2,49	1,24	-1,25	22,45	23,63	1,18	26,30	23,93	-2,37	48,76	51,20	2,44
26	Západné Slovensko	10,57	5,23	-5,34	38,80	41,95	3,15	20,81	17,69	-3,12	29,82	35,13	5,31
27	Stredné Slovensko	8,12	5,48	-2,64	39,52	41,91	2,39	22,10	19,94	-2,16	30,26	32,67	2,41
28	Východné Slovensko	8,08	4,70	-3,38	36,91	39,89	2,98	23,23	21,08	-2,15	31,78	34,33	2,55

Source: Author's compilation based on Eurostat data

In the vast majority of studied regions (23) a decrease in sector III – non-market services employment was observed. The analyzed regions presented distinctly lowest diversification regarding the size of employment demand in this sector, from about 16% up to about 23%.

The share of workforce in industry and market services sector increased in most of regions under analysis, while reverse tendency occurred in case of, respectively, seven regions included in sector IV and nine in sector II.

Pictures 1-2 illustrate hierarchical classification results of analyzed regions for 2000 and 2008, applying spanning trees and integration distance diagrams with regard to classification stages. On their basis, in case of both studied years a variant division of 28 regions into four and five groups was suggested. As the result, for each of analyzed years, two classification variants were carried out. For this reason k-means method was applied. For the selection of optimal classification Caliński-Harabasz index was used, which for 2000 was 44,4 in division into four groups and 51,7 in division into five groups, and for 2008 the respective values were: 50,7 and 57,5. Maximum value of Caliński-Harabasz indicator points to optimal classification. The division in both studied years refers to five groups of regions representing relatively homogenous sector structure of employment.

Composition, number and profile of regions' groups for optimal division in 2000 was presented in table 2. Picture 3 illustrates mean values of workforce share in particular economy sectors for distinguished groups of regions.

The first group of regions turned out to be the least numerous. It covers two capital regions including: Czech region of Praha and Slovak region of Bratislavský kraj. This group is characterized by definitely the lowest, average share of employment in farming sector (1,64%) and in industry sector (21,97%), slightly higher, than in other groups, share of workforce in non-market services sector (23,30%) and visibly highest in the sector of market services (53,10%).

The second group, consisting of five elements, includes only Polish regions. It is characterized by the dominating role of industry sector (32,52%) and relatively high significance of farming sector (18,39%).

The third and biggest group includes 10 regions. It comprises all Czech and Slovak regions (except capital ones). In this group the dominating role in creating job market, just as in the second group, was played by the industry sector (40,06%), next in line was market services sector (32,01%). The third group is characterized by the highest, of all distinguished groups of regions, average share of the employed in industry sector.

The fourth group covers four Polish regions characterized by the highest significance of workforce absorption by farming sector (31,50%), and the lowest by non-market services sector (21,79%).

The final group includes seven Polish regions. This group has the highest share of the employed in market services (34,94%), followed by industry (31,05%).

The least distant from each other, having applied Euclidean distance, are the following groups: second (Łódzkie, Małopolskie, Wielkopolskie, Opolskie, Kujawsko-Pomorskie) and fifth (Mazwoieckie, Śląskie, Zachodniopomorskie, Lubuskie, Dolnośląskie, Warmińsko-Mazurskie, Pomorskie). The distance between them is 4,76. The biggest distance is observed between the first, consisting of two components, group (Praha, Bratislavský kraj) and the fourth grup (Lubelskie, Podkarpackie, Świętokrzyskie, Podlaskie) – 21,69.

Optimal classification of studied regions, with regard to sector structure of employment in 2008, is presented in table 3. Picture 4 shows average share of workforce in particular economy sectors for distinguished groups of regions.

The first of distinguished groups is analogical to that of 2000 and covers two capital regions. It is also characterized by the significantly lowest, among selected groups of regions,

share of the employed in farming and the highest in market services sector. In 2008 the absorption of workforce in farming decreased, as compared to 2000, from 1,64% down to 0,7%, and in case of market services it went up from 53,1% to 55,66%.

Picture 1. **Dendrogram of connections, integration distances and classification stages by means of Ward method for 28 NUTS 2 level regions in 2000**
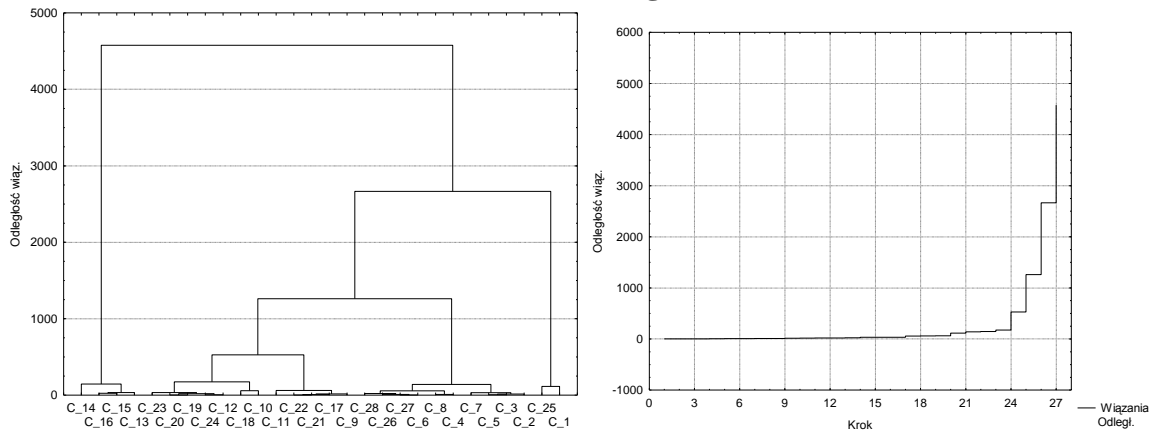
Source: author's compilation based on Eurostat data base applying STATISTICA 9 PL statistical package.

Picture 2. **Dendrogram of connections, integration distances and classification stages by means of Ward method for 28 NUTS 2 level regions in 2008**
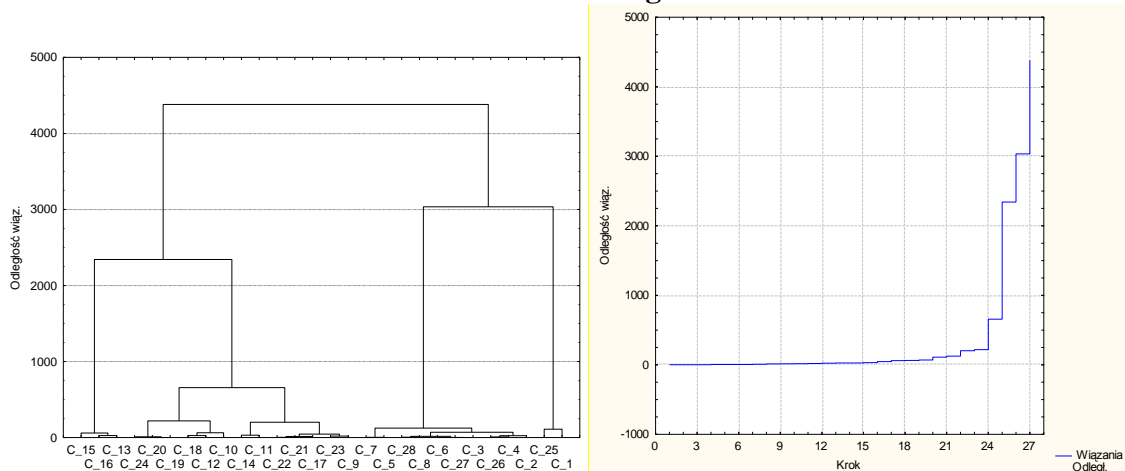
Source: author's compilation based on Eurostat data base applying STATISTICA 9 PL statistical package.

The second group comprising four Polish regions - Lubelskie, Podkarpackie, Świętokrzyskie and Podlaskie - did not change its composition since 2000. Just like eight years before, also in 2008 it was characterized by the highest, average share of employment in farming, among the distinguished groups, and the lowest in market services sector. It can be noticed that the absorption of workforce by farming sector presented a slight downturn in the studied period, from 31,5% up to 31,42%, while in case of market services sector it went up from 21,79% to 24,26%.
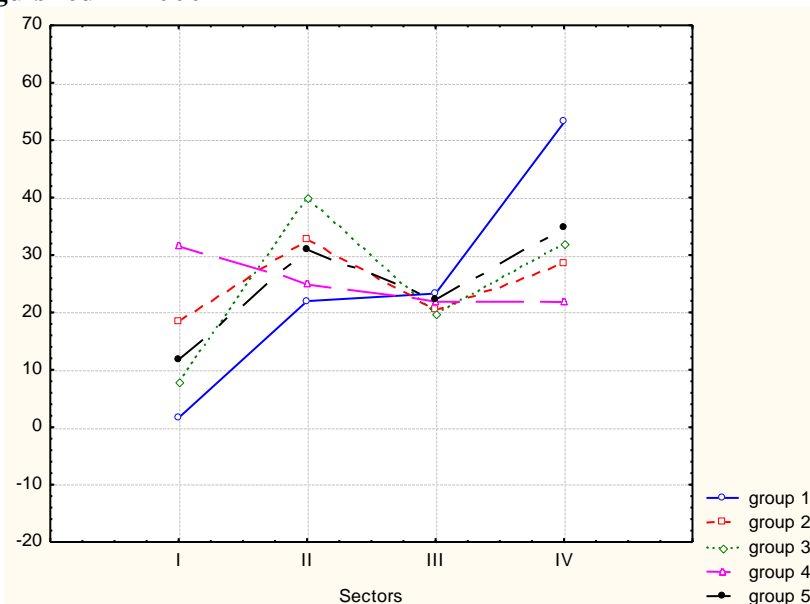
Table 2. **Classification results of Czech, Polish and Slovak regions applying *k*-means method with regard to sector structure of employment in 2000**

Group No.	Regions	Regions No.	Descriptive parameters	Sectors			
				I	II	III	IV
1	Praha, Bratislavský kraj	2	$\bar{x}$	1,64	21,97	23,30	53,10
			S	1,21	0,68	4,25	6,14
			V	73,95	3,09	18,24	11,56
2	Łódzkie, Małopolskie, Wielkopolskie, Opolskie, Kujawsko-Pomorskie	5	$\bar{x}$	18,39	32,52	20,64	28,44
			S	1,82	2,55	1,03	0,55
			V	9,87	7,85	5,01	1,95
3	Strední Cechy, Jihozápad, Jihovýchod, Severozápad, Severovýchod, Strední Morava, Moravskoslezsko, Západné Slovensko, Stredné Slovensko, Východné Slovensko	10	$\bar{x}$	8,03	40,06	19,90	32,01
			S	1,45	2,69	1,86	1,94
			V	18,04	6,72	9,36	6,06
4	Lubelskie, Podkarpackie, Świętokrzyskie, Podlaskie	4	$\bar{x}$	31,50	24,86	21,86	21,79
			S	4,26	3,67	1,30	0,85
			V	13,53	14,76	5,95	3,89
5	Mazowieckie, Śląskie, Lubuskie, Zachodniopomorskie, Dolnośląskie, Warmińsko-Mazurskie, Pomorskie	7	$\bar{x}$	11,78	31,05	22,24	34,94
			S	2,07	3,56	1,63	2,28
			V	17,59	11,45	7,31	6,52

where: $\bar{x}$ − arithmetic mean, S − standard deviation, V − variation coefficient (in %).
Source: author's compilation based on Eurostat data base applying STATISTICA 9 PL statistical package.

Picture 3. **Average share of employment in particular economy sectors for groups of regions distinguished in 2000**

Source: author's compilation based on Eurostat data base applying STATISTICA 9 PL statistical package.

The fifth, among the distinguished groups of regions in 2008, was also presented in the same composition as in 2000. It still persists to be the biggest group and covers all (apart from

capital ones) Czech and Slovak regions. Just like in 2000 this group is characterized by significantly highest, average share of employment in the industry sector, among all other regions. This share, in the studied period, increased from 40,06% up to 41,97%.

Table 3. **Classification results of Czech, Polish and Slovak regions applying *k*-means method with regard to sector structure of employment in 2008**

Group No.	Regions	Regions No.	Descriptive parameters	Sectors			
				I	II	III	IV
1	Praha, Bratislavský kraj	2	$\bar{x}$	0,70	21,54	22,11	55,66
			S	0,76	2,96	2,58	6,30
			V	109,1	13,72	11,68	11,32
2	Lubelskie, Podkarpackie, Świętokrzyskie, Podlaskie	4	$\bar{x}$	31,42	24,80	19,52	24,26
			S	4,26	3,71	1,19	2,27
			V	13,56	14,97	6,09	9,34
3	Mazowieckie, Śląskie, Zachodniopomorskie, Pomorskie	4	$\bar{x}$	11,39	29,91	21,10	37,60
			S	2,03	3,80	1,53	2,30
			V	17,81	12,72	7,25	6,12
4	Łódzkie, Małopolskie, Wielkopolskie, Lubuskie, Dolnośląskie, Opolskie, Kujawsko-Pomorskie, Warmińsko-Mazurskie	8	$\bar{x}$	15,99	33,56	19,72	30,72
			S	3,74	2,60	1,56	1,70
			V	23,37	7,73	7,90	5,54
5	Strední Cechy, Jihozápad, Severozápad, Severovýchod, Jihovýchod, Strední Morava, Moravskoslezsko, Západné Slovensko, Stredné Slovensko, Východné Slovensko	10	$\bar{x}$	5,09	41,97	18,80	34,14
			S	0,95	2,43	1,27	2,45
			V	18,75	5,79	6,73	7,18

where: $\bar{x}$ − arithmetic mean, S − standard deviation, V − variation coefficient (in %)
Source: author's compilation based on Eurostat data base applying STATISTICA 9 PL statistical package.

Picture 4. **Average share of employment in particular economy sectors for groups of regions distinguished in 2008**
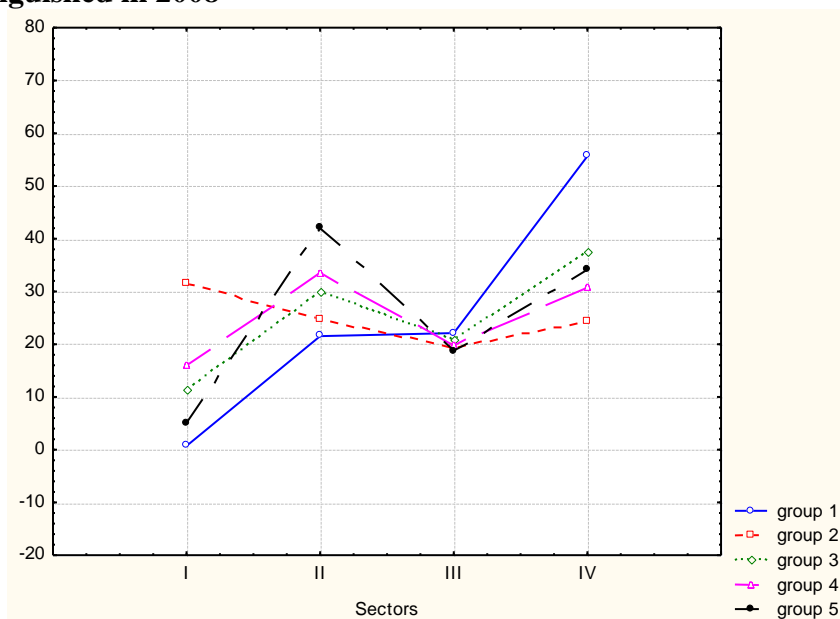
Source: author's compilation based on Eurostat data base applying STATISTICA 9 PL statistical package.

Groups three and four include only Polish regions, however, their composition is different from the groups distinguished in 2000. The third group comprised the following regions: Mazowieckie, Śląskie, Zachodniopomorskie and Pomorskie. These regions are characterized by the domination of demand for jobs occurring in non-market services sector (37,6%). Highest significance of this sector was observed only in a two-element group of capital regions (55,66%). Industry represents another sector of economy indicating high demand for jobs (29,91%).

The fourth group includes eight Polish regions. It is characterized by a dominating significance of industry sector. The share of employment in this region amounts to 33,56%. In this group of regions it is also farming which plays an important role (15,99%).

The least distant, understood as Euclidean distance, are the following groups: the third (Mazowieckie, Śląskie, Zachodniopomorskie, Pomorskie) and the fourth (Łódzkie, Małopolskie, Wielkopolskie, Lubuskie, Dolnośląskie, Opolskie, Kujawsko-Pomorskie, Warmińsko-Mazurskie) – 4,57. The most distant (just like in 2000) is the first group (Praha, Bratislavský kraj) and the second one (Lubelskie, Podkarpackie, Świętokrzyskie, Podlaskie). The distance between them is 22,06, which is more than in 2000.

Table 4 illustrates measures for groups' homogeneity referring to regions distinguished in 2000 and 2008, i.e. distances of particular regions from group gravity centre and their average values.

Table 4. **Measures of homogeneity referring to groups of regions distinguished in 2000 and 2008**

Years							
2000				**2008**			
Group No.	Regions	d	$\bar{d}$	Group No.	Regions	d	$\bar{d}$
1	Praha	2,68	2,68	1	Praha	2,64	2,64
	Bratislavský kraj	2,68			Bratislavský kraj	2,64	

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Group	Region	d	d̄	Group	Region	d	d̄
2	Łódzkie	0,90	1,33	2	Lubelskie	2,98	2,54
	Małopolskie	2,48			Podkarpackie	3,67	
	Wielkopolskie,	1,73			Świętokrzyskie	2,16	
	Opolskie	0,60			Podlaskie	1,37	
	Kujawsko-Pomorskie	0,94		3	Mazowieckie	3,10	2,08
3	Strední Cechy	1,82	1,86		Śląskie	1,15	
	Jihozápad	1,61			Zachodniopomorskie	1,57	
	Severozápad	2,09			Pomorskie	2,51	
	Severovýchod	1,60		4	Łódzkie	1,87	2,20
	Jihovýchod	0,93			Małopolskie	3,69	
	Strední Morava	3,01			Wielkopolskie,	1,71	
	Moravskoslezsko	1,95			Lubuskie	3,12	
	Západné Slovensko	1,85			Dolnośląskie	3,07	
	Stredné Slovensko	1,43			Opolskie	2,05	
	Východné Slovensko	2,29			Kujawsko-Pomorskie	1,09	
4	Lubelskie	2,90	2,30		Warmińsko-Mazurskie	1,00	
	Podkarpackie	3,70		5	Strední Cechy	3,10	1,57
	Świętokrzyskie	1,40			Jihozápad	0,77	
	Podlaskie	1,22			Severozápad	1,81	
5	Mazowieckie	4,31	2,07		Severovýchod	2,93	
	Śląskie	0,86			Jihovýchod	0,37	
	Zachodniopomorskie	2,10			Strední Morava	2,14	
	Lubuskie	2,03			Moravskoslezsko	1,34	
	Dolnośląskie	1,38			Západné Slovensko	0,75	
	Warmińsko-Mazurskie	2,15			Stredné Slovensko	0,95	
	Pomorskie	1,67			Východné Slovensko	1,56	

where: d – region's distance from group's gravity centre, $\bar{d}$ - average distance of a region from group's gravity centre

Group 2 (Łódzkie, Małopolskie, Wielkopolskie, Opolskie, Kujawsko-Pomorskie) turned out to be the most homogenous group, while with regard to regions' average distance from gravity centre in 2000 and in 2008 it was group 5 (Strední Cechy, Jihozápad, Severozápad, Severovýchod, Jihovýchod, Strední Morava, Moravskoslezsko, Západné Slovensko, Stredné Slovensko, Východné Slovensko). The least homogenous group, in both analyzed years, was the first two-element group (Praha, Bratislavský kraj). In both regions the sector of market services is the dominating one and the least important role is played by the sector of farming, however, the shares of employment in these sectors are slightly different.

In 2000 the most distant region from the second group gravity centre was the region of Małopolska, the third - Strední Morava, the fourth – Podkarpackie, and the fifth Mazowieckie, while the biggest distance from group gravity centre was registered in case of Mazowieckie region.

In 2008 the most distant region from group gravity centre was the region of Podkarpackie, the third – Mazowieckie, the fourth – Małopolskie, the fifth - Strední Cechy. The biggest distances from group gravity centres were characteristic for Małopolskie and Podkarpackie regions.

The level of regions' classification similarity, obtained with reference to sector structure of employment for 2000 and 2008, was evaluated by applying adjusted Rand index. The high consistence of obtained optimal divisions is confirmed by the adjusted Rand index value proximity to 1. In the conducted research this indicator amounts to about 0,8, which decides about high consistence of both obtained classifications.

4. Conclusion

On the basis of presented classification results for Czech, Polish and Slovak regions the following conclusions may be put forward:

1. The studied regions differ significantly with regard to sector structure of employment. The biggest differences refer to the importance of farming sector and market services sector.
2. In all analyzed regions in 2008, as compared to 2000, the decrease of workforce absorption was registered in farming sector.
3. In both researched years the biggest difference of employment share in the sector of farming occurred between Czech region of Praha and Polish region of Lubelskie. In 2000 it amounted to 35,4 and in 2008 to 35,6 percentage point.
4. Praha and Świętokrzyskie region represent the most different significance of market service sector. The difference in employment shares, referring to this sector in 2000, was 36,8 and in 2008 - 38,8 percentage point.
5. In both studied years the group characterized by the dominating significance of farming sector covered four Polish regions: Lubelskie, Podkarpackie, Świętokrzyskie, Podlaskie (employment share from about 25% up to 35%).
6. The dominating demand for workforce in the sector of market services occurred in the group including the regions of Praha, Bratislavský kraj (employment share from about 49% up to 60%).
7. Czech and Slovak regions in both studied years presented high similarity in sector structure of employment (they are included in the same groups of regions).
8. Polish regions were characterized by different sector structure of employment than Czech and Slovak ones. In none of the obtained classifications did Polish regions find themselves in the same group with Czech or Slovak regions.
9. Polish regions show extensive diversity with regard to employment structure. Both in 2000 and 2008 as many as three groups differing between each other were formed.
10. Sector structure of employment undergoes slow changes. Classifications of regions obtained in 2000 and 2008 present crucial similarities. Three out of five selected groups did not change their composition.

The assessment of sector employment structure, as well as the classification of European regional space should constitute the key domain of contemporary research referring to foreign markets. Further analyses may refer to identification of interdependencies occurring between sector structure of employment and the level of regional development.

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