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THE EDUCATION SYSTEM AS A COMPETITIVENESS FACTOR OF LOCAL LABOUR MARKET

Abstract

The purpose of this article is to present dependences between the quality of own and used labour force and the possibility of dynamic region development. The low level of society education, the shortage of an access to modern techniques and technologies do not create favourable conditions for economic development and consequently make the region less competitive.

Pursuant to the assumptions of the Development Strategy of the Silesian Voivodship for the years 2000-2020, the Regional Innovation Strategy of the Silesian Voivodship for the years 2003-2013 and the Regional Operational Programme of the Silesian Voivodship for the years 2007-2013, the Silesian Voivodship is to become a creative innovative region owning the large potential of highly qualified staff. To achieve this goal, attention has to be turned to the education system and the enhancement of labour force quality during the whole-life learning process.

Key words: labour force, competitiveness, employment, human capital.

Introduction

The Silesian labour market, similarly to the economy of the voivodship, is subject to a strong pressure of structural changes. The transformation of the Silesian Voivodship into a region based on modern industry and services, as well as on knowledge and innovativeness, is mostly determined by overcoming barriers to the sustainable development of the region. One of key limitations to the process is the supply of labour force, which is to adjusted to the requirements of a contemporary labour market. The changing structure of demand for labour, the drop of demand for traditional professions, the growth of demand for new professions and specialities cause that adequately qualified personnel has to be prepared. The low level and quality of the society's education, the shortage of an access to modern techniques and technologies are not in favour of economic development and consequently result in smaller regional, national and international competitiveness.

A need to improve the quality of labour force of the Silesian Voivodship was included in the region's strategic documents, including, but not limited to, the Development Strategy of the Silesian Voivodship for the years 2000-2020 and the Regional Innovation Strategy of the Silesian Voivodship for the years 2003-2013. Financial resources coming from EU structural funds, which may be acquired under the regional operational programme, constitute an important support for goal achievement.

Importance of human capital in the strategic documents of the Silesian Voivodship

The Development Strategy of the Silesian Voivodship for the years 2000-2020 and the Innovation Strategy of the Silesian Voivodship for the years 2000-2013 underline the importance of human capital, pointing out, at the same time, that the education and qualifications of most labour force are inadequate to current needs of the economy[1]. Entrepreneurs point out that the most important barrier of their development is a limited access to well-educated staff (Identyfikacja…, 2006, p. 18). On the one hand, this results from the fact that professional skills and qualifications of persons entering the labour market and the unemployed are not adjusted to the needs of enterprises, and, on the other hand, better educated employees choose jobs in other regions or states more and more frequently.

This problem refers both to graduates of universities, as well as persons with technical or vocational education. That confirms a need to intensify actions aiming at the harmonisation of work supply and demand in the context of professions and qualifications, as well as to utilise relevant incentives and instruments to stop the outflow of employees from Silesia.

The importance of the problem is also reflected by the fact that the growth of inhabitants' education and capacities of adaptation to social and economic changes, in the context of social and public safety, (Development Strategy …., 2005, p. 74-75) was indicated as first among four strategic goals defined for the region. That goal is directly connected with a vision presented in the Regional Innovation Strategy[2] (Regional…, 2003, p. 22-23) and objectives referring to the necessary development of innovative culture in the voivodship through, without limitation:

- education programmes at schools and universities promoting creativity, entrepreneurship and risk taking;
- instruments stimulating creativity and methods of selecting talented students that may establish own innovative companies in future;
- innovation-friendly environment in R&D centres.

To improve the quality of higher education, bigger attention has to be paid to the development and implementation of novelty curricula, stronger relations between trends in education with needs of the regional economy, as well as the improvement of the technical condition of educational centres, and support for cooperation between university environment with universities and R&D centres in Poland and abroad. Entrepreneurs declare they are ready to provide universities with information about an expected professional profile of a graduate, thus curricula could be better adjusted and student traineeships better prepared.

The development of inhabitants' capacity to adapt to ongoing social and economic changes is also subject to permanent education allowing for the improvement of qualifications and the change of vocational orientation. It is suggested that a Regional Observatory of SMEs should be established to deal with the promotion of permanent education and the growth of an access to efficient knowledge gaining at SMEs. At the same time, the idea of companies established by graduates and universities should be promoted and the networks of technological incubators and the entrepreneurship of students and professionally active

[1] The education of inhabitants of the Silesian Voivodship is not favourable comparing to other voivodships. In 2006, slightly over 58% of inhabitants had vocational or lower education, while only 9.2% of persons had higher education, i.e. the voivodship was at one of the last positions. Per 10,000 inhabitants of the Silesian Voivodship, there were 443 students, while an average per 10,000 inhabitants of Poland is 482 students. See: www.stat.gov.pl (as at 12.09.2007).

[2] The Regional Innovation Strategy supports the development of a friendly climate for innovations in the Silesian Voivodship so that creativity and synergy lead to the growth of innovativeness in the business and R&D environment and strengthen the competitiveness of the voivodship economy in comparison to other EU regions. The Regional Innovation Strategy of the Silesian Voivodship for the years 2003-2013, (2003) Katowice, p. 22-23.

persons taking up their own business activity should be developed.

The accessibility of EU funds for the development of human resources is perceived as one of chances to improve the difficult situation of the regional labour market. The Regional Operational Programme of the Silesian Voivodship for the years 2007-2013 is the key instrument of the voivodship's regional policy in the programming period of 2007-2013 combining most measures executed by local government units and other public and private entities under the structural funds of the European Union. The main goal of the programme is to stimulate dynamic development and strengthen the social, economic and spatial cohesion of the region (Regional Operational Programme …, 2006, p. 40). To achieve that goal, favourable conditions for the transformation of economy based on heavy industry into economy based on knowledge and information have to be created. The success of the region is mostly determined by overcoming barriers to sustainable development, as well. Ones of primary planes for the achievement of such a goal are economic growth and the growth of employment connected with the improvement of voivodship society's qualifications. Owing to such actions, 10,000 jobs are to be established. The Programme also turns attention to the growth of the accessibility of university and permanent education, as well as the improvement of the conditions thereof.

However, this may be expected to be a long-lasting process needing the involvement and support of both local governments, entrepreneurs, as well as the very employees. It is important to incorporate the term of innovative economy and "the culture of knowledge and technical knowledge" in the social perception of economy and prosperity (Identyfikacja…, 2006, p. 19) since without them social and economic development and transformation to knowledge-based economy will not be possible.

Creation of human capital in the Silesian Voivodship

The quality of human capital is a derivative of investments in human capital development, which reflects the amount of expenditure on national education, science and health care. Since higher education combines such fields like research, education and innovations, which have a central place in the knowledge-based economy, special attention has to be paid to the permanent improvement of education quality so that the Polish system of higher education could be competitive in relation to other systems in global terms. Thus, actions taken should focus on the improvement of education quality and the usefulness of bigger and bigger qualifications gained. Because the significant growth of the number of schools, as well as pupils and students in Poland (mainly at non-public schools) is not accompanied by expenditure on education. And, given the structure of qualifications, skills and knowledge which is inadequate to new requirements, education gained often does not bring about expected market benefits.

A need to increase outlays on R&D is called for in many documents. In Poland, according to the assumptions of the National Programme of Reforms (National …, 2005, p. 16-17), within 4 years, public expenditure on R&D should increase from PLN 3 billion to approximately PLN 6 billion, and the National Cohesion Strategy (National …, 2005, p. 47) stipulates that R&D expenditure will grow from 0.56% of GDP to 2.35% GDP in 2013. At the same time, support granted is to be rationalised by the way of concentrating financial resources on a defined number of integrated and multidisciplinary projects taking into account the priorities of social and economic development. However, let's note that the growth of R&D finance from public resources and the effective utilisation thereof (like, e.g. in the USA, Japan or France) is essential to attract non-budgetary resources to the sector.

In the Silesian Voivodship, total internal expenditure on R&D constitutes 0.41% of

GDP, given the national average of 0.70% (9th place in Poland), while in the Voivodship of Mazovia it constitutes 1.59%, Lesser Poland 0.86%, Lower Silesia 0.57% (Regional …, 2003, p. 6).

The World Bank's Report (Goldberg, 2004, p. 73-86) points out that in order to create knowledge-based society, Poland must redefine and improve the quality of its educational policy, provide the whole society with an access to a permanent education system, and aim at establishing closer relations between universities, university society and business. This should be reflected, without limitation, by the wider involvement of university staff in R&D projects or business.

In the R&D sector of the Silesian Voivodship, there are over 126 entities, including universities, R&D centres, research entities, and R&D departments at public and private companies, as well as institutions of the Polish Academy of Science. See: Table 1.

Table 1. R&D activity in the Silesian Province in the years 2002-2006

R&D	**2002**	**2003**	**2004**	**2005**	**2006**
Total	97	112	109	132	126
Business sector	55	74	73	91	82
Employees in total (FTEs)	7.03	7.133	7.192	7.072	-
Employees per 1000 professionally active persons	3.7	3.6	3.6	3.5	-
Total expenditure	342.5	374.9	402.8	438.5	-
Expenditure per inhabitants	72	80	86	93	-

- No data for 2006.

Source: own calculations based on data coming from the Regional Data Bank, www.stat.gov.pl (as at 21.12.2007).

The quality of human capital is reflected by the percentage of persons with higher education and the number of students per 10,000 inhabitants. In the Silesian Voivodship, similarly to whole Poland, since the beginning of the 90s, the number of universities and the number of students and graduates thereof have been systematically increasing. In 1999, there were 25 universities in the territory of the whole Silesian Voivodship, while in 2006 already 43. Such a growing trend was, on the one hand, a response to the labour market's demand for better and better qualified employees and, on the other hand, it postponed the entrance of those borne in the baby-boom into the labour market.

The operation of a large number of non-public universities in the Silesian Voivodship allows for the growth of higher education accessibility by locating such schools in many smaller towns. However, the schools, with few exceptions, did not bring new quality to the offer of universities. Suggested faculties, usually economic (management, marketing, finance, banking) ones, overlapped with faculties offered by public universities, whose reputation is decidedly better.

In the Silesian Voivodship, for the recent 15 years, the growing trend among students and graduates of universities has maintained, which, undoubtedly, improves the image of the voivodship in terms of its saturation with highly qualified staff (Table 2). However, questions whether the graduation of a bigger and bigger group of inhabitants is followed by the growth of the region's intellectual potential and whether the growth of the ratio of scholarisation[3] at

[3] The ratio of scholarisation at university level has grew almost 4 times during the recent 15 years. In 1990/91, it was 12,9%, while in 2006/07 – 49.9%. See: Szkoły wyższe i ich finanse w 2006r., GUS, Warsaw 2007, p. 18.

the university level will be accompanied by the relevant quality of education[4] are still open. Because the percentage of students and graduates of full-time studies has been decreasing systematically, while the percentage of persons graduating from weekend, evening and extension studies has been growing. In the Silesian Voivodship, around 47-48% of students study at full-time courses, while the others learn in the evening, weekend and extension systems.

Table 2. Number of students and graduates of universities in Silesia in the years 1998-2007 ('000)

Year	No of students ('000)			No of graduates ('000)	
	Total	Men	Women	Total	Women
1998/99	158,752	68,930	89,822	22,675	14,967
1999/2000	178,232	76,659	101,573	29,429	10,267
2000/01	192,580	82,443	110,137	33,208	22,065
2001/02	200,710	86,231	114,479	37,920	24,903
2002/03	200,421	88,561	111,860	41,622	27,550
2003/04	206,791	92,029	114,170	43,387	28,524
2004/05	207,739	92,977	114,762	44,903	29,265
2005/06	197,260	89,208	108,052	42,465	27,358
2006/07	192,873	87,199	105,674	40,598	26,183

Source : own calculations based on: www.stat.gov.pl (as at 16.06.2008) and Szkoły wyższe i ich finanse w 2006r., 2007r., GUS, Warsaw 2007, 2008, Tables 7, 15, 6, 14, p. 89, 144, 77, 142.

Most students study at social science, law and business faculties (49.8%). The shares of technical, industrial, construction faculties (16.1%) and pedagogical faculties (13.4%) are also significant (www.stat.gov.pl, as at 20.09.2008).

Market saturation with specialists of defined areas causes that preferences in the selection of studies and specialities of education change. Less and less students study at management and marketing, law, production engineering, as well as other economic faculties, mainly economy, finance and banking. Enrolment for certain pedagogical faculties also drops. In this case, university vice-chancellors and students seem to make a rational choice. Social fields of studies enjoy more and more interest. However, the interest, in particular of women, in science, mathematics, information technology, construction, engineering, which, from the point of view of the development of modern sectors of the economy, play a bigger and bigger role, is still small.

In 2006, out of 140 specialities identified in the higher education of the Silesian Voivodship, an unemployment rate for graduates of only 8 of them exceeded 4%, including: transport engineer (logistics specialist), teacher of religion, metallurgical engineer, psychologist, specialist in culture, chemician, historian, textile engineer, philosopher and public administration specialist. However, taking into account nine most numerous specialities (over 1000 graduates in 2006), constituting 57.45% in total of all university graduates in the Silesian Voivodship, the percentage of graduates registered as unemployed is relatively small. Relatively the worst situation is recorded for economists, sociologists and

[4] In 2005, a new act of 27 July 2005 on higher education (Journal of Laws of 2005, No 164, item 1365, as amended), which was to contribute to the improvement of education quality and the adjustment of the Polish education system to international, in particular European, standards, came into force.

other specialists in economic and management affairs, not classified elsewhere, where the percentage of the registered unemployed exceeds 2% (Ranking..., 2007, p. 62-63).

Employers are still most interested in "computer" professions, like a designer of web sites, a designer of computer systems, a computer system administrator. And construction engineers or welding engineers become more and more scarce professions.

The latest research shows that investments in EU education, in particular higher education, are necessary, but they will not solve all problems. The process of learning for the whole life should be perceived as continuum, owing to which a well-educated labour force will achieve better results in developing, accepting and applying new technologies. In terms of permanent education, Poland is far away behind developed states. In 2006, only 5.1% of adults in the Silesian Voivodship participated in various forms of permanent education[5]. Actions in this field have to be intensified, which is connected with a need of the abrupt growth of expenditure on permanent education in Poland. Authors of the strategy for permanent education development (Strategy ..., 2004, p. 13-14) assume that, owing to the effective utilisation of structural fund, expenditure on the education of adults may grow even to 2.5% in comparison to the present 0.6% of total expenditure on education. Employees and enterprises' capacities to adjust to changing environment, which may be shaped and developed, for example, by promoting and publishing innovative and flexible forms of work organisation, such as discretionary learning, are also important (Joint…, 2007, p. 16).

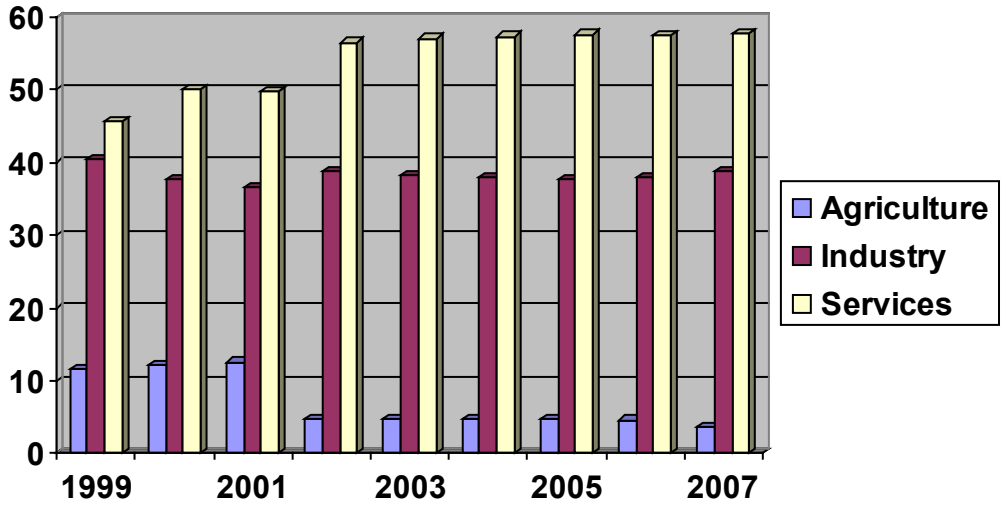
Quality of labour force versus changes in the labour market of the Silesian Voivodship

The growth of the importance of higher education is a derivative of departure from agricultural and industrial economy towards service-based economy. Such changes are connected with the growth of the society's affluence, demographical conditions, the development of a public sector, the appearance of new products generating demand for new services, and consequently the increasing significance of "knowledge employees" in the labour market. Shifts in the trisectoral structure of the economy are accompanied by changes in the labour market: in one sectors jobs disappear and appear in others. In highly developed countries and regions, services become the biggest source of the growth of jobs.

The direction of changes occurring in the Silesian Voivodship is consistent with general trends of world economies. The share of employment in agriculture drops systematically: from almost 12% in 1999 to only 3.7% in 2007. At the same time, the systematical growth of employment in the service sector is observed (from 45.6% in 1999 to 57.7% in 2007) – Chart 1.

[5] In 2006, in Poland, the share of adults participating in various forms of education and training was 4.7%, while in the UK 26.6%, in Denmark 29.9%, and in Finland 23.1%, www.eurostat.eu (as at 20.09.2008). The number of persons improving their skills is 1.2 – 1.5 million persons on the average per annum (around 8-10% of employees), while in the EU states around 20% of employees improve their market attractiveness in such a manner.

Chart 1. Share of employment in three sectors of the Silesian economy in the years 1999-2007 (%)



Source: own analysis based on data from the Regional Data Bank, www.stat.gov.pl (as at 15.06.2008).

Taking into account the fact that the development of particular economies is determined not only by the very development of the service sector, but the development of particular service groups therein, our attention should be turned to modern services intensively using knowledge. The experience of highly developed countries reflects the increasing role of services related to real estate and business management and IT services.

In the Silesian Voivodship, in spite of the growth of the share of employment in the whole service sector, the internal structure of services is not favourable. It is true that employment in real estate and business management grew, but it dropped in financial agency services. The biggest growth of employment is visible in the public sector: public administration and education, Table 3.

Table 3. Employees by the Polish Classification of Business Activities (as at 31.12, in '000) in the Silesian Voivodship, 1999-2006

Specification	Years								Growth/ drop 2006/1999 (%)
	1999	2000	2001	2002	2003	2004	2005	2006	
Total	1835.0	1750.8	1686.1	1536.6	1496.1	1491.8	1504.9	1543.3	-15.9
Sector 1, in total	212.2	213.4	212.8	73.0	71.4	71.2	70.9	70.5	-66.8
Agriculture, hunting and forestry	212.2	213.4	212.8	73.0	71.4	71.2	70.9	70.5	-66.8
Sector 2, in total	741.3	659.8	616.3	595.5	572.3	565.1	567.5	586.7	-20.9
Mining	174.2	147.8	139.8	135.2	131.1	122.2	120.8	117.0	-32.8
Industrial processing	383.1	348.7	321.6	318.5	313.1	320.5	322.4	338.3	-11.7
Production and power, water, gas supply	42.0	41.2	40.9	38.2	37.7	36.6	34.7	33.8	-19.6
Construction	142.0	122.2	114.1	103.6	90.4	85.9	89.7	97.6	-31.3
Sector 3, in total	836.7	877.2	840.2	868.0	852.2	855.3	866.4	886.0	5.9

Trade and repairs	274.5	282.9	296.4	273.2	268.6	264.0	270.1	272.6	-0.7
Hotels and restaurants	29.2	31.3	29.5	29.6	28.0	28.3	28.3	29.9	2.3
Transport, warehousing	109.9	99.7	91.7	94.8	94.2	94.8	92.3	96.7	-12.0
Financial agency services	43.2	30.5	31.3	32.0	27.2	29.1	31.0	32.7	-24.4
Real estate and business management	112.0	114.2	114.8	123.1	123.7	119.8	125.1	132.1	17.9
Public administration and national defence	42.7	55.4	55.5	52.7	54.1	55.4	56.2	56.9	33.4
Education	102.5	98.2	104.7	100.6	116.3	121.9	122.0	120.9	18.0
Health care and social care	122.7	117.7	116.3	115.1	92.1	92.3	91.4	92.2	-24.9
Other municipal service activities	no data	47.3	no data	46.8	48.1	49.8	50.1	52.1	no data

Source: statistical yearbooks of the Silesian Voivodship for the years 2001, 2002, 2003, 2004, 2005, 2006 and www.stat.gov.pl.

Because of changes in the employment structure connected with the servication of economy and bigger and bigger knowledge saturation, more attention should be paid to R&D and innovativeness of the region. In spite of increasing expenditure on innovative activities in industry, the creation of relevant networks of relations between science, R&D and the market, which would contribute to the establishment of incentives for the growth of effectiveness, is still a major problem. Knowledge transfer between the research sector and industrial applications is not efficient enough and too slow not only in the Silesian Voivodship, but in Poland and the whole EU, as well, comparing to the United States. In particular, small and medium-sized enterprises need an access to scientific research output and support to implement advanced technological solutions. Therefore, R&D institutions in the Silesian Voivodship want, *inter alia*, to:

- strengthen initiated regional cooperation networks,
- become an important component of a technology commercialisation system,
- strengthen the importance of Polish Technological Platforms,
- establish strong platforms for cooperation with SMEs in the Silesian Voivodship and other R&D centres.

To develop cooperation, in the voivodship, there operate three scientific and industrial consortia: Śląskie Centrum Zaawansowanych Technologii (Silesian Centre for Advanced Technologies), Centrum Zaawansowanych Technologii Energia-Środowisko-Zdrowie (Centre for Advanced Technologies Power-Environment-Health) and Centrum Zaawansowanych Technologii dla Ochrony i Promocji Zdrowia (Centre for Advanced Health Care and Promotion Technologies).

Till 2005, Polish regulations did not provide for relevant standards defining the role of scientific employees and an option for their taking up a job other than didactical. There were no mechanisms to motivate companies to acquire solutions and technologies developed at scientific centres, either. Taking into account the fact that the main source of innovation is science, the enforced act (Act on certain forms of support …, 2005, Journal of Laws 179/2005, item. 1484) may contribute to the development of university entrepreneurship in Poland[6].

[6] University entrepreneurship, understood as the business activity of students, PhD students, graduates and scientific staff of universities, developed in particular in the area of advanced technologies, is decidedly

As of the enforcement of the act on higher education (Journal of Laws 194/2005 item 1365, Art. 4.4), universities promoting "the idea of entrepreneurship in the university environment" may run university incubators of entrepreneurship and technology transfer centres[7].

From the point of view of the labour market and the quality of human capital owned by the voivodship, it is important to analyse the education of human resources. Since education is a set of certain skills and qualifications which a given person has gained under formal and informal education and which materially determine his situation in the labour market. The achievement of particular levels in the system of education or participation in permanent education contributes to the improvement or update of knowledge and skills held. Whether skills gained during the education process will be useful in the labour market and increase the probability of finding a job depends on the quality of the education system in the whole country and teaching quality at particular units, including in particular their ability to develop skills searched for in the labour market (A. Skórska, in: D. Kotlorz 2006, p. 43).

A relation between education and employment is reflected by an employment ratio. In Poland, similarly to highly developed states, although it is slightly slower, there is a shift from professions requiring small qualifications to jobs where high qualifications are necessary. Interpedently of the rate of changes, the direction thereof has not changed for several years. The lower education, the lower employment rate and vice versa. Although higher education does not protect against unemployment, but it materially determines chances in the labour market and influences an opportunity to take up a satisfactory and well-paid job. An employment rate among persons with higher education in 2007 was 76% and it was the only group in Poland that exceeded the target assumed in the Lisbon Strategy. Regardless of education, the employment rate for men exceeds the employment rate for women, and the lower education, the bigger spreads.

The structure of the registered unemployed by education in the Silesian region is similar to a nation-wide average. The share of inhabitants of the Silesian Voivodship with higher education (5.3%) and at least secondary education (34.1%) among the unemployed is slightly bigger.

The fact that persons with higher education constitute a small percentage of the registered unemployed shows that situation of persons with top professional qualifications is the best. A careful analysis reflects, however, negative trends in this category of the unemployed, since in 1999-2006 the group of the unemployed with university diplomas grew nearly four times, and only in 1999-2000 by over 50% (Table 4). Other groups of persons by education noted double growth.

The biggest unemployment was recorded among persons with primary vocational education (30.4%) and secondary or lower education (33.8%). In such a context, it is extremely important to create a relevant policy of education and permanent learning. Let's note that because of traditional industrial branches existing in the region, the share of persons

connected with innovative activities. In the light of the said act, innovative activity is any activity connected with the preparation and initiation of the production of new or improved materials, products, equipment, services, processes or methods to be marketed or used otherwise in practice. A. Żołnierski (ed.), (2006) Innowacyjność 2006. Stan innowacyjności, metody wspierania, programy badawcze. Warsaw, p. 117.

[7] University incubators of entrepreneurship are established to support business activity of university environment or employees of universities and students being entrepreneurs in the form of an university unit acting on the basis of regulations approved by a senate, a commercial company or foundation based on relevant statutory documents. They constitute a "protective umbrella" for newly established enterprises.

While, technology transfer centres are established to sell or deliver, free of charge, outcome of R&D for economy in the form of an university unit acting on the basis of regulations approved by a senate, a commercial company or foundation based on relevant statutory documents. Their services are addressed to mature companies or the very university.

with vocational education is bigger than a national average. At the same time, the share of persons with secondary and higher education smaller than a national average constitutes a serious obstacle to the acceleration of the transformation of the Silesian Voivodship's economy and the improvement of living conditions in the region.

Table 4. Registered unemployed by education in the Silesian Voivodship in the years 1999-2007 ('000)

Specification	Years								Index 2007/ 1999	Growth/ drop 2007/1999 (%)
	1999	2000	2001	2003	2004	2005	2006	2007		
Total	210.3	259.8	313.4	325.5	309.7	281.3	229.8	165.9	109.3	9.3
Higher[8]	4.7	7.1	10.6	15.1	16.5	15.9	14.8	12.3	312.3	212.3
High and high vocational	44.6	55.3	68.4	70.2	69.4	61.2	50.3	37.0	112.7	12.7
High comprehensive	12.9	15.7	17.7	19.0	19.7	19.1	17.4	13.2	134.8	34.8
Primary vocational	80.0	93.9	111.8	114.2	103.4	91.6	71.1	48.7	88.9	-11.1
Secondary and lower	68.0	87.8	104.9	107.1	100.6	93.4	76.2	54.6	112.0	12.0

Source: statistical yearbook of the Silesian Voivodship, Statistical Office in Katowice, Katowice 2004, Table 4(70), 12(75), p. 264, www.wup-katowice.pl (as at 06.06.2007).

In spite of the fact that the situation of university graduates in the labour market has deteriorated systematically, it still may not be compared to the situation of persons with lower education. The percentage of the unemployed with higher education registered at poviat labour offices does not exceed 6.4%, and an unemployment rate for that subpopulation is the smallest one. In addition, persons with higher education are more mobile, can adjust faster to changing demand for specific professional skills and qualifications as reported by employers, thus they constitute less than 2% of the whole group of the long-standing unemployed.

Summary

The literature and many strategic documents point out the importance of human capital as one of the basic factors determining the social and economic development of a country and a region. In the age of knowledge-based economy, education has become a foundation of the contemporary world. Without an adequately directed education system, and mostly without the actual implementation of permanent learning ideas, it is not possible to improve the quality of human capital. People who are aware of the fact that good top quality education and interest in updating and deepening permanent knowledge and skills translate into their level of life and prosperity will act rationally by learning, and will contribute, at the same time, to the faster social and economic development of a region and a country.

Because of the economic structure and a fuel and power industry prevailing in the Silesian Voivodship for a number of years, the education of population and the saturation of

[8] [translator's note] Higher education: universities, high education: Polish *liceum i technika* and equivalent schools, secondary education: Polish *gimnazjum*.

the market with highly qualified staff were below the national average. Challenges of the 21st century, including globalisation, growing competition, transformation to knowledge-based economy, cause that this traditionally mining and metallurgical region of Poland also pays bigger and bigger attention to the quality of its labour force.

The Voivodship Development Strategy and the Regional Innovation Strategy underline a need to further improve education of population. Effects of qualitative changes, e.g. in the form of an increasing scholarisation rate, have been visible since the beginning of the 90s. However, the growth of educational aspirations is not accompanied by the growth of the number of jobs. The deactivation of human resources in the voivodship is more and more visible, which brings about a number of both economic and social loss. More and more frequently, in particular young people decide to migrate to other EU states where they have bigger chances to find a job. Let's remember that the bigger education, qualifications and skills, the bigger loss borne by us.

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