Warsaw School of Economics
Enterprise Institute

Labour market in selected sectors of economy in Śląskie voivodship in 2008 and its changes in the years 2005-2007

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Warsaw, November 2008

Introduction

This report describes basic parameters of the labour market in Śląskie voivodship for selected economy sectors, i.e.: engineering, electronics, automotive, aviation, biotechnology, and business services in 2008 and changes thereof in the years 2005 - 2008[1].

Śląskie voivodship has considerable labour resources - ca. 12% of all employees in Poland. In the years 2005 - 2007 the number of employees increased by 6%. This phenomenon connected with migrations of people[2] had an impact on basic parameters of the labour market in Śląskie voivodship, including: unemployment rate, employment rate, unemployment intensity, occupation shortage rate, etc. In 2005 - 2007 the employment rate rose from 42.3 to 46.1% and throughout the analysed period stayed below the national average. One of the reasons for the relatively low employment rate was the considerable employment inactivity of people in the voivodship (ca. 50% of people above the age of 15 are inactive); this may be connected not only with low popularity of entrepreneurial attitudes among people who were earlier employed in the heavy industry, but also with retirement (in years 2005 - 2007 the number of employees inactive due to retirement grew from 732 thousand to 755 thousand people). Other important reasons for employment inactivity include:

- education and improvement of qualifications (427 thousand and 409 thousand people respectively),
- illness and disablement (311 thousand and 309 thousand people) [3].

[1] Due to inaccessibility of full data, the author presented business services using the example of real estate and printing services, the machine industry information was based on machines and devices production otherwise uncategorised, electronics industry information was based on electric machines and appliances manufacturing sector, and the automotive industry information - on the basis of cars, trailers and semitrailers manufacturing sector. There are no data for medical biotechnology sector and aviation industry.

[2] Internal migration balance values in years following from 2005 to 2007 reached, respectively -0.65; -0.78 and -0.77 per mill, and the foreign migration balance values -1.9; -2.6; -2.1 per mill. However, the abovementioned data are mere estimates as they do not take into account the unregistered emigration growing since 1st May 2004.

[3] Data from the Regional Data Bank*; Quarterly information about unemployment in Śląskie voivodship*. *Status as of 31.03.2008*. ,Voivodship Labour Office in Katowice, Katowice 2008.

Table 1. Basic parameters of the labour market in Śląskie voivodship 2005 - 2007

lp.	basic parameters of the labour market	2005	2006	2007
1	*2*	*3*	*4*	*5*
1	Employees in thousand	1 666	1 704	1 765
2	Employment rate %	42.3	43.9	46.1
3	Number of unemployed in thousand	281.3	229.8	166.0
4	Unemployment rate according to LFS in %	19.0	14.1	8.1
5	Job offers	2 695	5 159	11 049
6	Number of unemployed persons per 1 work offer	104.4	44.5	15.0

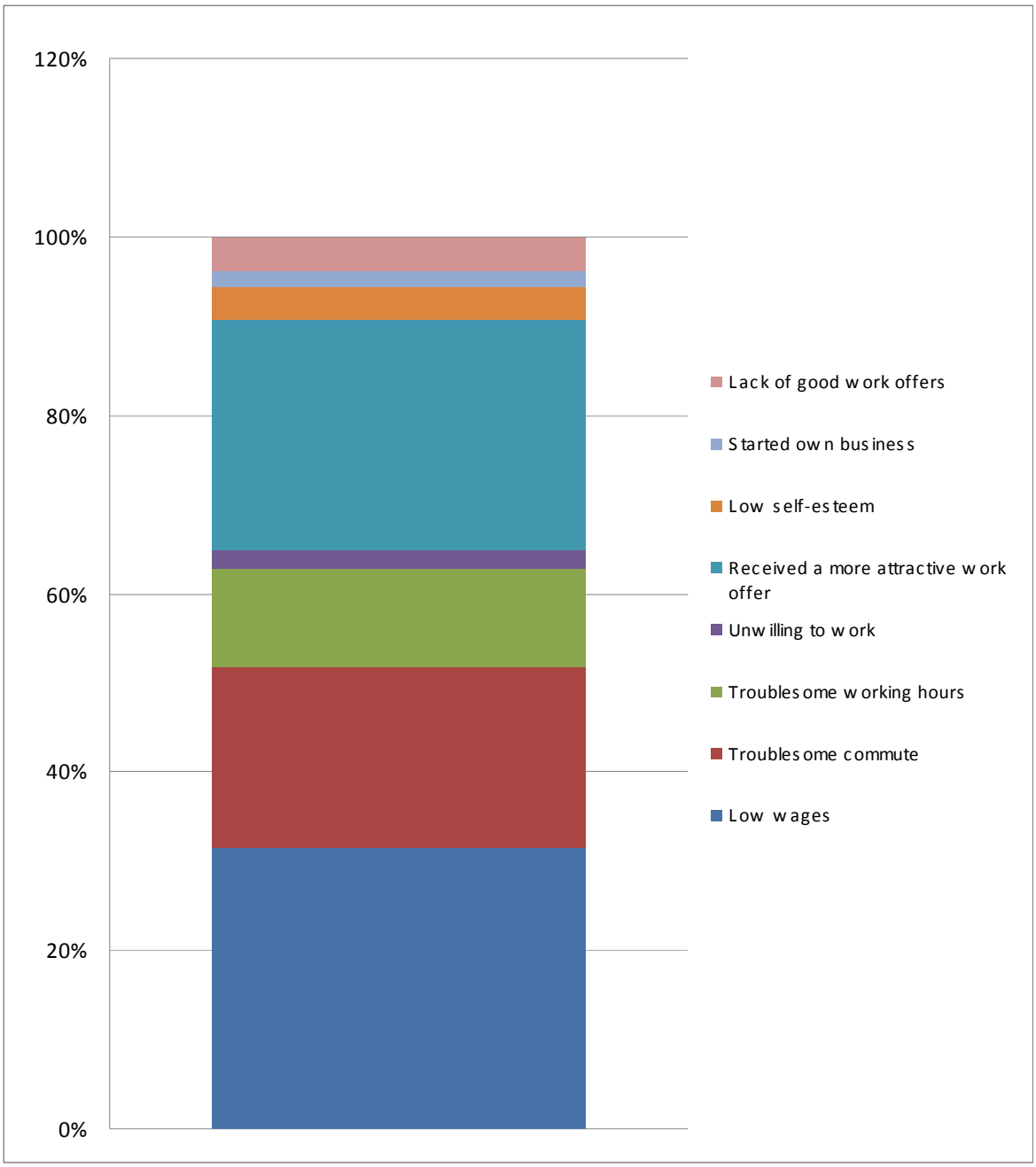
LFS - Labour Force Survey

Source: own document based on Regional Data Bank of CSO.

Low employment rate is mirrored in unemployment statistics based on the Labour Force Survey and unemployment data registered by state employment services. On the basis of LFS data in Table 1 one may conclude that Śląskie region in 2005 was burdened with a high structural unemployment rate. However, during only 3 years the unemployment rate decreased significantly from 19.0% to 8.1%

Also, the registered unemployment statistics show a radical drop in unemployment since 2005 until today. Within the period from 31st December 2004 to 31st June 2008 the unemployment rate decreased from 15.5% to 13% of the professionally active population, and the number of unemployed registered in poviat labour offices dropped from 199.6 thousand to 107 thousand, i.e. by nearly a half. Another important fact is that the number of people who register in labour offices for the first time is decreasing drastically.

The unemployment rate in Śląskie voivodship was significantly influenced by the growing number of job offers, as this number increased over fourfold within only three years. However, the reduction of the number of unemployed people caused a significant reduction of the number of unemployed per 1 job offer. Enterprise Institute's survey showed nevertheless, that the unemployed are hardly interested in the offers, usually due to unsatisfactory wages or commuting costs - see Graph 1.



Graph 1. Distribution of answers to the question about reasons for not starting work given by the unemployed trained by Poviat Labour Office

Source: Own document based on Enterprise Institute's survey "Labour market in Polish regions 2008. Questionnaire for Poviat Labour Offices"

The reduction of the number of the unemployed resulted not only from the fact that some of them started to work, but also from the failure of some of them to confirm readiness to take a job. In the first half of 2008 this phenomenon occurred in 10.4 thousand cases which was equivalent to 38% of unemployment reduction.

1. Employment in selected economy sectors

Positive changes in the labour market illustrated by the growing number of employees was observed not only in the region overall, but also in high technology sectors. In the years 2005 - 2007 the number of employees in the selected sectors[4] in the voivodship grew from 144.7 thousand to 162 thousand, i.e. by 11.2%; the number of new employees in these sectors nationwide grew by 13.8%. Consequently, the voivodship became more specialised in the analysed sectors; this is reflected in the increased share of the sectors in the overall number of the region's employees from 21 to 22%.

However, the region's share in the nationwide population of employees working in the selected sectors dropped from 16.4 to 16.2%.

The abovementioned processes occurred with different intensity in each sector. In the years 2005 - 2007 in Śląskie voivodship the highest average employment, among the analysed high technology sectors, occurred in the business services sector - see Table 2.

Table 2. Average employment in the selected high-technology sectors in Śląskie voivodship in the years 2005 - 2008

lp.	average employment	Business services sector	Engineering sector	Electronics sector	Biotechnology sector	Automotive sector	TOTAL (all HT sectors)
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1	Average employment in the enterprises sector (I-XII 2005)	62700	32500	15200	N/A	27300	137700
2	Average employment in the enterprises sector (I-XII 2006)	65000	31600	17000	N/A	30000	143600
3	Average employment in the enterprises sector (I-XII 2007)	68600	32200	19000	N/A	34500	154300
4	Average employment in the enterprises sector (I-VI 2008)	71500	33500	21500	N/A	39400	165900

[4] Data from PONT INFO for enterprises employing more than 9 persons, excluding sectors for which data was unavailable for 2005, which made calculation of change dynamics impossible.

5	**employment change dynamics 2005 – 2008**	**114%**	**103%**	**141%**		**144%**	**120%**

Source: own document based on data from PONT INFO.

The average employment in this sector in the first quarter of 2008 was 71 500 people, but at the same time its growth dynamics was relatively low in comparison with other sectors in the analysed group. From the point of view of new jobs creation, the second position is taken by the automotive industry which results from many new investments in the region. Second and third places, in terms of employment, were taken by automotive and engineering industries with 39.4 thousand and 33.5 thousand employees respectively in 2008. The fastest growing sectors were: automotive and electronics (over 40% growth in 2005 - 2007).

2. Graduates of post-gymnasium schools: numbers, fields of study*

High technology sectors have strong demand for employees with higher, as well as secondary technical and often specialist education background. An important role in meeting

* Structure of Polish Educational System:
- *Primary*: Primary School (Szkoła Podstawowa)
- *Basic Vocational*: Basic Vocational School (Zasadnicza Szkoła Zawodowa)
- *Lower Secondary*: Gymnasium (Gimnazjum)
- *Technical Secondary*: Technical Secondary School (Technikum)
- *Upper Secondary*: General Lyceum (Liceum Ogólnokształcące)
- *Vocational Secondary*: Vocational Secondary School (Liceum Zawodowe) /Specialized Lyceum (Liceum Profilowane)
- *Post- secondary*: Post- secondary Vocational School (Szkoła Policealna)
- *Higher education*:
    - first level courses (studia pierwszego stopnia); title of Bachelor or Engineer (licencjat/ inżynier);
    - second level courses (studia drugiego stopnia); title of Master (magister)
    - uniform 5-year magister level courses (jednolite studia magisterskie)

[translator's annotation on the basis of *The European Education Directory* http://www.euroeducation.net/prof/polaco.htm. (accessed: 15th December 2008).]

the demand is played by the local education system, in particular fields of study offered on post-gymnasium and higher school levels.

In Śląskie there are nearly 174 thousand students in post-gymnasium schools. Like in other regions in Poland, the largest group are general lyceum students; graduates of these schools every year constitute ca. 40% of all post-gymnasium schools graduates. In terms of the number of graduates, the following places are occupied by: post-secondary vocational schools (18%), technical schools and vocational schools (16% each), and specialised lyceums (12%).

Fields of training in occupation-oriented schools (specialised lyceums, technical schools, vocational schools) are in a different degree adjusted to the needs of high technology sectors. In order to assess their usefulness, occupations were divided into three groups:

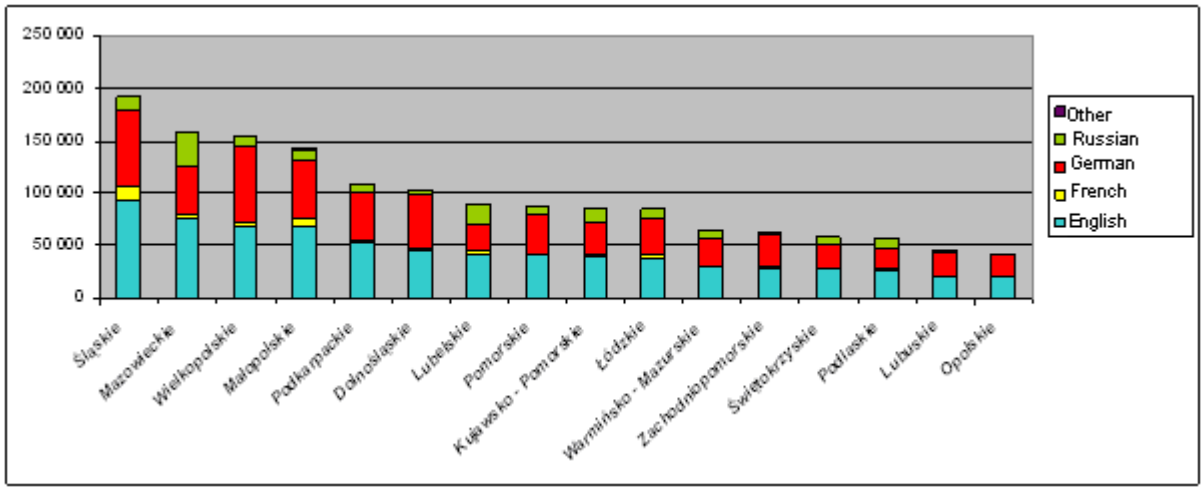
- economic and administrative (this group includes economic and administrative professions gained in specialised lyceums, such as: administrative technician, occupational hygiene and workplace safety technician, economic technician, trade technician, office technician, accounting technician),
- general technical (this group includes technical professions, such as: IT technician, mechanic, car mechanic), and
- specialised technical (this group includes: automotive body repairer, electronics engineer, electrical engineering technician, electromechanic, electrician, car electromechanic, mechanic production technicians, mechanical machine fitter, industrial automatic devices and precision appliances mechanic, precision mechanic, mechatronics fitter, electronic fitter, mechatronics fitter, machine tools operator, chemical industry devices operator, electronics technician, electroradiologist, logistics technician, aircraft mechanics technician, mechatronics technician, forwarding agent, ITC technician, telecommunications technician).

In Śląskie voivodship there are in total 74.1 thousand pupils studying the abovementioned occupation-oriented fields of training, which is equivalent to 12% of all pupils studying these subjects nationwide. From the point of view of high technology enterprises, the most desired group are people with specialised technical occupations. The share of pupils studying specialised technical subjects in the total number of all occupation-oriented students in Śląskie is 28.5%, which is 7.3 percentage points higher than the national average. In the region the largest group of students - 37.4% are those studying economic and administrative subjects, i.e. 3.7 percentage points less than the national average. Number of pupils in the voivodship studying general technical professions is also lower than the national average

(34.1%; Poland - 37.8%). Consequently, in terms of individual occupations, and in comparison with the national average, in Śląskie voivodship there is a very large number of people learning the following occupations: economic technician, IT technician, electronics technician, trade technician, administration technician.

Under the conditions of open national economy and strong link between high technology sectors and the world economy, language learning is a very important field of education. In post-gymnasium schools in Śląskie voivodship ca. 192 thousand people study foreign languages, including 94 thousand - English, 72 thousand - German, 13 thousand - Russian, 12 thousand - French[5]. This means, that 54% of young people learn English, 41% - German, and 7% - Russian and French.

Graph 3. Number of students learning a foreign language in post-gymnasium schools in the school year 2006/2007 - by voivodship



Source: Own document based on *Oświata i wychowanie w roku szkolnym 2006/2007 (Education and training in the school year 2006/2007)*, GUS Warszawa 2007.

An important measurement of the quality of education provided to future employees of the analysed sectors is the quality of language teaching. Numbers of students learning foreign languages in the school year 2006/2007, by voivodship is presented in the table.

Table. Number of students learning foreign languages in vocational schools in the school year 2006/2007 – by voivodship

Voivodship	English	French	German	Russian	Other	Total
Dolnośląskie	45 043	3 197	50 395	3 877	44	102 556
Kujawsko - Pomorskie	39 194	1 539	31 267	14 552	0	86 552

Statistical data: *Oświata i wychowanie w roku szkolnym 2006/2007 (Education and training in the school year 2006/2007)*, GUS Warszawa 2007.

Lubelskie	*42 569*	*1 753*	*25 626*	*19 932*	*217*	*90 097*
Lubuskie	19 310	2 219	22 276	1 659	0	45 464
Łódzkie	38 503	2 213	34 375	9 839	21	84 951
Małopolskie	67 648	7 821	56 742	9 905	264	142 380
Mazowieckie	76 090	2 989	47 116	32 650	532	159 377
Opolskie	20 342	493	21 135	544	0	42 514
Podkarpackie	52 785	2 872	44 738	8 218	0	108 613
Podlaskie	27 091	670	19 578	10 114	0	57 453
Pomorskie	40 722	1 944	38 001	6 117	430	87 214
Śląskie	**94 321**	**12 295**	**72 503**	**12 879**	**270**	**192 268**
Świętokrzyskie	28 453	803	21 514	7 094	179	58 043
Warmińsko - Mazurskie	30 015	598	25 834	8 151	0	64 598
Wielkopolskie	68 092	4 641	72 300	9 834	57	154 924
Zachodniopomorskie	28 417	1 501	31 179	2 747	0	63 844
Poland	**718 595**	**47 548**	**614 579**	**158 112**	**2 014**	**1 540 848**

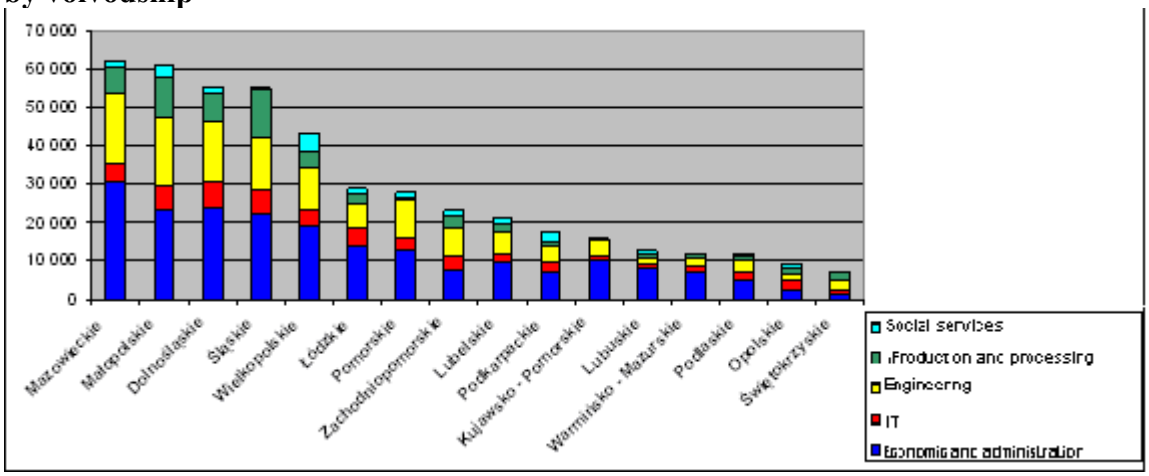
Source: Own document based on *Oświata i wychowanie w roku szkolnym 2006/2007 (Education and training in the school year 2006/2007)*, GUS Warszawa 2007.

3. Graduates of higher schools: numbers and fields of study

The number of students and graduates of higher education establishments is gradually growing in Poland. As of 2007, in Śląskie voivodship there were 44 higher schools with ca. 197.8 thousand students. Rare fields of specialisation may be regarded as the higher schools' strength. In this context it is worth to point out the specialisation of Wyższa Szkoła Mechatroniki w Katowicach (Higher School of Mechatronics in Katowice) offering the following faculties: mechatronics, Graph and sound information technology, and of the Wyższej Szkoły Inżynierii Dentystycznej (Higher School of Dental Engineering) where one may study material engineering and public health.

Unfortunately, there are no data about numbers of students in these faculties. We do have, however, collective information about state higher schools. In 2007 at the voivodship's public schools there were 55 134 students in the following five faculties chosen for further analysis: economy and administration, information technology, engineering, production and processing and services; this number constituted ca. 11.9% of all people studying these subjects in Poland. The largest population in this group were students of administration and economy - 22 187 (40.2%) and engineering - 13 583 people (24.6%). The following places, in terms of the number of students, were taken by: production and processing - 12 322, information technology - 6430 persons, services - 612 persons.

Graph 3. Number of students in selected subject subgroups (public schools) in 2007 - by voivodship



Source: own document based on Regional Data Bank, downloaded on 11.10.2008.

The dominant fields of study are reflected in graduates' educational background structure. Comparing the share of graduates with training adequate to high-tech company needs in the overall number of higher school graduates in Śląskie in 2007 (ca. 27 thousand persons), one may conclude that the education structure is similar to the national average. The share of engineering faculties in Śląskie reaches 9% (national average 9%); however, the share of physics and IT faculties graduates in the overall number of the region's graduates is one percentage point higher from the national average (4 and 3%, and 5 and 4% respectively).

4. Research fellows (in higher schools and research and development units)

High technology sectors are strongly linked with the research and development environment. On the one hand, enterprises establish their own research and development centres employing researchers, and on the other, they use outsourced potential (regional, national, or international). An indirect measure of a region's potential in this respect in the number of employees in R+D. According to the Regional Data Bank of CSO, in 2007 the region had 10 929 people employed in R+D sector; this gives the value of 0.58 per 100 professionally active people, i.e. much below the national average (0.72). 8 934 people in this group are R+D staff. In the higher education sector there is 7917 people; one fifth of the group possess “doktor habilitowany” (Habilitated Doctor) degree.

An important factor for establishing links between the practice and the science is the R+D staff employment structure, in particular employment of R+D staff in the enterprises sector.

In 2006 the share of R+D personnel employed in companies was 17%, i.e. 2 percentage points over than the national average.

High technology sector enterprises are also supported by research and development facilities located in the region; majority of the facilities operates in the so-called governmental sector (ca. 10% of all R+D staff). The analysed high technology sectors may be supported, in particular, by the following facilities[6]:

- Regionalne Centrum Innowacji i Transferu Technologii w Katowicach (Regional Innovation and Technology Transfer Centre in Katowice),
- Śląskie Centrum Zaawansowanych Technologii w Gliwicach (Advanced Technology Centre in Gliwice),
- Bytomski Park Technologiczny (Bytom Technology Park),
- Jaworznicki Park Przemysłowy (Jaworzno Industrial Park),
- Rybnicki Park Przemysłowy (Rybnik Industrial Park),
- Żorski Park Przemysłowy (Żory Industrial Park),
- Bytomski Park Przemysłowy (Bytom Industrial Park),
- Częstochowski Park Przemysłowy (Częstochowa Industrial Park),
- Śląski Park Przemysłowy w Rudzie Śląskiej (Śląski Industrial Park in Ruda Śląska),
- Sosnowiecki Park Przemysłowy (Sosnowiec Industrial Park),
- Park Naukowo-Technologiczny "Technopark" w Gliwicach (The Scientific Technological Park "Technopark Gliwice"),
- Goleszowski Park Przemysłowy Sp. z o.o. (Goleszów Industrial Park Ltd.)

5. Unemployment - shortage / surplus occupations

Access to qualified labour resources is very important for high technology sectors. The information about shortage and redundant professions in the region is essential for investors. Therefore investors search data about the rate and structure of unemployment divided by age, education and occupation. One should bear in mind however, that the data contain numerous errors, therefore may only be used for a provisional study of the labour market situation.

[6] Poll data from Polish Information and Foreign Investment Agency, Regional Cooperation Department, July 2008.

From the point of view of high technology sectors two aspects are worth pointing out: age - employers in innovative sectors prefer young people; companies are more willing to invest in the new staff by, e.g. providing them with specialised training; and education level. In Śląskie from 2005 to 2007 the number of unemployed people not older than 24 years decreased from 59.8 thousand to 27.1 thousand, i.e. reached 45% of the number in 2005.

Also the population of unemployed people aged 25 - 34 was reduced from 77.2 thousand to 44.6 thousand, i.e. reached 58% of the number in 2005. Thus, in spite of the simultaneous reduction of the unemployed in older age groups, one may observe the process of "ageing" of the unemployed population. The share of young people (24 years and less) dropped from 21% to 16% (Poland - 23 to 19%), and the share of the oldest age group, i.e. (55 years and more) rose in the same period from 5 to 10% (Poland - 5 to 8%).

From the point of view of high technology sectors and region's appeal for this type of business, education background of the unemployed is equally important. In the years 2005 - 2008 the largest group among the unemployed people were graduates of basic vocational schools and gymnasiums. However, these people would not qualify for a job in high technology sectors without appropriate training. People with higher and secondary education background are potential employees of high-tech companies. The unemployment in the former group decreased in 2005 - 2007 from 15.9 thousand to 12.3 thousand; the number of unemployed graduates of post-secondary vocational schools and people with secondary vocational training fell from 61.2 thousand to 37.1 thousand Since changes of the unemployment rate in other groups were more significant, the share of people with training useful for the high technology sector in the overall unemployed population rose from 27 o 28%.

Another piece of information used to determine potential labour supply to the high technology sector is the occupational structure of the unemployed population. In 2007 in Śląskie there was a large group of unemployed people with the following training: technical - 8958 persons (5.4%), mechanics – 3225 persons (1.9%), machines and devices operators – 2557 persons (1.5%), fitters - 2436 persons (1.5%), and electromechanics and electrical fitters – 2265 persons (1.4%). The number of unemployed people with other types of training useful for high-tech companies was very low.

In market economy the information about adjustment of the broadly understood education system to needs of enterprises (supply of suitable workforce) is provided by the labour market

situation perceived in terms of surplus / shortage professions[7]. Limiting the analysis only to professions and trades related with the high technology sector one may notice that in the years 2005 - 2007 in Śląskie voivodship surplus occupations were more frequent than shortage ones. However, it should be noted that the data available in Poviat Labour Offices fail to reflect this phenomenon in full. Firstly - not all enterprises notify vacancies to Labour Offices - in the case of rare professions they use services of specialised firms. Secondly - unemployed people who register with Labour Office often are not interested in starting to work. Therefore the analysis of shortage / surplus occupations is a mere illustration of certain general trends and relationships, rather than a full statistical analysis.

In accordance with PLO data, the surplus of labour resources in Śląskie voivodship concerned in particular specialists, although it decreased in the analysed period. In the group of specialists the surplus of labour in 2007 constituted 82% of this value in 2005.

In professional groups with slightly lower qualifications the supply of workforce is much higher than in the case abovementioned professions, but it is not the case for all occupational groups. High labour supply surplus in the years 2005 - 2007 occurred in Śląskie among physical, mathematical and technical sciences specialists, engineers and related professions, computer service personnel, biological and agricultural sciences technicians and financial and trade workers. Like in the case of management and highly qualified specialists, workforce surplus in these occupations was also much lower in 2007 than in 2005. This trend occurred also in the group of office workers and qualified manual workers. In 2007 in Śląskie voivodship there was shortage of, inter alia, office management staff, money flow and customer service personnel and machines and devices operators and fitters. This was also true for certain manual workers.

The surplus (shortage) of an occupation is illustrated by the occupation surplus (shortage) intensity indicator expressing the relation of the average monthly number of job offers in a particular occupation notified to PLO with the average monthly number of registered unemployed representatives of the occupation in a certain period. It is assumed that:

- occupations with the indicator value >1.1 are shortage occupations,
- occupations with the indicator value <0.9; 1.1> are sustainable occupations,
- occupations with the indicator value <0.9 are surplus occupations.

[7] In accordance with CSO definition, a shortage occupation is a situation where the market demand for an occupation is higher than the number of people looking for work in it.

Following this classification, in 2005 in the region none of the occupations was in shortage, only middle office personnel had the "sustainable" status. All other occupations were in surplus. In 2007 the shortage intensity indicator value increased for all of abovementioned groups, and sustainable occupations of 2005 became shortage occupations. At the end of the period this group was joined by machines and devices operators and fitters, middle office staff, money flow and customer service workers, tax and customs officials and related occupations, and the following occupations became sustainable: middle office staff, managers of other internal organisational units.

Surveys conducted by the Enterprise Institute confirms the shortage of labour in business services sector - one half of indications in the case of persons with the 2nd degree higher education, 2/3 of indications in the case of persons with 1st degree higher education and secondary technical education. All of the surveyed offices indicated lack of staff in automotive industry; this shortage concerns mainly people with basic vocational training (100% of indications), and also, although to a slightly smaller extent, with secondary technical education (85% of indications). There is also shortage of staff with higher education, however the phenomenon is not as common as in the previously mentioned groups. In Górny Śląsk there is also shortage of staff for electronics industry; the problem with secondary technical education was signalled by 70% of respondents, and the problem with basic vocational training - by 61% of respondents.

In order to match labour supply with the demand, labour offices use different forms of anti-unemployment activities. On the basis of questionnaires filled in by 13 poviat labour offices one may indicate the following most popular training courses: human resources, remuneration services, computer bookkeeping, CO2 welding, forklift operation.

6. Wages vs. expected wages

Labour shortage in high technology sectors may be connected with the fact that actual wages do not meet employees' expectations. In the years 2005 - 2007, as well as in the 1st quarter of 2008 average gross wages in Śląskie voivodship were higher from the national average (120%, 119, 117 and 117% respectively), similarly in high-technology sectors - 115%, 116%, 117% and 119% respectively of the national average in 2005, 2006, 2007 and 1st quarter of 2008. Thus, in the analysed sectors gross wages were systematically increasing from 2481 PLN in 2005 to 3152 PLN in the 1st quarter of 2008.

The increase was the strongest in the electrical sector - from 2356 PLN to 2980 PLN in the 1st quarter of 2008 (wages in this sector in Poland respectively - 2041 and 2576 PLN), i.e. 6 percentage points of the sector's national average.

A big change in gross wages occurred also in the business services sector - from 2224 PLN to 2646 PLN (in Poland respectively – 2486 PLN and 2978 PLN); this meant a relative increase from 82.8% to 88.8% of the sector's national average, i.e. 6 percentage points. There was also a slight increase in gross wages in the automotive industry - from 143.1% of the sector's national average to 146.5% of the average.

In the 1st quarter of 2008, the most expensive were employees in the automotive industry (146.5% of the average) and electrical industry (138%); labour in engineering industry was slightly cheaper (113%), and in the business services sector it was relatively cheap (98%).

In the period from 2005 to 1st quarter of 2008 average gross wages in high technology sectors in Śląskie were lower than all sectors' average (in the entire economy of the region) by 8% in 2005, 7% in 2006, 6% in 2007, and 4% in the 1st quarter of 2008.

Table 3. Average monthly gross wages in selected high technology sectors in Śląskie voivodship in the years 2005 - 2008 (PLN)

Details	Business services sector	Engineering sector	Electrical sector	Automotive sector	**Total (in the voivodship)**
Average monthly gross salary in the enterprises sector (I-XII 2005)	2058.92	2578.4	2365.4	2920.74	**2709.8**
Average monthly gross salary in the enterprises sector (I-XII 2006)	2213.16	2748.35	2483.41	3114.57	**2842.8**
Average monthly gross salary in the enterprises sector (I-XII 2007)	2402	3006.72	2656.46	3404.6	**3064.91**
Average monthly gross salary in the enterprises sector (I-VI 2008)	2646.05	3208.05	2980	3775.01	**3280.89**

Source: database of the WSE Enterprise Institute

The survey conducted by WSE Enterprise Institute shows that wages offered in high technology sectors in most cases do not meet employees' expectations. The analysis of discrepancies between offered and expected wages indicates that in Poland in majority of cases employees (47% of managers and 57% of workers) expect a wage 1000 PLN higher than the offered one.

Conclusions

1. In the years 2005 - 2007 the structural unemployment was reduced significantly. This was accompanied by still high employment inactivity of over one half of the economically productive population
2. The share of people younger than 24 years decreased, and the share of people older than 55 years increased in the overall unemployed population; it was accompanied by a higher number of people with higher education background.
3. Post-gymnasium vocational training is dominated by economic and administrative occupations, which corresponds to the nationwide trend. At the same time in the region there is more focus on specialised technical education than on average in Poland.

4. Śląskie voivodship is standing out in terms of the number of higher schools graduates (4th position in the country); like in other voivodships the main field of study is the economic and administrative faculty. There is no specialisation in technical, nor IT training. However, one should note that unique technical and/or IT faculties are being started in private educational establishments.
5. The higher than average employment of R+D staff in the enterprises sector should also be regarded as a positive development.
6. In the voivodship nearly every second post-gymnasium school student is learning English, 40% German, and 7% Russian and French.
7. In the analysed period there was an important change in the labour market - the surplus in many occupations turned to shortage; it concerned mainly the following occupations: tax and customs officials and related occupations, intermediate technical personnel, and machines and devices operators.
8. Śląskie has high salary costs in automotive and engineering industries, and low salary costs in the business services sector.

Annex 1:

Symbol of the occupational group	Śląskie voivodship	Average monthly number of job offers notified during a year		Average monthly number of registered unemployed during a year		Average monthly surplus (shortage) of labour during a year		Surplus (shortage) intensity indicator nadwyżki (deficytu)	
		2005	2007	2005	2007	2005	2007	2005	2007
12	Managers in large and medium-sized organisations	34.08	53.33	67.17	74.00	33.08	20.67	0.5	0.7
121	Directors general, executives, chairmen and their deputies	3.58	8.83	12.17	16.33	8.58	7.50	0.3	0.5
122	Managers of internal core business units	13.42	20.83	29.75	36.25	16.33	15.42	0.5	0.6
123	Managers of other internal organisational units	17.08	23.67	25.25	21.42	8.17	-2.25	0.7	1.1
13	Managers in small enterprises	17.92	17.58	50.33	25.75	32.42	8.17	0.4	0.7
131	Managers in small enterprises	17.92	17.58	50.33	25.75	32.42	8.17	0.4	0.7
2	Specialists	594.25	639.92	2618.42	2303.00	2024.17	1663.08	0.2	0.3
21	Specialists in physics, mathematics, and technical sciences	159.33	152.67	666.67	510.58	507.33	357.92	0.2	0.3
214	Engineers and related professions	122.50	108.50	445.92	335.92	323.42	227.42	0.3	0.3
221	Specialists in biological sciences	2.75	3.17	21.92	23.75	19.17	20.58	0.1	0.1
231	Higher education teaching professionals	0.42	0.83	3.33	2.17	2.92	1.33	0.1	0.4
3	Technicians and intermediate personnel	1069.17	1236.00	4687.83	3634.58	3618.67	2398.58	0.2	0.3
311	technicians	154.17	203.08	2031.25	1420.83	1877.08	1217.75	0.1	0.1
312	Computer technical service personnel and related professions	30.58	39.25	181.42	134.83	150.83	95.58	0.2	0.3
313	Optical and electronic equipment operators	5.67	8.08	34.42	32.08	28.75	24.00	0.2	0.3

314	Seafarers, barge, lighter, boat and air transport operatives	0.50	0.92	3.67	2.67	3.17	1.75	0.1	0.3
321	biology and agricultural sciences technicians	16.08	13.17	422.58	355.67	406.50	342.50	0.0	0.0
3211	Medical analytics technicians	3.58	2.33	14.08	11.25	10.50	8.92	0.3	0.2
341	Finance and trade workers	375.42	347.58	1296.33	1056.67	920.92	709.08	0.3	0.3
342	Office agents supporting economic activity and trade agents	19.92	21.58	26.42	20.50	6.50	-1.08	0.8	1.1
343	Middle office staff	268.08	299.92	301.00	250.67	32.92	-49.25	0.9	1.2
344	Tax and customs officials and related professions	0.92	5.42	2.92	1.75	2.00	-3.67	0.3	3.1
4	Related professions	1299.25	1972.50	1534.08	1047.33	234.83	-925.17	0.8	1.9
41	Office management workers	1146.83	1730.50	1350.58	876.33	203.75	-854.17	0.8	2.0
42	money flow and customer service workers	152.42	242.00	183.50	171.00	31.08	-71.00	0.8	1.4
72	Metal processing workers and machine and device operators	954.67	1321.00	2902.33	2147.67	1947.67	826.67	0.3	0.6
73	Precision workers, ceramics makers, decorative objects makers, printers and related professions	29.83	50.08	146.25	138.08	116.42	88.00	0.2	0.4
8	Machine and device operators and fitters	667.25	732.42	1051.33	489.17	384.08	-243.25	0.6	1.5

Source: databases of the Enterprise Institute