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THE STRUCTURE AND LEVEL OF UNEMPLOYMENT IN THE LOCAL JOB MARKETS OF LOWER SILESIA

Unemployment is an important social and economic problem. It is connected with conditions existing when people, who are able and willing to work, cannot find employment, and are thus deprived of their basic means of earning their living.

High level of unemployment was connected with economic and social transformation in Poland in the 1990s. It was a long-lasting situation, and it was different in different regions of Poland [Sekretna, 1994; Socha and Sztanderska, 2000, 225 ff; Witkowski, 1996]. As a result of the disproportion between labour supply and demand, unemployment rate is one of the indicators of structural unemployment, which is generally regarded as a particularly bad social and economic phenomenon.

In this article, we analysed results of our research on unemployment in the local job markets of Lower Silesia. We used two, generally accepted indicators: unemployment rate, and the number of unemployed people per one job offer. We considered such characteristics of unemployed people as: their age, education, their status as school graduates, and the length of their unemployment. Structural characteristics were used to analyse different demographic, social and professional groups connected with employment status. Although, the characteristics are less important than unemployment rates for those groups of people, we used them in our analysis because of the fact that Economic Activity Research was limited to nationwide and provincial (the area of *Voivodeships*) scales, therefore, only the data regarding unemployment registered at employment offices were available.

Our research covered the period from 1990 to 2000. We considered administrative borders established in Lower Silesia in 1975 and 1999.

According to the first administrative map, Lower Silesia included the former Provinces of Jelenia Góra, Legnica, Wałbrzych, Wrocław. According to the second administrative map, Lower Silesia included, in addition, Górowski County (*powiat*), and three communes from the former Kalisz Province: Dziadowa Kłoda, Międzybórz, Syców. In 1999, the territorial changes in Lower Silesia were not very significant, especially, when compared with the changes in other parts of Poland. There were bigger changes on local job markets. From 1990 to 1998, the range of those markets was based on regional administrative borders and territorial competence of local employment offices. In 1998, they were based on county borders. According to new administrative divisions, within four administrative regions (Jelenia Góra, Legnica, Wałbrzych, Wrocław), there are four urban and four rural counties. Three regions located in Kłodzka Valley (Bystrzyca, Kłodzko, Nowa Ruda) are included into one commune of Kłodzko. As a result of those changes, the number of local job markets in Lower Silesia increased in 1999 by 5 (compared with the number of markets, which existed from 1990 to 1998). Our research followed the administrative changes.

The most important goal of our research was to analyse the scope and structural characteristics of the unemployment in Lower Silesia in 2000, *i.e.* eleven years after the system transformation. We compared the situation in 2000 and 1991. We explained the differences based, among other factors, on the functional structure of territorial units. The data regarding rural self-employment were not complete, therefore, we considered the years 1988 and 1998, which were analysed in previous research [Hasińska and Hasiński, 2000a].

In 2000, the unemployment in Lower Silesia, according to comparative unemployment rate, was 20% higher than national average (18.4%, 15.1%, respectively). Lower Silesia was listed as the fifth region in the group of regions where unemployment was most severe (after Warmia-Mazury, Lubuskie, West Pomerania, and Kujawy-Pomerania). Compared with 1990-1991,¹ the situation in the region worsened in relation with other parts of Poland [Hasińska, 1993, 156].

The internal differentiation of the unemployment in Lower Silesia can be analysed at two levels: provincial level, according to administrative 1975 map (Jelenia Góra, Legnica, Wałbrzych, Wrocław), and local job

¹Gross values of the *Ws* indicator in 2000 and in 1990, 1991 are not comparable, because at the beginning of the 1990s the available data did not include inflowing job offers, and the unemployed in the analysed period; they only included the figures registered at the end of the period.

markets level. The analysis at the former leads towards reaching the most important goal of our research.

At the beginning of the 1990s, the unemployment rate in Wrocław Province was different from that in other three provinces of Lower Silesia [Hasińska, 1993, 156; Hasińska and Hasiński, 2000b). The region was listed at the top of the list which included 49 provinces in Poland. The Province of Jelenia Góra and Wałbrzych were at the end of that list, Legnica was in the middle. Labour supply and demand resemble the location of the provinces on the list. It relates to the W_s market indicator which includes the number of the unemployed per one job offer.

The W_s market indicator illustrates the unemployment rate because it relates to the possibility of labour supply reduction. In 2000, the situation in Lower Silesia was a little different from the national average. The number of the unemployed per a job offer listed by employment offices in Lower Silesia was 4.3, and in Poland, it ran at 4.1. The situation on the labour market in Lower Silesia can be characterised, therefore, in negative terms. Compared with the situation in 1990 and 1991, the situation in 2000 was a little better, but, it was not good (based on the analysis of the W_s indicator for Lower Silesia and Poland [Hasińska, 1993, 156]. In 2000, the share of subsidised labour in Lower Silesia was 36%, while in Poland it was 40%.

In Lower Silesia, unemployment was different at different local job markets. In 2000, the unemployment rate was from 7.2 to 31.2%, *i.e.*, 1:4.3 (Table 1). In 2000, 1990, and 1991, the unemployment rate in the majority of Lower Silesian territorial units was higher than the national average. In 2000, only three job markets registered lower unemployment rate: both urban and rural Wrocław job markets, and urban Jelenia Góra job market. In 1990, Wrocław, Nowa Ruda and Środa, and in 1991, Wrocław, Środa, Złotoryja registered lower unemployment rate.² A comparatively good situation (compared with other local job markets) was registered in Wrocław (urban market, 1999). Wrocław was considered³ one-element class job market, with the lowest indicator value in Lower Silesia, about twice lower than the national average.

Wrocław, as one of the Polish metropolises, benefited from the diverse social and economic structure, qualified labour force, localisation and urbanisation, which existed before the transformation. Also, Wrocław quickly adapted to the changing conditions [Hasińska, 2002].

²In 1975, within administrative borders, there were two job markets: Wrocław and Jelenia Góra.

³Regarding unemployment, local job markets were analysed according to the Three-Median Method [Nowak, 1977].

Table 1. Local job markets in Lower Silesia, according to W_s unemployment rate and W_s labour market indicators, in 2000

Market name	Functional type		W_b	Class		W_{S1}	W_{S2}
	1988	1998		No.	Number		
wrocławski (grodzki)	Bup	Bup	7.2	I	1	5	5
wrocławski (ziemski)	Pr	Pr	12.3	II	4	8	9
jeleniogórski (grodzki)	Bup	Bup	13.4			3	4
lubiński	Pp	Ppu	16.0			4	7
polkowicki	Pp	Pp	16.2			3	4
zgorzelecki	Pp	Ppu	18.3	III	10	4	5
legnicki (grodzki)	Bup	Bup	18.7			5	8
milicki	Pr	Pr	19.3			2	3
trzebnicki	Pzr	Pr	19.8			8	15
wołowski	Pzr	Pzr	19.9			5	10
głogowski	Pp	Ppu	20.2			3	4
średzki	Pr	Pr	20.5			5	9
oławski	Pzr	Ppu	21.0			6	15
wałbrzyski (grodzki)	Bpu	Bup	21.1			5	7
strzeliński	Pr	Pr	21.4			6	12
jeleniogórski (ziemski)	Pu	Ppu	22.0	IV	11	7	9
oleśnicki	Pr	Pzr	22.4			5	7
ząbkowicki	Pzr	Pzr	22.9			6	15
świdnicki	Pp	Ppu	23.0			5	9
bolesławiecki	Pzr	Pzr	23.3			4	7
kłodzki	Pu	Pu	24.3			4	20
górowski	Pr	Pr	24.4			4	6
legnicki (ziemski)	Pr	Pr	24.7			4	7
dzierżoniowski	Pp	Ppu	25.4			5	7
jaworski	Pzr	Pzr	25.5			3	6
lubański	Pzr	Ppu	26.0			4	5
złotoryjski	Pzr	Pzr	27.2	V	4	3	7
kamiennogórski	Pp	Ppu	27.4			3	4
lwówecki	Pzr	Pr	29.2			3	5
wałbrzyski (ziemski)	Pp	Pzr	31.2			5	15

grodzki = urban commune; ziemski = rural commune

Explanation: The functional types of labour markets: bi-functional, service-industrial (Bup); bi-functional industrial-service (Bpu); poly-functional, dominated by agricultural sector (Pr); poly-functional,

dominated by industrial sector (Pp), poly-functional, dominated by industrial and services sectors (Ppu), poly-functional, structurally differentiated (Pzr).

W_{S1} – the inflow of the unemployed in 2000 per 1 job offer listed at local employment offices in 2000.

W_{S2} – the inflow of the unemployed in 2000 per 1 subsidised job offer listed at local employment offices in 2000.

Source: own research results, based on data from Lower Silesian Employment Office [Hasińska and Hasiński, 2000a]

In 2000, the examined units were classified as normal, because 2/3 of them concentrated in the centre of the classification table. Beyond class 1, in extreme class 2 and 5, there were only a few local job markets (just as in 1990). Except for Kamienna Góra County, and, partly, Lwówek,⁴ territorial units were different from those at the beginning of the transformation. In 2000, class 2 did not include Środa, Trzebnica, Oława (former Wrocław Province). Instead, other markets were included in that classification. In class 2, Jelenia Góra urban job market, Lubin, Polkowice. In class 5, Złotoryja and rural Wałbrzych job markets. Centrally collocated class 3 and 4 also changed.⁵ That fact indicates changeability of the unemployment rate in Lower Silesia.

The situation in Lower Silesian job markets⁶ improved or deteriorated, according to the unemployment rate fluctuation. Nevertheless, the changes did not influence the divisions connected with the former divisions into Jelenia Góra, Legnica, Wałbrzych, and Wrocław Provinces. The classification of those provinces remained the same, while unemployment was increasing in Wrocław, Legnica, Jelenia Góra, Wałbrzych. The stability of those divisions is connected with different demographic, social and economic factors. One of the most important factors is the functional structure of local job markets (Tab. 1). We limited our research to three sectors (agricultural, industrial, and services sectors), but we should also include internal divisions in those sectors, especially, in the industrial and services sectors.

From an eleven-year perspective, we can conclude, that higher registered unemployment is connected with the structure dominated by industry and services (excluding agricultural sector). Poly-functional structure dominates local job markets in Lower Silesia (87%). Rural employment, mainly self-employment, should be regarded as a buffer zone

⁴Lwówek County included parts of Lubań, Bolesławiec, Jelenia Góra administrative units.

⁵In 2000, only three markets did not change, including Zgorzelec (class 3), Jawor, Dzierżonów (class 4), but it does not indicate their stability in the eleven-year period of the system transformation.

⁶A positive change was recorded in Milicz and Strzelin; a negative change was recorded in Złotoryja.

(both in Lower Silesia and, generally, all over Poland), which accepts the surplus of labour from weak building industry, other industries, and services sector, which are especially threatened by the changes in the system [Hasiński, 1999, 122].

Other poly-functional markets included the weak agricultural sector, therefore, there was no agricultural buffer-zone in those areas. Urban markets in Jelenia Góra, Legnica, Wałbrzych, and Wrocław (capitals of former Provinces) revealed different unemployment conditions. They have a bi-functional structure (service-industrial, and industrial-service). Those structures were buffered by service sector (not by agriculture). Labour surplus from a better or worse developed industrial sector were absorbed by new private and public services.

The unemployment rate in Lower Silesia, as mentioned earlier, is connected with branch industrial and services structures. Lignite mining, power plants, mining, metallurgy, copper metallurgy, and, partly, food and chemical industries contributed to limiting the results of unemployment growth. The concentration of traditional coal mining industry, light industry (fabric, garment, and leather factories), electric machinery industry, and radio-and-television industry, contributed to the growth in the unemployment rate.

The description of the unemployment in Lower Silesia, based on an analysis of the unemployment rate, should be altered when we include the W_S indicator (mentioned earlier in our text), which refers to the number of the unemployed per 1 job offer. In order to show the structure of both subsidised and non-subsidised job offers, the indicator was used in two versions: as referring to all job offers listed by employment agencies (W_{S1}), and referring to non-subsidised job offers (W_{S2}). The results of our calculations, rounded to integers, are shown in Table 1.

Comparing the unemployment rates with W_{S1} and W_{S2} indicators, we illustrated a complicated situation in the job markets in 2000. Territorial units, included in the same class, according to unemployment rates, are very different as to the number of the unemployed per 1 subsidised job offer and per 1 job offer in general. A high unemployment rate is sometimes connected with low W_{S1} and W_{S2} indicators, and vice versa. Bigger disproportions are connected with non-subsidised job offers than with job offers in general, because the range of W_{S2} indicator, according to local market scale, is higher than the range of W_{S1} indicator (1:6.6; 1:4). It is the result of big differences in the share of subsidised job offers listed by employers (from 15% in Wrocław urban county, to 78% in Kłodzko county). Such employer's preferences as in Kłodzko county document the difficulty in job markets, experienced by both employers and employees.

Considering the possibility of unemployment reduction, the best situation is connected with low W_S indicator value. Combined high unemployment rate and low W_S value, might indicate the non-adjustment of labour supply and demand, and not-adequate professional qualifications of workers. A negative adjustment should be a subject of further research.

In-depth analysis of the data in Table 1 reveals the following facts:

– low W_{S1} and/or W_{S2} values contribute to strengthening of markets with a relatively low unemployment rate (Jelenia Góra urban market, Polkowice, Lubin, Wrocław urban market, Zgorzelec, Milicz, Głogów), and this, potentially, limits high unemployment (in: Lwówek, Kamienna Góra, Złotoryja, Lubań, Jawor, Legnica rural market, Góra, Bolesławiec, and, partly, Kłodzko);

– relatively high W_{S1} and W_{S2} values contribute to worsening of employment conditions in the markets with a relatively high unemployment rate (Wałbrzych rural market, partly Kłodzko, Ząbkowice, Jelenia Góra rural market), and in the markets with a relatively low unemployment rate (Wrocław rural market, Trzebnica, Oława and Strzelin).

The spatial distribution of strengthening and worsening employment trends in Lower Silesia indicates a decrease in internal differentiation in a region according to market situation and job demand. The positive evaluation of the majority of markets in the former Wrocław Province is weakening, but the situation in other provinces is improving (mainly in Jelenia Góra and Legnica ones).

We considered four structural indicators as the third coefficient of unemployment in a region. It includes the following groups of the unemployed: long-term unemployed (over 12 months), unemployed with basic primary education, and with partial primary education, unemployed young people (below 24 years of age), and unemployed graduates from schools, who obtained their diplomas one year ago. We classified the data received from those groups, based on the synthetic measurement of demographic-social unemployment⁷ structure. According to our measurement, we listed territorial units in Table 2, which was used to analyse the structure and rates of the unemployed.

Regarding local markets, the range of the synthetic measurement was, in 2000, from 0.602 to 0.820, and it was three times smaller than the rate of unemployment (1:1.4, 1:4.3). Low differentiation level of that measurement is the result of similar differentiation of the three first characteristics (of analysed characteristics), excluding the rate of unemployed school graduates (1:1.7, 1:1.6, 1:1.6, 1:1.39, respectively). It me-

⁷Synthetic measurement was based on Strahl's method [Strahl 1977], which included all four characteristics of unemployment, considered as destimulants.

Table 2. Local job markets classification, based on the synthetic measurement of the unemployment structure, including the job markets in Lower Silesia in 2000

Class	Synthetic measurement	Number	Market name
I	0.602–0.635	8	polkowicki, średzki, zgorzelecki, milicki, lubański, wołowski, wrocławski (ziemski), strzebiński.
II	0.645–0.665	11	dzierżoniowski, górski, legnicki (ziemski), oleśnicki, złotoryjski, oławski, ząbkowicki, lubiński, głogowski, kłodzki, wałbrzyski (ziemski).
III	0.675–0.710	6	trzebnicki, świdnicki, jaworski, wałbrzyski (grodzki), bolesławiecki, kamiennogórski.
V	0.727–0.820	5	jeleniogórski (ziemski), legnicki (grodzki), wrocławski (grodzki), jeleniogórski (grodzki), lwówecki.

grodzki = urban commune; ziemski = rural commune

Source: as in Table 1.

ans, that, in 2000, in Lower Silesia, the selected characteristics of unemployed people influenced the unemployment territorial distribution, but only to a small degree.

The majority (2/3) of analysed territorial units should be considered in terms of synthetic measurement lower than entire-region average (*i.e.* negative), and should be included in the first two classes (Table 2). All the local poly-functional markets dominated by rural sector were concentrated in those classes. We can conclude, therefore, that negative unemployment structures are connected with the rural sector. Our conclusion can be strengthened when we analyse the classification of markets according to the unemployment structure. The classification reveals that poly-functional units dominated by agricultural sector were mainly/only located in upper classes, where the rate of unemployment was above the average.

The functional structure influenced the characteristics of the unemployed structures in urban areas of the former provinces, including: Jelenia Góra, Legnica, Wałbrzych, and Wrocław. Bi-functional, service-industrial and industrial-service character of those cities is the coefficient of lower-than-average participation regarding the following groups: long-term unemployed (with the exception of Legnica), the unemployed with primary and incomplete primary education (except in Jelenia Góra and Wałbrzych), young people and young school graduates (except graduates from Wrocław schools).

In the other types of functional structures, it is difficult to notice any regular relations with unemployment characteristics. It seems, however,

that one of the factors influencing the characteristics of unemployment, is the demographic structure, and, in particular, population age structure (it influences the inflow of young people and graduates to job markets). Relatively young demographic structures influence in that way the northern job markets, including: Lubin, Głogów and Polkowice (in former Legnica Province).

Comparing the territorial administrative divisions of 1975 and 2000, the job markets over-representation in the former Wrocław and Legnica Provinces was included in class 1 and 2 (below average value measurement). In the former Jelenia Góra Province, and, to a lesser extent, in Wałbrzych Province, the job markets over-representation was included in class 3 and 4 (below average value measurement). Unemployment structural characteristics contributed to correcting the evaluation of the unemployment growth mainly in the job markets in the former Wrocław and Legnica Provinces. Also, they contributed to correcting the evaluation of the unemployment decrease in the former Jelenia Góra, and, partly, Wałbrzych Provinces. The range of those corrections was small because of the limitations regarding the synthetic measurement of local job markets in Lower Silesia.

In 2000, a high unemployment rate was recorded in all the areas of Lower Silesia. Wrocław urban area was the only exception. De-industrialisation, the liquidation of coal mining industry, the liquidation of state-owned agricultural farms, and the destruction of tourist-spa institutions were not accompanied by a proper growth in the services-oriented economy.

As a result of the shortage of job offers, relatively more severe in rural areas, the need for subsidised labour is growing. Existing economic conditions limit the development of subsidised labour market. Employment Fund Administration's priority is to pay unemployment benefits.

The high unemployment rate limits the demand for services, therefore, the economy must be re-industrialised in order to change the situation. The re-development of industries will contribute to stimulation of the internal demand for services.

Its natural environment, the location of Lower Silesia near international borders, and the integration of Poland with the European Union should contribute to lowering the rate of unemployment in the region.

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