

Jolana Skalickova¹

DIFFERENTIATION OF REGIONS IN CZECH REPUBLIC BASED ON ECONOMIC INDICATORS

The aim of the paper is to evaluate the differences between the regions in Czech Republic and rank regions basing on the selected indicators. The following data are used: Gini index, gross domestic product per capita, unemployment rate, average gross monthly wage and the rate of economic activity. Their condition is monitored from 2009 to 2012. Regional differences are evaluated on the basis of synthesis and ranking regions to reflect the development of variables in the selected period. After synthesis of all economic indicators in the economic index of regional disparities, a position above average was assigned to the capital city, good positions – to other 4 regions (Central Bohemia, Pilsen, Hradec Kralove and South Bohemia). Low position is observed in 3 regions – Karlovy Vary, Olomouc and Usti.

Keywords: regional differences; income inequality; gross domestic product; unemployment rate; regions ranking.

JEL classification: O150; R110.

Йолана Скаличкова

ДИВЕРГЕНЦІЯ РЕГІОНІВ У ЧЕСЬКІЙ РЕСПУБЛІЦІ НА ОСНОВІ ЕКОНОМІЧНИХ ПОКАЗНИКІВ

У статті оцінено відмінності між чеськими регіонами і сформовано рейтинг регіонів на основі вибраних показників. Використано такі дані: Індекс Джині, валовий внутрішній продукт на душу населення, рівень безробіття, середньомісячна заробітна плата і рівень економічної активності. Їх стан відстежувався протягом 2009–2012 років. Регіональні відмінності оцінено на основі синтезу і сформовано рейтинг регіонів, що відображає динаміку показників за обраний період. Після об'єднання всіх економічних показників в економічний індекс регіональної нерівності позицію вище середньої отримала столиця, досить хороші позиції мають 4 інші регіони (центральна Богемія, Пльзень, Градец Кралове і Південна Богемія). Незадовільну оцінку отримали 3 регіони (Карлови Вари, Оломоуц, Уст).

Ключові слова: регіональні відмінності; нерівність доходів; валовий внутрішній продукт; рівень безробіття; ранжування регіонів.

Рис. 1. Табл. 12. Літ. 27.

Йолана Скаличкова

ДИВЕРГЕНЦІЯ РЕГІОНОВ В ЧЕШСКОЙ РЕСПУБЛИКЕ НА ОСНОВЕ ЭКОНОМИЧЕСКИХ ПОКАЗАТЕЛЕЙ

В статье дана оценка различиям между регионами Чехии и сформирован рейтинг регионов на основе выбранных показателей. Используются следующие данные: индекс Джини, валовой внутренний продукт на душу населения, уровень безработицы, средняя месячная заработная плата и уровень экономической активности. Их состояние отслеживалось в течение 2009–2012 годов. Региональные различия оценены на основе синтеза и сформирован рейтинг регионов, отражающий динамику показателей за выбранный период. После объединения всех экономических показателей в экономический индекс регионального неравенства, оценку выше средней получила столица страны, достаточно хорошие позиции – 4 других региона (Центральная Богемия, Пльзень, Градец Кралове и Южная Богемия). Неудовлетворительные оценки получили 3 региона – Карловы Вары, Оломоуц, Усти.

Ключевые слова: региональные различия; неравенство доходов; валовой внутренний продукт; уровень безработицы; ранжирование регионов.

¹ Moravian University College Olomouc, Czech Republic.

Introduction. Regional differences are one of the important current economic problems. Economic levels of regions development differ significantly in most countries. Regions vary by a significant number of economic, social and demographic features. Demographic differences are determined by age structure of population, population growth rate, mortality and migration. Social differences are evident in wages disparity and income which influence the standards of living. Economic disparities can mainly be expressed as different level of gross domestic product per capita. Number of economic subjects or contribution of various sectors to gross value added differs in per capita. Structure of regional economies is determined not only by geography but also by historical factors. Some regions are more affected by structural unemployment due to economy's restructuring or attenuation of some sectors of industry.

Literature review. There are many scientific studies dealing with the issue of regional disparities and focusing on particular macroeconomic indicators.

Bracelente et al. (2010) emphasized the greatest significance of economic parameters. They researched the NUTS 2 regions in the EU and concluded that the gap in productivity and employment are the main factors in regional differences.

The labor market situation is very often associated with regional disparities. Krabel et al. (2014) emphasized the importance of regional differences in the mobility of graduates. Avotins et al. (2014) pointed to different motivation to start business across regions, Rotarua (2014), Vinuela (2014), Yang (2014) or Zierahn (2013) showed fundamental differences in regional unemployment rates. Regional disparities can also be influenced by political and fiscal decentralization (Ezcurra et al., 2007).

Economic differences between regions can have many causes and influencing factors. Among the most important are the structure of GDP in a region (largely affected by its history of development) (Sobel et al., 2008), natural conditions, demographic composition, connection to international transport infrastructure, volume of foreign direct investment or subsidies (Martincik, 2008). Economic differences between regions can also be affected by spatial differences. The issue of regional disparities in spatial development is complicated by the fact that some empirical research record regional areas tend to divergence and some tend to convergence (Suchacek, 2008; Lopez, 1999).

Kostelecky et al. (2006) emphasized the importance of social, economic, political or cultural features especially on the qualitative level (educational level of population, presence of progressive economic sectors etc.). Differences can be examined on the basis of more approaches. Economic activity can be calculated either per unit area or per capita. In the case when both types of regional variation are observed, the trend in the development is towards higher inequality (Hampl, 2007).

Regional differences in Czech Republic demonstrate the following trends:

- above average long-term status of Prague and good economic position of Central Bohemia;
- threats in the areas with a decline in heavy industry development;
- threat in the educational structure of population in the regions with high unemployment, because of migration to larger regional cities (especially Prague and Brno).

Studies have shown that spatial structure becomes more fragmented in Czech Republic (Blazek et al., 2012). Generally, Czech Republic has higher territorial

inequality in the distribution of economic activity in comparison with other European countries (Hampl, 2007).

Considerable differences between regions are also evident in terms of unemployment. Unemployment is a typical value, which is not uniform in regions throughout market economies (Porter, 2003). This leads to migration to the areas with high number of vacancies. Usti, Karlovy Vary, Olomouc and Moravian Silesia are the most vulnerable to depopulation (Simpach et al., 2013). In terms of unemployment, it is necessary to focus on long-term unemployment and its development (Loster et al., 2011). Differences can also be observed in gender comparison (Kvicalova et al., 2012). The issue of employment is closely related to wage distribution. Marek (2013) after analyzing the data for the period 2000–2012 noted that the average wage in Czech Republic is comparable for all regions except Prague and Central Bohemia. This is primarily due to the location of many large and important companies in this area. The value of the Gini index is also significantly different there. Interesting is also the situation with gender differences in wages. The highest wages were reported for men in Prague and the lowest – for women in Zlin region.

The comparative study of economic development of Czech Republic regions shows significant differences. For a long time regions with the best economic status have been Prague and Central Bohemia (Zitek, 2010) and the worst were Olomouc, Zlin and Moravian Silesia (Kuprova et al., 2006).

Regions also react differently to cyclical fluctuations in the economy. After examining the impact of the global economic crisis which started in 2008 the results showed 5 clusters: A = Usti + Moravian Silesia, B = Prague, C = Central Bohemia + Pilsen + Karlovy Vary, D = Hradec Kralove + Pardubice + Vysocina + Olomouc + Zlin and E = South Bohemia + South Moravia + Liberec. Clusters A, B, E were influenced less than clusters C and D by the world economic crisis (Mazurek, 2011).

Methodology. The aim of this paper is to evaluate the differences between the regions in Czech Republic and rank the regions basing on the selected indicators. Comparative analysis of individual regions based on the graphical representation of the traffic light method is applied. Subsequent analysis is supported by the point method, based on the ranking of regions.

The data used in this paper, has quantitative and secondary characteristics. These indicators are available and can capture the status and development and are related to or can influence the income situation of households. These are the level of income inequality, regional gross domestic product, the unemployment level, wages and economic activity. Individual indicators are presented in the following characteristics: Gini index, gross domestic product per capita, unemployment rate, average gross monthly wage and rate of economic activity. Their condition is monitored from 2009 to 2012.

The chosen indicators are used to determine the economic success of regions. Economic performance is evaluated by the nominal gross domestic product and the rate of economic activity, labor market situation is evaluated by the rate of unemployment and average wage, and difference in income inequality is assessed via Gini index.

The selected variables are analyzed using the traffic lights method and point method.

Traffic lights method. Traffic lights method provides a visual view of differences in the economic levels of regions. Its advantage sate lucidity and usefulness for analysis of different groups of indicators (Michalek, 2012).

It is the method of scaling according to the criteria ($\geq 67\%$, $\geq 33\%$ and $< 33\%$). Minimum and maximum values are found for each indicator and then data are divided into 3 groups (into thirds). The best third is marked by white color, the middle third is marked by grey color and the worst third – by dark green color. For indicators of GDP, average wage and economic activity rate was rated as white color for group $\geq 67\%$, for indicators of Gini index and unemployment rate was rated as white color for group $< 33\%$.

This method is used to demonstrate graphically the differences and subsequent quantification is performed using the point method and calculating the economic index of regional disparities.

Point method. For the purposes of territorial units classification by the given parameters, or to determine their order, the point method is used. It is based on the search of a region, for which the selected indicator reaches the maximum or minimum (if progress occurs due to its reduction) value. Based on the detected values the criterial value is determined, which is then compared with the other. Criterial value is 1000. Index is a dimensionless number in the interval $\langle 0;1000 \rangle$ (Tuleja, 2008).

This procedure is repeated for all the indicators (intermediate results are shown in Annexes). Summary economic index of regional disparities is determined as the average value of the indices for all the indicators.

Results. Regional differences are mapped for each region on the basis of the indicators using the traffic lights method and then their condition and development are evaluated by the economic index of regional economic disparities reflecting all the indicators together.

The values of the Gini index for each region are shown in Table 1. The values do not change much over time and there are no significant differences between the regions. Prague is an exception, because it has higher value and its value is comparable to the most developed European cities. Czech Republic as a whole belongs to the most egalitarian countries in the world. The most significant increase in income inequality took place in the early 1990s, since then there have been no significant changes.

Table 1. **Gini index during 2009–2012 using the method of traffic lights, own processing by (Marek, 2013: 187)**

Regions	2009	2010	2011	2012
Prague	0.310	0.304	0.310	0.312
Central Bohemia	0.250	0.247	0.252	0.256
South Bohemia	0.240	0.242	0.243	0.238
Pilsen	0.233	0.232	0.234	0.237
Karlovy Vary	0.241	0.238	0.232	0.231
Usti	0.244	0.245	0.245	0.243
Liberec	0.232	0.233	0.234	0.230
Hradec Kralove	0.231	0.229	0.230	0.232
Pardubice	0.233	0.235	0.235	0.233
Vysocina	0.236	0.236	0.237	0.236
South Moravia	0.258	0.256	0.260	0.261
Olomouc	0.231	0.230	0.231	0.235
Zlin	0.235	0.236	0.234	0.232
Moravian Silesia	0.235	0.238	0.242	0.241

The level of gross domestic product in the regions mostly copies the national development trend and most regions have lower values in 2009 (Table 2). Prague got the values above average (more than double of other regions), which is due to the allocation of many large corporations there. Low levels of production characterizes Karlovy Vary, Liberec and Olomouc regions.

Table 2. Gross domestic product capita during 2009–2012 using the method of traffic lights, CZK, own processing of the Czech Statistical Office data

Regions	2009	2010	2011	2012
Prague	761,596	776,968	786,057	762,956
Central Bohemia	317,199	322,811	322,868	325,560
South Bohemia	298,058	306,833	309,006	311,309
Pilsen	299,846	306,628	325,753	325,886
Karlovy Vary	233,629	259,560	259,180	258,364
Usti	275,653	299,435	292,658	295,148
Liberec	240,057	268,480	279,039	283,671
Hradec Kralove	291,241	308,946	315,316	313,525
Pardubice	286,518	283,710	296,796	289,854
Vysocina	270,743	292,669	300,309	307,095
South Moravia	330,145	335,983	340,093	345,833
Olomouc	260,450	270,987	279,902	284,457
Zlin	286,977	301,442	309,386	322,246
Moravian Silesia	281,634	297,177	318,155	319,314

Czech Republic is characterized by significant regional disparities in unemployment (Table 3). This is caused in particular by different structure of economies and the educational composition. Czech Republic as a whole is struggling with unemployment. Higher unemployment rate is mostly observed for people with low qualifications.

Table 3. The rates of unemployment during 2009–2012 using the method of traffic lights, %, own processing of the Czech Statistical Office data

Regions	2009	2010	2011	2012
Prague	3.66	4.07	3.95	4.52
Central Bohemia	7.01	7.73	7.07	7.52
South Bohemia	7.78	8.50	7.53	8.36
Pilsen	8.16	8.25	7.01	7.31
Karlovy Vary	11.07	11.39	9.83	10.84
Usti	13.61	13.90	12.94	14.02
Liberec	11.24	10.54	9.46	10.26
Hradec Kralove	7.97	8.37	7.49	8.61
Pardubice	9.58	9.87	8.44	9.16
Vysocina	10.25	10.73	9.44	10.23
South Moravia	10.59	10.87	9.81	10.42
Olomouc	12.19	12.48	11.37	11.86
Zlin	10.83	10.74	9.35	10.42
Moravian Silesia	12.14	12.36	11.18	12.34

Prague is characterized by low unemployment. Relatively good situation is also in Central Bohemian region for a long time. The highest unemployment rates are in

Usti, Moravian Silesia and Olomouc. Usti and Moravian Silesia regions have the problem of structural unemployment, mainly associated with the attenuation of mining industry. The highest unemployment rate has been reported in most regions in 2010.

Average wages in the regions also differ (Table 4). Czech Republic has the highest wages in financial and insurance fields and also information and communication activities, the lowest – in agriculture and boarding. Regional differences are not too high, but for significantly higher levels in Prague. It is not confirmed that regions with the highest unemployment are associated with the lowest wages. The lowest wages are recorded in Karlovy Vary, Pardubice and Zlin regions. Average wages increased over time. Because it is a nominal indicator, we cannot really draw any conclusions about a real raise in people's living standards though.

Table 4. Average wages during 2009–2012 using the method of traffic lights, CZK, own processing of the Czech Statistical Office data

Regions	2009	2010	2011	2012
Prague	30,028	30,842	31,252	31,834
Central Bohemia	21,972	22,654	23,407	23,950
South Bohemia	20,319	20,583	21,041	21,714
Pilsen	21,864	21,989	22,452	23,132
Karlovy Vary	19,450	19,700	20,095	20,567
Usti	20,850	21,166	21,327	21,863
Liberec	20,426	20,739	21,581	22,153
Hradec Kralove	20,527	20,779	21,167	21,968
Pardubice	19,887	20,009	20,740	21,377
Vysocina	20,037	20,502	21,186	21,627
South Moravia	21,703	22,026	22,506	23,253
Olomouc	19,926	20,323	20,908	21,666
Zlin	19,478	19,937	20,777	21,338
Moravian Silesia	21,136	21,455	22,111	22,364

Just the indicator of economic activity rate does not show the gap between Prague and other regions (Table 5). Nevertheless, the highest value belongs to Prague. High values of this indicator, which is also highly conditioned of demographic structure, are in Central Bohemia, Plzen and Karlovy Vary regions. In the period under study a slight decrease is observed. In a longer term, further reduction can be assumed due to population aging in Czech Republic.

Table 6 shows the value of the index of regional disparities for the regions of Czech Republic. The index was first calculated for individual economic indicators (Annex 1–5) and then the average value was determined. The highest value (930) was calculated for Prague in 2009, the lowest (626) for Usti region in 2009. Regarding changes of economic index regional disparities in time, we can see different development in regions. Index growth in some regions and declined in others in 2010, but the index growth was observed in most regions in 2011 and 2012. Prague had a different development trend than remaining regions. Index declined and it reduced between 2009 and 2012. Index increased in other regions between 2009 and 2012.

Discussion. The order of economic success of the regions is determined taking into account all the examined indicators (Table 7). The order of the regions was

determined separately for each year, but in the surveyed period of 4 years there was no significant deviation.

Table 5. The rate of economic activity during 2009–2012 using the method of traffic lights, %, own processing of the Czech Statistical Office data

Regions	2009	2010	2011	2012
Prague	62.6	62.2	61.2	61.9
Central Bohemia	59.6	59.7	60.0	60.4
South Bohemia	58.8	58.0	58.5	57.8
Pilsen	59.6	59.0	59.3	59.5
Karlovy Vary	61.2	61.7	59.7	60.0
Usti	57.3	57.5	57.4	56.8
Liberec	57.3	58.0	57.5	57.6
Hradec Kralove	58.0	57.5	57.4	57.8
Pardubice	57.8	57.5	57.4	58.5
Vysocina	57.9	58.1	57.1	56.8
South Moravia	57.4	58.1	57.8	58.6
Olomouc	57.4	55.7	55.9	57.3
Zlin	57.2	56.8	57.4	57.5
Moravian Silesia	57.6	56.7	56.6	57.2

Table 6. Economic index of regional disparities, own calculations

Regions	2009	2010	2011	2012
Prague	930	921	925	901
Central Bohemia	697	696	706	703
South Bohemia	676	668	684	680
Pilsen	690	691	714	712
Karlovy Vary	633	644	655	652
Usti	626	632	636	635
Liberec	635	650	663	666
Hradec Kralove	679	680	694	685
Pardubice	656	651	671	672
Vysocina	645	651	663	661
South Moravia	651	656	664	667
Olomouc	633	632	644	648
Zlin	641	646	667	668
Moravian Silesia	644	643	655	654

Prague was ranked, as expected, first throughout the whole period. Central Bohemia occupied the second and then third position, at which Pilsen region was replaced. Hradec Kralove region is ranked fourth, South Bohemia region is ranked fifth in the whole time. Pardubice, with the exception of 2010, when it fell to the eighth position, kept the sixth place. The position of South Moravia varied between sixth to eighth ranks. The situation changed slightly in Zlin region. From the tenth position in 2009 and 2010 it moved to the seventh in 2011 and 2012. Vysocina region fluctuated between the seventh to tenth places. Liberec occupied the ninth place with the exception of 2009. Moravian Silesia varied between ninth to twelfth places. The situation was worse in Karlovy Vary. It was ranked twelfth throughout the whole peri-

od, with the exception of 2010. Olomouc was thirteenth and Usti – fourteenth (except for 2010, when the situation was reverse).

Table 7. **Economic index of regional disparities, own calculations**

Regions	Percentage of regions (100% = average)				The order of regions			
	2009	2010	2011	2012	2009	2010	2011	2012
Prague	1,380	1,363	1,344	1,313	1	1	1	1
Central Bohemia	1,034	1,029	1,026	1,024	2	2	3	3
South Bohemia	1,004	0,989	0,993	0,992	5	5	5	5
Pilsen	1,024	1,023	1,037	1,038	3	3	2	2
Karlovy Vary	0,940	0,952	0,951	0,951	12	11	12	12
Usti	0,928	0,936	0,923	0,925	14	13	14	14
Liberec	0,942	0,962	0,963	0,971	11	9	9	9
Hradec Kralove	1,007	1,007	1,007	0,998	4	4	4	4
Pardubice	0,973	0,963	0,974	0,979	6	8	6	6
Vysocina	0,958	0,964	0,963	0,964	8	7	10	10
South Moravia	0,965	0,971	0,964	0,973	7	6	8	8
Olomouc	0,939	0,936	0,935	0,945	13	14	13	13
Zlin	0,950	0,956	0,968	0,973	10	10	7	7
Moravian Silesia	0,955	0,952	0,952	0,953	9	12	11	11

The regions are divided into 3 groups (Figure 1) – above average, average and below average. Prague belongs to the first group, Central Bohemia, Plzen, Hradec, South Bohemia clump together form the second group and the rest of the regions can be described as below average.

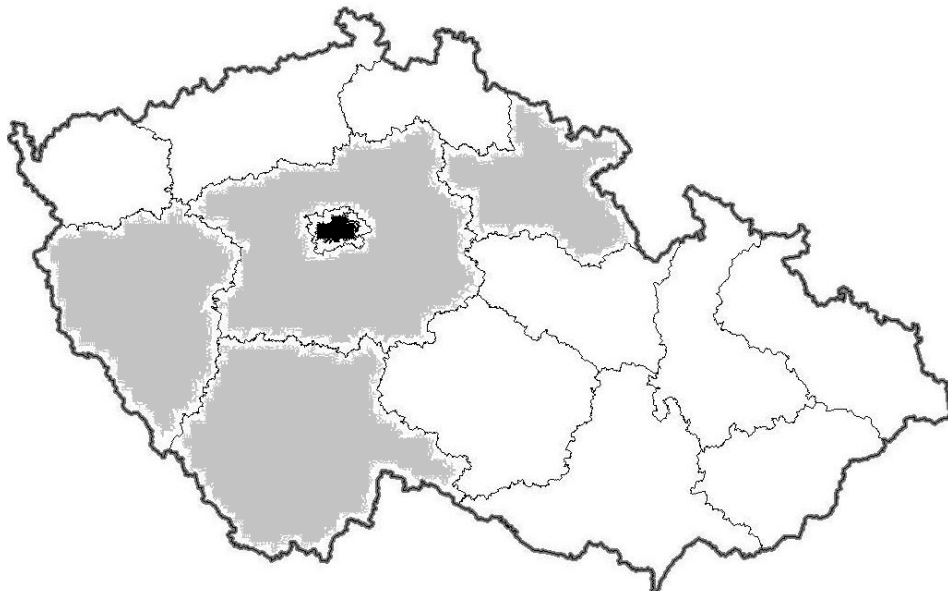


Figure 1. **The breakdown of Czech regions into the above average, average and below average groups, own processing**

Competitiveness is the prerequisite for future prosperity of any territory. Comparison and analysis of regional competitiveness (Zitek, Kunc and Tonev, 2006) shows the situation has not changed significantly. Competitiveness of the regions was evaluated on the basis of gross domestic product, wages, unemployment, education and migration. The result was the following ranking of regions: Prague and Central Bohemia, Pilsen, South Moravia, South Bohemia, Pardubice, Zlin, Hradec Kralove, Vysocina, Liberec, Karlovy Vary, Olomouc, Moravian Silesia and Usti.

Conclusion. The paper was aimed to evaluate regional differences on the basis of the selected economic indicators. Income situation of households was assessed by Gini index and average gross wages. Economic performance was evaluated by regional gross domestic product per capita and economic activity rate. Unemployment was assessed via the unemployment rate. All the indicators in individual regions differed. For Gini index low values were determined as positive, so Prague took the worst ranking in this case. The value of Gini index was significantly higher in Prague than in other regions. For gross domestic product and average wages high values were evaluated as positive. Prague got the highest results for these indicators. Prague differed also by the economic activity and unemployment rates, but not as significantly as for remaining indicators.

Despite the often mentioned importance of demographic factors, there is no similarity between regions based on the number of inhabitants. The position of 3 most populous regions (without Prague) – Central Bohemia, South Moravia and Moravian Silesia – are quite different. While Central Bohemia is rated above average, South Moravia and Moravian Silesia fall within the category below average (the position of South Moravia is better than Moravian Silesia).

After the synthesis of all the economic indicators in the index of regional disparities a good position was attributed to (excluding the already mentioned capital city) Central Bohemia, Pilsen, Hradec Kralove and South Bohemia. Karlovy Vary, Olomouc and Usti regions got the lowest ranks.

Further research in this area can be focused on the analysis of regional aspects in the following time period by applying other methods, for example, cluster analysis or principal component analysis.

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Annexes:

Annex 1. Index of regional disparities – Gini index, own calculations

Regions	2009	2010	2011	2012
Prague	738.71	753.29	738.71	733.97
Central Bohemia	916.00	927.13	908.73	894.53
South Bohemia	954.17	946.28	942.39	962.18
Pilsen	982.83	987.07	978.63	966.24
Karlovy Vary	950.21	962.18	987.07	991.34
Usti	938.52	934.69	934.69	942.39
Liberec	987.07	982.83	978.63	995.65
Hradec Kralove	991.34	1000.00	995.65	987.07
Pardubice	982.83	974.47	974.47	982.83
Vysocina	970.34	970.34	966.24	970.34
South Moravia	887.60	894.53	880.77	877.39
Olomouc	991.34	995.65	991.34	974.47
Zlin	974.47	970.34	978.63	987.07
Moravian Silesia	974.47	962.18	946.28	950.21

Annex 2. Index of regional disparities – GDP per capita, own calculations

Regions	2009	2010	2011	2012
Prague	968.88	988.44	1000.00	970.61
Central Bohemia	403.53	410.67	410.74	414.17
South Bohemia	379.18	390.34	393.11	396.04
Pilsen	381.46	390.08	414.41	414.58
Karlovy Vary	297.22	330.20	329.72	328.68
Usti	350.68	380.93	372.31	375.48
Liberec	305.39	341.55	354.99	360.88
Hradec Kralove	370.51	393.03	401.14	398.86
Pardubice	364.50	360.93	377.58	368.74
Vysocina	344.43	372.33	382.05	390.68
South Moravia	420.00	427.43	432.66	439.96
Olomouc	331.34	344.74	356.08	361.88
Zlin	365.08	383.49	393.59	409.95
Moravian Silesia	358.29	378.06	404.75	406.22

Annex 3. Index of regional disparities – Unemployment rate, own calculations

Regions	2009	2010	2011	2012
Prague	1000.00	899.14	927.09	809.92
Central Bohemia	522.58	473.59	517.72	486.81
South Bohemia	470.34	430.64	486.48	437.90
Pilsen	448.58	443.98	522.28	500.80
Karlovy Vary	330.57	321.27	372.36	337.72
Usti	269.02	263.35	282.91	261.12
Liberec	325.77	347.33	386.91	356.81
Hradec Kralove	459.43	437.15	488.49	425.18
Pardubice	382.17	370.98	433.63	399.66
Vysocina	357.14	341.15	387.73	357.85
South Moravia	345.80	336.88	373.31	351.33
Olomouc	300.29	293.23	321.89	308.67
Zlin	337.94	340.93	391.47	351.33
Moravian Silesia	301.49	296.28	327.35	296.66

Annex 4. Index of regional disparities – Average wage, own calculations

Regions	2009	2010	2011	2012
Prague	943.27	968.84	981.72	1000.00
Central Bohemia	690.21	711.63	735.28	752.34
South Bohemia	638.28	646.57	660.96	682.10
Pilsen	686.81	690.74	705.28	726.64
Karlovy Vary	610.98	618.84	631.24	646.07
Usti	654.96	664.89	669.94	686.78
Liberec	641.64	651.47	677.92	695.89
Hradec Kralove	644.81	652.73	664.92	690.08
Pardubice	624.71	628.54	651.50	671.51
Vysocina	629.42	644.03	665.51	679.37
South Moravia	681.76	691.90	706.98	730.45
Olomouc	625.93	638.41	656.78	680.59
Zlin	611.86	626.28	652.67	670.29
Moravian Silesia	663.94	673.96	694.57	702.52

*Annex 5. Index of regional disparities – Rate of economic activity,
own calculations*

Regions	2009	2010	2011	2012
Prague	1000.00	994.24	978.72	989.97
Central Bohemia	953.00	954.63	958.27	965.44
South Bohemia	940.00	927.65	935.30	923.03
Pilsen	951.93	943.36	948.18	950.27
Karlovy Vary	978.26	985.35	954.84	958.11
Usti	914.98	918.59	918.03	907.23
Liberec	915.72	926.20	918.22	920.07
Hradec Kralove	926.94	918.36	917.33	923.11
Pardubice	923.99	918.43	917.43	935.22
Vysocina	925.53	928.93	912.23	907.97
South Moravia	917.74	929.03	923.90	937.18
Olomouc	917.04	889.34	893.98	915.93
Zlin	913.37	907.97	916.96	919.65
Moravian Silesia	920.52	905.96	904.32	914.07

Стаття надійшла до редакції 24.03.2015.