

Classification of labour markets in the Silesian Province (Poland)

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ABSTRACT

The purpose of this article is to try to classify labour markets of the Silesian Province on the municipality level. The proposed solution of grouping labour markets is based on three criteria: the size of the labour market measured by a number of jobs, the weight of the labour market expressed with a proportion of the number of jobs to the size of the population and that scale of the impact that is a proportion of the commuters to the ones leaving for work. As a result of the assumed criteria the municipalities have been grouped according to their meaning on the labour market, at the same time identifying weaker and stronger labour markets. The first stage of the research was to divide the municipal labour markets according to the number of the employed. As a result territorial units were grouped into 4 classes (small, medium, big and huge) including in total 9 subclasses. Then the municipal labour markets were sorted according to their weight and the scale of their impact, verifying their position in this way. The research pointed out that a lot of labour markets in the Katowice conurbation showed lower levels than the assumptions. Consequently, it suggests polarization of the labour market of this urban unit that is mainly focused on Katowice and Gliwice. Higher parameters than the assumed ones were reached by several municipalities that are small or medium labour markets. In many cases these are municipalities where there are huge businesses connected with coal mining. A beneficial situation was noted in the southern part of the province that has a relatively steady situation on the labour market. The presented classification of labour markets can support the management process of local and regional development.

KEY WORDS: local labour markets, jobs, Silesian Province

1. Introduction

The labour market is a special category due to the fact that the subject of the turnover is human work. This generative factor is of a different character, as in contrary to the capital, it has its own independence and can be decisive by itself (BRUDA & WYPŁOSZ, 1995). The mechanism of prices and competition on this market consists in searching the best-paid jobs on this labour market by potential workers (job supply), and searching the best workers by the employers (job demand). The measure of the best job offers as well as the best employees is not only the price of the labour (salary), but the total balance of the salary along with other factors, such as: social security, character of the job, qualifications, age, etc. The spatial measure of the labour market is of some significance as well, i.e. geographical location of the jobs and location of human labour resources. A logical consequence of such a situation

is the fact that generally in areas of high density of population there are more jobs, which results from a necessity to obtain incomes by the households. Lack of balance on the labour market expressed by a surplus of the supply over the demand for jobs means unemployment. This state of balance can have a differentiated and determined spatial scope, which results in migration processes in areas lacking in available jobs. Labour market is one of the basic determinants of local development. It is also one of the main criteria of the assessment of the attractiveness and competitiveness of particular administration units.

The approach presented in the article as well as the classification have a typically spatial character. The subject of the analysis and quantification are labour markets delimited according to the division of the province into municipalities, constituting a collection of 167 territorial units. This group contains 49 urban municipalities, 22 urban-rural and 91 rural (THE SILESIA PROVINCE STATISTICAL YEARBOOK, 2013).

The purpose of the study is preparing a classification of the labour markets of the Silesian Province that shall allow to estimate a relative meaning of particular territorial units. In literature we can find information concerning the size of the labour market relating only to the number of jobs in a particular city. The information is highly insufficient as this ratio will be mostly a derivative of the number of population. The proposed approach assumes indicating stronger and weaker labour markets within the Silesian Province which represent a development level of this market above or below a corresponding potential. The above mentioned classification can be the base for identification of municipalities in which the main determinant of the development will be local economy. Considering this article a starting point will let us follow the dynamics and trends through a change in the position of particular municipalities in different classes.

The research was based on the data from the REGON database, including all the employed in 2010. The values of the quotient of the coming to work and leaving for work (C/L) comes from 2006 and were generated on the base of the information included in PIT.

The questions of the labour market are essential both from the scientific point of view and practical considerations connected with development processes management. The labour market of the Silesian Province belonging to the biggest ones in the country has a particular meaning, yet it is internally differentiated and its development is connected with stages of transformation of a traditional social and economic region. The studies dealing with the question of development processes management include, among others, RUNGE (1991, 1996), RUNGE & ŻUREK (2010), BARCZAK & TAUSZA (2004), KOTLORZ (2006), KŁOSOWSKI ET AL. (2013a, b, c, d), SITEK ET AL. (2013).

In a theoretical approach, the division of the labour market was described by PECK (1992), DOERINGER & PIORE (1971). Those studies analysed bases and causes of the segmentation of labour markets. The division process influenced the way working conditions shaped, and indirectly the social position. As a cause of the segmentation they indicated, among others, Trade Unions and business activities of huge companies. However, LEVY & MURNANE (2004) write about a new division of the labour market resulting from technological changes and the consequences of such a situation.

The specific character of the job market of the Silesian Province is a result of its complex structure which alludes to a broad settlement system consisting of two conurbations: the Katowice and

Rybnik ones, and two agglomerations: the Bielsko-Biała and Częstochowa ones. The regional labour market itself against the national average indicates bigger share of the industry, big companies and the public sector. Thus, the industry share accounted respectively for 39.6% in 2013, while for 30.5% in Poland. Cognately, the public sector generated here 27.5% jobs what is by 3.2 percentage point more than in Poland (REGIONS OF POLAND, 2014). We should also mention that in the last 25 years as so-called traditional region has undergone an essential modernisation connected with the restriction of the excavation and steel industry share.

2. Principle of the job market classification

The criterion used in the process of classification of the size of the labour market is the number of jobs in a particular municipality. The classification organises markets in an explicit, yet not relative way, indicating the economic potential of a particular municipality at the same time.

Still it seems that the classification based exclusively on the absolute values may not give an objective assessment. Job as a man's activity is dependent on the population and it is also its derivative. On the one hand, the size of population directly translates into labour resources, on the other hand, the population is a consumer of some goods, and especially services. Obviously, it requires profound analysis, including social demographic structure in a context of labour resources, as well as awareness that a lot of goods consumed in a scale of a unit are produced out of this place. However, regardless of the indicated restrictions, it can be expected that a territorial unit with a bigger demographic potential should have a bigger number of jobs. It is clearly proved by the fact that between the number of population and the number of jobs, the correlation coefficient within the municipalities of the Silesia Province amounted to 0.94 in 2010. Then, it is a very strong direct relationship.

Taking into consideration the aforementioned arguments and making an attempt to classify labour markets, two subsequent criteria were used: a rank of labour market and a scale of impact. The first of the measures, a rank of labour market is a ratio of a number of jobs assigned to a number of residents. The whole population was considered an attitude scale, on the basis that it creates a group of local consumers.

The third segment denoting a significance of the centre is its scale of impact, expressed as a ratio of people coming to work and the ones leaving

this entity to work outside of it. This measure has a feature of balance, however it does not reflect precisely a spatial meaning, confining only to out/in interpretation without pointing out the direction and distances of commuting. The only complete and available database comprising this scope are data from the Polish Central Statistical Office (Pol. GUS) of 2006. A similar report was prepared by Marshal's Office of Silesian Province on the basis of data from tax offices within the province (*ANALIZA POWIĄZAŃ...*, 2012). It is, however, considerably restricted, because of the fact that only people who filed their tax returns within the Silesian Province were considered. As a result it is impossible to provide a current list of employed people, because people working within the Silesian Province, and residing out of its boundaries, were omitted. Summing up a suggested solution with reference to a classification of labour markets, we may enumerate the following components:

- the volume of labour market measured by a number of jobs in a given municipality,
- a rank of labour market expressed by a ratio of a number of jobs and a number of residents,
- a scale of impact expressed by people coming to work and leaving their residential municipality to find a job in another municipality.

The distinguished classes and divisions were constructed with relation to the needs of the Silesian Province in the system of municipalities, with reference to values and their classifications noted here.

3. Classification of volumes of labour markets¹

Considering a classification of the employed in the Silesian Province in accordance with 167 local units at the municipality level four volume classes of labour market were distinguished: S – small up to 10 k, A – average 10-100 k, B – big 100-200 k and VB – very big over 200 k of the employed (Fig. 1). The distinguished classes are very diverse as for the size, space, structure as well as they possess a different impact force.

We observe a dominance of small labour markets in the quantitative interpretation (class S), which comprise 131 municipalities, which constitutes 78% of settlement units, whereas they generate 373 k of jobs, namely 19% of the employed.

A class of small labour markets is very diverse as for the size, and the relation between the biggest and the smallest market is a ratio of 1:33.

With reference to the above, it was decided to divide this group into smaller subclasses, respectively:

- MAa – the smallest out of small labour markets up to 10 k of the employed;
- MA – small markets class A from 1 k to 3 k of the employed;
- MB – small markets class B from 3 k to 5 k of the employed;
- MC – small markets class C from 5 k to 10 k of the employed.

The second subclass in the class of small markets, marked with the symbol MA, is the most numerous group among analysed labour markets, because it comprises as many as 71 municipalities, which constitutes 43% of the municipalities in the region. The potential, which it represents is considerably smaller, however, because it constitutes 7% of the employed in the province, which is 145,6 k of the employed. 71 municipalities in this subclass are predominantly represented by rural municipalities (55), city municipalities (7) and rural-urban municipalities (9) are more rarely represented.

The subsequent group of municipalities in the class of small markets is average markets (MB). Rural municipalities prevail here as well (21) with a small number of rural-urban municipalities (6) and two small towns. The subclass MB comprises 110 k of the employed, and on average 3,8 k of the residents work in this type of municipality. The most of small markets in the average subclass are in the southern part of the province.

The last subclass (MC) among small labour markets amounts to 15 municipalities, where 106 k people work. These entities may be treated as big among small labour markets. This group is constituted mainly by small towns (7) and rural-urban (3) and well-developed rural communities (5).

Concluding, we may state that small labour markets (MA) commonly occur in the Silesian Province, providing the inhabitants with work, of mainly these municipalities, often of a peripheral location.

The significant role in the labour market is fulfilled by a group of municipalities, the potential of which is focused on a segment of 10-100 k of the employed. We define them as a class of average labour markets (A). They comprise as many as 1 m of the employed in the analysed segment, which constitutes 50% of general employment in all municipalities of the province. This potential is focused on 32 municipalities (19%). In terms of economy it is a considerably significant group of municipalities – the employers. The average volume of a labour market for the average class amounts to 31 k.

¹More on the issue of labour market classification in the work by Sitek et al., 2013, p. 185-197.

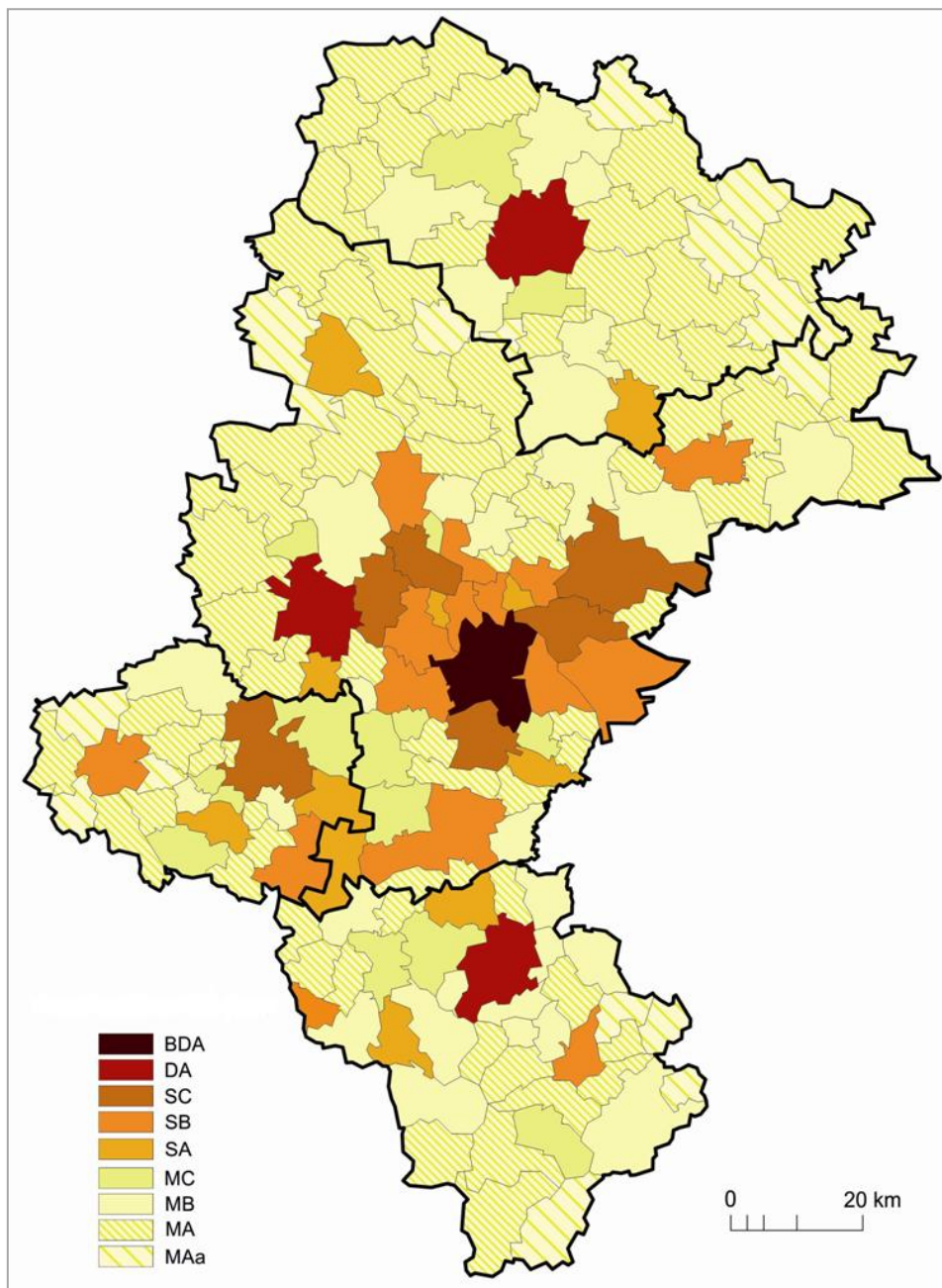


Fig. 1. Classification of local labour markets in the Silesian Province based on a number of the employed in 2010 (source: Sitek et al, 2013, p. 188). The justifications of abbreviations in the text

Class S may be divided into three subclasses:
 – small SA in the range of 10–20 k of employees,
 – average SB in the range of 20–50 k,
 – big SC in the range of 50–100 k.

The subclass SA comprises 149 k of jobs, which constitutes 7% on the regional level. It is created by 11 municipalities. On the other hand, the subclass SB is the most numerously represented in the size structure, because it covers 22% of labour market, namely 444 k of jobs in 15 municipalities. There are 1.5% of employees per 1 municipality. On the other hand, the subclass SC comprises the biggest labour markets in the class of average ones, being within the segment of 50-100 k. Only 6 municipalities from the entire province are within this class.

They comprise 21% of jobs. There are 3.5% of share in the labour market per one municipality.

These are mainly towns of higher territorial and organisational rank within a given state, the so-called county towns, which are responsible for the institutional organization at the county level. That is why they have a big range of impact (SZAJNOWSKA-WYSOCKA & ZUZANŃSKA-ŻYŃSKO, 2013). The key role in the class of average labour markets is fulfilled by cities with county rights, which create a core of metropolitan area in the region. The core cities comprise as many as 964 k of employees, which denotes 50% of the labour market. They are a very strong element of the labour market and constitute its core.

The class of big (DA) and very big (BDA) labour markets comprise as many as 31% of employees in the region. A big labour market amounts to 100-200 k of employees. It is created by the cities scattered all over the region: Częstochowa in the north, Bielsko-Biała in the south and Gliwice in the western part of the central subregion. The centres comprise 343 k of jobs. On average one city generates 5.7% of employees in the province. On the other hand, a very big (BDA) labour market is created by Katowice, the share of which in the general structure of the labour market amounts to 14%.

We may observe certain verifications related to size groups of labour market. In the class of small labour markets rural municipalities and small towns are predominant. It is associated with a restricted human potential, a peripheral location and a considerable distance from bigger urban centres. The developing productive functions are focused on the needs of the local market and are characterized by a mediocre structural differentiation of managed economic activities.

Average towns and bigger cities dominate in the class of average labour markets (S). Nearly all towns/cities fulfil their county functions. They are both centres of vast spatial entities managing a considerable area, as well as cities with county rights. We may conclude, then, that the average

labour market should be identified with an average city in general and the one with county rights.

The big markets are associated with metropolitan centres such as Bielsko-Biała and Częstochowa, earlier fulfilling the role of provincial cities. Gliwice is placed in this group, constituting the second pole of Katowice conurbation. The biggest labour market over 200 k is Katowice, the region capital and a centre of over-regional significance in the national settlement system, with developed metropolitan functions (ZUZAŃSKA-ŻYŚKO, 2012).

4. Classification in accordance with rank and scale of labour market impact

As a result of confronting a size class of a labour market with a rank of labour market expressed by a number of jobs per 1000 inhabitants and a scale of labour market impact, the ordering of municipal labour market was conducted. The basis of obtained types was the assumption that the higher the potential of a given market is, the higher its rank and impact should be. A table consisting of four table fields, in which a borderline amount for a rank criterion was a value of 430 jobs per 1000 inhabitants, and a level of impact was expressed by a quotient of the employees incoming and leaving for work of the value 1 (Table 1).

Table 1. The expected position of labour markets resulting from their size (class marking of market size in accordance with Fig. 1)

| | | | |
|---|-----------|--|---|
| Number of jobs per 1000 inhabitants | over 430 | 1. Average labour markets <i>SA, SB, SC</i> | 2. Big and very big labour markets <i>DA, BDA</i> |
| | below 430 | 3. Small labour markets <i>MAa, MA, MB, MC</i> | 4. Average labour markets <i>SA, SB, SC</i> |
| | | below 1 | over 1 |
| Quotient of the employees incoming and leaving for work | | | |

The justification for the level for P/W quotient is a critical level of this amount, significantly changing the market position on the regional level. If, however, a municipality has a quotient over 1, it denotes that it is an attractive market (more people come here to work than the ones who leave for work). The amount is a certain natural threshold dividing municipalities in terms of their spatial impact. On the other hand, in case of a rank of labour market, the decisive amount is a level of 430 jobs per 1000 inhabitants. As a borderline amount the average for the province was accepted, whereas the distribution of this parameter

does not have its normal nature. This criterion is met by 29 municipalities, which constitutes only 17.3% of a set. It was expected after the accepted level, because it was the aim to select a distinctive centres on a regional labour market.

In the light of the above assumption it was noted that very big markets (BDA) and big ones (DA) should meet both criteria (over 430 jobs per 1000 inhabitants, P/W quotient over 1). Respectively, average markets (SA, SB, SC) should meet minimally one criterion and be placed in the table field 1 or 4 (Table 1). The natural area for small markets (MAa, MA, MB, MC) is a segment 3 of the table,

representing the results (below 430 employees per 1000 inhabitants, P/W quotient below 1).

We need to emphasise here that very big markets (BDA) and big ones (DA) cannot be increased because *a priori* they need to meet both required criteria. However, due to the fact that there are only 4 such cities, and each of them totals over 100 k of jobs we may assume that as leaders they need to meet both criteria. It could turn out that by not exceeding these thresholds these cities would note down a decrease in their rank.

The exception, however in the opposite direction concerns small labour markets up to 10 k of employees. They, however, as the weakest entities may only be increased by meeting one or two criteria.

5. The results of integrated classification of labour markets

As a result of using the above criteria for 167 municipalities of the Silesian Province, the transfers of types 'up' and 'down' was observed. The classification indicates the transfers of the importance of labour markets in relation to their size in case of 38 municipalities, out of which 24 markets noted an increase and 14 ones a decrease (Table 2). The biggest group is constituted by the municipalities which were increased to the segment of over 430 employees and a quotient P/W over 1. There were 14 such cases, out of which 3 cases concern small labour markets. The increase meeting the criterion of a number of jobs per 1000 inhabitants concerns 8 municipalities, respectively of class MA – 2, MB – 3 and MC – 3. Only two markets of MB class were increased on account of P/W quotient. The entities, which experienced a decrease are average markets, out of which three are from SC class, three are the entities of SB type and six ones are of SA type.

Three municipalities noted a particularly high increase, which being small labour markets, met both required criteria. The first of them is a rural municipality Panki situated in Kłobuck county. A number of jobs on the level of 2,5 k locates it in the category of small markets of MA class. This centre possesses quite a diversified economic structure with the advantage of industrial sector, where approximately 57% of employees work. Within this area there are entities representing light industry (footwear manufacturing factory), agricultural-food manufacturing factory or a company manufacturing facemasks. On the other hand, other branches are represented by manufacturers of wood saws, plastics and non-ferrous metals,

concrete products and concrete prefabricated elements (curbs, palisades, pipes, cobblestone), protective equipment, workwear and uniform clothing, protective gloves, working footwear. There is also a sewing room employing about 30 people. This market demonstrates a considerable branch diversification. Taking into consideration the fact that Częstochowa subregion is represented by weak labour markets, the role of Panki is additionally enhanced.

The second municipality with a slightly bigger number of employees is Ornontowice, where 4,9 k employees work. It is a rural municipality as well, situated near Gliwice. The distinguishing feature for this marker is a visible dominance of one industrial plant – "Budryk" Coal mine belonging to Jastrzębie Coal Company (Pol: Jastrzębska Spółka Węglowa). As a result 64% of jobs are created by industry here. At a relatively small number of inhabitants amounting to over 5,7 k people, a ratio of a number of jobs per 1000 inhabitants was particularly significant here, totaling its value of 864, which is the third rank in the province.

Kłobuck is the last of small markets, which observed such a considerable increase. It is, however, a county town, which has an advantage due to at least its administrative functions. With reference to two former municipalities it is the entity of higher class size (MC), where 8,9 k employees work.

5 markets of average size, which were meeting criteria for very big and big markets comprise the municipalities standing out with their significance above their class. They are, respectively from the average class (SA): Pawłowice and Ustroń as well as from the average class (SB): Cieszyn, Żywiec and Mikołów. The case of Pawłowice is similar to the one of Ornontowice, where a character of a labour market is determined by a location of a coal mine. Ustroń, on the other hand, is a specialized tourist-spa centre, of a high level of economic activity with a considerable dominance of services. The remaining towns (Cieszyn, Żywiec and Mikołów) are strong county centres, of a considerable impact.

Ożarówice, Łędzin and Suszec have noted a positive transfer to a group of municipalities meeting the criteria of over 430 jobs per 1000 inhabitants. Ożarówice is a municipality, which is efficiently developing based on the Katowice-Pyrzowice airport functioning there, and it is situated in the suburbanization zone as well. Łędziny and Suszec are the analogous instances to the coalmining centres indicated above.

Table 2. Municipal labour markets, the parameters of which are not adequate to their size (marking of class size of labour markets in accordance with Fig. 1)

| | | Municipality, type of size class of labour market type, increase↑/decrease↓, number of employees in thousands | |
|-------------------------------------|-----------|--|---|
| Number of jobs per 1000 inhabitants | over 430 | Popów MA ↑2,4 Ożarówice MA ↑2,8 ----- Jaworze MB ↑3,1 Pilica MB ↑3,1 Wisła MB ↑4,5 ----- Suszec MC ↑5,6 Radzionków MC ↑7,4 Lędziny MC ↑8,3 | Panki MA ↑↑2,5 ----- Ornontowice MB ↑↑4,9 ----- Kłobuck MC ↑↑8,9 ----- Ustroń SA ↑10,1 Pawłowice SA ↑10,5 Lubliniec SA ↑10,5 ----- Cieszyn SB ↑20,5 Mikołów SB ↑20,9 Racibórz SB ↑24,9 Żywiec SB ↑28,2 Tarnowskie Góry SB ↑29,7 Jastrzębie-Zdrój SB ↑43,3 ----- Dąbrowa Górnicza SC ↑61,9 Rybnik SC ↑64,6 |
| | below 430 | Sosnowiec SC ↓88,3 Zabrze SC ↓73,4 Bytom SC ↓62,9 ----- Ruda Śl. SB ↓49,3 Jaworzno SB ↓35,5 Siemianowice Śl. SB ↓25,0 Będzin SB ↓22,3 Piekary Śl. SB ↓20,3 ----- Żory SA ↓19,4 Wodzisław Śl. SA ↓16,5 Świętochłowice SA ↓15,5 Knurów SA ↓14,3 Myszków SA ↓11,6 Czeladź SA ↓10,0 | Jeleśnia MB ↑3,3 Siewierz MB ↑4,5 |
| | | below 1 | over 1 |
| | | Quotient of the employees incoming and leaving for work | |

↑↑- increase of two types higher; ↑- increase to higher type; ↓- decrease to lower type

Jeleśnia and Siewierz are the markets which have noted a positive transfer as well, fulfilling the criteria of the impact scale, obtaining a result over 1 of incoming people towards the ones leaving for work. The reasons of such transfers may be rather different. Siewierz, for instance, is a municipality situated at the road hub, possessing within its area a significant entity in form of Electrolux (household equipment) factory. Jeleśnia, however, is situated on the outskirts and is surrounded by very weak labour markets, which in this surrounding indicates a considerable attractiveness.

The municipalities which turned out to be less significant than it would result from their size concerned average labour markets. The concentration of average size centres representing a type below the expected value comprises cities from Zabrze in the west to Jaworzno in the east. It particularly concerns the centres of average class size (SC), where a number of employees fits in the segment of 50-100 k people. This situation concerns Sosnowiec, Zabrze and Bytom. These are post-industrial cities, severely affected by post-restructuring processes causing a departure from traditional sectors of industry. It may the sign of

an evident polarization of Katowice conurbation as centres of labour market causing 'weakening' of the mentioned cities. The effect of this are certainly long commutes to work. An urban set creating a conurbation system should have a more balanced network of labour market. The subsequent divergence of labour markets within a conurbation may contribute to the reorganization of the entire urban system into a bipolar agglomeration with a dominance of Katowice and Gliwice.

Czeladź or Knurów are also in the group of municipalities which have noted a decline in the rank. They are medium-sized cities, situated in the direct neighbourhood of bigger labour markets. We need to predict that the entities possess the potential slightly exceeding the upper boundary of small markets.

Myszków and Wodzisław Śląski – the centres of county level have noted a decline as well. Myszków comes up badly in many economic statistics and as a county centre does not represent

appropriate potential. It is a relatively young town situation in a certain distance from DK1 (a national road no. 1), which constitutes an important economic framework of the region. Wodzisław Śląski, on the other hand, belongs to the weakest chain of a labour market of Rybnik conurbation. The reduction of industrial sector has not been fully replaced with services. Żory are in the same situation as well.

The distribution of stronger and weaker labour markets demonstrates certain spatial regularities (Fig. 2). In the central part of the province, comprising big cities from Zabrze and Bytom in the west to Sosnowiec and Jaworzno in the east, there appear municipalities, the markets of which are significantly weaker than it results from their size. As a counterbalance, we can observe the occurrence of markets, around the border of the conurbation. We may enumerate Tarnowskie Góry, Mikołów or Radzionków in this group.

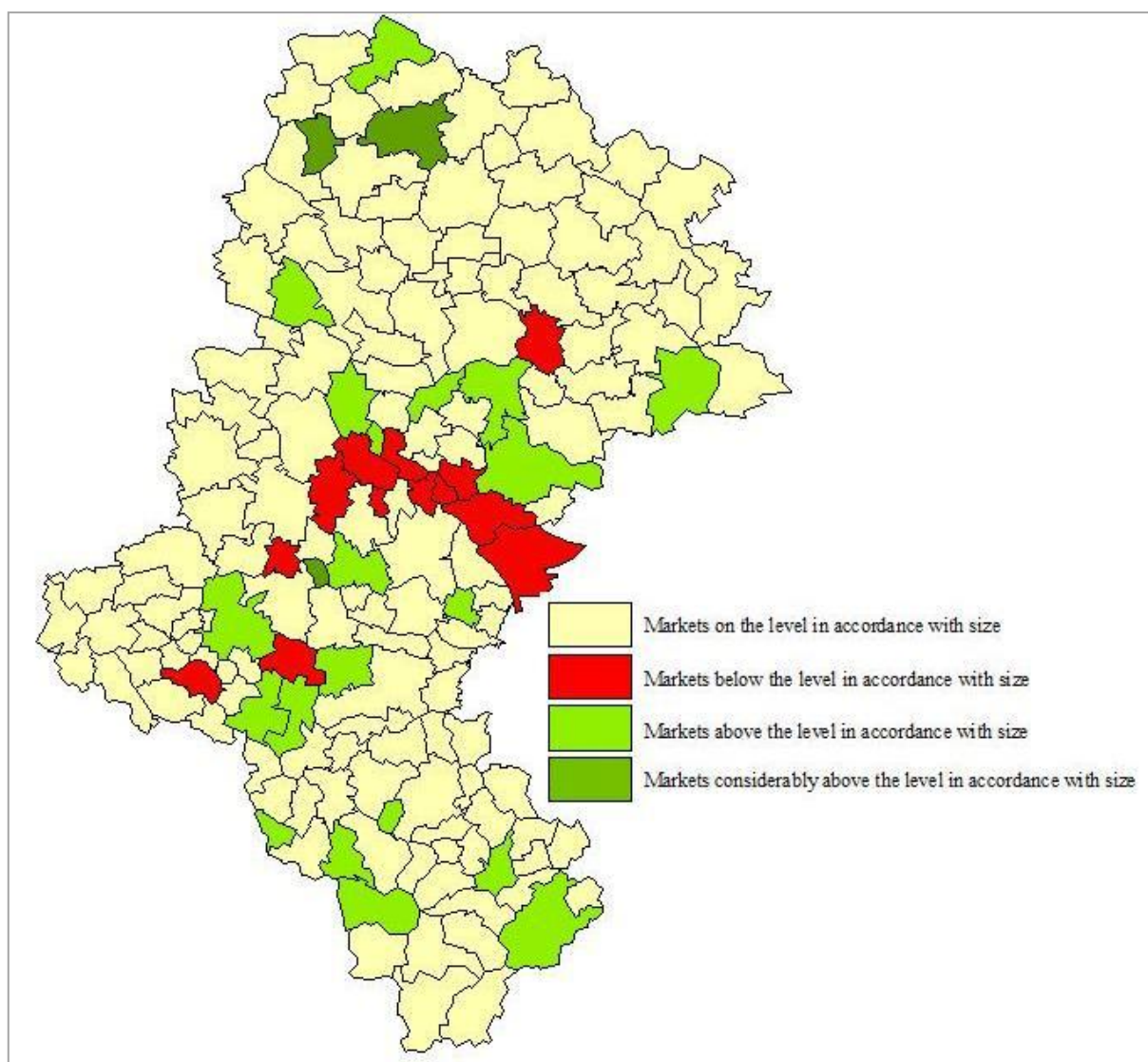


Fig. 2. Types of municipal labour markets in the Silesian province

The characteristic system appears in the Rybnik subregion. Jastrzębie-Zdrój and Rybnik definitely do in green numbers, however a labour market of Żory and Wodzisław Śląski comes up more weakly. A parametrisation of the neighboring municipalities: Suszec and Pawłowice, looks beneficial as well. The common denominator of these markets is mostly a bigger impact scale, resulting from the location of the main plants of Jastrzębska Spółka Węglowa (Eng. Jastrzębie Coal Company).

In the Bielsko-Biała subregion there are markets of a favourable situation in several places. Well-developed service centres, namely Wisła, Ustroń belong to them. The county towns – Cieszyn and Żywiec – have a higher rank as well. It is more difficult to explain the increase of Jaworze, which is built upon a residential function. Possibly a small population of the municipality and a high level of economic activity of its inhabitants contributed to such a result. The Bielsko-Biała subregion has an extensive settlement structure, which translates into a balanced and relatively strong labour market as well.

The Częstochowa subregion comes up weakly in the Silesian Province with respect to an economic range. Although such municipalities as Panki, Popów or Kłobuck as small markets have noted a considerable increase. Probably it is the effect of polarization of labour markets, because neighbouring entities included in the small markets possess very low values.

6. Conclusions

We need to emphasise that a considerable majority, because as many as 139 municipalities of the Silesian Province (83%), in the light of accepted criteria behaved neutrally or they represented values assumed for a given number of employees. We may consider this situation beneficial, because the accepted measure levels are so 'harsh' that they allow to identify only the centres differing considerably from the predicted system.

The markets demonstrate a greater importance with relation to their size:

- small of a diversified economic structure (Panki),
- small, monofunctional (Ornontowice, Lędziny),
- small, located on the outskirts and surrounded by not very sophisticated base (Jeleśnia, Popów),
- average being county cities / towns, namely: Tarnowskie Góry, Mikołów, Lubliniec, Cieszyn and Żywiec,
- average specialised service centres (Ustroń),

- average market of (SB) class or (SC) class being industrial cities (Jastrzębie-Zdrój, Dąbrowa Górnicza) or more service ones (Rybnik).

Mainly the medium-sized markets, located between Gliwice and Katowice are less significant. The division and differentiation of labour market in the metropolitan area indicate it.

The demonstrated classification of labour markets may be used in the management of local and regional development. It allows to make rational location decisions, restricting the amount of commutes to work and dimensions of unemployment. It points to malfunctioning of certain markets, as well as to areas where labour markets are relatively strong.

The location of labour markets in relation to other centres is highly significant as well. Lack of a bigger labour market in the neighbourhood causes that the condition of such a market may be beneficial, however the presence of a big leader may cause the effect of a drainage. It results from the fact that big markets of a bigger volume of jobs, simultaneously offer a more diverse range of offers at higher remuneration rates. The example of such a phenomenon may be the aforementioned medium-sized markets within Katowice conurbation.

Due to lack of analogous approach of labour market in the Silesian Province, we cannot directly confront the results. The revealed facts correlate, however, with the observations of other researchers. We, for instance, observe a convergence with the research by [GWOSDZ \(2014\)](#), who notices a particular accumulation of negative processes in the northern part of Katowice conurbation. These big and average cities after the economic modernization, did not create a new, equally strong, economic base. The condition of labour markets coincides with the intensity of coal mining restructuring processes, which is indicated by [TKOCZ \(2001, 2009\)](#). Within the very conurbation, only Dąbrowa Górnicza comes up better than it results from the size of its labour market. The probable reason for that is the location of one of the main investments of '70s of 20th century – Huta Katowice (Eng. Katowice Steelworks) within the area of this city. Katowice and Gliwice are distinct dominants, nevertheless in accordance with the assumption they need to meet such criteria. We may suppose that taking into consideration the fact of difference of labour market in the Silesian Province, changes on the labour market may still occur in the subsequent years.

References

- Analiza powiązań funkcjonalnych na obszarze województwa śląskiego*. 2012. Analizy RCAS, z. 1/2012, Wyd. PSiP, Urząd Marszałk. woj. śląskiego, Katowice.
- Barczak A.S., Tausz K. (eds.) 2004. *Śląski rynek pracy*. Wyd. GIG, PWE, Katowice-Warszawa.
- Bruda M., Wypłosz Ch. 1995. *Makroekonomia*. Polskie Wyd. Ekonom., Warszawa.
- Doeringer P., Piore M. 1971. *Internal labour markets and manpower analysis*. Lexington Massachusetts.
- Gwosdz K. 2014. *Pomiędzy starą a nową ścieżką rozwojową*. Uniw. Jagiell., Inst. Geogr. i Gosp. Przest., Kraków.
- Kłosowski F., Pytel S., Runge A., Sitek S., Zuzańska-Żyśko E. 2013a. *Rynek pracy w subregionie centralnym województwa śląskiego*. Sosnowiec.
- Kłosowski F., Pytel S., Runge A., Sitek S., Zuzańska-Żyśko E. 2013b. *Rynek pracy w podregionie bielskim*. Sosnowiec.
- Kłosowski F., Pytel S., Runge A., Sitek S., Zuzańska-Żyśko E. 2013c. *Rynek pracy w podregionie częstochowskim*. Sosnowiec.
- Kłosowski F., Pytel S., Runge A., Sitek S., Zuzańska-Żyśko E. 2013d. *Rynek pracy w podregionie rybnickim*. Sosnowiec.
- Kotlorz D. (ed.) 2006. *Śląski rynek pracy w procesie transformacji polskiej gospodarki*. GWSH, Katowice.
- Levy F., Murnane R. 2004. *The new division of labor: How computers are creating the next job market*, Publ. by Princeton Univ. Press, New York.
- Peck J. 1992. Labor and agglomeration: control and flexibility in local labor markets. *Economics Geography*, 68, 4. Clark Univ. Worcester, Massachusetts: 325-347.
- Runge J., Żurek I. (eds.) 2010. *Procesy i struktury demograficzno-społeczne na obszarze województwa śląskiego w latach 1988-2008*. Wyd. Urzędu Statystycznego, Katowice.
- Rocznik Statystyczny Województwa Śląskiego 2013*. Urząd Statystyczny w Katowicach.
- Regiony Polski 2014*. GUS, Warszawa.
- Runge J. 1991. *Dojazdy do pracy w przestrzennej strukturze powiązań miast województwa katowickiego*, Prace Nauk. Uniw. Śląskiego, Katowice.
- Runge J. 1996. *Struktura rynku pracy regionu tradycyjnego i jego otoczenia na przykładzie województwa katowickiego*. Prace Nauk. Uniw. Śląskiego, Katowice.
- Sitek S., Runge J., Kłosowski F., Runge A., Petryszyn J., Pytel S., Spórna T., Kurpanik M., Zuzańska-Żyśko E. 2013. *Społeczno-gospodarcze i przestrzenne kierunki zmian regionalnego oraz lokalnych rynków pracy województwa śląskiego – SGP WSL*, Sosnowiec.
- Szajnowska-Wysocka A., Zuzańska-Żyśko E. 2013. The Upper-Silesian conurbation on the path towards the "Silesia" metropolis, *Bull. of Geogr., Socio-Economic Ser.*, 21: 111-124.
- Tkocz M. 2001. *Restrukturyzacja przemysłu regionu tradycyjnego*. Wyd. Uniw. Śląskiego, Katowice.
- Tkocz M. 2009. Tendencje zmian w strukturze przemysłu w miastach Górnośląsko-Zagłębiowskiej Metropolii „Silesia”. [in:] Jażewicz I. (ed.) *Współczesne problemy przemian strukturalnych przestrzeni geograficznej*. Akad. Pomorska w Słupsku, Słupsk: 496-511.
- Zuzańska-Żyśko E. 2012. Funkcje metropolitalne Górnośląskiego Obszaru Metropolitalnego, *Studia Regionalne i Lokalne*, 2 (48): 39-61.
- www.stat.gov.pl